

THE GARDEN MAGAZINE



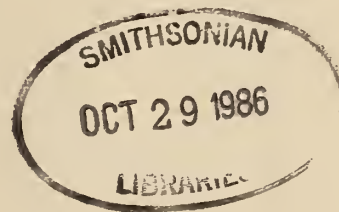
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THE GARDEN MAGAZINE

*Devoted to Planting and Managing the Grounds About the Home
and to the Cultivation of Fruits, Vegetables and Flowers*

Volume XIII

February, 1911, to July, 1911



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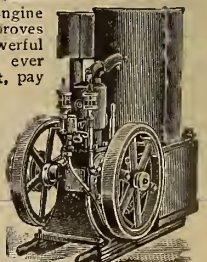
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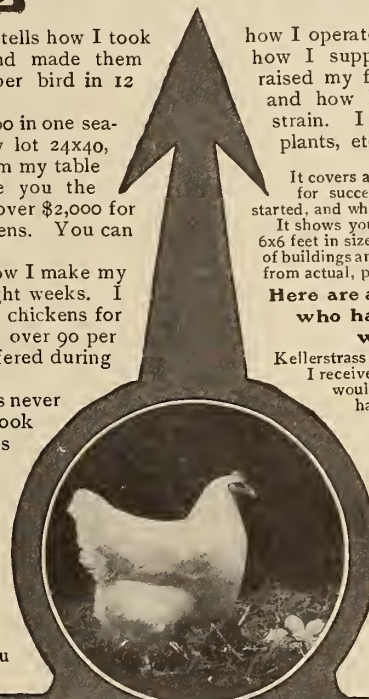
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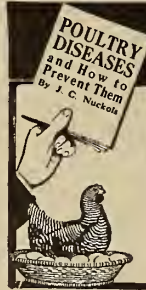
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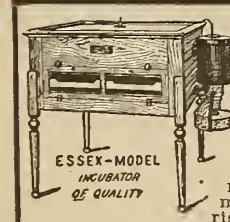
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and lively growing pigs are quick money-makers. Jersey Reds are the most satisfactory, all-round breed. Those who have tried them say so. Fatten easily and quickly, are small-boned, long-bodied, vigorous and prolific; quality of meat unsurpassed. Have some choice offerings now. Satisfaction guaranteed. Write quickly. Free Catalog. Arthur J. Collins, Box T. Moorestown, N. J.

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Nearly all the dirt in milk gets in at milking time. You can't "strain" out the impurity when the milk softens the dirt and it "trickles" into the pail. The

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I can show you how to raise nine chicks out of every ten hatched, how to make success a practical certainty. LET ME SEND YOU CONVINCING PROOFS!



Here is the most important announcement ever made to poultry raisers, professional or amateur. Everyone knows that it is not the chickens hatched that measures success or failure, but the proportion of chickens actually raised.

I have solved this vital problem—in a complete and practical way. First, I have invented a brooder that will raise nine chicks out of every ten hatched—raise them healthy and strong, until they are big enough to leave the brooder. Next, I have developed a plan for taking care of these chickens after they leave the brooder, that prevents nearly all loss and waste—saves time, worry and trouble—at the same time gives results far beyond your highest expectations.

To everyone who buys my brooder, I will give full details of my plan free.

My brooder is entirely different from any others on the market. Used with or

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I have a liberal proposition for Agents. I want representatives in every section. My plan is a winner, no money required.

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without my plan, it has demonstrated its remarkable capability under all conditions that confront the poultry raiser in this country.

No other brooder can compare with it for results, yet you do not have to pay \$20.00, nor \$10.00, nor \$5.00 for it. It is so extremely simple in construction, I can afford to sell it to you for the remarkably low price of **\$1.75 delivered to your door.**

This low price seems remarkable. But still more remarkable is my offer to give you full details of my plan. You get the full benefit of my experience without paying one penny for it.

This remarkable offer is worthy of your investigation. The best way to investigate, is to see the brooder itself. You have nothing to risk, the expense is mine if I fail to convince you. Simply send \$1.75, money order or stamps, which I will hold **merely as a deposit** until you have assured me that the brooder is perfectly satisfactory. I will not consider the sale complete until you have used the brooder and know for yourself just how successful it is, and how easy it is to get the best results by using it. Absolutely guarantee satisfaction.

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Gets twice the results with same labor and fluid. Flat or round, fine or coarse sprays from same nozzle. Ten styles. For trees, potatoes, gardens, whitewashing, etc. Agents Wanted, Booklet Free. 216 Broadway Rochester, N.Y.



VICK QUALITY SEEDS are winners

These three vegetables, grown from Vick Quality Seed, carried off the Premiums in our \$1040 Contest last year at Syracuse, N. Y.

IRONDEQUOIT. Vick's Favorite Muskmelon. Fruit large; sweet, rich and spicy in flavor; dark orange flesh; finely netted skin. See illustration. Packet, 10 cents; 1/2 ounce, 30 cents; ounce, 50 cents.

GOLDEN NUGGET. The Finest of all Sweet Corn. Large ears, filled to the tip with sweet, tender, milky kernels. Two to four ears to a stalk. Packet, 10 cents; 1/2 pint, 20 cents; pint, 30 cents; quart, 50 cents.

EARLIANA. Vick's Improved Strain of this Tomato far surpasses the original. Does not crack, ripens all over, is round and smooth, solid and meaty. Packet, 10 cents; 1/2 ounce, 35 cents; ounce, 60 cents.

These vegetables and many other favorites are described and illustrated in *Vick's Garden and Floral Guide*, a real helper to all who enjoy gardening, whether for pleasure or profit. The guide tells about our \$1000 Premium offer to customers. A copy is ready for you—won't you send for it now—a postal card will bring it. **JAMES VICK'S SONS, 362 MAIN ST., ROCHESTER, N. Y.**



40 other good varieties of Strawberries; the kinds for big profits.

500,000 Choice Raspberry Plants

Black, Red, Yellow and Purple varieties

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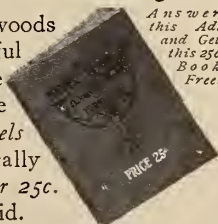
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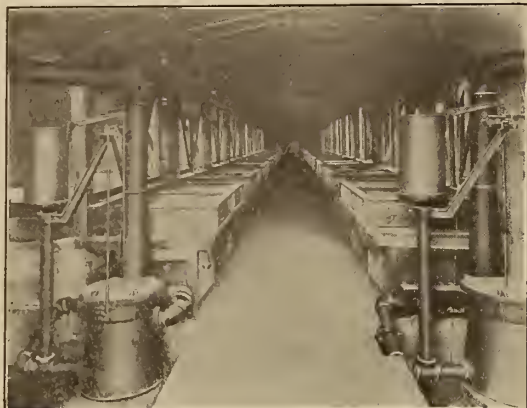
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Describes and illustrates the Hall Mammoth Incubator and Hall Brooder Systems, and shows some of the farms on which the Hall Equipments are proving *satisfactory* beyond competitive comparison.

Also, a new Edition of the "RESULTS" Booklet is from the press. It contains 31 letters on *satisfactory service*.

THE HALL MAMMOTH INCUBATOR CO., Utica, New York

Money in Early Tomatoes
One of my customers sold \$202.35 worth of big, red tomatoes from 100 plants in his back yard.
Another from 14 plants in her flower garden sold \$12 lbs. during July and August for \$16.70. It's all in the knowing how and in using the right seed. They used my new tomato—

FIELD'S EARLY JUNE
Earlier than Earliana, as handsome as Stone, as solid as Ponderosa, and a greater yielder than any of them. The greatest new tomato in 25 years. Small pit—2 lbs. 3 for 50c. 1/2 oz. \$1. (This for specially selected seed sown early.) My Garden Manual and Seed Catalog will give you lots of pointers and good advice about gardening. It's FREE—and people who claim to know say it's well worth reading. Get it and see.

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The Hydrangea has always been a favorite garden shrub. We offer a new one which possesses, in addition to its well known qualities, the merit of *flowering all summer* and is *perfectly hardy*. Catalogue containing description of it and the best Trees, Shrubs, Roses and Hardy Plants free on request.

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is responsible for our great success, and will give to the struggling beginner all of the profits and none of the losses. Absolutely automatic in every function, unvariable temperature, certain moisture from the moment of starting the hatch until nature requires a cessation in order to properly dry the newly-hatched unit of future profit—so thoroughly safeguarding its entrance into poultrydom as to guarantee its livability when raised under the very acme of "Foster Mothers," the

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This Hover makes possible the rearing of the maximum of chicks and the minimum of deaths—90% to 95% live and thrive and grow. It is the only device that contains the *active principle of the hen*, and the ingenuity of man can go no further.

Our best efforts are centered in the production of Day Old-Chicks and Hatching Eggs from matured stock. No pullets' eggs are used except for table purposes.

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The use of Wizard Brand Pulverized Sheep Manure on your lawn will make it a cleaner, better lawn than you ever had before. No unsightly appearance or objectionable odor. A highly concentrated, natural fertilizer, safe and sure for the amateur.

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A Beautiful Lawn
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Send us now your address and application for Landreth's Seed Catalogue, one of the best published of Seed Catalogues, which also contains an album of Farm Views, indicating the ability of the Landreth's to do what they undertake.

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I have been growing mushrooms for over twelve years. I probably know more about the subject of mushroom culture than anyone else in America. From a start with a few dollars capital I built up the largest mushroom farm in America, with acres of bed space in cultivation. By actual experience I have learned just how mushrooms can be grown, and what's even more important, how they *can not* be grown.

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It's just a matter of knowing how. Every failure in the mushroom business can be traced to poor spawn and unreliable information.

I have shown thousands of men and women how to grow mushrooms successfully. Most all of them are now in the business growing for

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I have written a little book which gives truthful, reliable, experienced information about mushroom culture, where mushrooms can be grown, how to have a mushroom bed in your cellar, etc. It also tells about spawn and how to secure really reliable spawn. I shall gladly send you this book free.

If you have never tried mushroom growing, or if you have tried and failed because of the causes of which I have spoken, write for my free book, in which I will show you beyond the shadow of a doubt that you can have a fine mushroom bed. *Address*

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Hardy Annual—Sow Outdoors in Spring



(About 1/2 natural size.)

The grandest of all Eschscholtzias.

The unopened buds on outer side of petals are of the deepest crimson, toning down in the inner side to bright flame color and molten gold.

We will mail a packet of this valuable novelty and a copy of our beautiful catalogue,

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CHEAP FERTILIZER

Oyster Shell Lime

ground fine, so it can be used in a distributor, and a burner used in burning it that makes

A Fine Fertilizer A Fine Germicide for Trees

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will correct acidity in land
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Cheap freight rates

It Unlocks Phosphoric and Potash Deposits In the Land

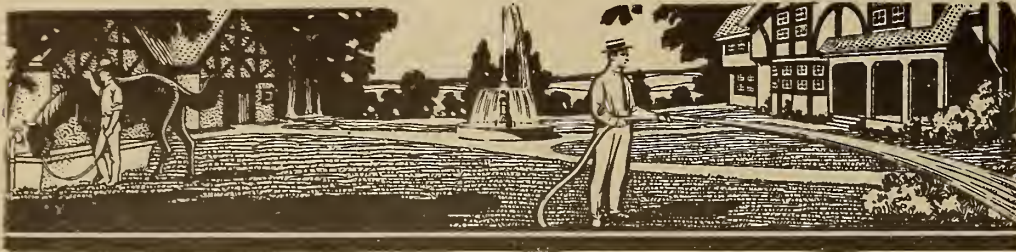
and makes available, and makes one of the best all-around land enrichers in existence.

Cheap freights — Via steamships and rail

Write for Prices

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Water Supply Service

for any building—
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No matter *where* you want water, or *how* much you want, or under *what conditions* you want it, it will pay you to investigate the

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No city water system provides better water supply service. With your own private plant—a Kewanee System—you can have an *abundance* of water delivered under *strong pressure*, to *all* your fixtures and hydrants—to the bathroom, kitchen, laundry, lawn, stables, garage—*anywhere*.

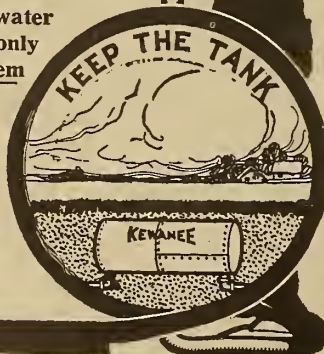
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In a large pot or tub it flourishes mightily in an ordinary bay window, if kept well watered during the blooming season; but the grandest of all places for it — that is, wherever it must be grown



Try growing a Calla lily in the window garden. Keep it well watered while in bloom

Abolish the Ash-Barrel.
It's a nuisance, a menace to health and a constant fire risk. Adopt this modern Receiver for ashes and all cellar refuse. Fire-proof, sanitary, out of sight. Top flush with floor. Easy to sweep into.

THE STEPHENSON

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Another great problem has been what to do with Garbage in Winter. The ordinary Garbage can freezes up, and when the collector pounds the can to empty it, he ruins the can. This is avoided by using the Stephenson Underground Garbage Receiver.

Sold direct from factory. Circulars of each free.

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Cabbage Plants

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MEGETTS, S. C.

indoors — is an odd corner of a greenhouse or potting-house. Take out a few feet of bench plant the bulbs in good soil on the greenhouse bottom, and then let them alone, excepting to give them plenty of water in winter.

A 5-foot bed arranged in this fashion, and left undisturbed half a dozen years or so, produced more than one hundred and fifty large blooms last winter; and all of them, with some of the foliage, commanded a good enough price to more than equal a fair return for the space used.

B. G.

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THE blackberry lily (*Belemcanda Sinensis*, or *Pardanthus*) is a fascinating old hardy plant. It belongs to the iris family, but the fruits look like a blackberry. It is very interesting to see the orange-colored flowers twist and untwist.

Good Farm and Garden Books And Where To Get Them

Every reader of this magazine who is interested in the growing of field and garden crops, will be delighted with the following books. These interesting volumes are replete with valuable information and contain detailed directions for the culture of every important Field, Orchard and Garden Crop from the amateur's point of view.

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Farmers' Cyclopedia of Agriculture, E. V. Wilcox & C. B. Smith	\$3.50-\$4.50
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How Crops Grow, by Prof. Samuel W. Johnson	1.50
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Systematic Pomology, by F. A. Waugh	1.00
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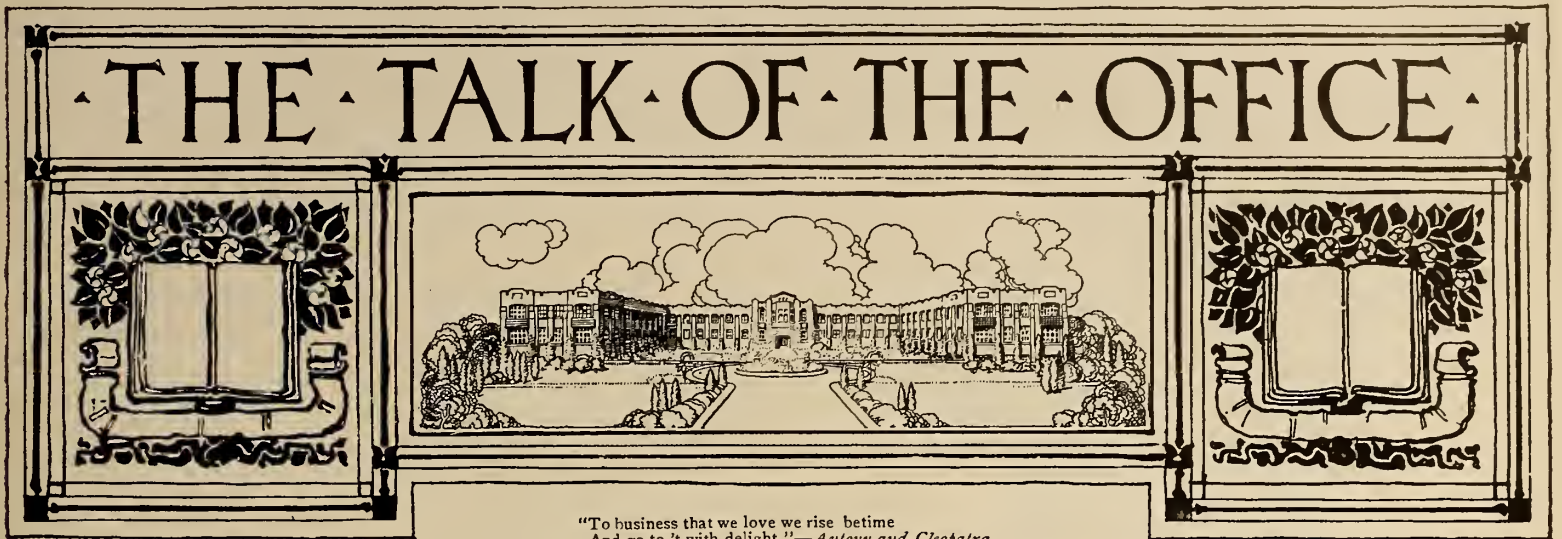
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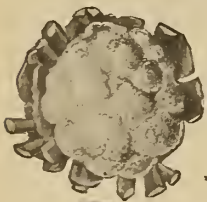
This catalogue tells the varieties suitable for each climate; suggests harmonious collections for beds, arbors, hedges and pots; and is, in fact, a complete, safe guide to selection. This catalogue is ready now. Don't put off sending for it. Planting time will soon be here. Get the catalogue now, and make your selections early. Just write us a postal—and do it to-day!

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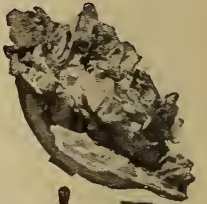
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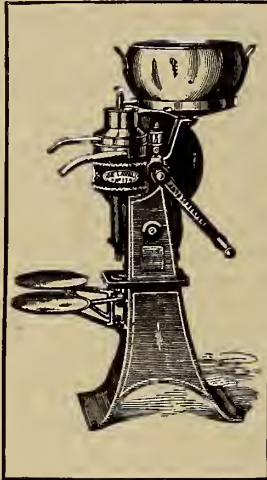
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In cleanness of skimming, quality of cream separated, ease of operation, simplicity of construction and durability the DE LAVAL is in a class all by itself.

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We have the largest, finest and most comprehensive stock of Hardy Plants in America, including three hundred varieties of the choicest Peonies, and also the largest collection of Japanese Iris in the world, and an unsurpassed collection of named Phloxes. Our illustrated catalogue, describing these and hundreds of other Hardy Plants, Trees, Rhododendrons, Azaleas and Shrubs will be sent on request.

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The Garden Magazine

VOL. XIII—No. 1
PUBLISHED MONTHLY

FEBRUARY, 1911

ONE DOLLAR FIFTY CENTS A YEAR
FIFTEEN CENTS A COPY



[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

Send for the Catalogues

ALL the new season's catalogues are now available. If you have not completed your orders, send for the new lists to-day and get your seed order out of hand while winter is still with you. Moreover there are sure to be limited supplies of certain things, and unless you order early you may suffer disappointment.

Study the lists of the leading houses and look for the specialties of each.

Buy novelties: By all means try out a few of the season's novelties, but unless you are a gambler and particularly interested in results, you had better stick to the well-tried standbys for main crops. Every gardener should try some novelties each year, and once in a while you will find a new variety that surpasses everything you have had before. All the standard varieties of to-day were once novelties themselves.

Won't you readers band yourselves into a great testing club? Make a resolution to get the novelties offered this year and give them thoroughly practical trials side by side with, and under the same conditions as, the kinds that you know to be reliable. Then, at the end of the season, tell us about any of them that were really better than those you had before. We will pay for any note of real experience that will help amateur gardeners generally. We want to know more about our readers' actual experiences with novelties.

Indoor Activities

IN ABOUT eight weeks' time, spring will be upon you. Are you ready with all the little extras — labels, stakes, brush for peas, strings, even poisons for

spraying? Look through the sundries list of your seed catalogue and lay in a stock of all these little requisites.

Buy a garden basket; you will find it useful for holding cut flowers as you gather them.

Coldframes and hotbeds will be wanted very soon. No garden is too small for a coldframe — in fact, the smaller the garden the greater the necessity. Lettuce, radishes, parsley, beets, carrots, beans can all be helped along as early crops by being grown in a coldframe.

Make hotbeds during February. Use good stable manure, breaking it up finely and treading it down firmly. For great heat use the manure without litter; for a moderate but a more lasting heat, add litter or leaves used as bedding.

Vegetables to be Sown

IN GREENHOUSES or hotbeds, for transplanting later: Plant French artichoke, broccoli, all kinds of cabbage, cardoon, cauliflower, celeriac, celery, leek, lettuce, onion, pepper — all these are for planting out later as soon as the weather permits.

To be matured in greenhouse or hotbed: Bush beans, carrots, cucumber, egg plant kohlrabi, melon, parsley, tomato.

For succession, every week in greenhouse or frame: Rutabaga, mustard, cress.

Mushroom beds may still be made in cellars, under the bench of the greenhouse, or in any other waste space. It will not be worth while starting mushrooms after the beginning of this month.

Flower Seeds to be Sown

INDOORS or in the hotbed you can make first sowings of all hardy annuals and half-hardy sorts, such as China aster, gaillardia, castor bean, cobeia, dahlia and pansy.

You can have much enjoyment by sowing canna and dahlia seeds now and watching for the different colors that they will develop. You cannot foretell the color in either of these plants, and in a dozen or two there may grow some of especially appealing beauty. Old pansy plants that are outdoors can be lifted during a period of thaw, or dug out from under the snow, and brought into a cool greenhouse or into the window of the dining-room. Keep moderately cool, with plenty of air and light.

Orchard and Grounds

DURING this month prune all outdoor fruits and finish up all thinning out and heading back of ornamental trees and shrubs. All transplanted stock that was moved last fall should be headed back one-third before growth begins. Flowering shrubs which bloom on the new wood can be pruned back hard now to make an abundance of bloom in the spring.

Did you ever try forcing rhubarb and asparagus? Lift up well established roots, put them into boxes with soil or sand, bring them into a warm place and keep them thoroughly watered. By bringing in clumps in succession the supply can be extended over a long season.

We Will Pay

\$500.00 for Your Garden

If it is the most productive and the best managed half-acre plot during the season of 1911.

We want the actual records of a well-managed home garden — its plan, its operation, yield, successions, etc., because we believe that besides better living, there is actual money to be made or saved in making the garden work for you.

Our object is to prove the greatest productiveness of a half-acre. The above sum will be given for the best account of a well managed half-acre garden in the year 1911. The competition is open to all. The only conditions are:—

1. Notice of intention to compete to be given not later than May 20th, 1911.
2. A complete record of work to be submitted at the end of the season, with names of varieties grown, yields, etc., and an exact record, in detail, of all labor and expense, with bills and vouchers.
3. All entries must be accompanied by a plan of the garden and its succession plantings
4. All contestants must submit their manuscripts not later than October 31st, 1911.
5. The prize-winning manuscript, with photographs, etc., to become the property of THE GARDEN MAGAZINE. The right is reserved to purchase any other MSS. at our regular rates, or not to award the prize at all, if the MSS. submitted are not sufficiently worthy.

Gaining Time on the Summer Flowers—By Leslie Hudson, ^{New York}

TAKE ADVANTAGE OF THE DULL SEASON TO ENSURE A WEALTH OF BLOOM OUT-DOORS FROM EARLY SUMMER—GAINING THREE OR FOUR MONTHS IN BLOOM

YOU can have your garden full of flowers from the very moment that the bloom of the first bulb begins to fade by taking a little thought and planning now. Even if you have no greenhouse, you can start seeds of the commonest of our flowering plants in the window. By sowing seed in February, the small plants can be grown on to flowering size ready to plant out toward the end of May, just at the time when the less watchful gardener is thinking of sowing the seeds outside. These later-sown seeds will not give flowers until well into the summer.

It is always well to buy the best seed for these early starts. The newer named varieties of Europe may have many surprises for you. It may cost a trifle more and its total germination may be a lower percentage, but it is worth while for the finer quality, larger size and better color of the flowers.

The newer petunias can be had in a great range of colors from white to the richest, true magenta and purple, quite a different thing from the sickly, washed out tints that justify the hatred of this color that is so often felt. They flower all summer in the beds, and giving large sheets of bloom, there is no flower that will be more satisfactory. The newer flowers are fully six inches across. If you have not tried them, get some of the selected strains this year.

There are named strains, too, of the old-time blue-flowered ageratum. This is a popular edging plant for flower beds. It never grows tall, it flowers freely, and while being compact, yet has withal gracefulness and freedom. The color is rather a gray-blue and works well into the

general garden scheme in framing formal beds and for edgings of gardens. It flowers all through the year from May onward with absolutely no attention.

Perhaps the easiest of all the plants to be sown just now is alyssum. Its white flowers make it a very welcome plant in all borders and in all situations; it mixes well with everything and harmonizes and softens any glaring color effects that may accidentally arise. Alyssum is quite hardy, but it is worth while starting the seed indoors and setting out the little plants when the weather becomes settled, so as to be sure of having plenty of white flowers almost from "frost to frost."

As a carpeting plant to fill in between shrubs, rose beds, etc., the verbena offers the greatest variety of colors. You can get it in white, blue, pink and fiery red. It is an accommodating plant; you can let it sprawl as it will, or you can peg it down with hairpins, and it flowers equally serene under any kind of treatment. It will give color in the garden after the bloom of the roses is gone.

There is nothing mysterious or difficult about sowing seed of any of these flowers. Any soil that is well aerated and drains freely can be used, preferably a garden soil with a good mixture of leaf mold and sand. Exact proportions do not really matter, and if you cannot get exactly these ingredients, get the nearest possible substitutes; use shallow boxes or

pans—earthenware pans are better than pots because they are easier to handle. After filling the boxes or pans and firming the soil well, leaving a half-inch rim all around, water it *before sowing the seed*. By doing this you will be sure of not washing the seed off the surface which is easily done by overhead applications.

Plunge the pan into a tub of water, allowing the moisture to soak through until it appears on the surface. After removing the pan and draining it off, sow the seed directly from the packet on the surface, cover the pan with a sheet of glass for protection and place in the window-garden. One watering given in this way will suffice until the seeds have germinated and the little plants are strong enough to hold on to the soil during an overhead watering. This method is particularly good for petunias, which are likely to be kept too damp.

FOR EARLIEST FLOWERS

If you have never before tried it, get some "frozen valley pips." That is to say, lily-of-the-valley roots from cold storage. You can buy these from the seed stores and by starting them in the middle of January and making successive plantings every week, you can get bloom from the middle of February until the outdoor flowers come in. Nothing is easier. Take the clump of pips as it comes from the store, with a pair of scissors snip off the long straggly roots, put the several masses in boxes or pots or pans, packing them as tightly as possible with a little sand or moss in between, give them a good watering and put them in a sunny



Get some "frozen valley pips" and have a steady supply of flowers for cutting



Start the old geranium and take cuttings from the growths as they develop



Sweet alyssum started indoors now will give flowers for outside all the year



Take root cuttings from the old chrysanthemum to make the big blooms of November

window in a warm living-room — 65 degrees is the ideal temperature. Your reward will be flowers. You cannot get both foliage and flowers unless you start them into growth gradually, by a more moderate heat.

STARTING UP STOCK PLANTS

Did you save from last year your old geraniums and chrysanthemums? If so, you can begin now to take cuttings for the supply of the coming year's plants. Nothing is easier to propagate than the geranium if you observe one precaution: do not keep it too wet. The cuttings will stand drying off more comfortably than they will being kept too moist. The latter will cause them to rot quickly.

By starting cuttings now, if you have only one or two plants left that have been carried over the winter, you can propagate cuttings from these again within a very few weeks and by the time the bedding-out season arrives, have as many geraniums as you can use.

Growing up from the root of the old chrysanthemum plant, as the season advances, you will see the little shoots which can be taken off when about two inches long, and if put into sand will quickly root. You must begin now if you want to make large plants for November flowers. Successive cuttings may be taken as the season advances, which will give bushy plants; but for large specimens, you must begin now. It is too late when spring is upon you.

GREENHOUSE FLOWERS FOR WINTER

Begonia Gloire de Lorraine still remains one of the most useful of all our winter flowering plants. If you have an old one that has gone out of bloom you need not throw it away and have nothing! By merely taking a leaf off and putting it in a small pot you can start your own

plant for next winter. The critical time in the growth of this plant is in the first potting, when the leaf cuttings are struck in the usual way. The amateur will do best to put the cutting directly into a small pot and let it root there.

To the amateur who has a greenhouse, the home propagation of roses offers an opportunity for a good deal of amusement. Of course, you can buy plants nearly as cheaply as you can make them, but there is some satisfaction in having your own roses. For greenhouse cultivation the best results are had from roses grown on the Manetti stock. This stock is a wild rose of Europe, and the dormant pieces can be had from the nurseryman or from the seed store. If you are near a florist growing cut flowers, you can probably purchase a few Manetti roses.

Grafting roses is simple if you have the facilities for putting them into a close frame to callus. A hotbed can be used, but usually a propagating box in the greenhouse is preferred. The secret in rose grafting is to get the Manetti stock just after it has made a good break, and before the growth has attained any appreciable size. The illustration shows the successive stages of rose grafting. It is best to have the stock and the cion of the same diameter, so as to make complete contact. If the stock is much larger than the cion, make a cut on the stock to correspond with the size of the cion, as nearly as possible. Put the two edges together, tie them with a piece of raffia, and put into the propagating box or hotbed. After the batch of grafted roots is ready, give a slight spraying, enough to give moisture to the air in the box but not enough to drench the plants.

Now close the box and keep it airtight and at a temperature of 70 degrees, for from ten to fourteen days, or until



Start dahlias and increase the stock of your favorites by taking off the cuttings!

the wounds have properly callused. The plants may now be taken up, potted and will be ready for putting into the greenhouse benches for flowering later.

INCREASING DAHLIAS AND CANNAS

A most interesting work for the amateur to start during this month is getting ahead with the cannas and dahlias. The advantage of starting the canna in some kind of heat now is that it will begin to flower in the early summer and will continue blooming all season. You can enjoy its beauty all the time. The advantage of starting the dahlia now is that you can increase your stock of desirable varieties. Both these roots will start to grow if given moisture and heat. You can increase your stock of cannas by cutting the roots into



The art of grafting roses. On the left a Manetti stock in proper condition. On the right the stock and cion (supported in a wire) ready for union. Completed graft in centre. Use flowering wood for the cion



Start verbenas for summer flowers in the rose beds

as many pieces as there are eyes after they have started into growing, and you can keep this up indefinitely until your stock is entirely planted out. Dahlias brought into heat and light now will push up small shoots, which may be taken off as cuttings and potted up into a light, sandy soil. They will give new plants and increase the stock.

Sunshine, warmth and moisture must be present to do any of these things successfully. You can make use of frames or hotbeds or windows of living rooms if they have a southern or some sunny exposure. North windows and shaded corners will not do, and if you do not have the right conditions it will be better to make no attempt at propagating your own plants, but buy them ready to set out in May.



Increase your cannas by starting the old roots in heat and cutting up into single eyes

Coöperation in Farming—By B. H. Crocheron, Maryland

SOME SURPRISING FACTS THAT SHOW HOW THE INDUSTRIES OF THE SOIL ARE WORKING TOGETHER FOR MUTUAL BETTERMENT—PRACTICAL SCHEMES OF FINANCIAL AID IN ESTABLISHING INDUSTRIES AND OPENING MARKETS

IT HAS been repeatedly said that farmers as a class are impossible to combine coöperatively, but facts prove that farmers are particularly adaptable to coöperative enterprises.

The Bureau of Statistics, U. S. Department of Agriculture, reports that 45,000 correspondents inform them of the following coöperative organizations in the United States.

	(Number estimated)
Insurance	
Fire, lightning, hail and wind	2,000
Livestock	150
Life Insurance	7,500
Sickness, funeral and relief	6,000
Selling	1,000
Buying	4,000
Production	75
Communities, colonies and settlements	50
Miscellaneous	300
Telephone service	15,000
Social, economic and educational	1,500
Irrigation	30,000
Grain elevators	1,800

From data compiled previous to 1907 it has been estimated that there are more than 85,000 different farmers' organizations with a membership of 3,000,000 farmers. There is scarcely a branch of agricultural interest into which coöperative associations have not already penetrated. Some of these are:

Beet-sugar making; butter and cheese making; cider making; cotton ginning; dairy products, marketing; fruit-growing and marketing; fruit-drying and selling; field crops marketing; grain elevating; honey, shipping and selling; live-stock breeding; poultry-products, selling; tobacco marketing; wheat and corn milling; wheat threshing; vegetables, marketing and canning; wine making; wool production.

Other associations, different from these, aim to promote the general welfare of no one industry or branch of industry, or section

of country. The following are some of the most prominent:

American Breeders' Association, American Farmers' League, American Pomological Society, American Poultry Association, California Fruit Growers' & Shippers' Association, Hood River Fruit Growers' Union, National Farmers' Alliance, Patrons of Husbandry, National Rice Association, The Coöperative Commission Company, The Tri-State Grain and Stock Growers' Association.

The industrial coöperation seems to be particularly marked in certain regions. Thus:

Fruit-growing in the far West; vegetable-raising in New Jersey, Ohio, Illinois, Utah; milk in New England; wheat in the Northwest.

This localization of coöperation is not because it is impractical in other sections, but largely because it is untried.

Thus far, coöperation has proved most profitable among the more quickly perishable products. The success has been more marked with fruit than with wheat, with vegetables than with live-stock. This does not necessarily mean that coöperation cannot be as effective with one as with another, but merely that it is more easily successful when the section is small and when competition is eliminated because of distances and times.

Marketing coöperation is possible for some objects. One of the chief aims according to the constitution of many societies has been to eliminate the middleman. The societies have in but few instances been able to do this since most found that in eliminating one middleman they must substitute another of their own for they could not market their products except through the operations of a skilled salesman.

The greatest success of coöperation has

been in the buying of commodities for the use of farmers. Fertilizers, seeds, coal, feed, flour, etc., are sold at cost to members by the organization which buys in large lots and is able to save \$5.00 a ton on fertilizer, \$1.00 a bushel on clover seed, 50 cents a ton on coal. These organizations are usually vigorously opposed by the town merchants and are not often successful unless they employ a salaried sales agent to attend to their business.

Fruit and Vegetable Marketing Associations have been highly successful where they were able to control a large part of the output at the time when their products were put upon the market. Thus, sections which marketed strawberries in train-load lots were able to raise the price two or more cents per quart by sending their berries to points which could keep the demand up to the supply and so prevent the glutting of one market. This type of association usually supervises the output of its members insisting that it shall come up to a certain definite standard in quantity, quality, type of marketing package, method of packing and amount of output.

Coöperative credit and agricultural banks. America has been notably behind Europe, where institutions for the establishment of agricultural credit have been well and favorably established. The societies are formed to promote credit among those who cannot give security such as would pass muster in a regular national bank. The security of the bank is the standing of the borrowing member in the community in which he lives. The association or bank loans the money at a low rate of interest without any other than personal security and the member borrows in order to purchase land, seeds, fertilizer and farming implements. The system is highly necessary in a poor community.

Watermelons from the Southern Viewpoint—By Thomas J. Steed, Georgia

WHAT MAKES FOR QUALITY IN THIS LUSCIOUS FRUIT—SOME REASONS WHY THE SOUTHERN GARDENER DOES NOT GET THE BEST THAT OPPORTUNITY AFFORDS—FACTS FOR NORTHERN GARDENERS TO FOLLOW

THE watermelon is just one of the things that the Southern gardener can enjoy in perfection without much trouble; his northern brother has no chance whatever to compete with him on even terms. The southern climate exactly suits the peculiarities of the watermelon. For this very reason, however, there are too many poor watermelons grown in the South. The crop comes too easily. Up in the North it is a matter of skill and good cultivation to produce a good watermelon, and only good ones are worth growing. In the South, unfortunately, little attention is paid to quality watermelons. Yet there is all the difference in the world; a poor quality watermelon is one of the most unsatisfying fruits to offer to anybody.

The watermelon will grow in the South on almost any kind of soil and grow to perfection, too. But at the same time it shows a preference to a light, sandy soil that has been lying out a year or two and has grown up in weeds which supply vegetable matter to the soil. Weeds also serve as supports for the vines, and prevent the wind from blowing the vines about and bruising them. A sandy loam that cow peas or crimson clover has been grown on the year before is also good for melons. The northern gardener knows, from experience, that a light, porous, warm soil is the one thing that is necessary to good quality in a melon of any kind. There is some difference in growing a crop for home and for market. The home gardener can naturally give better attention and produce a higher quality result.

After the watermelon has been successfully grown, there still remains the problem of picking it at the critical moment. The fruit requires from three to six weeks from the time it forms on the vine, until it attains maturity, depending on the variety, and the gardener must know the

relative times of the different kinds he is growing. This is important.

There are four possible methods of telling a ripe watermelon: First, strike on it sharply with the finger; if it sounds rather hollow it is ripe. Second, if the tendril where the melon is attached to the vine is dying, the melon is usually ready to eat. Third, press on the melon firmly with the hand; if ripe, you will hear the heart cracking. Fourth, pick the melon when it has a yellowish tinge on the under side where it rests on the ground. But sometimes the tendril of a melon vine dies from the attacks of insects or disease,

The Georgia Rattlesnake comes next in popularity, is almost as sweet, but is about a week later in maturing. This melon grows very long, is of a light green with dark green stripes, and has a medium tough rind. There is an improved form of this melon sold as Improved Georgia Rattlesnake or Augusta Rattlesnake.

Halbert Honey is equally as sweet as Kleckley, is of a darker color, and is ready for use from one to two weeks earlier; but it does not grow quite as large. The seed is white with two dark spots on the edge.

Panmure Allheart is certainly what its



Get the best seed possible. Note the difference between these fruits of the same name but different sources

and sometimes when green melons are hot from laying in the sun they will sound hollow when struck with the finger. Therefore, experience counts.

The Kleckley Sweets watermelon, which originated in Sumpter County, Georgia, in 1894, is the most popular melon in the South to-day, and is generally considered the sweetest of all melons. It is ready for use in one hundred days from planting.

name indicates it to be. It has very thin rind and few seeds, which are very small. The melons do not grow as large as Halbert Honey, but are equally as sweet. It is two or three days earlier and as productive. This and Halbert Honey are two of the best melons for small gardens, as they can be planted closer together than most other sorts.

The Florida Favorite is very similar to the Rattlesnake, but the melons do not grow as long as the Rattlesnake and the stripes are darker. The seeds are white.

McIver's Sugar melon is also very similar to the Rattlesnake. The Rattlesnake is of a lighter green and longer and smoother. The McIver's Sugar is easily distinguished from other varieties in the field on account of its very narrow, cut foliage.

Turpen's Gray is a very fine late, main crop melon. It grows very long and large, is very sweet and a good keeper. It is of a mottled gray green, has a very thin rind, brownish yellow seeds, and the flesh is a bright red.

Augusta Round, white in color, is practically the same. It is round in form, medium early, the flesh is a bright red and very sweet, and the seed is white.



Halbert Honey. is one of the best early kinds and is adapted to the home garden



The late kinds require more room than the early ones. Turpens Gray, a reliable market variety

The Georgia Sugar Loaf is an oblong form of this same melon.

Alabama Sweet, or Bradford, is a very fine, medium-early melon of a medium dark green color with light green stripes. The flesh is a bright scarlet and the seed is white. This melon is also catalogued by seedsmen under the following names: Tinker, Hoke Smith, McGuire and Pearson.

Sweetheart is a very good late, round melon for home use and market. Of a mottled light green with thick rind, it grows to large size, and is a good keeper; the seeds are black.

The Triumph is considered the largest of melons, and for this reason it is a good variety for growing for exhibition purposes. In quality it is very poor. Primus Jones is an excellent large, late melon, oblong, dark green with very narrow light stripes, bright red flesh and very sweet.

Angel Kiss is a very popular melon in the Southwest for home use, on account of its good quality and earliness. It is ready for use about the same time that Halbert Honey is. It is of medium size, the flesh is a deep crimson, seed very small and white, the rind thin and almost white.

In the home garden plant melons after beans and garden peas. The soil should

be plowed up with a large one-horse turn plow, or a two-horse plow, two months before the seeds are to be sown. Lay off or mark out the row with a large turn plow. Plow right and left so as to get a deep furrow (the rows should be from six to ten feet apart; six feet for small varieties and home gardens, ten feet for large varieties and field cultivation).

At least two weeks before planting, put one or two large shovelfuls of well-decayed stable, horse or cow manure in these furrows every six to eight feet. If possible place a handful of some high-grade fertilizer at each hill, and be sure to mix the fertilizer well with the soil. Cover the manure and fertilizer with four inches of soil. If manure cannot be had, use fertilizer and cotton seed instead.

For early melons, plant when trees are out in leaf, which is from the first to the last of February in the Lower South, March in the Middle South, and April in the Upper South, and May and June in the North. For succession, plant every three or four weeks. One of the most important points in growing fine melons is good seed. No matter how high you intend to fertilize and cultivate, above all be *sure* to get good seed.

When ready to plant drop from ten to

fifteen seeds on each hill and cover from three-fourths to one inch deep; by using plenty of seed you save replanting. It is a good plan to soak the seed in water for from twelve to twenty-four hours, most especially in sections where it does not often rain. One ounce of seed will plant from twenty-four to thirty hills.

When the plants are well up begin cultivation with a hoe and thin them out to four to a hill, and when they have four or five leaves give cultivation with a plow and thin to one good plant to a hill. A week or ten days later give them another cultivation with a plow and hoe and continue to cultivate with a plow until the growth of the vines prevents it. (Don't turn watermelon vines; they are very tender, and handling injures them.) Then cultivate with hoe only. Continue this cultivation until the melons are the size of a coconut.

At the last cultivation with the plow many growers sow cow peas in between the rows so as to shade the melons from the hot sun and to enrich the soil. This may be a good plan provided the peas are sown thinly. If sown thickly they may make a large amount of foliage which would exclude all the sun from the melons and in wet weather would induce decay.

To grow extra large watermelons for exhibition and other purposes, dig holes two feet deep and two feet wide and ten or twelve feet apart each way. In these put a double handful of cotton seed and a handful of high-grade fertilizer, most especially rich in potash. Mix this with the soil in the bottom of the hole and put in seven or eight shovelfuls of well-decayed horse manure. Cover this over at once with fine soil; in about two weeks plant the seed. Allow but one plant to a hill, and only one or two melons to a vine; prune the others off when they are young. In dry weather give them water; make holes near the plants six inches deep and wide enough to hold almost two or three gallons of water. Do this in the afternoon; and as soon as the water has soaked in, cover the hole with dry soil. This should be done every other afternoon during the drouths. Give frequent cultivations, once every week at least, so as to keep up a rapid growth. Cultivation may be discontinued when good-sized melons have formed.

The black squash bug is the most destructive insect in the South. It sucks the juice from the vines and from the stems of the watermelons, thus preventing the fruit from attaining full size. It also causes the leaves to rust or dry up and the small melons to wither. The only remedy that I am aware of is to pick the bugs off by hand. Spraying the vines early in spring with kerosene emulsion will usually ward them off for a while. Always spray late in the afternoon. Spraying will also have a tendency to keep off the plant lice which however are not very troublesome here in the South, as they are very soft bodied and cannot stand the hot summer sun.



Panmure Allheart, a type of fruit that is worth growing because of the thin rind

The "Fun" of Collecting Anemones, I.—By Wilhelm Miller, ^{New York}

THE HERALDS OF SPRING IN WOODS, ROCKS AND GARDENS—CHARMING LITTLE WINDFLOWERS THAT BRAVE THE SNOW AND "TAKE THE WINDS OF MARCH WITH BEAUTY"

[EDITOR'S NOTE—This new series is designed especially for beginners who would like to become collectors. The first article, "The Fun of Collecting Aroids," was published in January.]

WON'T you please describe all the anemones worth growing," writes an enthusiast with more wealth than prudence, "and tell me where I can buy every kind there is? I am smitten with their beauty and I want to have the most complete collection in the world. And, between you and me, I want to set back — and —, two neighbors who set themselves up for little tin gods, because they collect cannas and dahlias. Cannas and dahlias! Ugh!"

Bless your innocent heart! You will have to buy about one hundred different kinds, employ a private secretary to send for them, a gardener to label and grow them, a card index system to record them, many flower beds, a rock garden, a piece of woods, and three years' time. Wouldn't flying be a cheaper sport for you?"

It is so easy to ask such a question! But it takes years to answer it. One ought to study the literature, visit the herbaria, grow the plants, gather the pictures, correspond with experts, and even then a man cannot get all the varieties, or find out how best to grow them. Never mind, my Enthusiast, we expect to hear no more from you for several months. If you send postals to half the list we gave you, you will be buried in an avalanche of European and American catalogues.

But, airy persiflage aside, I admire your taste and hope to give you what you want in four installments, because

there are four groups of anemones, based upon the season of bloom.

GROUP I. THE HERALDS OF SPRING, which bloom before the last snows, in March or April, the most familiar examples being the diminutive hepaticas and pasque flowers.

GROUP II. THE SPRING WINDFLOWERS, which glorify the month of May, especially the garden anemones (*A. hortensis* and *coronaria*), which are famous for their gorgeous reds and blues.

GROUP III. THE SUMMER WINDFLOWERS, which bloom in June, July or August — all white flowers, and usually three on a stem, whereas in the preceding groups there is generally only one flower on a stem. Example, the Pennsylvanian or Canadian windflower.

GROUP IV. THE AUTUMN WINDFLOWERS, of which the celebrated Japanese anemone is the chief species.

Only the heralds of spring will be treated in this article. There are fifteen species of them worth growing and all but one are still catalogued as anemones by nurserymen, but the botanists now place them in four different genera. To clear the decks for action let us see just why they do this:

Styles long, becoming feathery in fruit	PULSATILLA.
Styles short, glabrous or pubescent	
Involucre remote from the calyx	ANEMONE.
Involucre of three simple leaves close under the flower	HEPATICA.
Involucre of three compound leaves	SYNDESMON.

But, while these botanical distinctions are important enough to constitute separate genera, all these heralds of spring should be considered as one horticultural group. They are not for show. They can never vie with daffodils, which they precede little, if any. Their mission is to stir the heart and make us rejoice that winter is really past. Not one of them is as large as a crocus, or has as wide a range of color. And yet they have an irresistible appeal. So long as men cheer any plucky little chap who fights against great odds, so long they will thrill at the sight of these game little flowers that look so fragile and are so hardy.

HEPATICAS HAVE THE MOST COLORS

The best of this group, in my opinion, are the hepaticas. For in the first place, they are generally the first wildflowers of the year in America, if we omit the skunk cabbage. Second, they are unique in having evergreen leaves of great beauty. And, most important of all, they have the widest range of color of all the plants mentioned in this article. You can buy the blue, purple, pink, or white in single or double forms. That makes eight varieties, and all are better than any you can collect. There is also the sharp-lobed hepatica (*H. acutiloba*) in as many colors. And finally there is the great hepatica (*H. angulosa*), a European species growing nine inches high and having flowers as large as a half dollar. This species is also



The American wood anemone (*A. quinquefolia*) is a trifle smaller than the European, but cheaper



American pasque flower, blooming in April amid the snow. Nurserymen call it *A. patens*, var. *Nuttalliana*



The rue anemone usually has more than one flower on a stem

running the gamut of color, since varieties alba, lilacina and grandiflora have already been offered.

Hepaticas will probably never be common garden flowers because they need partial shade in summer. They do not look happy if you bring them from the woods and put them into flower-beds with garden flowers. They look well when carpeting the ground beneath shrubs. But they are most beautiful when growing by the thousand in real woods. And I hope every wealthy person who reads these words will think about that sinful woodlot of his which the cows have spoiled. I hope he will restore the native wildness of that spot by excluding cattle and planting wild flowers that will multiply without care. He can have 1000 hepaticas, either round or sharp-lobed, gathered for him at a cost of only \$25.

Mr. Collector, of course, is not interested in pictorial effects, but in getting all the different varieties. He will have to import some of them, and pay half a dollar each for the rarest sorts.

RUE ANEMONES, THE MOST FLOWERS

One flower on a stem is the rule with these early flowers, but a charming exception is the rue anemone, which bears several white, rarely pinkish, flowers, only an inch across, but lasting a good while. I hope my wealthy reader is still awake because I want him to plant several thousand rue anemones in that shamefully neglected woodlot. He can buy 1000 of the interesting clusters of little tubers for a sum I blush to mention — \$3.00.

What a pity that we must give up the musical and expressive name Anemone. The botanists have revived an older name — *Syndesmon*. Sometimes it seems as if the smaller a plant the more they pick on it and load it down with hard names. This rue anemone, for in-

stance, has the soul of an anemone, but the clothing of a rue. Hence it has been burdened with the following names which you will find in nursery catalogues to this day: *Anemonella thalictroides*, *Thalictrum anemonoides*, and last and worst *Syndesmon thalictroides*.

PASQUE FLOWERS THE LARGEST

The most famous wildflower of the Rocky Mountains is the American pasque flower (*Pulsatilla hirsutissima*) which is here pictured blooming amid the snow. The blossoms are purple, bluish, or whitish, and would probably measure three or more inches if spread out. They are as satiny as any poppy. Tourists who buy souvenir collections of pressed wild flowers in Colorado always get this pasque flower. It is famous for the buds coming out of the ground before the leaves, and also for the wonderful silkiness of the whole plant, even the blossoms having these long, soft, white hairs. After blooming an extraordinary thing happens. The flower stalks, which have been only three to six inches high, grow at least two inches and sometimes a foot more. And to crown the wonder the seeds form a mass of fluffy stuff, resembling the feathery-fruited species of clematis.

You will find this charming flower catalogued only under the name of *Anemone patens*, var. *Nuttalliana*, because Gray thought it a variety of a European species.

The name "pasque flower" refers to the fact that the most famous of the group in Europe blooms about Easter. This is *Anemone Pulsatilla*, which is found all over Europe in dry, sandy or chalky soils. William Robinson says that it makes large clumps in the garden and bears larger flowers, but is prettier in the wild state, especially when "just showing through the dry grass of a bleak down on an early spring day."

THE TRUE ANEMONES

We come now to the true anemones, which never have the silky leaves and feathery fruits of the pulsatillas. Indeed, the pasque flowers are as showy as a poppy, whereas the anemones have a more spiritual beauty. I think we ought to call them "windflowers" oftener than we do. Of course, every flower is charming when stirred by the wind, even a fat old hyacinth. But the name "windflower" would open the eyes of many persons who are blind to the beauty of growing things. Anemone is simply Greek for windflower. The ancients had a notion that these blossoms opened only when the wind was blowing.

The only mean thing about anemones is the way to pronounce them. If you, Mr. Collector, began to enthuse about your *anémones*, people will look blank a moment and then exclaim, "Oh! *ánymonies!* Now I know what you mean!" But the classical scholars insist that the Greeks said *Anémone*. Consequently



Hespatica angulosa has flowers as large as a half dollar when well grown

your botanical purist will use one system of pronunciation for the English names and another for the botanical names. Thus, it is correct to say Japanese anémone, but the scientific name is *Anémone Japonica*.

But book learning is very dull compared with the flowers themselves. The most exciting of the early anemones, undoubtedly, are the two sky-blue species which make such ravishing pictures in England when naturalized in woods, blooming with the snowdrops and earliest daffodils, and making the best possible foil for them.

TWO SKY-BLUE ANEMONES

The Grecian windflower (*A. blanda*) is probably better than the Italian (*A. Apennina*), for it has the reputation of being earlier and larger. Some say its tubers are less liable to decay from wetness, especially in winter. Certainly they are rounder and more bulb-like, while those of the Italian windflower are more slender and cylindrical. Both must be planted in early autumn. Roots of the Grecian species cost \$8 a 1000; those of the Italian \$12 to \$25.

On the other hand Mr. Mallet declares that the Italian windflower "thrives in almost any soil, and for purposes of naturalizing it is a better plant in damp or wet soils."

There are white, pink and rose varieties of both these species, but they are costlier and collectors only want a few of them for contrast with the blue.

I hope every enthusiast who can afford to naturalize these precious blue winter windflowers will try them, but the general public would better put its money into Siberian squills and glory-of-the-snow — which also bloom in March and have good pure blues. Of course, they are different in form, being bell-shaped like diminutive lilies, while the anemones are more starry and open. But \$8.00 is something. And 1000 scilla bulbs in the long grass will probably give you a prettier picture for the money next March, and every March, on the first day the lawn turns green.

Collectors will naturally desire *A. Apennina*, vars. *alba*, *flore pleno*, and *purpurea*;



Wood anemone and trillium in the rock garden of Prof. C. S. Sargent, Brookline, Mass.

also *A. blanda*, vars. *alba*, *grandiflora*, *Scythica*, and *Taurica*.

YELLOW, ANOTHER RARE COLOR

Rare as blue is among the windflowers, yellow is still rarer. Therefore collectors will be glad to know about *A. ranunculoides* — which, as its name implies, is as golden as any buttercup. The form from southern Europe may not be as hardy as the Siberian, for Robinson says it blooms less freely than the Italian windflower on common soils, though it is happy on chalk. A nurseryman in Massachusetts says it soon makes broad clumps and blooms in March or April.

It is a very pretty idea to carpet a piece of woods with golden blossoms that spring as if by magic out of the bare earth before the trees have put forth their leaves, but I doubt if anyone can furnish this yellow anemone in quantities sufficient for naturalizing. Probably the winter aconite (*Eranthis hyemalis*) would paint such a picture more cheaply. You will find it offered in every American bulb-catalogue. But I hope some one who can afford the yellow wood anemone will import it and send us a picture of it when a colony of it is established.

THE FAMOUS WOOD ANEMONE

The wood anemone of history and literature is *A. nemorosa*, a lovely white flower which grows abundantly throughout Europe and Northern Asia, blooming in April and May. The flowers are only an inch across but full of charm, as may be seen by the picture. The double white

variety is said to be a good garden plant, but I should think it safest to give all the wood anemones shade during the hottest part of the day.

Collectors can get a rich haul by studying this species in foreign catalogues. The range of color is indicated by varieties *alba*, *cærulea*, and *rosea*. Of double forms. I find *alba plena*, *rosea duplex* and *rubra plena*, the last of which was said by the late Mr. Forbes, of Hawick, Scotland, to be "rosy crimson" and "blooming in June or July," both of which statements sound dubious. Another quaint double form is the "Jack-in-the-green" anemone (var. *bracteata*), so called because of the pretty way in which the double white flower is set off by its snug collar of green. As to the largest variety there is dispute, two of the claimants being *grandiflora* and *Vestal*.

But the most surprising thing is to find a flower that is normally white varying to sky blue. The most celebrated example is *A. Robinsoniana*, named after William Robinson, the leader of English gardening. I shall not believe it is sky blue until I see it, and my suspicion is deepened by the fact that many catalogues describe it as pale lavender. Other "blues" are *Connubiensis*, *Alleni* and *Blue Bonnet*. The two latter are claimed to be even better than *Robinsoniana*.

It sounds too good to be true — a blue anemone flowering in April before the trees leaf out and dotting the forest floor with the color of the sky. Yet Americans are taking it seriously, for all the plants offered last year at \$7.50 per 100 were sold.

Some of our millionaire friends must have been awake. We need a blue flower of that kind very badly at that time to redeem those shabby, uninteresting woods near all our great cities.

OUR BEST WHITE WINDFLOWER

You may have noticed that I did not recommend the European wood anemone (*A. nemorosa*) for naturalizing. That, Mr. Millionaire (nudge him), is because I want you to plant a few thousand of its American equivalent, which is *A. quinquefolia* — our best white windflower of early spring. It is so much like the European that botanists formerly considered it the same thing. And a collector in New Jersey offers 1000 plants of what he calls "nemorosa" for only \$5. Of course it must be the American species, as this price is far below what the European species costs.

As collectors will need to know the botanical differences I will quote them from Britton. The American species has a more slender habit, slender petioles, less lobed divisions of the involucre leaves, paler green foliage, and smaller flowers.

Take my word for it — this is one of the daintiest and most exquisite plants known to the art of wild gardening. The books say it is a white flower. Ah, the letter of truth again! It is white on the inside; but half the time you will see the outside, which is one of the purest and most tender pinks in creation. Verily, Nature is better than any account of it.

Mr. Backhouse, of York, an authority on alpine flowers and rock gardens, says



The European pasque flower (*Anemone pulsatilla*) as grown at Rochester, N. Y.



The wood anemone of Europe as grown at Rochester, N. Y.

that the blue wood anemone (Robinsoniana) is an American variety! If so, it must belong to quinquefolia. Davis, however, who was the last to monograph the genus, puts it with nemorosa. Can anyone tell me when and how the blue wood anemone originated, and to what species it really belongs?

This group of anemones is of easy cultivation in the wild garden or rock garden. The plants require such conditions of soil, shade and moisture as they find in woods and rocky places. Do not plant them in full sunlight among garden flowers. A writer in *The Garden* (London) says:

“As the Pasque Flowers ripen plenty of seed, they can always be best increased in this way. Good seed will germinate readily and freely, especially if sown as soon as it is quite ripe. It is best to sow the seed in good-sized pans, and plunge them in ashes in a cold frame, so that they can be protected from heavy rains, but yet not be allowed to get dry at any time. The pans should be thoroughly well drained, and a sandy loam is the most suitable soil for the seedlings. If germination takes place the same autumn, the seedlings may be left in pans during the winter, and potted off, or

pricked off into other pans in spring when they start growing again. When the seedlings are large enough to plant out, select an open situation in well drained, somewhat dry soil.

RARE ANEMONES FOR COLLECTORS

There are half a dozen species in the Pulsatilla section which are not sharply distinguished in Bailey's Cyclopedia, and perhaps they cannot be.

The type is the European pasque flower (*A. Pulsatilla*), of which vars., rubra, lilacine and alba are offered abroad.

Another European species is *A. patens*, which is said to have larger and more pointed flowers than *A. Pulsatilla*.

The shaggy Swiss anemone (*A. vernalis*) is said to be the smallest, but full of charm. *A. Halleri* is another Swiss species with large whitish purple flowers.

We come now to the later-blooming members of the Pulsatilla group, which are generally said to bloom in May.

The most famous of these is the alpine windflower (*A. alpina*), with flowers 2 or 3 inches across, creamy white inside and purple outside, but varying much. All the other pulsatillas have solitary flowers, but

this one often bears two or three on a stem. It blooms at Ottawa about April 24 to May 23.

Its variety sulphurea (*A. sulphurea*, of nurserymen) has larger leaves and flowers, and blooms later.

The Pacific Coast representative of *A. alpina* is *A. occidentalis*, with white or purple flowers only, 1 to 2 inches across.

The meadow anemone of Europe (*A. pratensis*) differs from all the preceding species in having drooping, bell-shaped flowers. Normally it has very dark purple flowers but there is a cream colored variety. Blooms at Ottawa April 28 to May 19. The variety montana grows 1½ ft. high, and has dark flowers appearing at Ottawa May 5 to June 3; catalogued as *A. montana*.

The following seem to have come in since Davis published his revisions of the garden anemones in Bailey's Cyclopedia and *Vick's Magazine* for 1900, page 108.

A. cernua, a Japanese species, said to have “dark crimson” flowers.

A. intermedia, a hybrid between nemorosa and ranunculoides, having pale yellow flowers.

A. Regeliana, a Siberian form of *A. Pulsatilla*.

The Best of All The Tropical Fruits—By John Gifford, ^{Florida}

INDUSTRIAL DEVELOPMENTS FORESHADOWED BY THE NEWER IMPROVED VARIETIES OF MANGO, A FRUIT THAT TO THE TROPICS IS ALL THAT THE SEVERAL DIFFERENT ORCHARD FRUITS ARE TO NORTHERN CLIMES

SOME call the mango “the apple of the tropics.” It is more; it is the apple, peach and pear combined. The novice in eating the old common seedling sorts meets with difficulties. Such an experience is sure to prejudice him against mangoes forever. These old-time sorts have the smell and taste of turpentine and a tough cottony fibre around their big seeds which completely fills the crevices between the teeth, making business for the dental profession. It is mushy, slippery and hard to hold. The juice stains the clothing. One smells and feels and looks as though he had been the victim of a yellow paint accident. After eating such a fruit for the sake of three or four tablespoonfuls of pulp, one must take a bath and then retire to some shady nook for the rest of the day to pick his teeth. But some of the improved sorts which sell locally at twenty-five cents each are quite otherwise. The skin peels off easily, the aroma is pleasant, there is no fibre, the seed is small, the fruit weighs twenty or more ounces and the creamy, delicious peach-like pulp melts in your mouth. I have never tasted a mangosteen, which, according to the books, holds the world's record for goodness, but of all the

fruits I know, temperate and tropical, two or three varieties of mangoes lead in my estimation.

South Florida is making rapid strides in mango culture. Many varieties have been introduced from all parts of the tropics, both by the government and enterprising growers. Many choice seedlings are just coming into fruit and our budding are learning the trick.

I have always contended that a Florida seedling mango will become the commercial mango of the future. None of the choice imported sorts fill the bill perfectly. There is usually some defect, such as shy-bearing, poor carrying qualities, or lack of resistance against pests. If the government had imported a large quantity of seeds of all the best varieties of mangoes the world affords ten years ago, we would now have several new varieties of local origin which would exactly fill the bill for home needs and shipment North.

It is possible that we have it anyway in the form of a seedling Mulgoba, bearing this year for the first time; it is too early to say. But this tree bears fruits of a large size, of very beautiful coloring; hard, rather thick skin; no fibre; small flat seed and delicious flavor. It remains to be seen whether it is a shy bearer



Type of the improved Mulgoba mango; rich, luscious, and devoid of fibre. Actual size

or not. This is the fault of many of these high-grade mangoes. It is possible that this difficulty may be remedied by root-pruning, girdling, or by a proper fertilizing.

I have a little book on the mango written by Woodrow of India, the man who sent Mulgoba plants to Florida in 1889, in which over eighty varieties of mangoes are listed and this is probably not more than half of the varieties now known, many of which are of recent origin and many of which are no good.

For instance, the Alphonse, Alpoos or Alfoss is highly prized. Higgins thus describes it: "This is one of the most noted of the India mangoes. Size, medium to large; color, greenish yellow on the unexposed side and running to yellow on the exposed side, which is overlaid with light red; peeling qualities excellent; texture excellent, may be readily eaten with a spoon; flavor unique, with a peculiar mingling of acidity and sweetness in the bright colored fruit." In looking over Woodrow's list, on the other hand, one runs up against all kinds of Alphonse. For instance:

Afonza of Goa; Alphonze, Kirkee, "the keeping qualities of this fruit are excellent and it is generally admitted the best of all mangoes. *The name is applied in the markets to many distinct sorts of greatly varied merit.*" (The italics are mine.) Kola-Alphonse; Kagdi-Alphonse, Bombay; Surawini Alphonse, Bombay. In fact, it seems that whenever they found a really good mango, they called it Alphonse.

The Mulgoba, Cambodiana and a long yellowish kind from Burmah are my favorites. There is a little mango in Florida about the size of a peach, yellow in color, with a beautiful pink blush on one side. It has a thin skin, no fibre and delicious flavor. It is commonly called the "peach mango" and was raised from seed sent from Jamaica. For home use one would hardly wish for a more perfect fruit.

The Khatkia, according to Woodrow, is meant to be sucked while others such as Fernandino II. of Goa is a cooking mango of special value. It should be stated to the credit of the mango that good apple pies can be made from the green fruit. The merits of the many kinds is a fruitful topic of discussion among mango cranks. Conclusions are not warranted as yet. It takes time to settle such questions. Some of the old timers with perverted taste settle it by saying that the common turpentine mango is good enough for anybody.

The mango belongs to a disreputable family, the Spondiaceæ or sumac family. It is probably the most respectable of all its relations. It is represented in Florida by a poison tree (*Metopium Metopium*) commonly called hog plum, poisonwood, bumwood and doctor gum. It includes the cashew nut (*Anacardium occidentale*), the jobo, pronounced hobo, and should be spelled the same way (*Spondias lutea*), the famous pepper tree (*Schinus molle*) so common in California, and the cassava (*Manihot Manihot*).



The mango is not unlike a peach tree, but evergreen, and in its season laden with the golden yellow fruit

In spite of the highly poisonous nature of many plants of this family, the mango is very wholesome although I have heard of one or two cases of "mango rash" due presumably to the excessive eating of this fruit. Negroes in many parts of the tropics practically quit work during mango season devoting themselves assiduously to making the best of a good thing while it lasts.

The mango is a beautiful, broad-spreading shade tree. Its rounded crown and dense foliage form a perfect shelter from the sun. It has a dark green leaf larger than, but similar in shape to that of the peach. It is never leafless. The young leaves are a beautiful pinkish red. The tree grows to be very large and groups of such trees around the homestead are striking features of many tropical landscapes.

The flowers are small but profuse and a dry winter season is favorable to a good crop. Some of the common mangoes bear heavily almost every year, the branches bending to the ground with the weight

of fruit. In planting the seed it is best to remove the outer covering or case by carefully cutting the margin with a sharp knife. The seed may contain two or three embryos so that it is often possible to secure two or even three trees from a single seed. It is a promising fruit for South Florida and although it bears in the summer when peaches and other northern fruits are in the market, it will sell on its merits and besides there is the probability of keeping it in cold storage till winter, when the tourists come with plenty of money and good appetites for the fruits of the land. By this means, too, the railroads and commission men may be prevented from robbing the owner of the fruits of his toil. Ten years in the future Florida mangoes will be famous. Many local varieties will be developed and perfected and become as well and as favorably known as is the Florida standard grapefruit or pomelo. The same prediction applies to the avocado or alligator pear.

Making a Garden in a City Yard—By H. B. Graves, ^{New York}

A BUSINESS MAN'S RECREATION THAT IN EIGHT YEARS HAS MADE A "PICTURE GARDEN" OUT OF UNPROMISING MATERIAL—THE PART PLAYED BY HAVING A DEFINITE PLAN

WHEN buying our home nine years ago, we secured with it two acres of land adjoining the rear of the house lot, which was of the modest dimensions of 80 x 315 ft. The two acres consisted of an oblong piece, one side 445 feet and the other 488 feet in length, with a width of 185 feet. A grape trellis and fruit trees at the rear of the lot cut off the view of this plot of ground from the house. The larger part of this two acres was covered with an orchard of fine old apple trees.

I enclosed an oblong strip in the centre of nearly an acre with wire fence for the family cow, and fortunately nearly all of the apple trees came within this enclosure. The land outside of this centre was used for the garden and landscape planting.

The first step was to put my plan on paper, and to make out lists of plants. After exhausting the favorites that were familiar to me, I began to study parks and private grounds, as well as garden literature, nursery catalogues and works on landscape gardening. The list of desirables grew fast. The more I studied the subject, and considered the importance of placing each tree or group to secure best relationship to all, the more I appreciated the necessity of the services of a first-class landscape architect in the final adjustment of the plan. I turned my lists and plan over to a man of ability and wide experience, telling him the effects I wanted to secure, and stated that he might add to or take from my planting list as his judgment dictated. The result is that my ideas have been, to a large extent, carried out, and mistakes apt to be made by an amateur have been avoided.

The house, with three first-

story rooms on the front, did not give a view of the back lawn from a living room. A new part was built and the library enlarged. All of the planting on the east side of the lot is included in the vista from a broad plate-glass window in this room. The fruit trees were taken out of the centre of the

back lawn, and the grape trellises removed.

The first planting included about one hundred varieties of trees, about the same number of shrubs, and upward of thirty kinds of climbing vines, with a few perennial flowers. Each year herbaceous plants, bulbs, and usually some choice trees and shrubs have been added. The largest planting of bulbs, about four thousand, was put in four years ago. The path was put on paper when the first planting plan was made, and it was constructed of cinders two years later. The first two years the entire plot, outside of the pasture lot, was kept under cultivation. Perennials and bulbs have been planted in colonies along the fence enclosing the pasture lot, and on the borders of shrubbery groups. The old line fences were removed and replaced with new wire fence, which was built 6½ feet high just inside of the line. This and the pasture fence were planted with climbers—Crimson Ramblers,

Hall's honeysuckle, Japanese golden-leaved honeysuckle, Belgian honeysuckle, Chinese wistaria, *Clematis paniculata* and *Virginiana* and some thirty other things.

The rear of the lot is planned for a wild garden, and here the fences are covered with wild grapes, bitter-sweet, wistaria, and Virginia creeper (*Ampelopsis quinquefolia*). While the trees, shrubs and vines for this section were largely included



A flower-bordered grass walk makes a pretty outlook from the window in early spring



Old apple trees and newer ornamentals are combined to make garden pictures. The walk following the boundary lines opens on a series of different effects



The whole garden, about two acres in extent has several distinct features



And the enjoyment and comfort of the owners are well provided for

in the first planting, and some wild flowers have been planted since, the wild garden is mostly a work for future development.

In order to screen outside objects and secure a pleasing background for the general planting, I set out five or six species of willow along the outside fence. Within three years' time these and the climbing vines gave a fairly good background and something of a parklike effect to our little pleasure ground. Laurel-leaf, golden and rosemary willows were largely used, these being planted quite near together with the intention of thinning them out as they became large. Purple foliage, with the golden willow as a background, gives a most charming color effect. During the past three or four years borers in the willows have given me much trouble, but the three kinds named have been exempt from their attacks. While beautiful all the year, nothing is more charming than the canoe birch in a winter landscape, and these have been largely used in preference to the European cut leaf, as the latter are apt to be killed by the borer that has destroyed so many of these beautiful trees in this section.

An enjoyable feature is the path, which



The border of asters skirts the walk that leads around the whole area

winds gracefully among the trees and shrubbery, making a circuit of the pasture lot, and on the east side lying principally at the left of the vista, which it crosses at the farther end. Through the wild garden the branches of the trees overhang the path. On the west side the planting is of a different nature, and includes a small collection of magnolias. The final stretch running east and west is the only part laid out on straight lines. It runs parallel with the south end of the pasture lot, between which and itself is the planting of lilacs, and at the right the fruit and a vegetable garden.

Care in planting, cultivating and mulching has resulted in the loss of but a small percentage of the planting. Some that failed to pull through the first season have done well in the second planting. The greatest loss has been among the canoe birches, some of which have been replaced three or four times. In the fall of 1909 I made an experiment, planting a cluster of eight of these, placing them closely together and interlocking the roots. I gave the clump the usual mulching, and then drove tall stakes around the planting, covering them with burlap, thus securing complete shade from the winter sun. This screen was not removed until spring was well advanced, and every one of the eight trees is living and doing well.

From the kitchen door a cement walk extends back about one hundred and fifty feet to the tool house, located at the rear of the house lot, where it joins the two acres. This walk forms the eastern or the right-hand border of the vista from the library window. On the farther side of the walk are fruit trees and a grape trellis, with some bulbs and perennial flowers, but the border on the left of the walk is the feature that gives color to the foreground of the vista. This is filled with bulbs, *Narcissus poeticus*, Emperor and Empress, and tulips Kaiserskroon, Chrysolora and Picotee. To follow these in bloom are some clumps of scarlet oriental poppies. The bulbs are planted fully four inches deep, and are left in the ground from year to year. The last of June the ripened stalks are removed, except the poppies, which not entirely ripened, are tied to stakes. The surface soil is worked up fine, and a light covering is added of

sifted rotten sod, with some wood ashes or fertilizer. With this preparation the entire border is planted with branching china asters. At the left of the vista, beyond the clump of Japanese evergreens seen on the picture, the setigera and rugosa roses are bordered with early and late red tulips, with a few groups of white, and some scarlet oriental poppies. The bulbs here are usually followed by *Salvia Bonfire*, and a little bay extending between the roses makes a capital place for a few plants of nicotiana, which mingle their white blossoms with and above the rich green leaves of the rugosa. Three *Magnolia stellata* are planted so that the blossoms and foliage give appearance of a bank of white blossoms some thirty feet long. Two clumps of forsythia, one fifty feet beyond the other, give the appearance of a continuous mass of blossoms.

At two points Lombardy poplars were planted to screen telegraph poles and in other places trees are also planted to hide some object beyond. In order to get the proper location for these, a long pole with a white flag at the end was placed in different positions until it came in line between the view point and the object to be screened.



Passing under an arbor of clematis and flowering vines. See also the opposite picture



(EDITOR'S NOTE.—We want to know how successful workers do things in order to put actual experiences before our thousands of readers in all parts of the country. Every reader is invited to contribute a short note on some interesting experience. Just state the facts about some ingenious idea that you have actually worked out yourself or have seen.)

A few years ago, in one season, I caught twenty-seven moles in my small garden, and twenty-four of these in one row of peas less than thirty feet long, the number about evenly divided between noon and night. I used the spring spear trap. — W. H. R.

A part of the hardy border of our garden is so shaded by an overhanging tree that we had great difficulty in inducing any flowers to bloom. Finally, quantities of ferns, in as great variety as the neighboring woods afforded, were transplanted. Then the impatiens (*Impatiens Sultani*), which had flowered freely in the house all winter, was "vivisected," and the slips planted along the border of the bed. They all rooted successfully, and made a lovely mass of rose-pink all summer and autumn. Among the ferns several varieties of tuberous-rooted begonias were planted. The cool green of the ferns and the soft coloring of the begonias were most pleasing on hot days.—F. B. C.

I want to disagree with B. G. who wrote, in the Readers' Experience Club for November, that "cats should never be allowed in a garden unless planted three feet underground." My cat has been for eight years my constant companion in my garden. He is so well fed that he has no desire to catch the birds nor does he appear to frighten them away, as B. G.'s "chipping sparrows, song sparrows and robins" are found in my garden together with orioles, summer yellow birds and others. The only insect pests from which I ever suffer are aphid on young rose shoots, and I do not spend much time in spraying, either. Cats and gardens can "go together" comfortably if the cat is well fed and is taught properly. I do not say that a well-fed cat will never catch a bird, for he will. Mine has had three this past season, to which I consider he is as well entitled as I am to an occasional quail, reed-bird or snipe. In travelling about England I have noticed that the garden is exceptional which does not show at least one cat, and in some gardens — not very large — I have seen as many as six!—M. A. H.

A charming little picture I noted this spring was a clump of scarlet Japan quinces with an underplanting of white dogtooth violets. The almost bare branches of the quince seemed to rise from a mass of the handsome speckled foliage of the bulbs as if they were part of them. Dog-tooth violets are plentiful almost everywhere in the spring but securing the bulbs demands a search warrant and an expert miner! They are down at a remarkable depth, considering the size of the plant, and they seem to ramble around and send up their leaves in a manner which disguises the real location of the bulb. —D.

I have had an annoying experience in trying to secure the Dropmore variety of *Anchusa Italica*. Various dealers sell various plants under this name. From one I secured a dwarf plant, evidently *Anchusa angustifolia*, with a militant Dutch blue color that fought with everything within reach. A lot of a dozen bought from another dealer were *Anchusa Italica*, but there was a very marked difference among these plants. Some had much larger flowers than others, and some were a better blue than others. The foliage, although rather coarse and weedy, is so overshadowed by the wealth of flowers that it is forgotten. None of my plants survived the first year, I am sorry to say. They seemed to bloom themselves to death. It would be interesting to know what firm sells the true Dropmore variety. It seems evident that some of them are selling seedlings which do not come true. —S. R. D.

Wallflowers are hardy in Northern Illinois if kept dry. This statement is made in endorsement of a note from a reader of THE GARDEN MAGAZINE printed some time ago. This reader was from the "Show Me" State and said that wallflowers could be grown in Missouri



These wallflowers lived over winter in Missouri by being kept dry

provided they were kept dry in winter. Last year I raised a lot of wallflowers and placed them in a coldframe, which was not built with an idea of providing warmth but merely to protect such plants as Canterbury bells and foxgloves, the crowns of which rot so readily if subjected to thawing and freezing while wet. Everything in this frame froze several times, the temperature dropping to ten and twelve below zero repeatedly. Not a wallflower was hurt in the least; snapdragons were killed, while others left in the open ground and covered with a light mulch survived. These wallflowers bloomed in April and were brought through the winter in splendid shape by merely being kept dry. —C. D. J.

The sweet pea article in the November GARDEN MAGAZINE interested me exceedingly. A friend of mine, a rose grower in New Jersey, puts her sweet peas into the ground in the fall in a sheltered spot and allows them to get a few inches above the ground, contrary to the theory expressed in the article just mentioned. She then covers them lightly with straw; the vines survive the winter and bloom very early. She also sows the seed in a coldframe in early spring, and has a bountiful supply of peas all summer. —C. J. D.

Experiments make the garden game worth while, but experience often makes the game better for some one else. So let me pass on my experiment and experience with *Nicotiana sylvestris*. Do not use it in a small garden. Put it in large groups in the shrubbery, or use it as a bold background where one has room. It is worse than hollyhocks for spreading over the ground. A year or so ago THE GARDEN MAGAZINE said this variety was superior to *N. alata* as its flowers kept open all day instead of wilting in full sun. I grew it for the first time last year placing it during August in bare spots, as I always do the *alata*, for bloom in September and October. It waxed mighty and strong, and many lower leaves had to be cut off to save young perennials from being smothered. In one border where it had full play, it grew eight to nine feet tall. It is effective, but its flowers do droop in sun, though not quite as badly as those of the older *alata* for they grow differently, are much smaller individually and hang from a large flower head. What a difference of scent there is in *Nicotiana*! One of my old plants that self-seeds in the same spot each year has a decided lily perfume; others have scarcely any or, at best, just a faint petunia-like odor.—F. E. McI.

Spinach, as everyone knows, is a rank feeder and likes to have its food near the surface of the soil. A plan I have followed every year with great success is to plough the soil, then manure and harrow it, which leaves the manure where the plants can quickly reach it. —C. J. D.

CHILDREN'S GARDENS EVERYWHERE



THE GOAL OF OUR GARDEN WORK LIES WITHIN THE BOUNDARIES OF THIS CHILD'S OWN HOME. IT IS HIS HOME GARDEN OR HIS EFFORT TOWARD THE IMPROVEMENT OF HIS SURROUNDINGS WHICH TELLS THE STORY OF THE INCENTIVE WE HAVE GIVEN HIM.

Conducted by
ELLEN EDDY SHAW
New York



The Soil Pantry

WE CAN look upon the soil as a great big pantry full of food. This food often is locked up in the pantry, locked so tightly that even the plants themselves cannot get at it. This is pretty serious. We expect to find certain soils with little food in them because they are really poor and lack food. But it is amazing to think about soils which have plenty of food and to spare, but cannot give out this food in proper form so that the plants may get the benefit. Where can a boy or girl find a key which will unlock this soil pantry?

What is plant food? There are a number of chemicals and combinations of chemicals which serve as foods to plants. Some of these are very important. Others are less important, not so necessary to plants as others. The foods we should know about are the absolutely necessary or fundamental ones. There are three of them: nitrogen is one, potash another, and phosphorus the third. You can always tell whether or not these foods are actively present in the soil by the appearance of the plant. Suppose its foliage is fine and green and abundant? Then you may know that there has been plenty of nitrogen given to that plant. Now appears a well-formed flower which tells us that potash is available too. Good sound fruit has been fed by potash and phosphorus.

Suppose the plants' foliage look weak and sickly; then by this sign it is evident that nitrogen is lacking in the soil. If

there is trouble with flowers and fruit, although the previous growth has been good, then potash and phosphorus are needed.

I suppose the next question you would ask is concerning the best form of these different plant foods to add to the soil. Put on manure for nitrogen. Bone ashes or phosphates will give the phosphorus. For potash get the muriate or the sulphate of potash and wood ashes. Perhaps nitrogen is the most universally needed, the most generally lacking food.

The real key to the food question has to do with bacteria. We hear a great deal about bacteria in these days. Bacteria are present in the soil too. There are good bacteria and bad ones. The good ones act upon the soil and change the food into forms which the plants can take in. The bad ones prevent this. To encourage the good and discourage the bad ones the best conditions must be present. The best conditions are these; first, plenty of air; second, water in right amount; third, a sweet condition of things; and lastly, extra plant food if necessary.

Clay soil, you have found out (by experiment), has the bad habit of squeezing its fine particles up into tight masses and thus excluding air. So clay soil needs to be helped over that weakness. It is a soil which bakes and cracks in the sun; it is a soil which is cold and wet in early spring. We must change these conditions. Again old rotten manure will put this soil into shape. This sort of help is a physical one. When manure was added just for the nitrogen element in it, the

soil was improved chemically. When we add manure we also improve the soil physically by breaking up its bad habits. Ashes or sand mixed with clay will also improve it physically.

Sand has a bad habit, too. It is that of letting water pass through it too quickly. Sandy soil has not enough body. Rotted manure added to this soil puts into it what it lacks both chemically and physically. What is true of sand physically is true, too, of lime soils. These need more body; they also need to hold more water in their own mass. Rotted manure is the remedy for both of these.

And so the great question is: How can I make the soil of my garden hold just the right amount of water and give up to the plant its proper and right food?

Seed Tests

LAST month's tests were with soils; this time try the following with seeds:

Experiment 1—Count out 100 seeds of the kind you wish to test. If the seeds are large, like squash or bean seed, take but fifty. Place on a plate a damp blotter, and on that sprinkle the seed you wish to test. Cover with another damp blotter. Have as many of these plates as you have kinds of seed to test. After a day or two count the seeds which have sprouted or germinated. How many did not germinate? What is the percentage of germination? Work out the germinating per cent. for all the seeds you are going to plant this season. Make a germination table.



Note the method used by Mabel in training her prize tomatoes



Boy's Garden. Background of foxglove; effective foreground of Shasta daisies



A part of Roger's flower garden; 105 different varieties were in this garden

Experiment 2 — As you do experiment 1, note the number of days it takes the different kind of seeds to germinate. For example, how many days before lettuce starts to sprout? How many days does it take corn to germinate? Suppose some of the lettuce seed begins to germinate on the sixth day and after the eighth no more seed sprouts. Then the germination time for lettuce seed is from six to eight days. Work this out for your other seeds. Call this a germination table or a germination time-table.

Experiment 3 — If you have some seed two years old, some of the same kind three years old and some of this past season's seed, test the effect of age upon the power to germinate. You may have corn seed from several years back.

Experiment 4 — Try the effect of deep planting. Take corn for this experiment. Plant some 1 inch deep, some 2 inches, and so on up to 4. Keep track of the number of days it takes each lot of seed to come up. What effect has deep planting upon corn seed? Try this with any seed you like and in different soils. Plant the seed in pots or in separate boxes.

The Children's Contest Letters

THE following are a few letters written by some of our "contest" children concerning their gardens. These are a part of the report required by the contest conditions.

I HAVE had 105 different kinds of flowers in my garden this last summer. My seeds for plants sold cost me \$4.25. I have sold plants and flowers for \$22.95 and took \$2.50 in prizes, making \$25.75. I started my seeds April 5th, in my hotbed, expecting to sell only aster plants, but people wanted a few of the others, so I sold them. On account of dry weather I did not get large enough blossoms to get many prizes exhibiting. I raised some handsome water lilies in a tub. I am saving my money for a greenhouse.
Worcester, Mass. ROGER NEWTON PERRY.

OUR GARDEN festival was very fine. All the schools and many home gardens were on exhibit. I am happy to report six first premiums out of nine entries, including one special first on asters.

I won easily on tomatoes (which averaged over one pound each). I entered more for display and must say I was much surprised when the judges placed first banners on my parsnips and celery, and special first on my asters. The best premium or the one I prize the highest is one year's subscription to THE GARDEN MAGAZINE. We have had a very warm dry summer here, no rain in July or August, but I am much encouraged with my summer work. So far this season my receipts are \$35.40, my expense \$4.21, leaving me a balance of \$31.19. I sowed all my perennials in coldframes on the fifteenth of August. They are now nice, hardy plants. I will only protect them with boards this winter, and transplant to hot sash about March 1st. I hope this, together with my chart, pictures, press clippings and premium cards will give you a fair idea of the interest and pleasures I have taken in my garden this season, and place me in a favorable position in class "A" of THE GARDEN MAGAZINE'S National Contest.
Cleveland, Ohio. MABEL JANE MUSSER.

MY VEGETABLE garden was 24 feet long by 16 feet wide with two paths running cross-ways, each 1½ feet wide. In this garden I grew twenty different varieties. I will tell the amount of each variety.

Corn (2 varieties).....	4 dozen ears
Red cabbage.....	4 heads
Green cabbage.....	4 heads
Tomatoes.....	½ bushel
Potatoes.....	½ bushel
Beans (bush).....	(2 plantings) ½ bushel
Beans (pole).....	½ bushel
Beets.....	1 ½ bushels
Carrots.....	½ bushel
Parsnips.....	½ bushel
Turnips.....	½ bushel
Squash.....	4
Cucumbers.....	1 dozen
Radish.....	(3 successions) ½ bushel
Onions.....	½ bushel
Parsley.....	½ bushel
Spinach.....	½ bushel
Cauliflower and Brussel sprouts	too late for exhibit.

My flower garden was 8 feet by 10 feet, with twenty-one varieties, namely:

Asters (4 varieties)	Poppy
Dablias (5 varieties)	Love-in-the-mist
Zinnia	Candytuft
Morning Bride	Marigold
Phlox	Dianthus
Snapdragon	Cosmos
Larkspur	Verbena

Waltham, Mass. R. GREENLEAF BRUCE.

I HAVE a pretty good garden this year of about the same size as last year, but have more and better things. For vegetables I had two varieties of sweet corn, two varieties of carrots, two varieties of tomatoes, two of potatoes, and three of beans. The other vegetables were beets, turnips, cauliflower, cucumbers, muskmelons, citron, pumpkins, two varieties summer and winter squash, onions, parsnips, cabbage lettuce, curly leaf lettuce,



Howard supplied his home with vegetables all summer. Area of garden 50 x 40 feet

cabbage, and besides these I had a patch of yellow field corn. I had fifteen varieties of flowers. The cutworms bothered quite a little the first part of the summer so that I had to put paper around the cauliflower and cabbage plants when I set them out. I entered a collection of vegetables and flowers at the Groton Fair, September 29th, and got second prize.

Groton, Mass.

PAUL H. WILSON.

I PLANTED my nasturtiums in a place about ten feet long and twenty-seven inches wide. I planted two rows of seeds and put them about three-quarters of an inch under the ground. They came up in about a week and they grew rapidly. I planted them about the first of April. About May they had advanced very much. About the first of June the plants had little green worms on them. I sprayed with arsenate of lead, and in two or three days I had gotten rid of the pests. My first flower came out on July 4th, Independence Day. I have had a great many bunches of nasturtiums since July 4th. They were the climbing nasturtium. The leaves were very large, and I soon had to put strings up for them to climb on. I planted them right under the dining-room window and they were also at the foot of the porch steps. I planted my sweet peas, but only a few came out as it was rather late when I planted them. Those that did come out were very large and fragrant. They were planted against a fence in a bed about seven or eight feet long and a foot wide.

Rochester, N. Y.

ESTHER HENCKELL.

I WILL describe how I cared for my plot in Hudson Park. The ground was measured into plots three by six feet. The earth had to be dug with a spade. The large stones were removed by a rake. After this was completed the work of sowing the seeds began. I divided the ground into five rows. In the first I planted radishes, a few seeds in a place and about an inch and a half apart. In the second, beans, one in a place and a few inches apart. In the third, beets, a few in a place and a few inches apart. In the fourth, carrots, which I scattered along the ground. The fifth, I divided into two parts, putting onions in one part, and in the other I scattered lettuce seeds, and when it had grown to a certain size I transplanted it. I took great care that the weeds would not choke out the vegetables while growing. I watered them three times a week after the sun went down. Farming is entirely new to me. And I hope by next summer my garden may be even a greater success.

New York City.

RICHARD QUIGLEY.

From a Boy's Garden

AS A faithful old reliable, the foxglove is one of the best flowers in the garden. Once grown, it reseeds itself industriously in all corners. We have grown it with much success, some plants attaining a height of nine feet.

Those in the picture were found by a little boy, growing in various parts of the garden, and planted by him in a "nursery." In the fall they were planted in his corner at the end of an old-fashioned border. Some were planted close to the edge of the border, thus bending gracefully over its edge to whisper courage to the daisies. For effect and charming picturesqueness, the foxglove occupies a place of its own.

This summer the boy has discovered some eight or nine dozen foxglove plants here and there in the garden, which are now a flourishing colony ready for their permanent places. It is a biennial, blossoming the second year after sowing. The white foxgloves are especially beautiful, sometimes oddly penciled.

When the foxgloves had finished blooming, the Shasta daisies (planted in front of them) opened their handsome white flowers, so the corner was attractive all summer. The gap in the daisies was where a mole showed an appetite for tender green leaves. Next year the boy plans to have a longer row by using all the new foxgloves and dividing the daisies into more plants.

The boy has started a seed-bed of his own by gathering ripe seeds from the flowers, and wherever there happens to be a bare spot he asks, "Can I have that for my garden, too?"



THE HOUSEKEEPER

Making the Most of the Squash

By ANNA BARROWS, New York

IT IS worth while even this early in the year to consider the end thereof. For of all the vegetables that round out this time of the year none equals the squash in importance or real value. For the winter table, however, we must plan beforehand.

Once well started in the spring in a deep moist soil, squashes require little care, and a small patch will yield a winter's supply for a family. Even in a dry season they thrive and though the squashes may not be as large or as numerous they are drier and more mealy than when there is plenty of rain.

The illustration gives an idea of the thickness of the shell in some varieties of squash. The kind which furnished these pictures has often been brought from the home garden, kept in a city flat through the winter and until after the fourth of July. Each squash that is used has a somewhat thinner shell than its predecessors and in the late spring or early summer there is only a thin skin, the remainder of the hard shell having softened in pulp like the rest.

It also shows two of the best utensils for sifting squash or pumpkin or similar vegetables — the usual potato ricer and an inexpensive puree strainer.

One of the most satisfactory ways to serve the hard-shelled winter squashes is cooked in its own shell. Split the squash as regularly as possible that the shell may be a shapely dish for the table. Some are better split across, some lengthwise. Take

out the seeds, but do not scrape the pulp clean until the squash is steamed or baked. The oven should be moderate or the sweet juices of the squash will brown too fast — an hour will be none too long to make the pulp tender to the shell. Carefully scrape out the pulp. Trim the shell into better shape with scissors if needed, but be careful not to break it. Mash the pulp fine, perhaps press through a potato ricer. Season with butter, or cream if the squash is dry, salt and pepper. Refill the shell and brown slightly in the oven. A border may be forced through bag and tube. The pulp of a whole squash thus may be put in the half shell.

Yet another way, suitable for a squash with only medium hard shell, is to cut it in pieces suitable for individual service — brush over with melted butter — put in a dripping pan or deep pie plate and

turn another closely fitting over it. When the squash begins to soften or in half an hour remove cover and bake till soft and slightly brown.

But it is usually more satisfactory for general use to steam the squash in its shell, which requires about half an hour — then scrape and put through a colander or potato ricer and season as desired.

An early writer on household affairs, Miss Catherine E. Beecher, in some of her recipes suggests that left over squash, if not mashed is "excellent fried for next day's breakfast." She also advised saving the water in which the squash was cooked for yeast or for brown bread, thus recognizing that much of the sweetness of the squash is dissolved and lost if it is cooked in water which is thrown away.

The preparation needed for a squash pie is that described above. If the squash



Squash delicacies that help out the winter table. Note the thick meat of the cut specimen



As the season advances the rind of the squash gets thinner. Two tools for preparing squash

was buttered and salted and only slightly peppered any left from the table may be used in a pie. The squash varies so in texture that it is difficult to give proportions for a pie. However, one cup of dry squash is ample for an average pie plate. Combine this with a custard made of two eggs, one pint milk, one-half cup sugar, flavor with nutmeg, cinnamon, ginger.

Line a deep plate with thin crust, pour in the mixture and bake in an oven quickly first, to cook the crust, then slowly till the whole is firm, which is usually shown by a puffing of the centre.

On the other hand, if the squash is moist and there is no time to let it dry away,

use one and one-half cups or more of squash and correspondingly less milk.

Condensed milk or the milk powders are useful when squashes are watery.

The squash biscuits or rolls shown in the cut are made by combining one cup of cooked and sifted squash with each cup of milk in an ordinary recipe for raised rolls. The squash in any case is so moist that additional flour will be required. The result is a soft roll of rich golden color as if much egg yolk had been used.

Cream of squash soup is made much like the familiar cream of tomato or mock bisque soup. Use one cup sifted squash for each quart of milk. Thicken with two tablespoonfuls of butter and the same of flour cooked together. Season with salt, pepper and onion. Strain and add a little fine chopped parsley or green pepper just before serving.

The old time housekeepers used to dry the pumpkin and squash much as apples are dried—and sometimes they were used for preserves—alone or combined with quince or some high flavored fruit.

Some Turkish sweetmeats have squash as a basis. The squash is cut in strips and partly boiled, then is cooked in syrup until well preserved. The syrup is finally flavored with rose water.

A Harmonious Bed Cover

IF a bedroom leads directly out of a living-room the bed itself is the one thing which seems to stand out and proclaim itself. A very pretty covering for a bed is one made of monk's cloth. Monk's cloth looks like a burlap. The color is just a natural one. It does not come in

different colors as does burlap. The texture of monk's cloth is pleasing, as is the coloring. It harmonizes well with any room furnishings.

A Cooking Kit

IT is a problem how to cook a dinner over a one or two burner oil or gas stove. As soon as one or two vegetables are cooked these must come off and others go on. While the latter are cooking, the former are cooling down. Then finally comes the grand rush of trying to have everything hot, and the mother of the house is hot and disturbed when dinner is served. By using the following contrivance a hot dinner of several vegetables, soup and even meat in certain forms may be served.

Get a large agate or porcelain kettle or even a 5-pound lard pail will do. Then gather together a small pail or two, some baking-powder tins and a wire basket.

Let us have potatoes, beans, squash, and onions for the hot part of this supposed meal. Place the beans in a small pail with the water for their boiling and in another pail or tin go the onions. Now place the tins and pails, all nicely covered, on the bottom of the large pail. Pour in water. Fill in chinks between the pails with the potatoes. The wire basket should fit down into the top of the pail and in this put the squash. Cover the kettle and place over the one little burner.

You might wish to cook certain things which take different lengths of time for their boiling. Suppose you wish to have some brown bread for the evening meal. Put it in its own can and start it ahead of

the other food. If one has a two-burner stove then start one kettle with those things which take a long time for cooking over one burner. Later put on the second kettle with its foods requiring less time for their cooking over the second burner.

New York.

E. E. S.

Afternoon Tea

ALL lovers of lemon served in tea will like this combination. Add to a cup of clear tea a teaspoonful of orange marmalade. Stir it in well. The resulting flavor of orange combined with lemon, which is of course necessary, is delicious.

Meat Soufflé

THIS is to be made of the final remains of a roast which has been served up for several meals. Chop the meat fine. Warm it up in its own gravy or a little hot water. To a cup of chopped meat plan to use one egg. Beat the eggs, both white and yolk together, with a quarter cup of cream or milk for each egg. Add salt, pepper, and butter. Mix with the meat and cook for fifteen minutes in a double boiler. Line a baking dish with mashed potato, pour the hot meat mixture into this, and cover with potato. Brush over the top with the white of an egg and drop little pieces of butter here and there over it. Cook for twenty minutes. Serve hot.

Keeping Cut Flowers

IN A symposium of ideas as to the best way to preserve cut flowers in water which I read some time ago nothing whatever was said of a little point worth knowing and observing. In cutting the stems (which should, of course, be repeated every time that the water is changed), use a knife and cut diagonally. That adds to the suction area of the cut part.

H. S. A.

A Cheese Supper Dish

SOAK one cup of bread crumbs in one cup of milk. Add to this one well beaten egg, salt, and last of all one cup of cheese cut in. This is only a small individual portion to be baked in a ramekin. For four or six people the ingredients can be increased accordingly and one large dish may be used for baking.

Doctoring an Omelet

EVERY one knows this receipt: 3 eggs, 3 tablespoonfuls of milk, a pinch of salt.

Beat separately the whites and yolks of the eggs. To the yolks add the milk and the salt. Fold the whites into the yolks.

But it is far better if, after beating the whites until the mass is perfectly stiff, one-half is then thoroughly stirred with a spoon into the yolks and milk. Fold the other half in. This makes more body to the omelet and less froth.



A great deal can be done to lighten labor in the kitchen by making the plan fit the conditions. In this case there is ample work space, and the sink is properly put in the lightest place. The space-saving recess in which the table fits is a novel feature, too.



Rescuing Worn-out Bulbs

AN excellent February idea for amateur gardeners is that each one should establish an individual "Band of Hope for the Rescue of Orphaned Pot-Hyacinths." The formula says: "There is much good in everyone, and a rather papery and battered hyacinth bulb is not necessarily beyond restoration to a life of usefulness." This is a fact. I have been sole proprietor of such a mission for nine years, and the rescued now amount to two good pecks; or to fifty square feet of crowded flowery beds, if you are not used to measuring hyacinths by the peck like rutabagas.

The whole trick lies in keeping the potted bulb in a light, cool place, not only till the spent flower-stems wither, but so long as it has leaves. Given light and a little water, the leaves will rebuild the bulb. For convenience, I keep my spent plants in bedroom windows until the first of April, and then, removing pots without breaking the root-ball, earth them in some flower bed in which the soil has thawed enough to be manageable. By the middle of June large, rather light-weight bulbs will be found, with no roots nor leaves. These, with the few offsets they may have made, should be taken up, cleaned of soil, and well dried all summer. Plant in October or November in light soil, preferably in beds left empty by the freezing off of annuals. The forced bulbs are not usually worth potting a second year; but planted out closely in beds they make a cheerful show — Dutch Romanized, so to speak — slender, extra early, and often smaller in bells than the year before.

All of the bedded bulbs and bulblets should be lifted and cured as before when their leaves have died. By the second year some of the original roots have made three or four small flowering bulbs, while some have attended just to rebuilding their own stout persons. These last may be graduated from the sanatorium and go back into pots for the winter, or they will produce splendid flowers in the outdoor bed. A small offset will, in five or six years produce a true "exhibition spike" and in a year or two after that will split itself into small trash again, to begin life over. Thus, in my two pecks of bulbs saved from eight seasons, I find sometimes one grand flower-spike of a double blackish tint; sometimes two poor stems; sometimes two good stems and one poor one; and at last a half-dozen little double blacks, fairy size. Al-

lowing for mortality, I may next have five medium spikes of the black, and next year after that, three fine ones and one fair. With all costlier sorts the increase is slow — Morena, Gigantea, and La Peyrouse on the contrary, are as the English sparrow's posterity; they ripen early, therefore ripen perfectly, and get the very most out of their roots and leaves before being lifted in June. Pennsylvania. E. S. J.

The Rejuvenation of Azaleas and Poinsettias

ON THE 22nd of February, 1909, I received as a gift, an azalea which was covered with exquisite pink and white blossoms. It remained in bloom for nearly a month. When the last blossom faded, I removed the plant from the parlor with the intention of throwing it away, as I supposed, being a hothouse plant forced into bloom,



After your Christmas azalea has finished blooming, keep the soil moist and it will bloom next year

lowing for mortality, I may next have five medium spikes of the black, and next year after that, three fine ones and one fair. With all costlier sorts the increase is slow — Morena, Gigantea, and La Peyrouse on the contrary, are as the English sparrow's posterity; they ripen early, therefore ripen perfectly, and get the very most out of their roots and leaves before being lifted in June. Pennsylvania. E. S. J.

It had exhausted its vitality. I was told, however, that if it was never allowed to become dry, it would bloom another year. The experiment was surely worth trying. During the spring and summer I watered it occasionally, and in the autumn repotted it, using very rich earth. A florist told me afterwards that it

would have been better to have repotted it in the spring.

Late in November, buds appeared. Every few days, I would plunge the pot in a deep pail of water, allowing the water to reach as far as possible into the branches. I also sprinkled the leaves. This was continued until the color began to show in the buds. Once a week I used a little ammonia when I watered the plant.

A year afterwards, on the 22nd of February, 1910, there were over seventy blossoms on the plant and a few days later there were more than a hundred. The plant was much larger and more beautiful than when I received it.

I had a similar experience with a poinsettia which was given me one Christmas. I cast that aside also, but my housekeeper rescued it, put it in a sunny pantry window and tended it until it began to put forth new leaves. In the fall it was repotted and at Christmas time — it was again in bloom; but it presented a grotesque appearance, as the blossom was at the end of a leafless stalk nearly two feet high. I subsequently learned that the leaves had dropped because I had allowed it to become too dry. The poinsettia needs to be kept moist (not wet). It should also be cut down when it is through blooming; then it will branch out and be attractive in shape. Massachusetts. ETTA RICH SOULE.

Raising Snapdragons from Seed

I DO NOT believe any plant can give more satisfactory results in a garden than the snapdragon; it is so easily grown and seems to be practically free from insect pests. I have always had them in my garden, but never in such quantities as last summer. And it was the result of two packages of seed sown indoors in small seed pans about the last of February.

One package was of pink snapdragons and the other red. I gave the pans bottom heat to hasten germination by placing them on boards over the radiator in my room for a few hours each day, until the plants showed above the surface of the soil. A piece of cheesecloth, laid over the top of the pans and kept moist, prevented the surface from parching and injuring the tiny shoots.

When the plants were from one to one and a half inches in height they were transplanted and placed in a window with a southern exposure, which gave the needed light and sun. Three transplantings developed good strong plants by the middle of May, when they were set out in the open ground.

The two packets of seeds produced from one hundred and fifty to two hundred fine plants — enough for myself and all my neighbors. The plants bloomed from July until hard frost in November. Cutting simply seemed to increase the blooming capacity of the plants. The main stalk, of course, always gives the largest and finest bloom, but when it is cut off a number of side shoots send up blooms which are smaller but quite as beautiful.

If you have never grown snapdragons in your garden, try this little experiment just for fun. Pennsylvania. H. G.



Snapdragons are easy to raise in the house. Sow seeds in pans, give bottom heat to hasten germination, covering with cheesecloth to prevent the soil from drying out. The third picture shows the seedlings four weeks after the seeds were sown



An Amateur's Peach Orchard

MY ORCHARD of less than fifty trees was set, primarily, to furnish choice fruit for family use through as long a season as possible; secondarily, to test and compare a number of the old and the most promising of the new varieties. It is in the latitude of, and less than a score of miles from, the upper part of New York City, at an elevation of probably 200 feet above sea level. The surface slopes gently to the east, giving good air and water drainage.

The soil is sandy to a depth of thirty feet, underlaid with red rock. It has been severely affected by drouth nearly every summer. It was pretty well worn out when the first trees were set six years ago. The trees have since had practically no commercial fertilizer or chemicals, but coal ashes, with a small admixture of wood ashes, have been applied occasionally.

The trees were set in the yards in which chickens and ducks were raised each season. The company of the growing birds seems to have had a beneficial effect. During the earlier years of these trees, we buried within reach of their roots the mortal remains of whatever fowls or chicks had wearied of life's struggles; these furnished excellent plant food for the growing trees.

There was some trouble with San Jose scale during the first years, it having been introduced on trees purchased before rigid inspection was enforced. But a thorough spraying with common kerosene oil three years ago, before the buds started, apparently rendered further spraying needless.



Belle of Georgia peach tree one year from planting, showing half of new growth after having been cut back

There were one or two trees that showed slight traces of the scale, but a good spraying last spring cleared the trees.

The trees have received practically no cultivation except that the ground is dug up early in spring and oats sowed for the later delectation of the chicks. As they grow, the oats grow less and less, and bare ground is the rule for the rest of the season. Sometimes oats are dug into the ground, thus furnishing an incentive for the chicks to do more cultivating. The treatment seems to agree with the trees, judging from their vigorous growth.

Our greatest drawback, so far as fruit is concerned, has been the liability to late frosts after the trees are in bloom. Bright prospects of a generous crop have been several times blighted by this untimely visitation. On April 29, 1909, while the trees were in full bloom, we had a heavy fall of damp snow which remained on the trees for several hours, and I gave up all hope of having any fruit that season. But though all the trees had been full of buds and a few bore heavy crops,



Four-year-old Greensboro peach tree in full bloom. Half or more of previous year's growth had been cut away

the others had only scattering fruits. I have noticed that there seems to be a great difference in varieties as to their resistant power over unfavorable conditions.

When the trees were set, the broken roots were cut off smoothly and all branches removed, leaving only a straight stick. From the top of this, three, four and five of the strongest shoots were allowed to grow. Pruning these consisted in cutting off half or more the next spring. Little summer pruning was done except to rub off any shoots that started on the body or about the base of the tree. Pruning in after years had consisted in cutting out weak shoots, interfering branches and shortening remaining ones from one-third to two-thirds according to circumstances. I have been told that I was pruning the trees "to death," but their appearance three months afterward belied the accusation. The trees were set in rows twelve feet apart, the trees in the second row being set opposite the spaces in the first row, and so on alternately. This plan gives more space to each individual tree.

We aim to set a few more peach trees in the spring of each year; we do not plant these trees in the fall. There are not more than two trees of any kind. Sometimes, unfortunately, when new trees come into bearing, we find they are not what the labels indicated, so we have to try again, and wait a few more years before tasting the fruit of some much-desired variety. Our present assortment gives us ripe fruit every day from late July until almost the end of October. We are planning to set a few more trees that we think will lengthen the season at each end, and make a round three months of peaches.

VARIETIES FOR A CONTINUOUS SUPPLY

In late July, we have the Greensboro, a very large peach, an early variety of the best quality, and handsome in appearance. Triumph follows a few days later. With us, this needs thinning severely. Champion comes next, a handsome,

creamy-white peach of excellent quality. Following closely in order comes Carman, Belle of Georgia, Mt. Rose, Foster, Oldmixon, Elberta, Wager. Dr. Cummings is much later, of extra size and quality, but not a heavy bearer. The full bearers under adverse conditions have been: Belle of Georgia, Reeves' Favorite, Greensboro, Triumph, Champion, Mountain Rose, Banner and Iron Mountain. Triumph and Banner are small fruited, but under more favorable conditions, on older trees, and with more severe thinning, would do better. Iron Mountain is a lusty, late variety with huge fruit. It is not a handsome peach, but of best quality. Pickett's Late is also among the last to bear—yellow, of medium size and excellent quality.

New Jersey.

F. H. VALENTINE.

Cast-off Cracker Boxes for Seedlings

FOR the indoor starting of vegetable seedlings we found the ordinary cardboard cracker boxes very satisfactory. We made three sizes: one by cutting each box into two equal parts, setting each on its end, which we used for potatoes, tomatoes, beans and other large seedlings. A smaller size was made the same height as the width of the box and used for plants that required less depth, or for any plant in its early stages, transplanting to a deeper one when necessary. The entire box, placed horizontally, with the cover folded back to reinforce the inside, was useful for groups of seedlings or for sprouting corn or peas in sand.

Of course, these boxes are not durable and are inclined to mold, but for temporary use they make good substitutes for the little individual flower pots and are much less expensive. The only work required, beside cutting the box to the desired size, was to tie a string around it, to keep the sides from spreading. Transplanting to the open garden was especially easy with these boxes, because they were simply unfolded from around the roots, without disturbing them. The potatoes pushed their roots through the cracks, so we took the precaution to line with paper all boxes planted later. Some drainage is necessary, and this we supplied with charcoal.

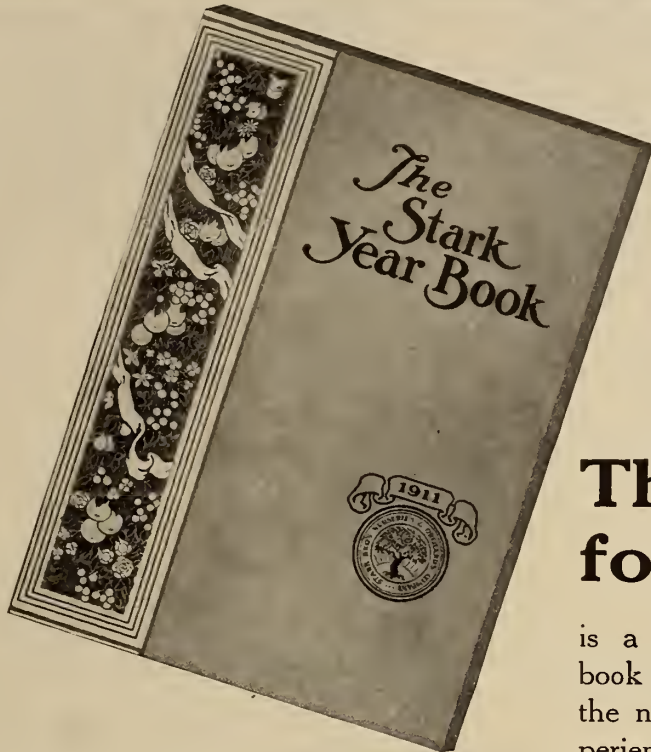
A good supply of cracker boxes, saved up for early spring, will be the means of having vegetables ahead of the season, as they can be started in a sunny window, hardened to outdoor conditions in some sheltered spot, and then set out in the garden when the proper time comes.

New York.

I. M. ANGELL.



Try starting vegetable seedlings in cracker boxes. Transplanting will be wonderfully easy



This book will make easy the planning of your commercial or home orchard or the beautifying of your home grounds.

The Stark Year Book for 1911 (Volume II.)

is a practical, testimonialized, easy-to-understand text book for the planter of fruit trees or other products of the nurseryman. It is understandable both to the experienced and inexperienced alike. The information

embodied within its covers is expert counsel, it is the boiled down essence of the knowledge and experience of the country's most successful orchardists and scientific horticulturists.

Within its covers are thirty-one full-page illustrations of fruits and flowers in natural colors, representing one hundred and sixty-five varieties and covering apple, crab apple, quince, pear, peach, apricot, cherry, plum, grape, currant, raspberry, blackberry, gooseberry, mulberry, dewberry, clematis, and roses. The remaining eighty-eight pages are devoted to descriptions and records of varieties and to information on all subjects directly related to fruit growing such as planting and caring for an orchard, pruning, spraying, cultivation, cover crops, etc.

Briefly, The Stark Year Book for 1911 is an encyclopedia of latest, dependable, horticultural information, fully illustrated both in color and in black.

Anyone interested in fruit or flower culture, will find The Stark Year Book for 1911 of inestimable value and totally different from any previously issued nurseryman's literature; different because it deals with the subject from the standpoint of those who are engaged in fruit growing commercially and for home orchard purposes; different because it is as beautiful as it is instructive; a book to be kept for frequent reference and one that will adorn the library table of any home.

The Stark Year Book for 1911 will be sent to any interested person on receipt of the coupon. Postage ten cents.

STARK BRO'S NURSERIES & ORCHARDS CO.
Louisiana Missouri

Coupon

Stark Bro's Nurseries & Orchards Co.

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Gentlemen:—

Kindly forward me a copy of the Stark Year Book for 1911, for which I enclose five cents in stamps to pay postage.

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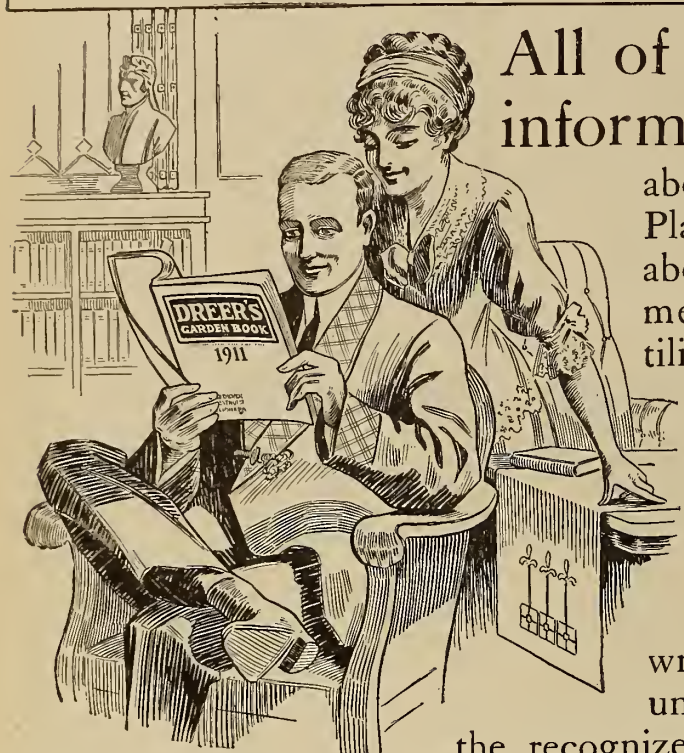
Town _____ State _____

I expect to plant _____ trees about _____

(fill in date) C.M.

DREER'S GARDEN BOOK

1911 Edition



All of the required information

about growing Flowers, Plants, and Vegetables, about soils, times and methods of planting, fertilizers, garden tools, etc., will be found in Dreer's Garden Book. It contains

Hundreds of Cultural Articles

written in clear, concise, untechnical language by

the recognized horticultural authorities of this country—prepared especially for this book. They are thoroughly reliable, practical and sensible. Here are a few of the subjects:—

- How to grow Roses—situation, preparation of the beds, planting and summer care, pruning, winter protection, enemies.
- Proper treatment of Pansies, Dahlias, Asters, Sweet Peas, Ferns, Gladioli, Palms, Water Lilies, etc.
- How to grow flowers from Seeds, both annuals and perennials.
- Hints and suggestions for the amateur

- florist and gardener—soil for pot plants, drainage, watering, repotting, fertilizers, insects, airing.
- How to make and care for hotbeds and cold frames.
- How to make and care for a border of old fashioned, hardy plants.
- Complete cultural instructions for growing all kinds of vegetables, from seed time to harvest.

Horticultural books to cover all this information would cost many dollars.

The 73d annual edition of Dreer's Garden Book contains 288 pages—32 more than last year,—1,000 illustrations, 8 color and duotone plates. Describes over 1,200 varieties of flower Seeds, including many new ones—2,000 kinds of Plants, 600 varieties of Vegetables. Also lists garden requisities of every description—Tools, Fertilizers, Insecticides, etc.

We send "Dreer's Garden Book" free on request to those mentioning this magazine

HENRY A. DREER

714 Chestnut Street, PHILADELPHIA



The Busy Spring Commences

THIS is one of the busiest spring months for gardeners in the Lower South. All hardy vegetables and flowers should be planted before the fifteenth, and all tender ones toward the end of the month.

If the weather is favorable, plant some early bush beans and sweet corn. Cover them on cold, windy days and frosty nights.

Watermelons and muskmelons may also be planted now. Fertilize with stable manure.

Plant gladiolus bulbs. It pays best to get the large-sized ones, for they will flower the first year.

Bed sweet potatoes and plant white potatoes any time during January and February.

On hot days peonies should be shaded from the mid-day sun. On page 345 of THE GARDEN MAGAZINE for July, 1910, a good plan is shown for shading plants.

During this month and the early part of next is your last chance for sowing garden peas and sweet peas in the Lower South.

Dahlias can be easily grown from seed and will flower this year if sown now. Plant in a sunny spot in the garden where the soil is rich and where protection from cold winds can be given.

Every garden should contain a full assortment of herbs. They are easy to grow and are useful for many purposes. Sow the seed or plant out the roots now.

Nasturtiums and marigolds are two of the easiest annuals to grow in the South. Get seed of the new varieties if you want the finest flowers and sow them about the last of the month.

Plant out rhubarb roots in rich, moist soil.



Remember to plant gladioli in your garden this year. Get large bulbs

Stokes SEEDS Standards

I want you to send for my new 1911 seed catalogue.

I'm sure it will be a real help to you. Describes the choicest varieties of tested farm and garden seeds, and shows photographs of what they have actually grown.

Send for it today—free, if you mention *The Garden Magazine*. It's different from anything you ever saw before—more complete and more helpful in every way.

For 10c. in coin or stamps I'll also send you three 10c. packets of seeds—one each of my unequalled Bonny Best Early Tomatoes, New Sparkler White Tip Radish and orchid flowering Sweet Peas.

Walter P. Stokes

Dept. A

219 Market St., Philadelphia

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A course for Home-makers and Gardeners taught by Prof. Craig and Prof. Beal, of Cornell University.

Gardeners who understand up-to-date methods and practice are in demand for the best positions.

A knowledge of Landscape Gardening is indispensable to those who would have the pleasantest homes.

PROF. CRAIG

250 page catalogue free. Write to-day.

THE HOME CORRESPONDENCE SCHOOL
Dept. G, Springfield, Mass.



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THIS particular house appeals to you strongly, because it does not look so "everlastingly greenhousey." And that's the point with U-Bar houses—they are not like other houses.

Not only unlike in looks, but entirely unlike in construction. They are better. Over and over again have they demonstrated a yield of more and finer flowers than other houses.

The catalog explains and illustrates why this is. Send for it. Pick out the house you want and we will name the price by return mail.

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DESIGNERS AND BUILDERS

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12 Dahlias, Cactus, Show and Decorative Varieties, \$1.00

12 Everblooming Roses, 90c

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Largest importers and growers of ORCHIDS in the United States

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The Best Spray Pump

Sprays the tallest fruit trees from the ground. Special nozzle for grape vines, shrubs, etc. Sprays quickest and best. Does the work in half the time and does it thoroughly. Always ready. Used with bucket, barrel or tank. Lasts a lifetime. No leathers to dry up, wear out, or make trouble.

Standard Spray Pump

Warranted for 5 Years. Price \$4.00.

It will not cost you a cent to try it. Our special offer gives complete details. Write for it today and we will also send our illustrated circular showing how this pump pays for itself many times over the first season.

The Standard Stamping Co.

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Better Crops

HAVE you an orchard or a garden? Are your fruits or vegetables injured by insect pests? Do you know the best methods of preventing damage by them? If not, then send for a copy of "Spraying, a Profitable Investment," a 120-page, illustrated book, describing the many insect pests, their habits and some practical methods for keeping them under control. The book is compiled from data gathered by experts and will prove a most efficient help to the gardener and fruit grower. It will pay you to have one of these for reference. Mailed for the asking. Drop a card while you think of it.

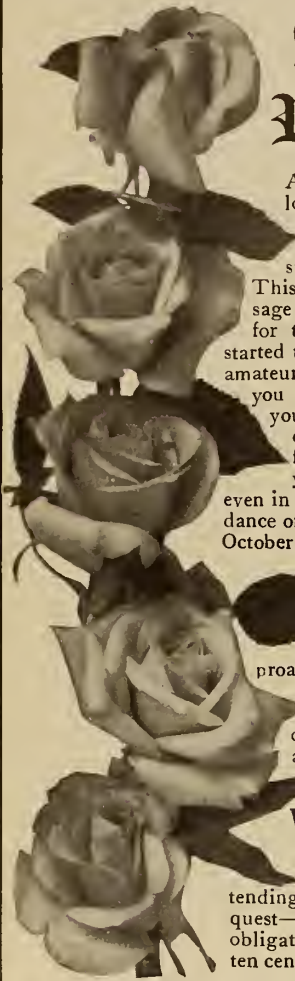
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"A Little Book About Roses"



A title for the rose-lover to conjure with just as "*Peterson Roses*" are roses to succeed with. This booklet is the message of an enthusiast who for ten years before he started this business was an amateur rosarian. It tells you in detail just what you need to know in order to achieve the fullest success—how you may have daily, even in the north, an abundance of roses from June to October.

It represents a business which for quality stands alone, unequalled, unapproached—one that has "made good."

Its beauty will delight, its honesty amaze, and its frankness win you.

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(1911 edition ready Feb. 1st)

It's mailed to intending purchasers on request—to anyone, without obligation to purchase, for ten cents in coin or stamps.

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Rose and Peony Specialist
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To
You.

If interested in
Hardy Trees,
Evergreens,
Shrubs, Vines,

Roses, or Perennials, send for our Catalogue. It will give you information about everything for the HOME GROUNDS. Address—

THE BAY STATE NURSERIES
NORTH ABINGTON, MASS.

Get large ones and don't delay planting later than the last of February.

If perennial phlox was not planted in the fall, see to it now. Also plant out carnations. Give them a rich soil. Carnations are easy to grow and successfully withstand the hot, dry summers.

Horse radish may be planted any time from now until the last of April. The new variety Malin-erkren is earlier and grows larger than the kinds ordinarily planted.

Cyclamens and Chinese primroses make excellent pot plants for house culture, and are very easy to grow from seed, provided the seed is sown now while the weather is cool.

February is also an excellent time for sowing seed of begonias and geraniums. Put them in a warm, sunny place protected from the wind, and cover on cool nights or, if possible, take them in to the house.

Geraniums are very seldom grown from seed, as they make rather slow growth and require more care than most flowers that are grown from seed; but you can thereby get a good assortment of varieties, and very likely some that are different from others already in cultivation.

Georgia.

THOMAS J. STEED.

The WINDOW GARDEN



House Plant Troubles to Guard Against

NO MATTER how careful you are, nor how healthy your house plants were at the beginning of winter, the warm, dry air of the living-room will sooner or later promote the growth of insect pests. The minute the insects are discovered, commence treatment; do not wait until the blighted or curled leaves become conspicuous. It is very convenient to have a supply of remedies on hand for immediate application. They are inexpensive and most of them can be bought at any drug store. Syringes for spraying cost from thirty-five cents to a dollar.

The most common pests—the aphid or green fly, thrips, red spider, mealy bug and scale—are not formidable if attacked when they first make their appearance.

The aphid is easy to recognize. It is a louse-like creature with wings, and you will find it on the under sides of the leaves and along the tender stems, the most vulnerable part of the plant aside from the root. What may at first appear to be a heavy, vigorous stem will prove upon examination to be thickly covered with aphid. However, he is quite easy to vanquish. His chief aversion is tobacco and he can be smoked out of house and home. Or else apply a tea made by steeping four ounces of tobacco stems in one gallon of hot water. When cool, apply to the infested plants with a small syringe, spraying both the upper and under sides of the leaves. Spray twice a week until all late arrivals are exterminated.

If tobacco stems can only be had in bales of 100 pounds, make the tea from a package of chewing tobacco.

Fir-tree oil soap is also destructive to the aphid. Dissolve an ounce of it in warm water and syringe or wash the plant with it. It comes in half-pound tins and costs twenty-five cents.

Somewhat similar in style but more lively, and of a light brown or yellow color are the thrips. They are found on concealed parts of close-growing plants. Like the green fly, the thrip dislikes tobacco, but resists it more strongly. Apply the tobacco liquid three times a week.

If neither of these creatures has been found upon



GILLETT'S Hardy Plants

Rhododendrons for mass planting and for specimen plants. I can supply bushy clumps in small or large quantities.

Before placing your order get my prices.

Hardy Ferns for open sun, dry shade, moist shade or wet open ground.

Hardy Flowers for open border, dark shade, wild garden or rockery.

Azaleas and ornamental shrubs for lawns. My illustrated catalog containing 75 pages will be of interest to all lovers of wild flowers. Mailed free on request.

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Rhododendron Hybrid

Best Varieties, 1' to 4'

Rhododendron Maximum

Fine Plants, 1' to 8' in car lots

Kalmia Latifolia

1' to 3', Choice Plants, in car lots

Koster's Blue Spruce

5' to 6', write for price

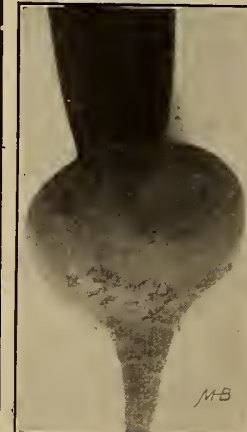
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We are sure they will more than please you. For only 10c in U. S. stamps or coin we will send a regular full size packet of each of the following:

Beet, Improved Blood Turnip; **Lettuce**, May King; **Radish**, Scarlet Turnip White Tipped; **Aster**, Queen of the Market, mixed; **Sweet Peas**, Finest mixed

and a copy of our new Seed, Bulb and Tool catalogue. Remember these are regular, full size packets and should not be compared with those sent out in some collections. Send for the catalogue anyway. It is a large, handsome book of 80 pages superbly illustrated and contains valuable information for every gardener. A copy will be mailed free to all.

M. H. Brunjes & Sons 1581 Myrtle Ave., Brooklyn, N. Y.



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Shows the

JAPAN FERNBALL

In full foliage. Nothing is more dainty or graceful than these Fernballs; in themselves a complete fernery for the Dining Table.

Hung up at a window or on verandas they form a beautiful ornament. We furnish:

Medium sized, each 25c.

Large sized, each 50c.

DELIVERY PAID:

With every Fernball sent out we add a leaflet giving full directions *how* to grow Fernballs *successfully* and how to keep them in good condition.

OUR NEW CATALOGUE FOR SPRING 1911

Will be ready *during January*. It will contain list of most interesting *Novelties* in *Flowers, Shrubs* and *Vines*. *No humbug about it*, but the *good* and *true* material is there, and the goods we send out will *please* and *satisfy* you. *Send for our Catalogue if your name is not on our mailing list*. *Address*

H. H. Berger & Co., 70 Warren St., New York City.

Get this book

If you are one of the many who intend to beautify their grounds by planting in the coming months, you will find valuable assistance in our new and enlarged catalogue, "**Hardy Trees and Plants for Every place and Purpose.**" Contains list of trees and shrubs—2000 varieties. In sizes from two years old up to those large enough to give immediate finished effects.

Reproductions of photographs of country places and city homes show just what may be done with varying surroundings. Valuable points on climate, soil and arrangement of shrubbery.

Just drop us a postal and we will send you this handsome catalogue—Free.

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Roses. Irish stock, grown to our order by Dickson & Sons. Thousands of 2 and 3 year plants in 200 varieties.

Evergreens. Thousands of specimens in sizes from one to ten feet, in seventy hardy varieties.

Evergreen Shrubs. Mahonia, Mt. Laurel, best and hardiest Eng. Hybrid Rhododendrons, Catawbiense and Maximum in car lots.

Deciduous Trees. In sizes up to 20 feet, Maple, Poplar, Linden, Willow, Birch, Dogwood, Magnolia and other flowering trees

Flowering Shrubs and Vines. We make a specialty of large sizes for immediate effect.

Hardy Perennials. Our stock of old-fashioned flowers has become famous. We were among the first to recognize the value of this material, and have planted many gardens.

Fruit. Special offer in large Apple, Pear, Grapes; a grand lot of dwarf fruit trees, all transplanted.

Catalogue, illustrated with 100 superb photo engravings, is a cyclopedia of information to the planter. Ready Feb. 1st. Write to-day to make sure of it.

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Did you ever see such roots?



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Co-operation is the keynote of telephone success.

For good service there must be perfect co-operation between the party calling, the party called, and the trained operator who connects these two.

Suggestions for the use of the telephone may be found in the directory and are worthy of study, but the principles of telephone etiquette are found in everyday life.

One who is courteous face to face should also be courteous

when he bridges distance by means of the telephone wire.

He will not knock at the telephone door and run away, but will hold himself in readiness to speak as soon as the door is opened.

The 100,000 employees of the Bell system and the 25,000,000 telephone users constitute the great telephone democracy.

The success of the telephone democracy depends upon the ability and willingness of each individual to do his part.

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One Policy

One System

Universal Service



It is easy to grow fine hedges when you plant Allen's strong, healthy, well-rooted plants. Our stock is right and our prices are right.

California Privet (*Ligustrum Ovalifolium*) 2 yr., well branched, strong 2 to 3 feet, \$3.00 per 100; \$25.00 per 1,000; 18 to 24 in., \$2.00 per 100; \$18.00 per 1,000; 15 to 18 in., \$1.50 per 100; \$12.50 per 1,000; 10 to 15 in., \$1.25 per 100; \$10.00 per 1,000.
Amur River Privet (*Ligustrum Amurense*) 2 yr., strong 2 to 3 feet, \$3.50 per 100; \$30.00 per 1,000; 18 to 24 in., \$2.50 per 100; \$20.00 per 1,000; 15 to 18 in., \$2.00 per 100; \$16.00 per 1,000.
Splren Van Houttei, 2 yr., strong, 2 to 3 feet, \$15.00 per 100; \$40.00 per 1,000; 18 to 24 in., \$3.50 per 100; \$30.00 per 1,000; 12 to 18 in., \$2.50 per 100; \$20.00 per 1,000.

Also a long list of other shrubbery and small fruit plants. Get my catalog. It is free.

W. F. Allen, Salisbury, Md.

a plant and the leaves are turning brown or copper-red in spots, it is probable that the very injurious red spider is at work. This insect is so minute as to almost escape detection with the naked eye. Use the fir-tree oil soap solution as for thrips; but unless the spraying is very thorough, it is better to sponge the under sides of the leaves. [Red spider is easily routed by plain water. The pest cannot endure moisture, and its appearance is an indication of too dry air.—Ed.]

The blue aphid, which works at the roots of roses and other plants, and the mealy bug, a small downy creature gray-white in color, thrive in a high temperature and rarely trouble plants in an ordinary living-room. For the former pour liquid tobacco, strong and black, about the roots. Use fir-tree oil soap for the mealy bugs. It will also destroy the brown or white scale which sometimes



Use a syringe for spraying so as to be sure all infected parts receive treatment

affects oleanders, palms, ivies, etc. Where the scale infection is slight, simply rub them off.

Gray-white patches of mildew on the leaves of plants will yield if dusted with powdered sulphur. Flowers of sulphur sells for ten cents a pound at garden supply houses. [Mildew will sometimes give way before the standard kerosene emulsion.—Ed.]

Worms in the soil of potted plants often retard their growth by disturbing the roots. The presence of angle worms is proved by tiny roughened elevations of the surface of the soil. Lime water will destroy them. Use about four tablespoonfuls of air-slacked lime in one gallon of water.

New Jersey. M. ROBERTS CONOVER.

A Plant for a West Window

ALTHOUGH *Impatiens Sultani* is a stand-by among house plants, I find that its fitness for a west window is not generally known.

When, through a misunderstanding, my flower window was given a western, instead of a southern, exposure, I was thoroughly discouraged. For three years I have grown only ferns, begonias, *Asparagus Sprengeri* and Wandering Jew in it. My dream of rose-colored blooms to match the room seemed doomed never to materialize.

Impatiens Sultani, however, not only flowers freely from early fall until late May, but the blossoms are as deep a rose as if grown in full sunlight. One plant, in the centre of the dining-room table, away from all direct light, did quite as well as those in the window. Being of compact growth, with long, drooping branches, the plant is particularly well-adapted to table decoration.

Slips may be made at any time, and they take root as easily as geraniums. With me, cuttings which have been started only a month have already burst into flower.

Colorado.

ROOSEVELT JOHNSON.

How Long Should a CREAM SEPARATOR Last?

It Depends Upon the Kind

The average life of the common "mail order" type of cream separator is one year; many of them barely hold out for three months; others for six; but this gives the "mail order" man plenty of time to get his money before the buyer discovers his mistake.

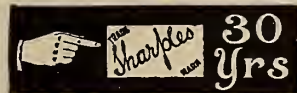
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are guaranteed forever, and thousands of them, sold ten years ago, are giving perfect service to-day. Tubulars are built right, by a manufacturer who knows how; who has had thirty years' experience. That's why they last.

You can have a Tubular, for a free trial, right in your own home, without spending one cent for freight or anything else.

Our 1911 catalogue will soon be ready; ask for Catalogue No. 215.



THE SHARPLES SEPARATOR CO.
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How much do you know about the beautiful and unusual plants of California? Just enough, probably, to make you anxious to have some of them in your own home. Our New Price Catalogue, just out, tells about these rare things and how they may be moved successfully to other sections of the country. In addition, it describes

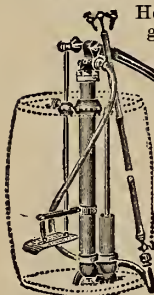


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—Fruits, Nuts and Flowers—which we alone are authorized to place on the market. We publish two other books, beautifully illustrated in colors, at 25c. each, postpaid: "California Horticulture," telling the "how" and the "why" of success with trees and plants; and "New Products of the Trees," fully describing Mr. Burbank's recent introductions. Whether or not you order these two books, however, write for our new, free Catalogue, anyway! State where you saw this advertisement.

FANCHER CREEK NURSERIES, Inc.
GEO. C. ROEDING, President and Manager
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Established 1882 Paid-up Capital, \$200,000

Bigger Fruit Profits



Here is a spray pump invented by fruit growers. It was our endeavor to secure the best spray pump to use on our 300 acre fruit farm that produced the

ECLIPSE SPRAY PUMP

It overcomes every defect found in other makes—it has proved itself best in actual work. Put an Eclipse to work on your trees and earn bigger profits. Write for our fully illustrated catalogue. It tells why you should spray—and why you should do it with an Eclipse. It's free. Write to-day.

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They embody the very best music and entertainment of every kind, sung and played in the very best way by the very best artists, and reproduced absolutely true to life by the very best process—the new and improved Victor process of recording that results in a tone quality sweeter and clearer than was ever heard before.

Hearing is believing. Go today to the nearest Victor dealer's and he will gladly play any Victor music you want to hear.

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The new Victor Record catalog lists more than 3000 selections—both single- and double-faced records. Same high quality—only difference is in price.

Victor Single-faced Records, 10-inch 60 cts; 12-inch \$1.
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To get best results, use only Victor Needles on Victor Records

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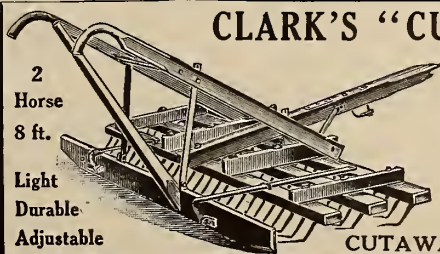
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Also used for grading and leveling.



2 Horse
8 ft.
Light
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With this light, handy tool any field can be made as smooth as a floor, and the soil pulverized fine enough for a flower bed—makes a most perfect onion bed. In twenty minutes you can easily smooth an acre as true as a mill pond.

It's a great road maker. A man with team can make a perfect trotting track of any road. The driver controls entire action of this harrow with one adjustable lever. One horse, 6 ft.; two horse, 8 ft. Made in other lengths, if desired. Send for our new catalogue, "Intensive Cultivation." Free, of course. Write us a postal to-day.

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50% Cheaper than Paint
100% More Artistic than Paint

Paint now costs more than twice as much as Cabot's Shingle Stains, and painting costs more than twice as much as staining, because painting requires skill, while any intelligent laborer can apply our stains perfectly and rapidly, either by using a wide, flat brush, or dipping. The stains give beautiful coloring effects, soft, deep and transparent, on shingles, siding, or boards. The creosote penetrates and thoroughly preserves the wood. You save half your painting bill, double the beauty of your house, and keep the woodwork sound, by using



Stained with Cabot's Stains
Davis, McGrath & Shepard, Arch'ts, New York

Cabot's Shingle Stains



Lined with Quilt and stained with Cabot's Shingle Stains

← This Bungalow is Lined, Roof and Walls, with **Cabot's Sheathing Quilt** and the owner says:

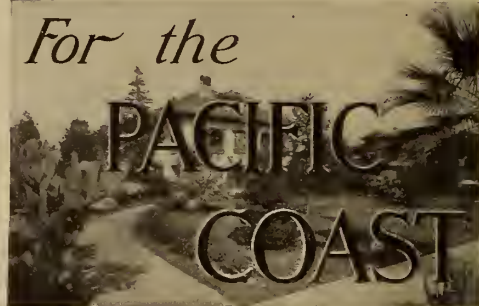
"Experience has more than justified this method. The second story rooms are in summer as cool as those on the first floor, while in winter all the rooms are warm and comfortable in the coldest windy weather."

"The cost was \$20 for the whole house, and for this \$20 the owner gets warmth and comfort and reduced coal bills as long as the house stands. Can you make a better investment?"

Quilt is not a mere building paper. It is a heat-proof and cold-proof insulator.

You can get our goods all over the country. Send for free samples and name of nearest agent.

SAMUEL CABOT, Inc., Manfg. Chemists, 1 Oliver St., BOSTON, MASS.



Flowers for Sun and Shade

AFTER the cold and rain of December and January, when garden operations are often quite difficult, February, with its sunshine and drying soil, its flowering trees and its daffodils, gives the California amateur the nearest thing he ever gets to the April and May enthusiasm of the eastern gardener who has been kept from his favorite recreation for a so much longer time.

Except in the high and colder valleys he can still plant his trees, shrubs, rose-bushes, and (if he has been prevented before) he can still do that pruning which is required by many things in early spring, including the cutting out of that wood which bore fruit on his raspberry and blackberry bushes last season. This also is an excellent time to sow all hardy annuals for later blooming, though they will rarely do as well as those sown in the fall. Even the half-hardy annuals may now go in, except where experience has shown that heavy later frosts are apt to come. This, also, is a good month for sowing vegetables in most parts of the state, but, except in frostless places or where protection is given, cucumbers, melons, tomatoes and corn had better wait over for a couple of months.

During the next few weeks many of the most attractive flowering trees will be in bloom, so that the gardener who has limited space and wishes to select what will please him most had better visit neighboring parks, or, if he can obtain permission, some of the fine private places where good collections may be found. The golden-flowered acacias, of which I prefer the very fragrant *A. mollissima*, and the glaucous-leaved *A. Baillyana*, are fine, rapid-growing evergreens blooming this month. These, with the various fruit trees grown for their flowers—such as the double pink and white peaches, almonds, cherries, double-flowering crab-apples, and Japanese scarlet quince—are all as satisfactory as they are appropriate to the California landscape and garden, and besides this furnish the finest flowers for house decoration as well.

It is no difficult matter to have flowers in April, when the whole country-side is a garden; but to have the house and its surroundings looking bright in July after three rainless months, is a different matter.

Perhaps no two plants will thrive with less attention in the matter of watering, and yet continue to cover such large areas with their flowers as well as the lowly petunia and the verbena, yet as borders to paths and in large beds they are very attractive if some attention is paid to using pure, unmixed colors. This can be done either by pulling old plants apart and rooting the newer shoots now, or sowing the seed of such colors as you desire, for though they will not always come quite true, a packet of white seedling petunias or pink verbenas, for example, will be safe to produce no discordant shades.

The scabious, too, in its present improved size and nice, clean shades of pale blue, white, blush, pink, rose, and cherry reds, is so much at home under our summer conditions that it has escaped from some gardens and may be found growing by the roadside; yet, when I gave it a little attention last summer, it rewarded me with the prettiest and most lasting cut flowers we had during the months of July and August.

Snaptagons, particularly in masses of harmonizing colors, add to the variety of our dry season; while for yellows and browns the annual chrysanthemums and calliopsis are quite useful. Of all perennials the Shasta daisies, gaillardias, and peren-



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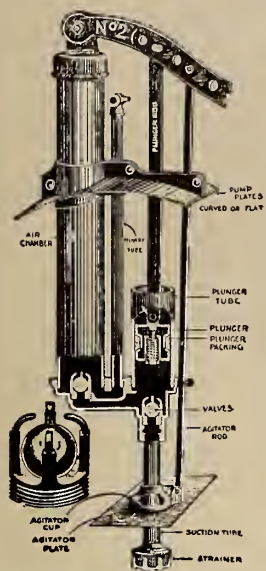
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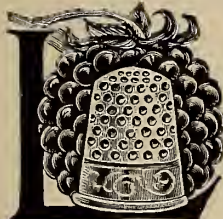
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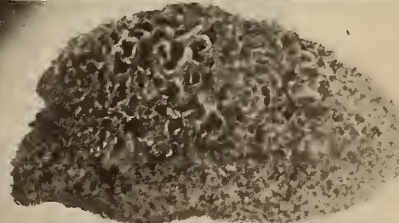
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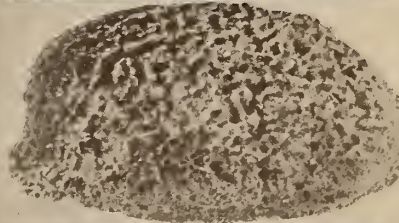
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nial coreopsis are most faithful in flowering during the summer months. I believe that the simplest way to raise all the above and to avoid contests with weeds at this season of the year is by sowing seeds in boxes, transplanting the seedlings when they have made sufficient growth, and finally putting them in their permanent places when they have attained some size.

All the above do well in the bright sun, but when we come to shady places an even more attractive series is available. I do not mean, of course, that dense shade where only the periwinkle (often called myrtle) can be used to cover the ground, but rather the conditions to be found on the north sides of houses or in oak groves, where the tulip and daffodil flourish in springtime. Here in the coast counties pansies and nasturtiums will bloom all summer, if given water, while in the sun they would be burnt up by a few hot days. Many of the pretty California annuals, such as the nemophilas, godetias, *Clarkia elegans*, and monkey-flower (*Mimulus*), will do well in shady places, and the best asters I saw last summer were growing in semi-shade.

Of perennials, the best under these conditions in California are the columbines, pyrethrums, hardy larkspurs, perennial phlox, and Japanese anemones, while among summer bulbous flowers the tuberous begonias, after being started in boxes, demand planting in shady north borders to succeed at all. California. SYDNEY B. MITCHELL.



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Such a frame has many uses. Starting in spring, there are a dozen or more of the early vegetables that can be pushed along just by placing these little frames over them in the row, and the late frosts that usually catch the first sowing of beans can now be laughed at. In early summer they will be found just right for cucumbers and the several kinds of melons, successfully bringing them through their delicate early stage and being quite a hindrance to their many insect enemies.

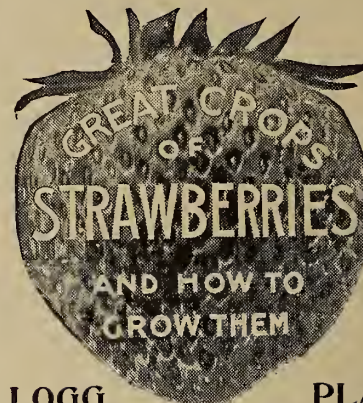
During the extreme heat of mid-summer, it sometimes seems as if transplanting were out of the question, but by using the frame and a cotton cloth or other substitute for the glass, it is done safely with no danger of breaking delicate plants. Later, there may be a row of lettuce or some other vegetable that is liable to be injured by the first fall frosts.

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Hints for Making a Garden Plan

WHEN making your plan for next year's garden remember that the picturesque character of a garden may be marred as much by sins of commission as by sins of omission. There are gardens in which no expense has been spared to ensure a splendid succession of bloom but which have been utterly ruined by the introduction of garish and incongruous accessories. The smaller the plot, the stronger, apparently, the temptation to import these eyesores. The garden-maker cannot be too watchful against the use of inharmonious features. Such accessories as summer-houses, arches, pergolas, dials, and garden seats should be designed to suit the garden, and their details and mode of construction should be simple and unostentatious. Paint should be used sparingly if at all, and its color should be chosen so as not to compete with the flowers. I have seen a wide expanse of trellis painted canary-yellow, which for crudity and ill-taste would be hard to match, yet the perpetrator was content to grow nasturtiums upon it!

The so-called "rustic" work is rarely in good taste. If the summer-house is to be decorated, allow some pretty creeper to scramble over it, softening its outline and load it with bloom.

Terra-cotta, china, and cast-iron vases are generally out of scale in a small garden, and never quite satisfactory unless associated with a terrace wall or some similar structure. In most cases their place could be advantageously filled by stout oaken tubs. The gardener must be hopelessly depraved if he admit such objects as minerals, mechanical models, and sea-shells into his garden.

Given discretion in excluding the inartistic and incongruous, there may be still room for mistakes in the use of garden accessories. They may be selected so as not to be in proper scale with the garden, or with that part of the garden in which they are to be installed. Good proportion is largely a matter of intuition, though a sense of fitness may come from knowledge and good sense. The golden rules are: Use before ornament; simplicity; appropriateness; sound construction; scale.

As every garden picture must have a focus, I attach much value to the summer-house. It makes a very natural terminal to the principal path, and is therefore "led up to" in such a way as to enhance its usefulness. Again, the pointed roof is admirably adapted for constituting the apex or summit of the garden picture. This particularly applies to new gardens, before it is possible to utilize the trees as conspicuous elements in the picture. Make the summer-house weather-proof, and place it so that its open side is in shade.

It is often feasible to so wed the kitchen garden to the flower ground that it materially helps the garden picture. In small gardens the apparent size of the garden is reduced if the vegetable ground is screened off. On the other hand, if left in full view, it contrasts too conspicuously with the flower ground. It is best to take both factors into consideration when making the garden design, and to blend the flower and kitchen garden. In this way the garden vistas may be lengthened without curtailing the vegetable space.

There is only one other point to emphasize, and that has reference to garden management rather than to garden making. I refer to what some gardeners call "tidiness." The striving after a neat, trim, and well-kept garden is apt to lead the gardener into a ruthless trimming and pinching of plants. It is one of the things which can be too well done. The truly artistic garden is one in which the plant has full scope to develop its character. It wants elbow-room, and has no respect for artificial boundaries. It is a sin to curb and mutilate a plant, because it pushes out its foliage across the path. The occasional plant which has more than repaid your care by exceeding its neighbor in vigor of growth deserves encouragement. Let it sprawl; it will soften the edge of your border and redeem the straightness of its line.

And lastly, beware of the too liberal pruning of trees and shrubs. To trim all trees to a uniform shape is to destroy their individuality and charm, and to introduce the very essence of formality into the garden.

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is the name of the best booklet ever issued on the subject of tomato culture. It contains 30 pages and illustrations fully describing the Potter method of raising tomatoes. By this method you can have bigger and better fruit and weeks earlier than otherwise. It teaches the secret and science of tomato culture; forcing the fruit by systematic cultivation and pruning. This book is invaluable to every gardener, whether he grows one dozen or one thousand vines. The subjects covered are: History of the Tomato; Its Nature and Habit; Tomato Culture in General; The Potter Method; Plants and Planting; Home-Grown Plants; Preparing the Ground; Setting the Plants; Cultivation; Pruning and Staking the Vines; Picking the Fruit; Ripe Tomatoes at Christmas; 40 Tomato Recipes; Best Tomato Seeds. The information is condensed and to the point—just what every grower wants.

The cut herewith shows one of a large number of vines in my garden this season. Notice that each stalk is loaded with large, perfect fruit from top to bottom. This is the result of my method. It is easy to raise this kind of fruit when you know how. Just send for my book—price 50c., postage or money order. Your money back if not satisfactory.

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DEPT. C.

T. F. POTTER, Tomato Specialist, DOWNERS GROVE, ILL.

ANSWERS



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THRIPS ON CINERARIAS

An insect about one-sixteenth of an inch in length, slender, reddish brown, quite active in its movements, is eating the undersides of the leaves of my cinerarias which are growing in a window garden. What is this pest and what will kill it?

South Dakota.

G. M. D.

—The cinerarias are troubled with thrips. These can be suffocated with insect powder or tobacco dust, or they must be hit with an oil, soap or tobacco spray. Kerosene emulsion, a strong tobacco decoction, or whale-oil soap (one pound in six to eight gallons of water) will kill all the insects that are wet with the spray, but it is practically impossible to hit them all with one application. They develop so rapidly that usually it is necessary to repeat the dose several times during the season. Any of these sprays will doubtless kill at the same time any slugs that may be at work.

KILLING THE BURROWING MOUSE

In the mountains of North Carolina we are troubled with a short-tailed or burrowing mouse. I have put grain covered with strychnine in the holes. Is there not a better method of destroying the mice?

North Carolina.

T. G. H.

—Use carbon bisulphide and the work can be quickly accomplished. Bisulphide of carbon is a heavy, colorless, volatile liquid which easily sinks into the ground, and the fumes, which are heavier than the air, quickly penetrate downward into the most remote corners. One or two tablespoonfuls of the liquid may be carefully poured into the opening of the nest or runs and a damp cloth or a handful of soil should be immediately put over it and packed down tightly. Nothing else is necessary. If one application does not entirely get rid of these little pests, it is a simple matter to repeat the attack. This poison is highly inflammable, and the vapor is dangerously explosive. Be very careful not to use it near a fire.

HOW TO GROW CANNAS

Will you give me particulars about starting cannas?

New York.

H. N. K.

—New varieties of cannas are raised from seeds which usually are slow to germinate and sometimes fail entirely unless the hard integument is cut or filed, or softened by soaking the seed in water before planting it. Sow late in the winter, in rather strong bottom heat, either in flats or pots. Prick out, and give plenty of room as they grow. Cannas are ordinarily propagated by dividing the root-stock, a branching mass with many large buds. As many plants may be made from a rootstock as there are buds, although the weak buds produce weak plants. Leave as much tissue as possible with each bud. Those 1-bud parts usually give best results if started in pots, so that the plant is six to twelve inches high at planting time. The commercial canna plants are mostly grown in pots. If one has sufficient roots, however, it is better not to cut so close, but to leave several strong buds on each piece. These pieces may be planted directly in the ground, although more certain results are to be secured by starting them in the house in boxes or pots.

C. A. H.



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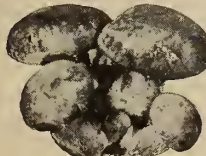
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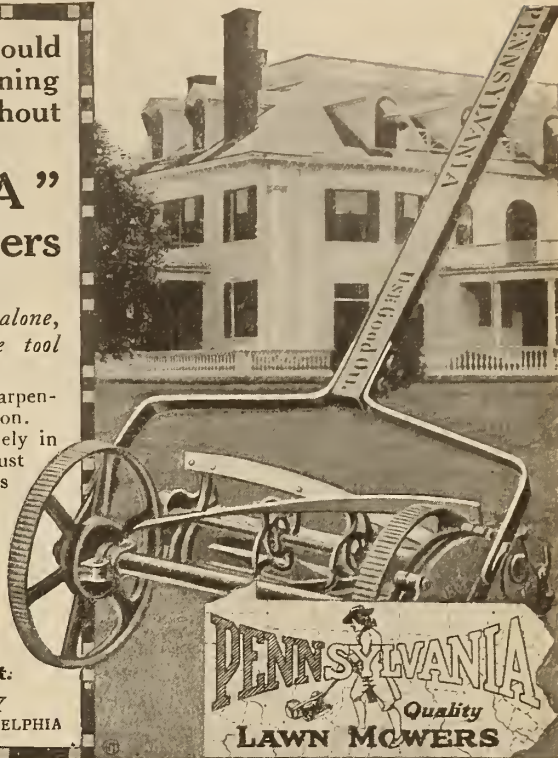
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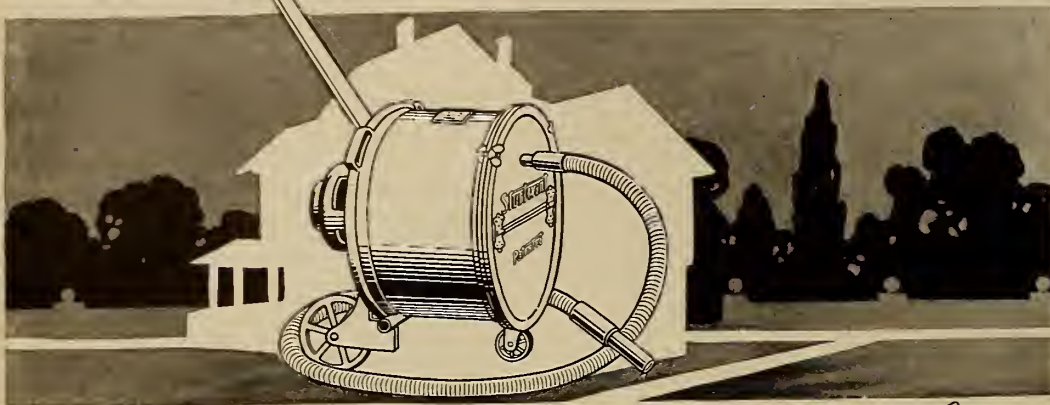
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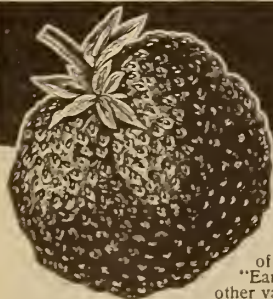
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Ohio.

J. R.

— If you can dispose of poultry droppings in a local market it will probably pay. Unless poultry manure is properly treated while fresh, the ammonia is dissipated, and the value is enormously decreased. In order to preserve this the droppings must be composted and this makes bulk; therefore, the freight charges on sending to a distance would take away all the profit.

PRUNING IN THE ORCHARD

What is the best time to do the annual pruning of apples, peaches, pears and plums?

New York.

C. M. W.

— Pome fruits can be pruned any time during the winter (except when the wood is actually frozen), or before growth starts in the spring. Peaches and stone fruits had best be pruned in the spring before growth starts. Pruning the peach after the June drop is in the nature of pinching, and if summer pruning is done no other pruning is necessary; but this entails an enormous amount of work during the busy season. The summer pruning of peach trees, however, is particularly suitable for the dwarf varieties.

HEATING A GREENHOUSE

In a greenhouse is it practical to use heat generated by a hot-air furnace?

New York.

D. L. H.

— In small greenhouses where steam or hot water cannot be put in, fairly good results can be obtained from the old-fashioned flue. One cannot heat the greenhouse by means of a furnace like the ordinary living-room. The flue can be carried into the greenhouse and through it; but the hot-air must not be allowed to come into the greenhouse itself. The flue will keep the greenhouse to the right temperature, provided a hot enough fire is kept in the furnace, and the flue is big enough. To overcome the dryness in the air, pans of water are set around above the flue. These should be kept filled constantly in order to allow the moisture to escape into the atmosphere.

WOOD ASHES ON THE LAWN

What is the best time of year to put wood ashes on the lawn? Are the best results obtained from using it alone or by mixing it with something else?

Missouri.

A. M.

— The best time to use wood ashes on the lawn is during the spring or at any time during the growing season. Mix the sifted ashes with ground bone meal in equal parts by weight, and use it as a spring top-dressing, distributing it by weight over the surface of the lawn at the rate of one ton to the acre. This will give an even covering over the surface of the lawn, and leave it with a slightly grayish color. The top-dressing may be safely used in heavier doses than the uninitiated would imagine. It is best to select for the broadcasting a day when rain is anticipated so that the fertilizer may be at once washed down to the roots of the grass.

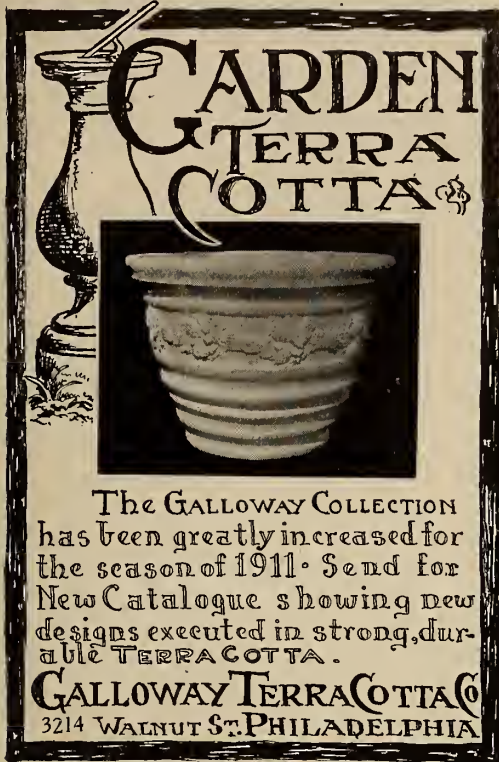
HOW TO GROW SWISS CHARD

Is Swiss chard adapted to the climate of St. Louis and when should it be planted?

Missouri.

E. W. J.

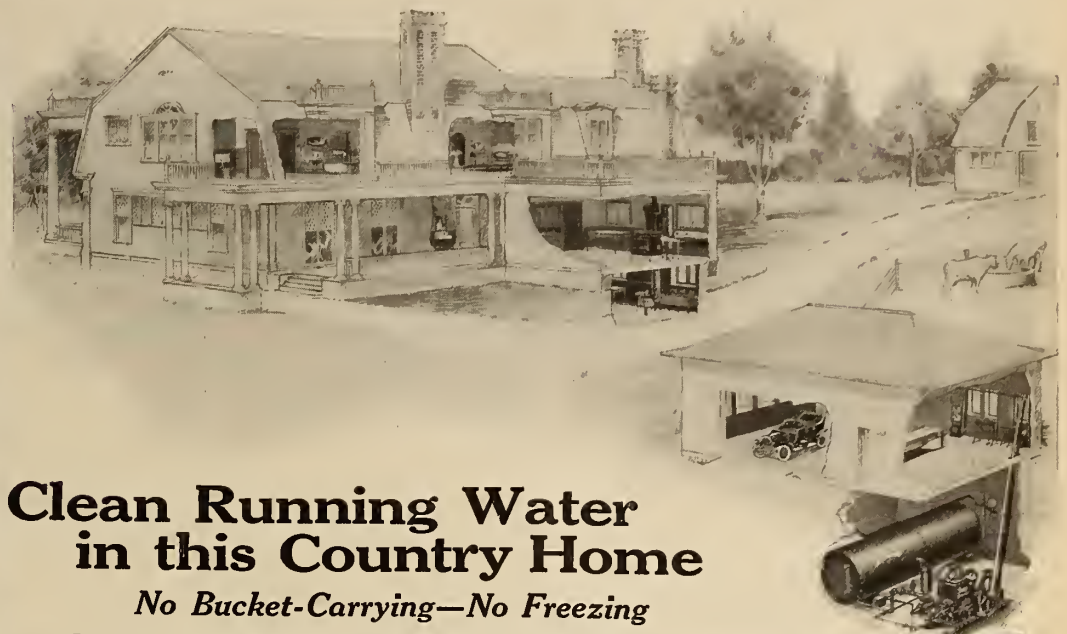
— Swiss chard and other leaf beets require much the same culture as the beet root, excepting that the soil does not require to be dug so deeply. Sow the seeds in April or May in drills sixteen to eighteen inches apart, and thin the plants to stand ten to fifteen inches apart in the rows. Cultivate occasionally, and do not let the plants suffer for lack of water. The leaves may be gathered during the summer and fall, selecting only the best ones. Leaf beets continue to yield in the open ground until quite late in the season; but if a winter supply is desired, take up the plants and store in a vegetable house or greenhouse. The leaves are large and tender and succulent, and are highly esteemed as a "fresh vegetable" during the winter. They are boiled like spinach, either entire or with the stem and midrib removed.



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EVERGREENS that add a tone of warmth and verdure, and impart a charm to landscape,—**HARDY FLOWERING SHRUBS** that add beautiful bits of color to the garden work,—**CALIFORNIA PRIVET**, the ideal hedge plant, are some of my specialties, and **GROWN IN NEW JERSEY** under soil and climate advantages are ready to start growth again anywhere as soon as planted.

Beautiful illustrated catalogue, mailed free.

T. E. STEELE, Pomona Nurseries, Palmyra, N. J.



Points on Starting a Hedge

AS A HEDGE is to endure for generations, the preparatory work cannot be done too thoroughly. Prepare the soil by digging a trench about two feet wide with a depth of three feet. Where the original soil is of a fair quality, plenty of well-rotted manure only will be needed, which should be mixed into the soil as thoroughly and in much the same manner as cement is mixed into sand in concrete work. Where the ground is very clayey, it will positively have to be replaced with prepared soil. In setting out the material always do it with the aid of a tightly stretched line, and never trust to the eye alone for exact alignment. The distances apart will vary according to the plant.

In trimming, the experienced gardener will discard the hedge shears as far too cumbersome and slow; he will use a corn knife or have a long knife made from an old wornout flat file. By means of this, with deft upward strokes, he trims the sides of his hedge, while the top he cuts moving the knife from him. It is easier to keep true to the line with a knife than with the shears. Whether water be applied or not, cultivation should on no account be neglected for at least the first three years of the hedge's growth. Weeds or grass among the shrubs must not be tolerated.

Be advised that to start a hedge is a matter of patience; five years, at least, will be consumed from the time you set out your bushes until the hedge assumes its true character. But what is worth while is worth working and waiting for.

North Dakota. C. L. M.

An Honor Medal for Horticulture

AN IMPORTANT event in the horticultural world during the past year has been the establishment of the George Robert White Medal of Honor, for the maintenance of which a suitable fund has been given to the Massachusetts Horticultural Society by Mr. George Robert White of Boston. "The income of the fund is to be devoted annually for the specific purpose of providing a substantial gold medal to be awarded to the man or woman, commercial firm or institution in the United States, that has done the most during the year, or in recent years, to advance the interest in horticulture in its broadest sense."

The George Robert White Medal of Honor will take rank with the Victoria Medal of Honor of England and the Medal of the Legion of Honor of France, and will have a strong influence in promoting the horticultural activities of this country.

The first award of the medal was made to Professor Charles Sprague Sargent, Director of the Arnold Arboretum, in recognition of his work in the introduction of many desirable ornamental trees and shrubs.

The American Pomological Society

AMATEUR horticulturists who may be traveling in the South during February might find it worth while to be at Tampa, Florida, on February 9th, 10th and 11th. On these days the American Pomological Society will hold its 32nd biennial session on the invitation of the Florida State Horticultural Society and the Tampa Board of Trade. The sessions of the Society, which will be held in the Tampa Bay Casino on Thursday evening, February 9th, are purely formal. On the two following days, however, a very valuable lot of discussions will be introduced by the leading horticulturists of the country. An exhibition of tropical fruits will be held in connection with the sessions, and also on the opening day the Society of Horticultural Science will hold its annual meeting.

A Greek Desert Plant

LONG years ago, when we studied Greek, we supposed the asphodel to be a mythical flower, but most nurserymen have it. It is a desert plant of the lily family which grows outside Athens near the cemeteries, and thus came to be called the "flower of the dead." The word "daffodil" is a corruption of asphodel. Try *Asphodeline lutea* in the back of your hardy border where the thinness of its foliage will be obscured.

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vegetables will be early, sweet and tender. Your roses will bloom as if in the Tropics. Your lawn will look like velvet. No other fertilizer to compare with "BONORA" Endorsed by the greatest authorities, among them Luther Burbank, John Lewis Childs, Dingee & Conard Co., Conard & Jones, and many

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Put up in dry form in all size packages as follows:

1 lb.	makes	28 gallons, postpaid	.65
5 lbs.	"	140 "	\$ 2.50
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50 lbs.	"	1120 "	22.50
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Paper Pots

Your garden will be one to four weeks earlier if you will start your lima beans, melons, sweet corn, etc., in paper pots. Prof. R. L. Watts of the Penna. Ex. Station writes: "They are entirely satisfactory." \$1.25 for 1000. Shipped flat. Shipping weight 18 lbs. 500 for 75c.

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This shows what may happen to you when you go abroad.

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A Good Time to Paint

Much painting should be done this spring, whether linseed oil be slightly lower or slightly higher; for with the 1910 flax crop short it seems unreasonable to expect a return to the oil prices of a few years ago.

The thing to remember is that, though high, paint materials are not nearly so expensive as the repairing of a neglected house. Even oil at \$1.00 or \$1.25 makes the painting of the average house cost only \$4 or \$5 more than it used to cost. That isn't enough more to justify letting a \$10,000 house, or even a \$2,000 house, go to ruin. Paint it this spring. It will cost you less than later.

And use "Dutch Boy Painter" white lead and genuine linseed oil. People are tempted sometimes, when standard materials are high, to employ something inferior. A great mistake, because not true economy.

Moreover, the first cost of genuine "Dutch Boy Painter" white lead paint is not so great as you may have been led to believe. It may surprise you if you do a little figuring for yourself. Get from your local dealer prices on the following ingredients:

12½ lbs. "Dutch Boy Painter" white lead	\$.....
½ gallon Pure linseed oil	- - - - -
½ gallon Turpentine	- - - - -
½ pint Turpentine drier	- - - - -
This makes 1 gallon Genuine old-fashioned paint	

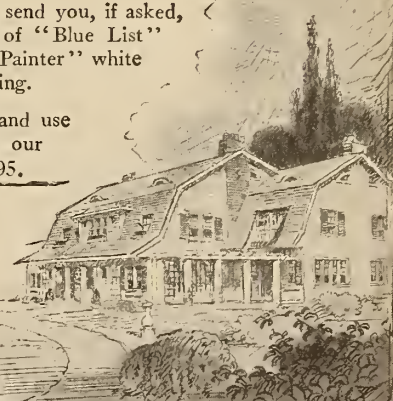
Compare this with the cost of any other paint you would think of using. You'll find the best is also the cheapest.

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We try to be of service to those about to paint. We will send you, if asked, color schemes, miscellaneous painting directions, and name of "Blue List" Painters in your community, men who use our "Dutch Boy Painter" white lead. Ask for "Helps No. 195." That will include everything.

TO PAINTERS: If you are a skilled white-leader and use "Dutch Boy Painter" white lead, send us your name for our "Painters' Blue List." Write us for Blue List Circular No. 195. It gives particulars.

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SPRAY with the Empire King

He who attempts to grow fruits without a Sprayer is handicapped. Blight and bugs, rot and rust, mold and mildew, all conspire to damage the crop, and in all cases succeed if the farmer does not spray. This is the only hand pump having automatic agitator and brush for cleaning strainer. Valuable book of instruction free.

FIELD FORCE PUMP CO., 48 Eleventh Street, Elmira, N. Y.



Write for Our Free Book on Home Refrigeration

It tells you how to select the Home Refrigerator—how to know the good from the poor—how to keep a Refrigerator sweet and sanitary—how your food can be properly protected and preserved—how to keep down ice bills—lots of things you should know before selecting any Refrigerator.

Don't be deceived by claims being made for other so-called "porcelain" refrigerators. The "Monroe" has the only real porcelain food compartments made in a pottery and in one piece of solid, unbreakable White Porcelain Ware over an inch thick, with every corner rounded, no cracks or crevices anywhere.

The "Monroe"

A Lifetime Refrigerator

is the only refrigerator that can be made "hospital clean" in a jiffy by simply wiping out with a hot cloth. There are no hiding places for germs—no odors, no dampness. The leading hospitals use the "Monroe" exclusively and it is found today in a large majority of the very best homes. It is built to last a lifetime and will save you its cost many times over in ice bills, food waste and repair bills. Other refrigerators must be made with sections to come apart—bolts, screws, braces and strips to work loose—and with cracks, crevices and corners in which food collects and decays—germs breed and odors arise to taint the food placed therein.

The "Monroe" is never sold in stores, but direct from the factory to you freight prepaid to your railroad station, under our liberal trial offer and an ironclad guarantee of "full satisfaction or money refunded."

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V. THE LEATHER LEAF

THE leather leaf (*Chamaedaphne calyculata*) is a graceful little shrub native to our peat bogs where it is often found in the company of the wild cranberry. The branches are slender, numerous and spreading or horizontal, and seldom rise to a height of more than three feet. The leaves are small, narrow, nearly evergreen, dark green above and of a rusty color beneath. The flowers



Plant the leather leaf in a bog or else in the garden in peaty, moist soil

are small, white, urn-shaped and borne in one-sided, leafy racemes. They are very similar to those of *Andromeda floribunda* and are in most perfect bloom at about the same time, which is usually the last of April or the very first of May. The leather leaf is desirable for planting on the edges of small ponds or in the garden if the soil is peaty, sandy and moist. Massachusetts. DANIEL A. CLARKE.



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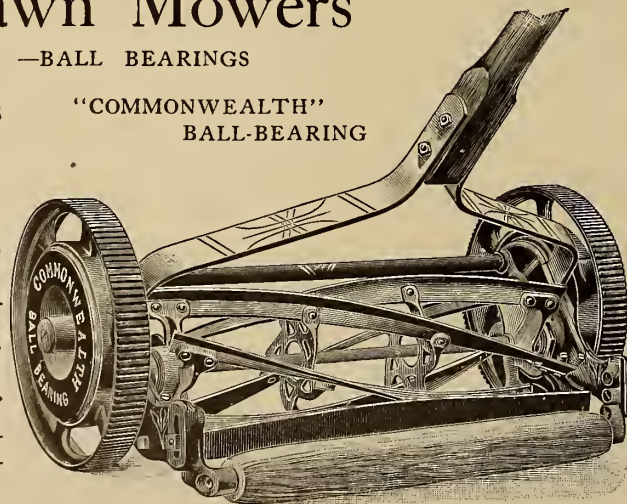
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Are the most rugged, hardy Roses in America. They are just the kind to plant to make your Rose Garden a success. The soil here at New Castle is peculiarly adapted to Rose growing—a fact that has had much to do with our success in growing only strong, vigorous and healthy Rose bushes. You will be successful with your Rose Garden, too, if you plant the Roses of New Castle, for they carry with them all the strength and vigor imparted to them by our wonderful New Castle soil.

We grow and sell all the leading varieties of Roses, and plants are sent everywhere with all shipping charges prepaid and safe arrival guaranteed. This saves you the uncertainty of express charges. By all means order early. Many disappointments were caused in former years by our supply of Rose bushes giving out too soon. Order at once, and we will carefully reserve the plants until you desire them shipped.

Let us help you start right this year by showing you what Roses to plant and how to make them bloom luxuriously. You will find all the necessary information in our beautiful book for 1911, illustrated in colors, entitled

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Send us the names and addresses of six of your Rose-loving friends and we will send you a great, lusty plant of Jeannette Heller, absolutely the most magnificent, hardy, ever-blooming, vigorous bush Rose known. It grows and blooms everywhere.

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Dingee Roses are always sold on their own roots—the only way a Rose should be grown. We prepay all express charges under a special plan explained in our book, and deliver growing plants free to your door, no matter where you live, with safe arrival guaranteed. While our specialty is Roses, we also grow all other flowers worth while—Carnations, Chrysanthemums, Violets, Perennials, Shrubs and Vines, etc. We sell also the finest varieties of Flower and Vegetable Seeds.

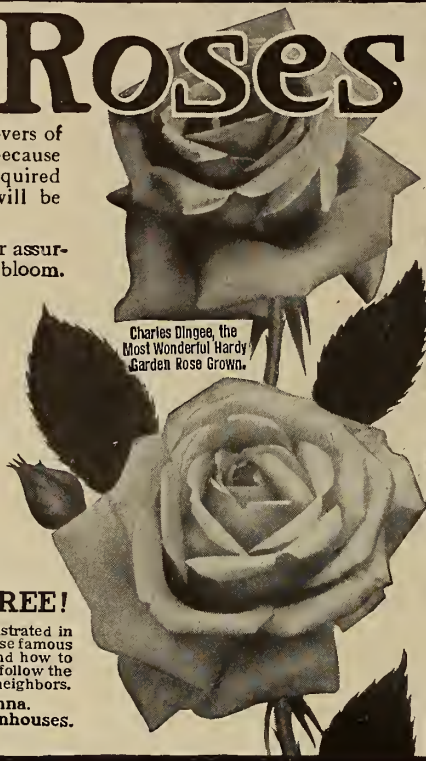
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ONE of the best combinations of annual flowers in a city garden is sweet peas and asters. They will give a wealth of blossoms on a small area from early to late summer. The combination is peculiarly good because both flowers require nearly the same conditions. Neither should be grown on the same ground two summers in succession. An interval of two years gives better results for either flower.

In Chicago sweet peas ordinarily begin to bloom about June 10th, and continue, in a normal season, until August 1st to 15th. When they are through blooming we cut off the vines level with the tops of the asters and turn the stubble into the soil. The asters shade the roots of the sweet peas to some extent, thus acting as a mulch. Usually the asters are ready to set out about July 1st; they come into bloom in September. Both asters

PINK AND BLUE FLOWERING HYDRANGEAS

In our unique varieties of Hydrangea you are offered a delightful variation from the standard and well-known sorts. Among these are Monstrosa Otaksa, Ramis Pictis, and Thomas Hogg, which bloom freely in early summer, bearing large heads of flowers, colored, according to variety, pale rose or blue, or pure white, and lasting for weeks. These are strong, field-grown plants, perfectly hardy in the South either in the open ground or in tubs. Further North they require protection.

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(Biota Aurea Nana). Originated by us: becoming more popular every year. Dwarf, pyramidal, compact, symmetrical; foliage of an intense golden hue. Unexcelled for small gardens, cemeteries, window boxes, tubs, etc. A fine stock this year: particulars on request. Get our attractive free Catalogue, describing Southern-grown trees and shrubs—Azaleas, Camellias (imported and home-grown); field-grown Roses, evergreens, shade, fruit and nut trees, etc.

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A border of sweet peas and asters—two flowers that require practically the same conditions

Sure and Sudden Death to All Insect Pests

when you spray with the stick-longest, kill-quickest, safest and most economical of all insecticides

ELECTRO Arsenate of Lead

(in Powdered Form)

It is the only dry Arsenate of Lead in amorphous (non-crystalline) form, hence the only one that mixes instantly with water in such a finely divided state that every drop of spray is equally strong in arsenic. It cannot be washed off by rain. Is death to insects months after application, yet it is harmless to the newest, tenderest foliage.

Electro is guaranteed to contain 33% arsenic oxide, or 50% more than other brands, as proved by Connecticut and New Jersey Agricultural Experiment Station tests. Write us for them.

If your dealer can't supply Electro, don't accept substitutes, but send to us for prices and proofs from successful fruit growers. We'll supply Electro in paste form if you prefer it. Use Electro Lime Sulphur for San Jose scale and Sucking insects.

THE VREELAND CHEMICAL CO.
Dept. C 50 Church Street New York

and sweet peas do best in ground rich in phosphoric acid and potash and poor in nitrogen. Hardwood ashes are an unsurpassed fertilizer for both.

Sweet peas must be planted very early, to make good roots and vines—in the latitude of New York or Chicago, just as soon as the earth can be broken for the purpose, even if you have to take an axe and chop through a frozen crust of an inch or two. Early planting applies, under the most favorable conditions of weather, even to the light-seeded kinds like Dorothy Eckford, though as a rule, it is better to plant these later, when the ground is warmer. If the spring comes on gradually, and the ground is porous so that it dries out quickly, the light-seeded ones will do better planted very early. But the hardest of sweet pea seeds sometimes will rot in the ground, and the light-seeded ones are very good to use as fillers where there are bare spots in the rows, planting just as soon as the earlier kinds have broken through sufficiently to show where they are needed.

Dark-seeded sweet peas will not produce vines worth putting up supports for, if sown late—say a month after the first day the frost is out of the



A new home before planting the grounds.



The same home 2 years later.

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They are a source of endless pleasure besides.

But results like the above are obtained only from perfect plants—healthy, sturdy, honest nursery stock must be used.

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gives the best broad interpretation of American out-of-door life. His outdoor novels and adventurous narratives sound the deep call of the free, wide spaces.

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are large, bright, glossy green and the foliage remains bright and attractive throughout the entire growing season. The illustration shows a small part of a photograph of one Climbing American Beauty in bloom. Rose-lovers will certainly take great delight in this wonderful new rose. We will be pleased to send you, by mail postpaid, one or as many more as you like, of these beautiful roses. One-year-old plants \$2.00 each. Write for complete descriptive literature.

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ground. There will be far better plants if the early spring is not abnormally warm. The article on sweet peas published in the August, 1910, GARDEN MAGAZINE explains fully how to be successful with fall-planting.

Almost all city gardens are provided with running water and hose, which means insurance against drought and does away with the necessity of providing mulches in hot weather. For sweet peas in city gardens wire trellises are commonly used, but they are troublesome to put up and take down, and the sweet peas burn on them. Brush is very good, but is hard to obtain; a horizontal string trellis is much the best thing for the city garden.

To make such a trellis, get from a lumber yard or planing mill some strips of soft wood one inch thick and two inches wide. Usually these come in 16-foot lengths, and one such length can be sawed into two or three parts, each eight feet or five and one-third feet long. For sunny situations the shorter pieces will be long enough to form the posts of the sweet pea trellis, if driven so as to stand four feet out of the ground. Where there is shade the vines grow taller and the 8-foot lengths are better. Sweet peas do better if they get a little shade in the hottest days of summer, but too much makes a vigorous growth of vines with few flowers. Asters do best in full sunshine.

The 1-inch by 2-inch posts of the trellis should be painted or stained, if you desire a neat appearance, green being the most pleasing color. Each post should be sharpened at the lower end for driving into the soil and should have galvanized wire staples, about three-eighths of an inch wide and one and a half inches long, driven into it at intervals of four inches, from a point one inch below the top of the post to the ground line, two feet from the pointed end in the case of 8-foot posts. These staples are to hold the horizontal strings that support the vines. Each string is passed through a staple on each post, drawn tightly, and tied around each end post. At one end the strings are tied in a half bow knot, so that they can be untied easily and the slack of the strings taken up from time to time. Manila twine, about one-sixteenth of an inch in diameter, is satisfactory. Use new twine each season. At the end of the blooming of the sweet peas run a knife along each end post, severing the strings, which can easily be pulled out. One advantage of horizontal strings is that they need be used no higher than the vines grow, and they can be put up one or two at a time, as needed.

In loose soil the posts can be driven quickly to the right depth with the flat of a hatchet, hand axe or heavy hammer; in hard soil make a hole for each post with an iron bar. Set the two end posts of each row first, making the tops the same distance above ground. Then stretch lines between the tops and bottoms of these posts. The bottom line will be a guide to setting the intermediate posts and the top line will enable them to be made of uniform height. Space the posts five to eight feet apart. Diagonal braces between each end post and the post next to it, made of the same 1 x 2 in. stuff, should be used, or brace the end posts by means of tie lines, for the pull of the strings is considerable and comes wholly on the end posts.

The asters are set out, when four or five inches high, along each side of the sweet pea rows, being raised from seed sown in the open ground in May. The rows of asters should be eight or nine inches from the sweet peas and the plants set eight to twelve inches apart. If the sweet pea rows are three feet apart, the aster rows will be uniformly eighteen inches apart. Set the asters nine inches from the sweet peas. Three feet will do in a small city garden, but three and a half or four feet is better, for it gives more working room and a better chance for the development of the flowers.

To put up or take down the posts of the horizontal string trellis is the work of about an hour for each one hundred feet of row. As soon as the sweet peas are out of the way the posts should be pulled up and stored. I have used the same posts six years and they probably are good for two or three years more. The posts cost me about one cent a lineal foot, delivered. The finest new Spencers require much skill and care in their cultivation, but they are worth it.

Illinois. EDWARD MORRISON.

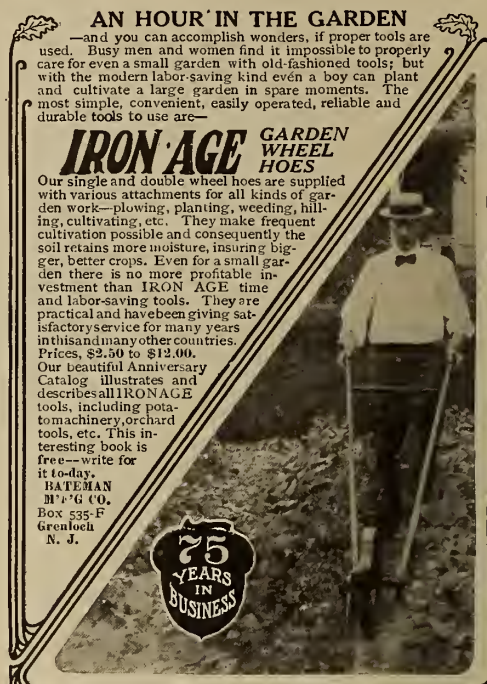
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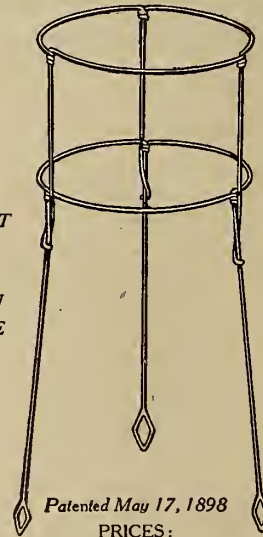


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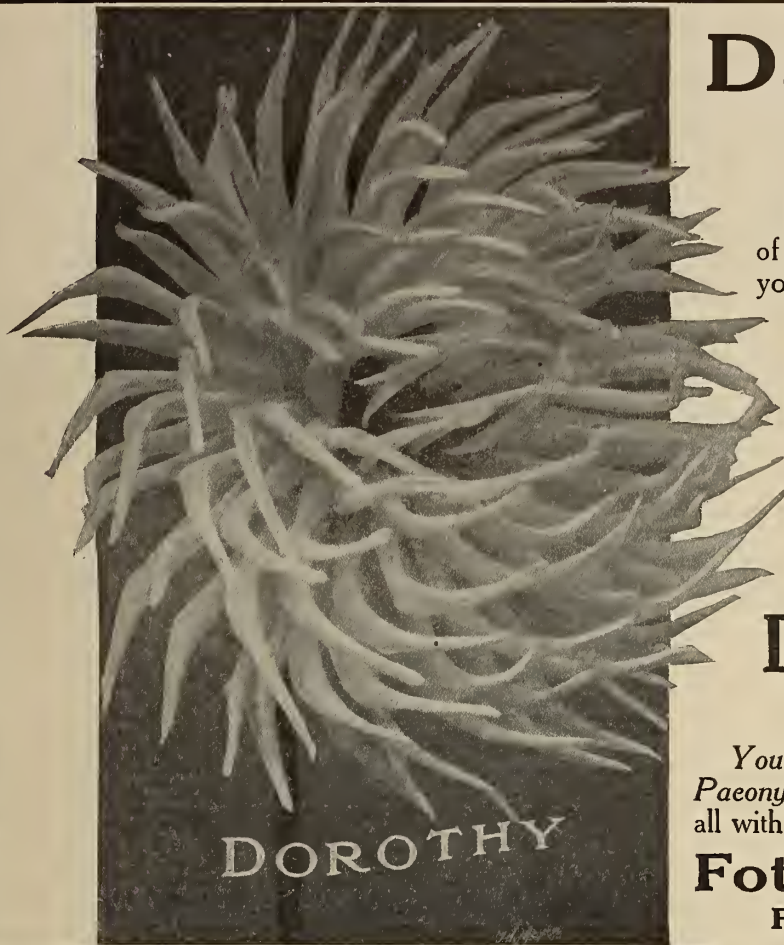
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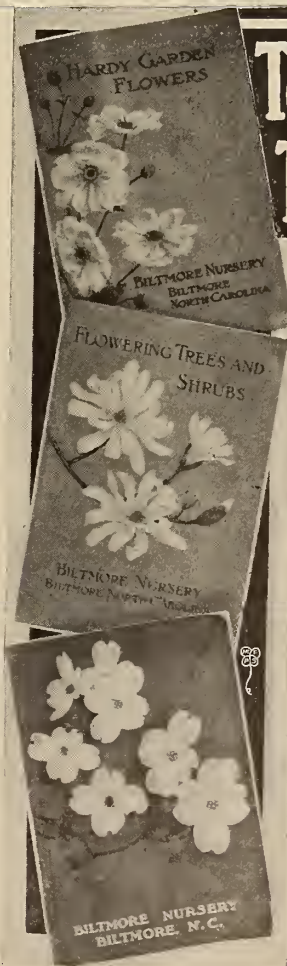
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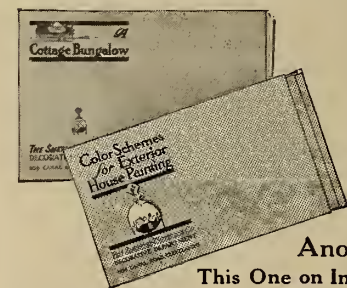
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"Anyweight" Water Ballast Lawn Roller.

Remember that a difference of 50 pounds in the weight of a roller may mean success or ruin to your lawn—that a half ton machine will spoil it in early spring as sure as fate, while a two hundred pound roller is absolutely useless later in the season.

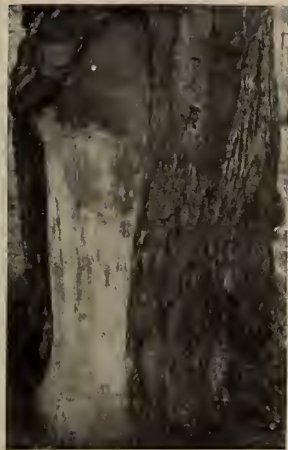
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The "Anyweight" Water Ballast Roller is built in 3 sizes, all of 24 inch diameter and of 24, 27 and 32 inch widths. The machine shown here (our smallest) weighs but 115 lbs. empty, 470 lbs. when completely filled with water and 737 lbs. with sand. The other sizes weigh 124 and 132 lbs. empty and from that "anyweight" you require up to half a ton. Filled in 30 seconds—emptied in a jiffy. Fully protected by our patents. Runs easy—lasts a lifetime.

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(Signed) Isaac N. Seligman.

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COURT OF
COMMON PLEAS No. 5,

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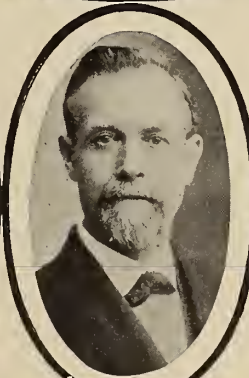
It gives me much pleasure to state that an examination of the trees upon our "Gynedd" place evidences that in every case the process of healing is going on most satisfactorily. This is especially so, in the case of a large maple tree at the side of the house, which had so much of the bark removed, that I rather despaired of saving the tree.

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(Signed) William H. Staake.

Save Your Trees

Real
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Surgery
Requires
Training
Study and
Skill



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Giant Pascal	Pkt.	1/2 oz.	1/2 oz.	1 oz.	Victoria	1 oz.	2 oz.	1/2 lb.	1/2 lb.
CORN—Golden Bantam	1/2 pt.	1 pt.	1 qt.	2 qts.	SQUASH—Boddington's Extra-Early Jer- sey White Bush	Pkt.	1/2 oz.	1/2 oz.	1 oz.
Early Cory	1/2 pt.	1 pt.	1 qt.	2 qts.	Improved Hubbard	Pkt.	1/2 oz.	1/2 oz.	1 oz.
Country Gentleman	1/2 pt.	1 pt.	1 qt.	2 qts.	English Vegetable Marrow	Pkt.	1/2 oz.	1/2 oz.	1 oz.
Stowell's Evergreen	1/2 pt.	1 pt.	1 qt.	2 qts.	TOMATO—Boddington's Early Sunrise	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.
CUCUMBER—Boddington's Selected White Spine (Improved)	Pkt.	1/2 oz.	1 oz.	2 oz.	Dwarf Stone	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.
EGGPLANT—Boddington's Improved New York Spineless	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.	Earliana	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.
ENDIVE—Moss Curled	Pkt.	Pkt.	1/2 oz.	1 oz.	Ponderosa	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.
Broad-leaved Batavian	Pkt.	1/2 oz.	1/2 oz.	1 oz.	TURNIP—Boddington's Model Snowball	1/2 oz.	1/2 oz.	1 oz.	2 oz.
KALE—Dwarf Green Curled Scotch	Pkt.	1/2 oz.	1/2 oz.	1 oz.	Golden Ball	1/2 oz.	1/2 oz.	1 oz.	2 oz.
KOHLRABI—Boddington's Early White Delicious	Pkt.	1/2 oz.	1/2 oz.	1 oz.	(Rutabaga) Champion	1/2 oz.	1/2 oz.	1 oz.	2 oz.
LEEK—Boddington's Prizetaker	Pkt.	1/2 oz.	1/2 oz.	1/2 oz.	HERBS—Dill, Fennel, Lavender, Marjoram, Savory, Thyme	Pkt.	Pkt.	Pkt.	Pkt.

For full descriptions of the above varieties, see vegetable portion of our Garden Guide, pages 71 to 100.

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MARCH
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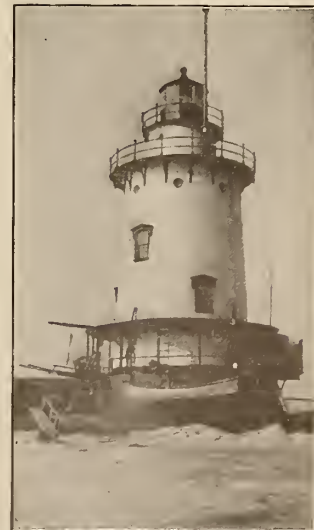
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Keeping a Rubber Plant Healthy

THE rubber plant is one of the easiest plants to handle in the house. The great trouble, however, is that it is not properly understood, and from this misunderstanding there results drooping and yellowing leaves and, in most cases, an ungainly and sickly plant.

The most important thing is to make a good start. Begin right, and the rest is comparatively easy. Therefore, when buying a rubber plant, get one that is properly rooted. Oftentimes plants are forced for market at the expense of their root system. If possible, "knock out" the plant before buying it and see that it has plenty of roots. A young plant with good roots will live on indefinitely until its branches fill the room.

The general idea is that a rubber plant requires considerable water. This is entirely wrong; it wants but little water in the house. To prove this, start two plants under the same conditions. Give one frequent and plentiful waterings and the other just enough to moisten the loam, every



This rubber plant has not been repotted for two years. It is watered once a month

second or third day. The latter plant will not drop a leaf from the time it is taken into the house, while the former will probably either remain stationary or else the leaves will begin to turn yellow and drop off.

An old plant watered every third day and kept in a small pot, pot-bound, will retain its green foliage, and the pot-bound condition will force it into making new growth. To repot such a plant in the winter is a mistake. By repotting you check the growth and destroy the root system



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BILTMORE NURSERY
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Three Books Suggestive of Pleasing Ways of Planting— One of them Free to You



BILTMORE NURSERY
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YOUR landscape planting requires just *two* things to give it that distinctly *unusual* touch that you admire so much. The first is trees and plants of exceptional worth; the second is the knowledge of *how* to plant them so that they will harmonize with their surroundings, and with each other in the landscape picture.

The superb trees and plants of Biltmore Nursery and the original literature describing them supply both needs—opening the way to such a decoration of lawn or garden as you have doubtless hoped for but perhaps have thought it hardly possible to realize in your own home grounds.

The three books described below contain complete and accurate descriptions of our trees and plants. And the illustrations show you how to secure the effects you want. They are not confined to specimen trees or flowers but suggest delightful ways of planting them—an informal clump of *Hydrangea* in a corner of the lawn, a mass of *Spiraea* at the gate, a great bed of old-fashioned perennials along the walk, or vines for the pergola.

The Three Biltmore Nursery Books

Each of these books has been carefully prepared at great expense with a view of supplying all the information one can possibly need in planting and caring for a given variety of trees or shrubs. These are unusual books in printing, illustrations, and text, and are not to be compared with the ordinary nursery catalogue. We shall be pleased to hear from owners who intend to beautify their grounds by planting ornamental trees or shrubs this spring and to such will forward free of charge, whichever of the following books is best adapted to the individual requirement of your grounds.

THE BILTMORE NURSERY CATALOGUE—a guide to the cultivated plants, shrubs and trees of North America. Over two years in the making and cost more than \$1.00 a copy to complete. In excess of 500 photographs were made in preparation for it, and the volume contains 196 large pages. More than 300 Perennials, more than 500 Flowering Shrubs, including *Roses*, more than 325 distinct kinds of Evergreens, more than 300 different Deciduous Trees, and more than 300 Vines and Odd Plants, are fully described and many of them illustrated. Second edition now almost exhausted.

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BILTMORE Nursery produces uncommonly good ornamental plants, trees and vines. Primarily this is due to the great natural advantages of location in the Southern Alleghenies, Nature's "wonderful workshop" for the production of trees and plants with a rugged vigor that fits them for planting either North or South.

Here are many soils, many elevations, many temperatures; we take advantage of them by planting in each the things that thrive best there—certain deciduous trees here, evergreens there, roses yonder. Our soil is rich but shallow, inducing strong, fibrous roots which grow trees and plants notably free from disease.

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The illustrations, all from special photographs, suggest many pleasing and varied forms of hardy garden planting, from the simple door-yard effect to the elaborate formal attainment. The descriptions are full and complete, yet are free from purely technical terms.

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to a great extent, and this injury manifests itself principally by the leaves turning yellow.

If you have a rubber plant that has grown leggy it can be made into many little ones. Propagation by cuttings is easily accomplished, particularly if bottom heat is available. Even without this heat in the spring, the rubber cuttings will strike. Make the cutting by taking it just under a joint. Split the end for about half an inch. Stuff some moss into the cut and then wrap a little ball of moss around it. If placed in moist sand little roots will be thrown out through the moss. The cutting is then ready for potting in a thumb pot.

Another way is to wrap moss about a joint on the plant. Roots will also strike through this moss if it is kept moist. Split a pot and tie it, filled with moss, about a joint and the result will be the same. Roots will form in the pot.

An old stump that has lost about all its leaves can have a new set put on it by "inarching" a branch of another plant on to it. Stand it near the plant that is to supply the cutting. Cut a slice off the side of the stump at the place you want the leaves. On the other plant make the same kind of a cut. Bind the two branches together with tape, the cut places being placed together. Keep the plants dry and in the light, and in the



Inarching—putting The old stump two a new top on an old weeks after separating stump the plants

course of a few weeks the two branches will have united. The new top can then be cut from the plant that supplied it.

Again, take an old stump and cut the top wedge-shaped, and on this set a cutting that has been so cut as to receive the wedge. Have the cutting and the old stump about the same size. Bind them with electric tape and keep them dry. The old stump can be further decorated by inserting cuttings along the stem at different points in practically the same manner. Once get the top growing and the matter of decorating the stump beneath will be easy.

Do not repot your rubber plants too often. Instead of repotting, top dress them. Dig out the earth without going into the roots too deeply and replace what you take out with good soil. Pack it in well and this treatment will answer better than a repotting. It will not check the plant at all.

However, if repotting is imperative, crack the old pot and set the ball of the plant in a pot one size larger. Then fill in with good garden loam. Do not increase the size of the pot more than one size. Be sure to give good drainage, putting charcoal in the bottom of the pot. Put a little moss over it before filling it with the soil, which should be packed in hard. But don't be in a hurry to repot; keep the plant pot-bound as long as possible. And do not resort to stale meats and oysters for fertilizing purposes. With the proper kind of loam this will not be necessary.

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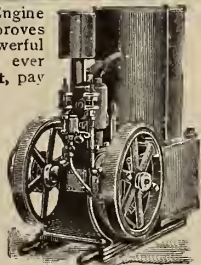
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Amazing "DETROIT" Kerosene Engine shipped on 15 days' FREE Trial, proves kerosene cheapest, safest, most powerful fuel. If satisfied, pay lowest price ever given on reliable farm engine; if not, pay nothing.

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The "DETROIT" is the only engine that handles coal oil successfully; uses alcohol, gasoline and benzine, too. Starts without cranking. Basic patent—only three moving parts—no cams—no sprockets—no gears—no valves—the utmost in simplicity, power and strength. Mounted on skids. All sizes, 2 to 20 h. p., in stock ready to ship. Complete Engine tested just before crating. Comes all ready to run. Pumps, saws, threshes, churns, separates milk, grinds feed, shells corn, runs home electric-lighting plant. Prices stripped, \$29.50 up. Sent any place on 15 days' Free trial. Don't buy an engine till you investigate amazing, money-saving, power-saving "DETROIT." Thousands in use. Costs only postal to find out. If you are first in your neighborhood to write, we will allow you Special Extra-Low Introductory price. Write! DETROIT ENGINE WORKS, 229 Bellevue Ave., Detroit, Mich.

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A PALISADE HARDY BORDER

A perfect picture in your garden to last for years will be the result if you allow us now to plan a scheme, whether of contrasts or of harmonies, to be carried out this spring. Our "Artistic" Border, 100 ft. by 3 ft., costs \$25.00 only, for 300 plants, freight charges included. Consider what is "saved" by this system, and what is gained in true beauty.

Visitors always welcome at our Nurseries, where they can make selections from more than a thousand varieties of Hardy Plants.

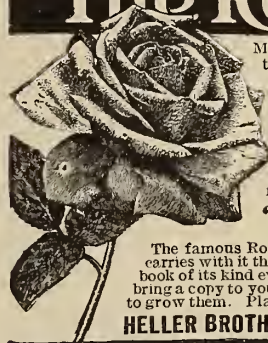
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The biggest collection offered anywhere is found in our Novelty Catalogue, just out of great interest to the amateur and commercial grower alike. It describes uncommon plants of singular beauty, desirability, and simplicity of growth; inexpensive to acquire, and profits large. Mailed along with our wholesale catalogue of Hardy Perennials, etc. on receipt of three 2c. stamps, which pays postage only, and which amount is deducted from first order.

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Most rugged, hardy Roses in America. They are just the kind to plant to make your Rose Garden a success, for they carry with them all the strength and vigor imparted to them by our wonderful New Castle soil. We grow and sell all the leading varieties of Roses, and plants are sent everywhere with all shipping charges prepaid and safe arrival guaranteed. Order at once, and we will carefully reserve the plants until you desire them shipped. Let us help you start right this year by showing you what Roses to plant and how to make them bloom luxuriously. You'll find all the necessary information in our beautiful book for 1911, illustrated in colors, entitled



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It keeps them from crawling up the trunk.

Bind it around your trees this month and save the first tender leaves from being riddled. Every caterpillar you keep down in the early spring means hundreds prevented later on. Easy to apply. Cannot injure your trees. When removed in fall, comes off clean—no unsightly remnants left. It is by far the most effectual banding substance known. One banding lasts entire season. Send at once for booklet.



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This picture shows simply an exaggerated case of what happens when Soap Powder is made by the new method.

Each Grain of Soap Powder is **POPPED**—**FLUFFED**—**FLAKED**—it Fills more space—yet does no more work.

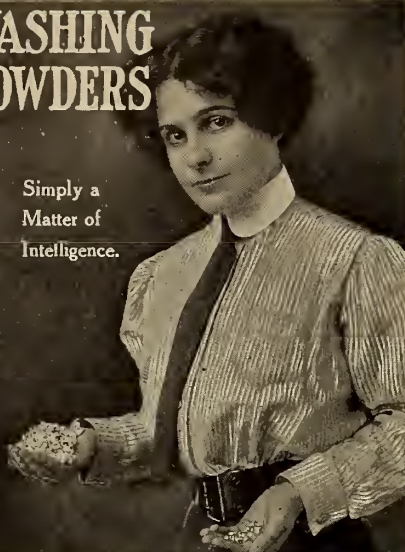
Besides—Water is added to Increase the Weight—again Decreasing the value of the Powder.

PEARLINE IS NOT POPPED, FLUFFED, FLAKED, WATERED

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Simply a Matter of Intelligence.



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Old England's historic estates are carpeted with the most beautiful stretches of lawn. Through centuries of careful study and trial, coarse undesirable grasses have been supplanted by a uniform durable species, almost the texture of velvet.

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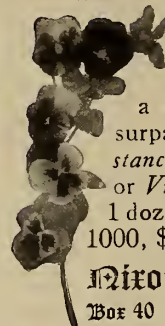
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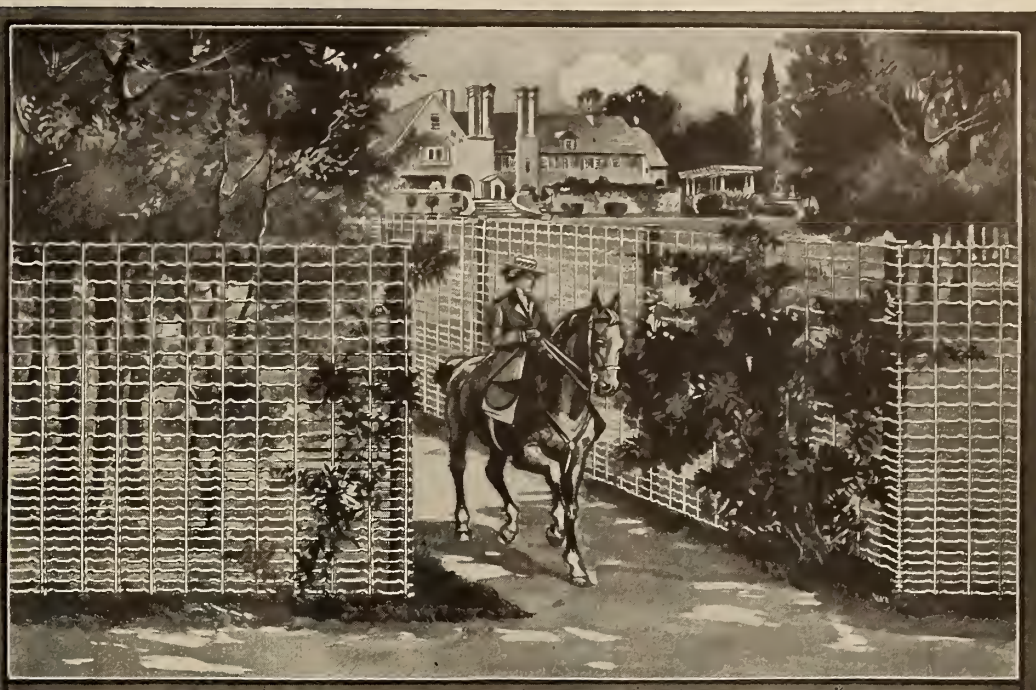
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ONE PLANT FROM PHOTO JULY, 1910
This is the **Greatest Berry** the world has ever known, discovered in the Himalaya Mountains. Its growth and productiveness is simply marvelous. It is perfectly hardy everywhere and grows from 30 to 50 feet in a season and can be trained on arbors or trellises of any kind. The Engraving shows one Plant, from photo July 1, 1910, which is trained to a large trellis, loaded with fruit, and continued bearing until October. The Fruit is black, almost coreless and the large luscious Berries borne in enormous clusters will literally melt in your mouth. It is unsurpassed for eating fresh, cooked, canned or preserved in any form and is the Greatest of all Berries for all Climates. Everybody can and will grow this **Great Berry**, for it is the easiest Fruit in the world to grow, is splendid for city people or any one with limited space, for it can be trained up from the ground like a tree, producing Berries from 3 to 4 months, growing larger and producing more Fruit each year. We guarantee this the **Greatest of all new Fruits** and can produce facts no one can get away from. Beware of imitations; **Giant Himalaya** is a family by itself and highly valued wherever grown. The English Himalaya or Plants raised from seed cannot be relied upon for fruit or hardiness. Our plants are from tested parent stock. Complete satisfaction guaranteed. Instructions for cultivation, with a booklet of receipts for using in many ways, free with all orders. Strong Plants, 30c each, 3 for 60c, 6 for \$1.00, 15 for \$2.00, 25 for \$3.00, postpaid. Our 1911 Catalogue of Vegetable and Flower Seeds, Plants and Rare New Fruits free with every order. MILLS SEED HOUSE, Box 45, ROSE HILL, N. Y.



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FOR such service as enclosing a private park, or the grounds of a private residence, the Park and Paddock fence is particularly valuable. It thoroughly encloses and excludes, yet does not obstruct the view. With posts having ball tops, the structure becomes an ornament.

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A wide range of heights is provided, from the extreme height of 88 inches down to 61 inches.

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Stocks of American Fence are carried in every place where farm supplies are sold. The Fence is shipped to these points in carload lots, thereby securing the cheapest transportation, and the saving in freight thus made enables it to be sold at the lowest prices. Look for the American Fence dealer and get the substantial advantages he is enabled to offer. He is there to serve the purchaser in person, offer the variety of selection and save the buyer money in many ways.

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Send for copy of "American Fence News," profusely illustrated, devoted to the interests of farmers and showing how fence may be employed to enhance the earning power of a farm. Furnished free upon application.

ASTERS Famous Aster, Lady Roosevelt, New Lavender Crego and White Hercules, Scientifically grown and separated seed. Catalogue and packet of mixed aster seed free. Please send address of friends. Dept. A JOHN S. WEAVER, GLEN MAWR SEED FARMS, Kinzers, Pa.

DAHLIAS 20 kinds, my selection, \$1. Satisfaction guaranteed. Write for full particulars. Catalogue. My dahlias were given the highest possible awards at Pan American and St. Louis Expositions. H. F. BURT Taunton, Mass.

10 Broad-Leaved Evergreens for \$1

One each of *Rhododendron maximum, *Kalmia, *Leucotho, *Am. Holly, Boxwood, Euonymus Japonica, Euonymus Jap. variegata, Euonymus radicans variegata, Abelia grandiflora, Vinca minor. Ten of any starred sort for \$1.

3 CONIFERS FOR 25 CTS.—1 each of Carolina Hemlock, White Pine, Red Cedar. Or 3 conifers and any 3 Broad-leaved Evergreens for 50 cts.

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All good plants of mailing size. Larger plants by express at reasonable rates.

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is responsible for our great success, and will give to the struggling beginner all of the profits and none of the losses. Absolutely automatic in every function, unvariable temperature, certain moisture from the moment of starting the hatch until nature requires a cessation in order to properly dry the newly-hatched unit of future profit—so thoroughly safeguarding its entrance into poultrydom as to guarantee its livability when raised under the very acme of "Foster Mothers," the

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This Hover makes possible the rearing of the maximum of chicks and the minimum of deaths—90% to 95% live and thrive and grow. It is the only device that contains the active principle of the hen, and the ingenuity of man can go no further. Our best efforts are centered in the production of Day-Old-Chicks and Hatching Eggs from matured stock. No pullets' eggs are used except for table purposes. We have just completed our 1911 catalogue on incubators and hovers, also our stock catalogue on Rancoas Strain BABY CHICKS and HATCHING EGGS. You are welcome to either or both of these catalogs. Send to-day.



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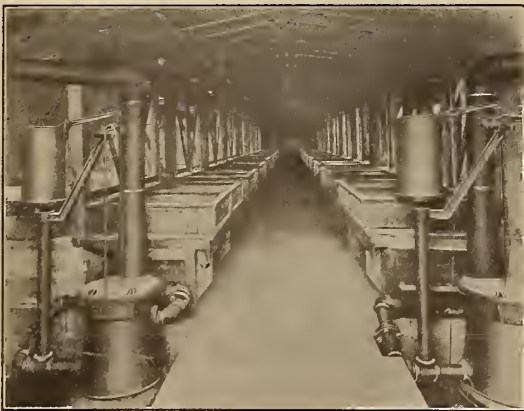
that new hen-house or fix up the old one but get our large 100 pp. catalog and circulars (over 100 illustrations) showing POTTER PORTABLE SANITARY POULTRY HOUSES, Roosting and Nesting Outfits, Perfection Feed Hoppers, Trap Nests, Feeds, and supplies of all kinds. Potter Fixtures have been on the market nearly 10 years. They are made in 3 styles and 12 sizes, and are complete, convenient and sanitary. Our Portable (K. D. made in sections) Hen-houses, Brood Coops, Pigeon Lofts, are made in 20 styles and sizes, from a coop 2 ft. square to a complete house 8 x 80 feet, or longer, at lowest prices. House shown is 8 x 10 feet, complete with 8 ft. Potter Outfit for 20 hens, for \$40. A fine house at a low price. If you need a house or coop of any kind do not fail to find out about the Potter line before buying or building.



DON'T KILL or sell your laying hens, use the POTTER SYSTEM and pick out the layers from the loafers and diseased hens. Keep only healthy laying hens. The POTTER SYSTEM is a secret and the greatest discovery of the century in the poultry world on the subject of Egg Producing Hens. Used by over 30,000 satisfied poultry keepers who are saving dollars every year. Our New 100 pp Potter System book, "Don't Kill the Laying Hen," contains the secret and knowledge about laying and non-laying hens. It's a revelation to poultry keepers and you will learn how you can use the Potter System on your flock; keep less hens, get more eggs and make more money using it. Write today sending 2 RED STAMPS to cover postage on our large catalog and circulars telling all about Potter Poultry Products made for Particular Poultry People. If you are particular and want to make more money on your flock you will write us today.

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Baby Chicks of Quality
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From the finest exhibition or utility matings of Fishel Strain White Plymouth Rocks Single Comb White Leghorns, Barred Plymouth Rocks, Single Comb Rhode Island Reds.

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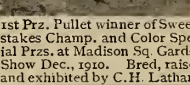


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All dust, hair and filth that fall from the udder are caught by the "dirt shelf." Only absolutely pure milk, just as drawn from the cow, goes into the pail. The only sanitary milk pail that ever proved a real success in every way and received the approval of all cow owners. Easy to wash—just right for pouring and handling milk. If your dealer cannot supply you, We Will Send Pail Prepaid on Ten Days' Trial Free. After trial send us the money or the pail. Price \$2.50.

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It tells how I made \$3,600.00 in one season from 30 hens, on a city lot 24x40, just by feeding the scraps from my table three times a day. I'll give you the names of those who paid me over \$2,000 for the eggs alone from these hens. You can write to these people.

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This valuable information has never been published before. This book tells how I feed my chickens for egg-production—how I keep them healthy and free from disease—how I break up my broody hens without injury to them. I tell you how I pack my eggs so as to keep them fresh—how I mate my chickens to produce best results in fertility of eggs and quality of offspring. I tell you

how I operate my incubators and brooders—how I supply moisture. I tell you how I raised my famous \$10,000 hen "Peggy"—and how I produced my big egg-laying strain. I tell about broiler-plants, egg-plants, etc

It covers all branches—it tells everything necessary for successful poultry raising. It tells how I started, and what I have accomplished.

It shows you a picture of the first hen house I built, 6x6 feet in size. It contains over 50 full-page pictures of buildings and views taken on my farm. It was written from actual, practical experience.

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I received your book sent me Saturday a. m. It would have been worth to me \$500.00 if I had had it last spring. "Good Book," common sense learned by hard-earned experience. Worth \$1,000 to me. Respy, L. R. HAYWARD.

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Dear Sir:—Your late poultry book received, and I have received very much valuable information therefrom. I believe I can now begin the poultry business intelligently and successfully. Yours respectfully, T. W. SHACKELFORD.

Best dollar's worth I've ever received. CHAS. P. GOETZ, Buffalo, N. Y.



My Book tells you everything that is necessary in conducting a successful poultry business.



I have sixteen of your hens that average two hundred and thirty-one (231) eggs per bird in 12 months. LAWRENCE JACKSON, Pennsylvania.

Heaviest Laying Strain in the World.

There isn't a thing that would make you successful in the poultry business that is not fully shown and explained in this book.

Send \$1.00 and I'll Send You a Copy of this, My Latest Revised Poultry Book.

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nared the Crystal White Orpingtons, now famous the world over. Mr. Kellerstrass exhibited upwards of \$25,000 worth of birds at the Chicago Show.—Western Poultry Journal, Cedar Rapids, Ia.

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Our Poultry Fences are made of extra heavy, double galvanized Rust Proof wires. No top or bottom boards required. Chick tight—vermin proof.

Our Ornamental Fences and Gates are white enameled, attractive and durable. We can save you money. Catalog free. The Brown Fence & Wire Co. Dept. 95 Cleveland, O.

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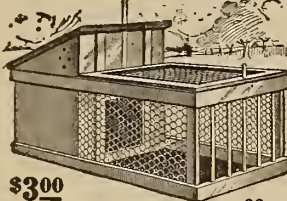
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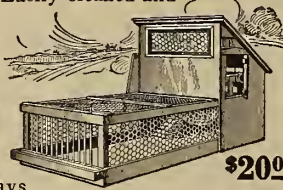
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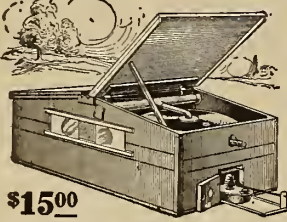


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The Spring Star Flower

OF ALL my spring flowers I doubt if any has been a more delightful surprise to garden visitors than a charming one that for two years I cultivated under a wrong name. This is the spring star flower.

I purchased the bulbs as *Milla uniflora*, but they are properly *Triteleia uniflora*, a near relative of what at first I took it to be, as well as of the North American brodiaeas. The ordinary *Milla uniflora*, which is a native of the Argentine Republic, is described as "shaded blue" and "pure white", and the *Violacea* variety as "porcelain blue striped violet." Mine, presumably, is the latter, though I should call it, to all intents and purposes, white with a faint lavender stripe on each section



The spring star flower (*Triteleia uniflora*) is equally as hardy as scillas and showdrops

of its dainty and deliciously fragrant stars. I plant it in my hardy borders, the same as scillas and snowdrops, and find it equally hardy. Costing as it does only fifteen cents a dozen, it should be planted more extensively. Indoors it may be grown in earth or sphagnum and, by gentle forcing, the lovely blooms, which are fine for cutting, may be had from January to March.

This bulb should not be confused with the true *milla* that is cultivated—*M. biflora*, known variously as Mexican star, Mexican star-of-Bethlehem, frost flower and floating star. The latter grows about twice as tall as *Triteleia uniflora*, which is less than six inches high, and the pure white blossoms, usually in pairs, are much larger—say two and one-half inches across. It blooms in August, is too tender to be treated as other than a summer bulb, costs four times as much as *Triteleia uniflora* and, aside from the question of hardiness, requires greater cultural care.

New York.

H. S. A.

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This brooder is a radical new departure from previous types. The principle upon which it is built, absolutely eliminates the possibility of crowding, overheating, chilling and smothering — does away with regulating or supervision of any sort.

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The reason for sending you this valuable little book free, is, of course, to get you to know about the wonderful Slumber Brooder. We know that you will want this brooder as soon as you understand its working principles (and you can easily buy it because its price is so insignificant).

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You have nothing to lose and everything to gain by investigating this offer. If what we promise you is true, you need this booklet and the information it contains.

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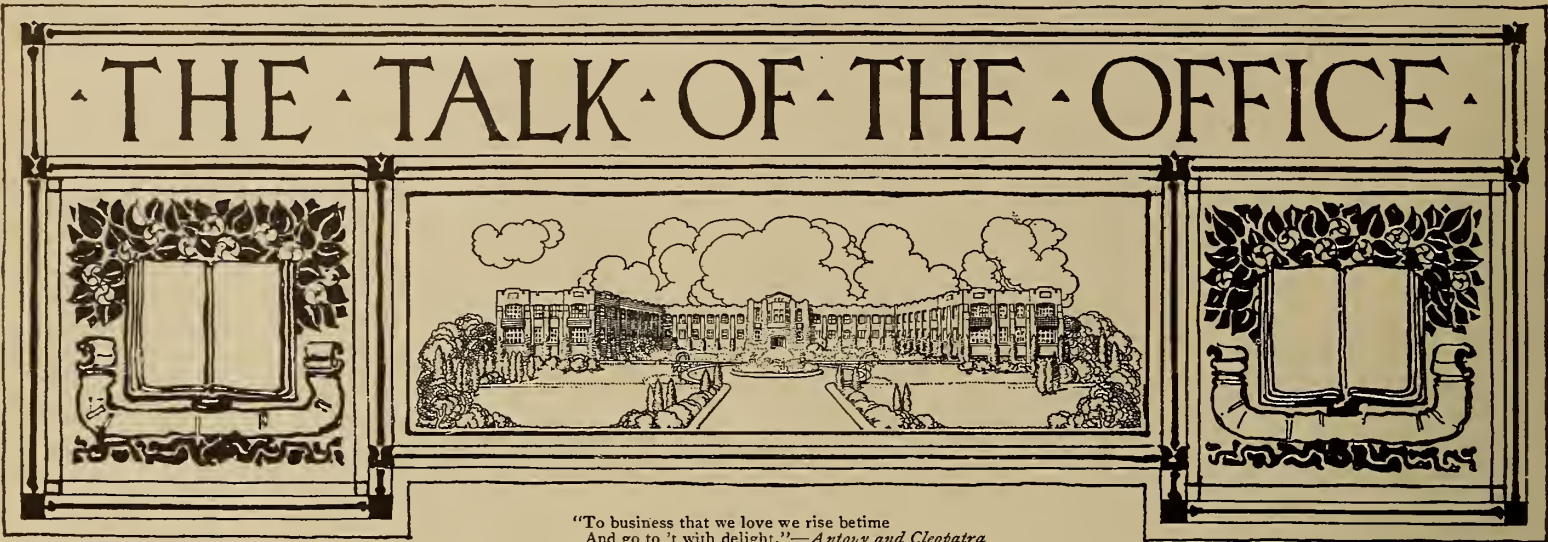
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A PLAN OF IMPORTANCE

During the last few years a demand has developed for a new kind of book for young people beyond the picture book age. Our own CHILDREN'S LIBRARY containing literature that every child should know has had, and continues to enjoy, a phenomenal sale; but realizing that there was a demand for a new kind of book as mentioned, we have been working for two years to produce what we choose to call:



THE CHILDREN'S LIBRARY OF WORK AND PLAY

The wise folk who decide how our children shall be educated have made a great discovery of late years. The *new idea* is that a boy (or girl) must do some useful work with his hands in order to get the best out of his brain.

Old or new, it's what every child needs. The whole modern system of exclusive book learning from the age of four to fourteen is being remodelled all over the world. Children are being taught Housekeeping, Carpentry, and all sorts of manual training, and preferably work that is necessary that needs to be done. It is not the plan of this set of books to make Carpenters or Farmers or Cooks—but to restore that old lost balance between working with the head and working with the hands, which existed in perfection with the country boy of a few generations back—who did all sorts of chores and farm work in addition to attacking the three R's in the district school.

Your child will never be as healthy and as happy, will never go to his study with avidity, unless you give him the chance and the impetus to find out the *joy of doing*. On the other hand, just try him at using his hands and muscles usefully; there will be few times when the problem is what to do; there will be a marvelous increase in care of playthings when he learns what it means

to make new toys or mend old ones; there will be a growing delight in the creation of objects of use from wood and metal. And finally, to look ahead, you will do for your child, by starting his feet on this path, what he will doubtless bless you for when he becomes a man of affairs—almost the most important thing of all: You will *add to his resources* and give him a fresh avenue to the true joy of life.

It is because we believe all this most fervently, because we know that no more fortunate thing could happen to the young people of America than an awakening among them of the natural instinct to do and make things, that we have prepared the only set of books in existence which aims to be a *guide to the useful things a child can do*. The aim throughout has been to inspire the child with a *desire* to do something and to show him practically and in clearest detail, how to go about and do it; as a result the books are marvelously helpful and practical.

The task of preparing a set of books like this has been a difficult one, because it is essentially a new idea. It needed to be, in a way, a Children's Encyclopedia with all the helpful qualities an Encyclopedia possesses; yet it must be what such books of reference are not—*readable and inspiring*.

This has been accomplished by securing writers whose narrative is entertaining and interesting, and the quick reference to any subject has been provided by a full and adequate index.

The working out of the plan, the securing of competent authors and the arranging of the work has occupied several years and the result is a work which will, we hope and believe, be the standard for all time.

The Children's Library of Work and Play will be complete in ten volumes; the books will be sold exclusively by subscription, and, if desired, on convenient monthly payments. We have prepared an attractive booklet, descriptive of this great new work, copy of which we shall be glad to send to you upon request. *It's free*.

The double Spring Issue of THE GARDEN MAGAZINE comes next month—April—a 25 cent number, or \$1.50 a year.

SPRING INSPIRATION

Which is to say that the wise man hoes his own garden.

Here are some items:

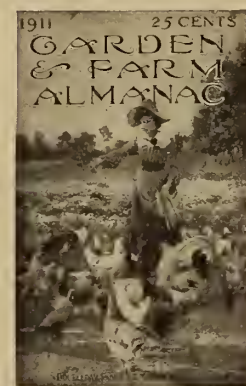
The Back-to-the-Land issue of *Country Life in America* comes ready March 15th. It is the sort of thing one likes to read when one thinks of the far away possibilities of a farmhouse. Price 20 cents a copy, or \$4 a year, for 24 issues—two years for \$6.

The Garden and Farm Almanac is more valuable this month than any in the year. It is a daily reference guide with clear and concise directions on garden and farm matters covering this wide field fully and authoritatively. If you are an actual or prospective owner of a farm, a garden, or a country home you will need the 1911 Garden and Farm Almanac. 25 cents. Use coupon below.

WINTER IN THE COUNTRY

The Country Life Press has experienced its first Winter in the country, and has particularly enjoyed the light and brightness that is diffused in every corner of the building. Snow came early and added to our pleasure. All our gardening enterprises were at an end on December 1st, but we got in several thousands of trees, several car-loads of rhododendrons, 50 or 60 cedars, from 35 to 40 feet high, and we are now beginning work for the new season.

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The Stark Year Book for 1911, Volume II

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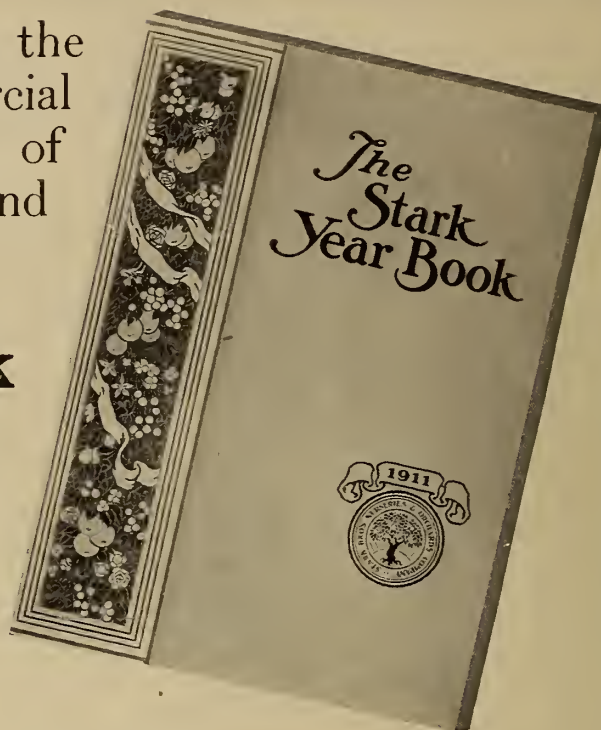
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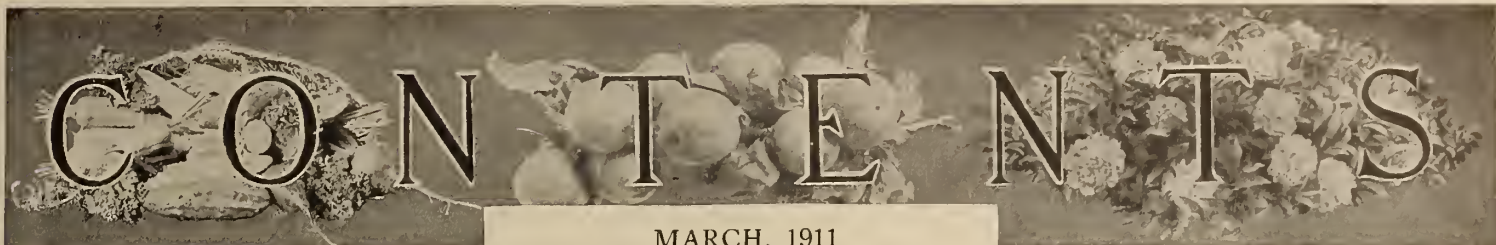
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I expect to plant _____ trees about _____

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MARCH, 1911

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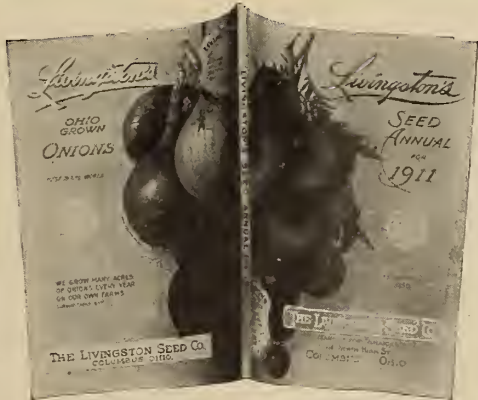
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The Garden Magazine

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ONE DOLLAR FIFTY CENTS A YEAR
FIFTEEN CENTS A COPY



[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

As the Frost Leaves

PLANT the hardiest seeds just as soon as the ground can be worked — that means: on light grounds, as soon as the frost is out; on heavy grounds, a little bit later, as they must take time to dry out and warm up a little. For earliest crops, sow on the lightest and highest ground.

Vegetables: In the open: asparagus, carrot, chicory, corn, salad, mangel wurzel, parsnip, peas, salsify, sea kale, spinach. For first sowings of peas, use round-seeded kinds. If you want sea kale this season, read the article "Sea Kale In Nine Months," by W. C. McCollom, in the March, 1908, GARDEN MAGAZINE.

In greenhouse or hotbed, for planting out when the weather is safe, sow now: beets, broccoli, all the cabbage family, cardoon, cauliflower, celeriac, leek, lettuce, celery, eggplant, kohlrabi, okra, onion, parsley, squash and tomato.

Under cover, to mature inside, sow bush beans, cucumbers, melons.

Begin your successions by sowing every week from the first of March, in frame or greenhouse, cress, mustard, radish. It is not too late, at the beginning of this month, to try an outdoor mushroom bed, but this is the last chance.

Flowers: All hardy annuals can be sown this month in the open air, to flower where they are sown. Give room by thinning out. Or they can be sown in the greenhouse or hotbed and transplanted outdoors as soon as the ground is right.

The half-hardy annuals and tender perennial plants that are grown as annuals must be started in heat. Read Mr. Adams's article on page 74.

As early as possible plant bulbs of hardy

lilies. It is yet too early to put outdoors any other roots, except peonies, which were not planted last fall.

Plant perennials in the hardy border any time from now on. Also transplant shrubs and rearrange groups. It is perfectly safe to transplant any time in the spring, even while they are in bloom, any shrubs that flower before the leaves come.

Fruit Garden

SET out fruit trees any time now. Prune the orchard trees. Thin out currant bushes, graft cherries and plums. Cut back two-thirds of last year's growth of dwarf trees, if it was not done during the winter. Prune raspberries and trim up the grape vines. (See THE GARDEN MAGAZINE for March, 1910.)

Make new strawberry beds, planting some of the novelties and testing out their behavior in your region. Nothing in the garden has more strongly marked local peculiarities.

Lawns and Grounds

REMOVE gradually all protective material that was used during the winter, especially the covering of bulb beds, rose beds, etc. Replace if the weather suddenly becomes colder.

Mulch afresh all stock planted last fall. Bring in and distribute manure and give a final overhauling to all shrubberies and plantations, repairing any winter damage by wind or ice.

Prune roses and plant new beds. At-

tend to the roses as early as possible, because they make early growth. If you want large flowers, don't be nervous about cutting back. Roses flower on the new wood. For a quantity of flowers, prune moderately; the weaker the growth the greater the necessity of pruning.

Prune now all flowering shrubs that flower on the *current season's growth*, such as *Hydrangea paniculata*, garden roses, etc.

Roll lawns and repair all heavage by winter frosts. Fill the hollows, beat down high places, top dress and scatter a pinch or two of seed on any bad spots.

Remove coarse, rank weeds before they start strong growth.

Spray while the trees are yet dormant. See page 98.

Work the Hotbeds

MAKE hotbeds at any time, using clean, fresh manure — a layer two feet thick tramped down hard. Be careful not to let the heat get too great. Put a few inches of soil over the heating material and after the first fermentation seeds may be sown. Give air on all fine days when the weather is warm, and remember the bed must be kept moist. Better use two thermometers — one for the air and the other for the soil. In here you can sow all seeds of annuals and perennials for transplanting in the open, all tender vegetables, and propagate hardy perennials in quantity. By sowing a pinch of lettuce seed every ten days a succession of salad can be kept running ahead until the outdoor crop matures.

WE'LL PAY \$500 FOR THE BEST HOME GARDEN OF HALF an ACRE, OR LESS

If it is the most productive and the best managed plot during the season of 1911.

We want the actual records of a well-managed home garden—its plan, its operation, yield, successions, etc., because we believe that besides better living, there is actual money to be made or saved in making the garden work for you.

This award will be made for the best account of a well-managed garden of a half-acre or less in the year 1911, provided the account really tells how the greatest productiveness may be achieved. This competition is open to all, whether present subscribers or not. The only conditions are:—

1. Notice of intention to compete to be given not later than May 20th, 1911.
2. A complete record of work to be submitted at the end of the season, with names of varieties grown, yields, etc., and an exact record, in detail, of all labor and expense, with bills and vouchers.
3. All entries must be accompanied by a plan of the garden and its succession plantings.
4. All contestants must submit their manuscripts not later than October 31st, 1911.
5. The prize-winning manuscript, with photographs, etc., to become the property of THE GARDEN MAGAZINE. The right is reserved to purchase any other MSS. at our regular rates, or not to award the prize at all, if the MSS. submitted are not sufficiently worthy.



Sweet sultan (*Centaurea imperialis*) matures flowers before hot weather



The cosmos will give abundant bloom from July until frost



A most ornamental climber is the *Coboia scandens*



Salpiglossis, a neglected but one of the most fascinating annuals

The Secret of Certain Annuals—By H. S. Adams, ^{New York}

PLANT THE MORE TENDER ONES INDOORS, OR IN A COLDFRAME, IN APRIL, OR EARLIER, AND THUS DISCOUNT THE SEASON

IN all of gardening there is nothing more disappointing than to see cosmos, or Brazilian morning glory, or any other annual blackened by the frost at the very moment when no end of buds are ready to give the first burst of bloom. One remedy there is, and only one: plant under glass and get a fair start of the season.

True, the season may be prolonged at the other end by taking the trouble to cover the plants; but, aside from the fact that this is a real trouble when it comes to protecting such big things as cosmos and vines, at every sign of frost, the cooler weather from the middle of September on has a marked tendency to diminish the size of some blossoms. So that several of the most beautiful annuals, even if they do get the better of Jack Frost, are never seen in all their perfection when they do not begin to bloom before the fag end of the season.

There are annuals and annuals: some are and some are not. By certain annuals here is meant the more tender class of those flowers that are treated as annuals, whether they actually are such or are biennials or perennials when on their native heath. That class cannot be sown in the open ground until "all danger from frost is over," which in the North means some time in May, according to the latitude. And seed sown so late either stands scant chance of giving good bloom before frost is to be looked for or, owing to the limited time allowed, is forced to offer half measure when only too gladly it would make it full and running over.

As has been said, the sole remedy is planting the seed under glass. Neither a greenhouse nor a hotbed is needed;

with both the temptation of the amateur is to sow the seed too early and thus get weak, or weakened, plants for May planting out-of-doors. A coldframe will answer just as well, or shallow boxes placed in a sunny window anywhere from cellar to attic. The point is to get the seed in the ground more than a month earlier than it would be safe to sow it in the open; it must be sown, say, not later than the first to the tenth of April to bring about the desired result.

I like the coldframe idea myself, because it reduces trouble to a minimum—and brings no dirt into the house. I sow the seed in rows the short way of the frame, and on the back board I put a number, which, in my notebook memorandum, is placed opposite the name of the flower. Only the ordinary rules of seed-sowing are followed, excepting that, until the seeds begin to come up, I water through a piece of cotton cloth cut to fit the seed-bed. The rows can be thinned out as they stand, at the proper time, or if the seedlings are too precious to lose they may be transplanted to another frame. I knock my own frames together, because there always is plenty of old sash available, but in my opinion no country place is complete without one of the real kind, made solid and put in some convenient place to stay there for years, and twice each year to prove an unmixed blessing.

I speak of cosmos and Brazilian morning glory not at random, but from the heart; I have seen six-footers of the one and twenty-footers of the other ruined by Connecticut frost, and Nebraska frost, just when both at last were ready to reward me generously for my summer's

pains. Another reason why I mention the Brazilian morning glory (*Ipomœa setosa*) is because I not only seize every opportunity to call attention to one of the most magnificent of annual climbers, but make opportunities wherever I can.

Here is a really stunning thing, glorious at first with its wonderfully, vigorous growth of handsome light green, lobed foliage, set off by stems thickly covered with reddish hairs, and still more glorious later when the large blossoms of old rose, with a solferino throat, appear. Seeds planted in the open sometimes have given me blossoms in the late summer, but unqualifiedly I recommend the earlier planting that allows this tropical climber to find its full expression. Started under glass, it is such a rank grower that by August a single vine is likely to cover a space twenty feet square.

The charming little scarlet morning glory (*I. coccinea*), the remarkable but sadly unappreciated Japanese and Heavenly Blue morning glories and the moonflowers all should be given the same early start. To hasten germination the seed of all the ipomœas should be soaked in warm water before planting; frequently I leave them in a tumbler over night, setting the glass on the seed envelope. Moonflowers are such "pesky critters" about coming out of their shells that the only safe way is to file a notch in the seed; once when I merely soaked some over night it was just four months before the first one showed above ground. All the ipomœas are easy to transplant if the seeds are not planted too close together. I put the seeds in the ground one by one to obviate thinning.

As for cosmos, there is an early blooming kind nowadays, but if you want masses of bloom from July on, the seed must be sown under glass. Indoors, March is not too early to sow the seed. Care must be taken, however, that the plants do not get too spindling. For porch use, or for placing in the shrubbery temporarily, pot some of the seedlings, one in a pot. Pinch off the top when the plant is six inches high and again at intervals if a compact plant is desired. The comparatively new Lady Lenox is the best pink variety and, with a package of white cosmos, will give more for the money than most flowers.

Salpiglossis is another annual that simply finds it a physical impossibility to do its level best unless helped along in the same manner. One of the most fascinating of all annuals, it is at the same time one of the most neglected. I have had fair results, very late in the season, from seed sown in the open, but the secret of success is April planting under glass. Unless a hotbed is at hand, it is better to sow this seed indoors. The Emperor strain, in mixed colors, is best if only one package of seed is planted. It is possible, however, to get six separate colors—crimson, primrose, purple, rose, scarlet, and white, the last four with intricate veinings of gold—for only forty cents, and such a collection will give any one who does not know salpiglossis one of the real joys of his gardening experience.

Dahlias from seed are only in the infancy of their possibilities so far as the average grower of flowers is concerned. Although the single ones will flower in ten weeks from the time that the seed is planted,



Dianthus blooms the first summer from seed sown outdoors in May

if the conditions are ideal, the advantages of April sowing are obvious. The single type, which is admirable for cutting, is the most reliable as to results. The peony-flowered type, which is semi-double, is excellent, however, and it is interesting to test by actual experience the potentiality of the double types—show, fancy pompon, and cactus—in the way of producing something at once new and worth while.

One gardener of wide experience sows the seed of that splendid climber,



For a blaze of brilliant red late in summer. plant masses of scarlet sage (*Salvia splendens*)

Cobaea scandens, as early as the middle of February for bloom the middle of July, and never later than the first of March; but where heat is not available, the first of April will do. The seed should be put in the ground edgewise, and if the seedlings are potted, one to a small pot, they may be allowed to run up a yard or more, on a small stake, before planting time.

Nasturtium seed sown out-of-doors gives bloom the middle of July; you will get it early in June if you sow the seed under glass about March 15th. This getting ahead of the season is particularly desirable in the case of the tall climbing kind, *Tropæolum majus*, than which no annual vine is more gorgeous. Its charming near relative, the Canary bird flower (*T. peregrinum*), absolutely demands early planting as the price of success—say the middle of March for bloom the first of July and so on. Seed sown in the open occasionally does not bloom until September.

Schizanthus, sometimes called butterfly flower, is in the class of half hardy annuals, which is a good enough reason for favoring it; but there is another reason, its flowers are too lovely to lose one day of the normal blooming season. There are two good kinds, *S. pinnatus*, which has a considerable range of coloring, though running a great deal to mauve shades for the markings other than yellow, and *Wisetonensis*, a white variety marked with rose.

For bold floral effects some of the aristocratic relatives of the common "Jimson weed" (*Datura Stramonium*) are worth early planting. I do not know where daturas begin and brugmansias end, but there are some showy kinds,

usually sold under the former name, that may be treated as tender annuals. Personally I prefer the single ones, especially the pure white. The horn-of-plenty type, *D. cornucopia*, however, is interesting because of its trumpet-in-trumpet form variations and the double yellow, Golden Queen, has a fine color tone to recommend it. The white *D. cornucopia*, which was brought from South America so recently as 1895, is not the old fashioned marriage bell, or angel's trumpet, that our grandmothers used to winter in the cellar and bring out every spring for summer flowering; that seems to be either *D. suaveolens* or *Brugmansia arborea*. It is called the latter in the Bahamas, where, as a tall shrub, it is a striking permanent feature of gardens.

The snapdragon (*Antirrhinum*) is a perennial, but getting a start of the season brings it into the annual class for the present purpose. Seed should be sown under glass in March or April; pick out a few of the fine named varieties and don't forget to include the pure white, that being one of the best for cutting. Sow the scarlet sage (*Salvia splendens*) at the same time for like advantageous results; also the so-called annual pinks (*Dianthus*), which agreeably resolve themselves into biennials and sometimes refuse to die even at the end of the second season. They will bloom the first summer from seed sown in the open ground in May; but it is better to give named varieties, of which there are some wonders, an early start. For a single red I find Crimson Belle reliability itself.

Then there is the sweet sultan (*Centaurea imperialis*). This time-honored flower, lately in vogue again, likes to perfect its flowers before the advent of hot weather; so it offers to the others its own excuse for early planting. Violas, or tufted pansies, though not tender, will bloom in June if started in April; likewise the new strains of verbenas and petunias. For Memorial Day, petunias and also stocks should be sown late in February, and verbenas by the middle of March.

Rose moss (*Portulaca grandiflora*) has its own notions about germinating; it wants high temperature and therefore it is not customary to plant it until late — corn-planting



Be sure to grow some pure white snapdragons. Best for cutting

time. As it transplants easily, I favor indoor planting for the double kind. This gives early bloom and good colors can be increased at once by taking cuttings and sticking them in the ground.

The amethyst (*Browallia demissa*, the *B. elata* of the florists), generally is used as a greenhouse annual, but it may be grown from April-sown seed for bedding purposes. The African daisy (*Arctotis grandis*) gives fine flowers for cutting in July if sown under glass, and that is the best way to be sure of perfect blooms of helichrysum, one of the choicest of the everlasting. For the same reason the annual wallflower, an excellent substitute for the perennial kind where the latter objects to the winter, should be sown in April.



Among the lesser known half-hardy annuals the butterfly flower (*Schizanthus wisetonensis*) is worth knowing for its variety of coloring

These tender or half hardy annuals also should be helped to get a proper foot-

hold by forcing the season; the balloon vine (*Cardiospermum*); the lovely Swan River daisy (*Brachycome iberidifolia*); Japanese hop (*Humulus Japonicus*); ice plant (*Mesembryanthemum crystallinum*); Joseph's coat (*Amaranthus tricolor*); butterfly runner bean (*Phaseolus multiflorus*, var. *papilio*); balsam apple (*Momordica balsamina*); giant hemp (*Cannabis gigantea*); yellow morning glory (*Convolvulus aureus*, var. *superbus*); balsam pear (*Momordica Charantia*); squirting cucumber (*Momordica involucreta*); rag gourd (*Cucumis acutangulis*); *Bryonopsis laciniosa*, *Erythrocarya coccinea*, var. *Indica*, *Rhodanthe maculata*, *Cyclanthera explodens*, *Leptosyne Stillmani*, *Linum grandiflorum*, var. *rubrum*, *martynia*, *Matthiola bicornis*, *Nicotiana alata*, *Passiflora gracilis*, *Thunbergia elata*, and *maurandia*.

Practical Celery Culture in Florida—By P. N. Holst, Sanford Florida

[EDITOR'S NOTE:—Supplementing the article in the January number on the general situation, a grower now tells his routine of cultivation and shows how \$1,000 an acre has actually been made in celery in the Sanford district. It is only fair to add that such returns are coupled to great speculative uncertainty, on account of the chances of losing the entire crop. As a matter of fact the writer of the present article suffered a complete loss of the crop following the one now described, and at the same time the price of lettuce fell to about 50 cents net. We would emphasize these facts in view of correspondence that has reached us. Any venture that returns such large percentages must of necessity be speculative and is not a safe poor-man's game, although he may win largely on his first venture. Other correspondents declare that the West Coast of Florida offers still greater rewards, or rather that it is on record that a still greater return was made there, at least once.]

THE fact that flowing artesian wells can be drilled at Sanford, Fla., is a reason of the preëminence of that region as a trucking centre. Flowing wells are found at an average depth of 100 feet, and a 2-inch well, complete with shut-off valve, usually costs only \$60. I know of one well that was dug in an afternoon and cost only \$27.50. The whole district is practically honey-combed with wells (one to each five acres) without showing any diminution in flow.

The land in the district is of two types (1) The low hammock on the lake shore, distinguished by the growth of hardwood, and the peaty character of the soil; and (2) The so-called "flatwoods" or pine land with sandy soil. This land in the raw state now sells at from \$125 to \$200 per acre according to location. Hammock land costs more than flatwoods, as the hammock soil contains more humus and therefore requires less fertilizer.

The cost of clearing depends of course, upon the nature of growth upon the land. Hammock land sometimes costs as high as \$200 per acre to clear, whereas the flatwoods can be handled at from \$15 to \$75 per acre.

Clearing by the piece costs as follows:

Trees dug up	\$ 1.00 to \$ 3.00
Stumps dug up35 to 1.00
Burning the wood and grubbing	10.00 to 20.00 per acre
Grubbing roots and scrub palmettoes	10.00 to 20.00 per acre
Disk plowing (4 mules)	8.00 per acre
Four horse cutaway harrow	8.00 per day
or about	5.00 per acre

There is very little profit in selling the wood. Cut up in stove lengths it costs \$3 a cord, and \$2 a cord for delivery. It can sometimes be sold for \$6 a cord delivered, but as a rule the sale of wood is a negligible item in reducing the cost of clearing.

After the land has been thoroughly broken up and the well dug, tiling is commenced.

The well is dug at the highest corner of the field, and is provided with a valve so that the water may be turned on or off at will. The well pours into a large terra cotta stand pipe which has a cement bottom laid in it. From this, a terra cotta 4-inch main is laid along one side of the field with all joints cemented. At intervals of about twenty feet this main is

tapped and the water from the main flows into 8-inch terra cotta stand pipes which are at the head of each row of lateral tiles. The object of these stand-pipes is to regulate (by means of wooden plugs) the amount of water flowing into each row of tile. The tile is laid eighteen inches deep across the field with a slight fall (1 to 3 inches to 100 feet). Three-inch tile, a foot long, and made of clay or cement, are commonly used. The water passes through the joints where the tiles meet, and these joints are covered with palmetto fibre to keep sand from sifting into the tile. At the lower end of the rows of tile are so-called pockets to regulate the amount of water to be turned on the crop. A pocket, made of cement, is simply a box with a partition in it. The tile enters the lowest part of the pocket, and if the partition is not plugged up, the water flows right through the pocket into the drainage ditch which is dug along the side of the field opposite the main. But by plugging the bottom hole in the partition the water is raised until it pours through a hole almost at the top of the partition. By plugging this upper hole the water is raised to the level of the top of the par-

tion. Thus there are three degrees of wetting the land: (1) by letting water run through the tile a certain amount escapes from the joints and is carried upward by capillary attraction; (2) the bottom hole being plugged the water is raised to within a few inches of the surface and the ground becomes thoroughly saturated; and (3) in extreme cases the upper hole may be plugged and the land flooded.

Besides being invaluable in times of drought and for saturating the soil at the time of setting plants in the field this system of irrigation is particularly advantageous as a drainage system. In other words the matter of moisture is absolutely under the control of the grower.

The cost of tiling averages about \$100 per acre.

Estimate cost of tilling 5 acres:

11,000 tile at \$20 per M.	\$220
48 stand pipes and pockets	48
320 feet 4-inch main at 8 c.	26
Nipples and plugs	8
Cement	5
Fibre	10
Hauling materials	30
Labor, 8 men 10 days, at \$1.50	120
Total	\$467

This estimate is based on actual experience but may vary about \$30 either way. Having the work done by contract usually costs more.

Planting begins about September 1st, and ends about June 1st, during which time three crops are raised. In the summer the land is planted in cowpeas or allowed to go to grass, from which about three tons of hay to the acre are cut. This refers to old land in a thorough state of cultivation. Newly cleared land is very sour and will not make a good crop of celery and lettuce, which are the two principal crops of this district.

The usual practice with new land is to apply a ton of Canada hardwood ashes to the acre, and sow cowpeas broadcast at the rate of about a bushel to the acre, if the peas can be planted before July. Should the land not be ready by that time, the land is repeatedly plowed and harrowed



Transplanting young plants into the "prick bed" whence they are later set into the field

until time for planting the winter crop. This crop on new land is usually cauliflower or potatoes. With excessive applications of ashes or lime, celery is sometimes successful on new land, but lettuce seldom does well on first-year land.

The cost of cauliflower per acre is about as follows:

1/4 lb seed per acre	\$ 10
1 ton high grade fertilizer	42
Labor	30
Harvesting including hampers	75
Total	\$157
Average yield 400 hampers	

The cost of planting potatoes, including barrels at about forty cents apiece, should



This is the average Florida celery head, which is very profitable when the crop catches the market properly

be a little less than this. Average yield about forty barrels. Average price last year about \$4.50 per bbl. f. o. b. Sanford. This year, \$4.00.

With average yield and fair prices a profit is possible on either of these crops, but even with no profit, the value to the land from the cultivation is inestimable.

Supposing, therefore, that we have finished our first year, that our land has been thoroughly and repeatedly turned up to the sweetening influences of air and sunshine, that our land has been gathering nitrogen from the air all summer through the aid of some leguminous crop such as cowpeas or beggar-weed, and that we are on the ground by August 1, to begin our campaign on second year land,



A good planter can set out 20,000 plants a day. An acre takes 70,000

then we are prepared to follow the general method of the old-timers, whatever may be the age of their land. The third season, and each succeeding year, our chances of success may be better, but in describing one we describe them all.

First, some disposition is made of the summer cover-crop. It is generally conceded that to turn under any green vegetation is to run the risk of adding more acidity to our sandy soil, so our usual procedure is to run a harrow over our pea vines, turning them under when dead, or to cut them for hay and plow in the stubble. Stable manure is a luxury that only a favored few can obtain. Those who are lucky enough to get it now work it thoroughly into the soil.

We always try to obtain a few loads of manure at \$3 or more to put on our seed-beds, the preparation of which is now in order. For reasons beyond the logic of the writer, new land is preferred for celery seed-beds, and if no more new land is available, those who know always choose a new spot for seedbeds each year. This, like many other local customs, is the direct antithesis of the practice in the North.

The early birds begin planting celery about August 25th, extremists some days earlier. In order to make the seed germinate during this hot weather, precautionary methods of a complicated nature have to be taken. Beds three feet wide, raised an inch or two above the general level and of any desired length, are made convenient to the water supply. These are raked, re-raked, rolled smoothed, fertilized, and raked again until they are in a condition of most perfect tilth. Slight furrows are then made across the beds, four to five inches apart, in which the Golden Self Blanching French-grown seed is thinly sown. Individual opinion varies in the matter of raising plants. Some cover the seed lightly with soil, others do not cover, but simply lay burlap sacks over the uncovered seeds. "Half-covers" (which are frames made of plaster laths with interstices of about an inch) are placed on the south side of the bed, leaning at an angle of 45 degrees toward the North, thus completely shading them. Until the seedlings are up, burlap sacks are stretched



An abundance of water readily available is the foundation of the celery industry at Sandford

Transplanting is done most efficiently by division of labor; one man drops the plants, another following actually plants them

across these frames to make the shade more dense. These beds are watered at least once a day with a fine spray until the seeds have germinated, which takes from ten to twenty days. When the plants are about one inch high the sacks are removed from the "half-covers"; when two inches high, the "half-covers" are taken off; and when about three inches high, the plants are ready to "prick out." The "prick beds" are made in the same way as the seed beds. The plants are pricked or transplanted into these beds with an awl or a one-tine fork (which may seem paradoxical) by pushing the roots down into the ground, in five-inch rows across the bed, and one inch apart in the row. Sometimes the largest plants are set directly from the seed bed into the field, but the transplanted plants can be sorted and give a more even stand in the row which is an important consideration when blanching time comes.

Seedbed plants usually sell for fifty cents a thousand, pricked plants from one to three dollars a thousand.

About September 10th, after the celery beds are well under way, the lettuce is planted (Big Boston). The beds are prepared in the same way as above described, but shading is seldom resorted to. The seed germinates in about three days, if well watered, and in three weeks the plants are ready to set in the field.

Meanwhile the field has been plowed, harrowed, fertilized (1 to 2 tons of ashes and ten days later 2 to 3 tons of high grade fertilizer) then harrowed again and levelled and smoothed until it is like the surface of a ballroom.

The lettuce is set in the field in 15-inch checks and each plant watered. It takes about thirty-two thousand to set an acre. Plants are set out about October 1st, and should be ready by November 10th. Average yield 400 hampers.

After the lettuce is harvested the celery plants are set in the field in 30-inch rows and three to four inches in the row. This usually requires two hands to take the plants out of the beds and sort them, two to drop them on the row (which has been marked with a roller having cleats at the required distance) and one waterer. A good setter can set 20,000 plants a day. It takes 70,000 plants to set an acre. The celery is cultivated frequently and several applications of fertilizer are made along the rows until time to blanch the celery.

Celery is blanching with cypress boards — 12-inch boards 12 to 16 feet long. This is the most costly outlay. It takes 30,000 feet of boards to blanch an acre or about \$400 worth. To economize boards we set large and small plants in alternate rows. By the time the large row is

blanched (average time about fifteen days) the small row is large enough.

The celery is cut, sorted, and packed in crates in the rough (*i. e.* not washed) state. Average yield about eight hundred crates.

As the celery and lettuce crop on the same land come so close together that it is hard to correctly separate the fertilizer and labor accounts, I give a combined statement for the two crops:

Seed	\$ 10 per acre
Fertilizer	200
Crates	150
Labor	140

\$500 for the two crops

Average yield and returns in 1909-10:

Lettuce, 400 hampers at \$1.75	\$ 700
Celery, 800 hampers at \$1.25	1,000
Total	\$1,700
Less cost of production	\$ 500
Net profit per acre	\$1,200

After the celery is harvested, some spring crop follows, as tomatoes, cucumbers, eggplants or peppers. These sometimes prove quite profitable and they have the advantage of being cheaper to raise.

[EDITORS' NOTE.—In this connection, we publish elsewhere in this month's magazine a letter concerning the Sanford situation. The writer of this letter does not wish to have his name made public, which may, to some extent, lessen its weight as evidence. We publish it, however, just for what it is worth. We do not desire to be considered as in any way booming a special industry or any particular locality. Our desire is merely to lay before the readers of THE GARDEN MAGAZINE what we believe to be the facts as they come before us. One man will succeed where another will fail. The capacity of the individual and his quickness to perceive and take advantage of peculiar conditions give the greatest opportunities for success.]



Lettuce is grown as a "catch crop" before celery and usually pays its way

Quick Results in a Renter's Garden—By C. L. Meller, North Dakota

HOW THE TENANT, UNCERTAIN OF THE DURATION OF HIS OCCUPANCY OF A PLACE, MAY DRAW ON ANNUALS TO CONVERT HIS BACK YARD INTO A GARDEN OF DELIGHT

HAVE an annual garden, if you are not sure that you will occupy the same rented place another summer. Say it is a typical city back yard that is available, and one divided into unequal parts by a walk leading from the house to the back fence or alley gate, you can handle it thus: Next to the house, on the wider part, measure off a square the full width from the walk to the side fence. Divide this square into a central round bed and four corner ones with the sides facing the central bed. Sow the remainder of that plot to grass and lay out the narrow side of the yard in rectangular beds. Have just enough paths to bring the flowers within easy reach.

Then commence spading, the hardest part of all. Turn under as much manure as may be available; and if none is to be had, spade the ground all the more thoroughly. Almost any soil will grow annuals, provided it is sufficiently worked.

Hide the fences and shut out buildings as much as possible, and for this morning-glories are excellent. In fair soil they will quickly grow as high as eight feet, and when sown thickly afford an abundance of foliage. With Tom Thumb nasturtiums at the base, these are as effective an annual treatment for a tight board fence as there is. The wild cucumber vine is hardly to be recommended;

it soon gets unkempt and yellow. Along a picket fence sweet peas do fairly well.

The treatment of the geometric design must be simple to be really effective. In the central bed, plant cannas, edged with either lobelia or sweet alyssum. Castor beans may take the place of cannas for a bolder effect. By far the most artistic way to treat the corner beds is to sow the same variety of flower in each. This provides not only harmonious, massed color, but uniform height, which should not run over two feet. Petunias give white and crimson until frost; nasturtiums have fine yellow, salmon, and red shades, but if already used as a border it is just as well not to repeat; ageratum is a good blue, and Drummond's phlox is a free bloomer with many tones. Aside from annuals, geraniums are always good bedders, though expensive as compared with seeds. They may be used for the triangular beds to fill the middle one instead of cannas or castor beans.

As for the bit of lawn, this may be converted from spaded ground into a sheet of green almost within a month, though a good lawn is really a matter of years. White clover makes a fair lawn, germinates quickly (especially if soaked for a few hours in lukewarm water), and when carefully sown a pound of seed will cover a considerable

space. I have achieved a tolerable sod with a plentiful sowing of the sweepings from a hay loft. A sod, however inferior, is quite an addition to any garden, yet there are other uses to which this plot of ground might be put. Asters might be grown, for instance. These sown thickly and thinned out properly will yield a profusion of bloom from which even a slight financial return may be derived. I doubt if there is any town with ten thousand inhabitants or more where such flowers would not find a ready sale at ten cents a dozen, and the number of dozen that one can cut from a fair-sized bed is really astonishing. I have in mind a woman who made a neat little sum from an aster bed in a weed-grown lot next the house she was renting.

The rectangular beds should be filled with such flowers as fancy dictates. For the best effect, put the lower-growing flowers near the house. Have a bench, or make some other provision, for whatever foliage plants have been growing indoors. Along the alley fence sow a row of sunflowers. Grow the large double varieties that so much resemble huge chrysanthemums.

This renter's annual garden is feasible, because it has been done, not once, but many times, and worth while because the results of all the work will be evident within the year.



The chief effect here is from annuals. It is fortunate, indeed, if, as in this case, a few trees already have been planted on the place

A Rose Garden That Gave Results—By Josiah D. Whitney, New Jersey

A REFUTATION OF ALL THE COMMON BUGABOO IDEAS ABOUT THE DIFFICULTY OF GROWING ROSES AND GETTING FIRST-CLASS BLOOMS—FLOWERS ALL SUMMER AND FALL AND AT LITTLE COST

I THINK I was made into a rosarian suddenly by reading in a garden book some such prohibition as this: "The first thing a novice always wants to grow is roses, although it ought to be the last."

The implied challenge is enough to make a rosarian of anybody. Every garden person knows that being a novice has nothing to do with the case. That advice should merely have read:

"Nobody ought to try to grow roses who is not willing to show a little common sense and a little devotion."

My rose garden—which at the time of this writing is a little more than a year old—has upset so many of the popular beliefs that I am encouraged to set down a few of the facts about it.

Roses are generally regarded as being expensive. We have 230 bushes in 30 of the finest varieties; and the cost, up to date, has been \$25.

Another belief is that roses require an unheard-of amount of care. I have managed ours singlehanded in odds and ends of time. A few minutes a day, most of the time, are all they need.

A third notion is that it is almost impossible to keep the foliage looking well. Nothing is easier, if you keep the plants themselves well.

We had also read that rose bushes, out of flower, could never be an ornament to the landscape, and that after the June festival there would be no further returns till the following year. Our plantings have been beautiful and have borne flowers constantly from May 15th till the first snow after Thanksgiving.

There were other bugaboos, such as the sucker peril with budded stock, but they all failed to materialize.

For several days in the spring of 1909 my neighbors thought that I was crazy. They saw me getting out before breakfast on raw, cold mornings, clad in old clothes and hip boots. The plants I was putting in looked insignificant—being dormant, leafless stock—and the people regarded it as an act of folly that I cut the plants down to the ground. Many came into the yard and inquired: "Aren't you putting them too close together?" Others said: "Do you have to plant them so deep?" and "Isn't it too cold yet?"

I did not undertake to be at all positive, never having raised a rose before, and only knowing what I had read. However, the following summer—three months later—we had armfuls of flowers.

I waited one year before writing this article, to see whether the performance would be repeated. It was, many fold.

The rose garden came about originally through the accidental opportunity to buy some plants very cheaply. The lust

of possession, reinforced by an unusually low market, overcame me, and soon I had several hundred bushes. They were mostly Dutch stock, budded on Manetti roots. But some were American grown.

We have been able to give away twenty-five or more plants to friends, and sell a number in their second season to people who wanted roses which they had seen in bloom. The account stands at present as follows:

Expended on plants	\$24.45	
Labor	1.50	
Manure	2.50	
Sprayer	2.00	
Insecticides	2.00	
Straw jackets25	
		\$32.70
Deduct for those sold		7.70
		\$25.00

There are 230 plants left, as follows:

Bush roses: 13 Frau Karl Druschki, white; 5 Killarney, brilliant pink; 4 Hugh Dickson, crimson shaded scarlet; 9 Kaiserin Aug. Victoria, white to lemon; 14 Gruss an Teplitz, fiery red; 3 Paul Neyron, deep pink; 10 Maman Cochet, pink; 5 Prince Camille de Rohan, almost black; 7 Magna Charta, bright pink; 1 Mme. Plantier, white; 1 La France, pink; 9 American Beauty, crimson, 5 Margaret Dickson, white; 13 Mme. Caroline Testout, clear pink; 5 Mme. Jules Grolez, red; 11 Ulrich Brunner, crimson scarlet; 8 Mrs. John Laing, soft pink; 7 Clio, flesh; 5 Duke of Edinburgh, dark red; 3 Gen. Jacqueminot, rich crimson; 1 Captain Christy, pink;



Clio, Flesh Colored (in the foreground) and Magna Charta, a bright pink

1 Bride, white; 5 Perle des Blanches, white; 4 Persian Yellow, yellow; 7 Soleil d'Or, yellow and copper.

Standards: 4 Gruss an Teplitz, fiery red.

Climbers: 3 Gloire de Dijon, creamy salmon; 2 Dorothy Perkins, pink; 3 Prairie Queen, pink; 2 Hiawatha, scarlet; 1 Tausendschoen, white to deep pink; 2 Lady Gay, cherry pink.

Rugosas: 48 red or white, single.

Miscellaneous: 9 names uncertain.

I decided to grow primarily for "cut flowers;" and so I had an Italian dig up four long rectangular beds in the rear half of the side yard. These beds were so placed that the roses would have air and light on all sides. There was no tree near enough to dispute the soil and the sun fell on them all day except in the late afternoon. I had read Dean Hole's description of a suitable place for roses, and this seemed to fit it, save that my location was somewhat windswept. I tried to remedy this by planting a hedge of rugosa roses and other shrubbery to the north of it. The rugosas are so hardy that they mind nothing. Some of them were planted on December 15, 1908, when they had to be inserted with the aid of a pickaxe.

Early in February I had measured off the beds and sprinkled sheep manure on the snow where they were to be. As the snow melted the richness sank in. The ground was naturally rich; and when, in March, Tony came round to dig the beds, all that seemed to be needed was to lay a little old cow manure in the bottom of them.

Excepting some of the rugosas, all the plants were put in between March 20th and April 4th. After struggling with the first bush, the vision of 250 more to plant was indeed appalling. The term "budded low" is, in most cases with Dutch roses, a misnomer. The roots are likely to be long, and they call for a deep hole. Then care has to be exercised not to get the manure against the roots, and each plant requires a half bucketful of water to settle it. When the planting was finally completed, I spent several weeks with a bottle of peroxide of hydrogen and needles removing thorns from my hands.

The loss by death was less than 5 per cent. Cutting the bushes back had the effect of making them grow strongly, and the stems stout, so that the bushes stood up of their own accord. A third result was that larger and fewer blossoms were obtained. Within three months of that first planting, we cut a Frau Karl Druschki which measured five and one-half inches in diameter.

We expected to have *some* flowers the first year, but we were unprepared for the



Rose bugs are best picked off by hand. Have a bowl of kerosene in which to drop the bugs

overpowering abundance that appeared. The rugosas opened in the middle of May; the hybrid perpetuals began about the end of the first week in June; and the hybrid teas followed close after. From that time on until Thanksgiving there was not a day on which we did not pick roses.

When all else failed, such wonderful performers as Gruss an Teplitz, Kaiserin Augusta Victoria, and Mme. Testout were still producing blossoms. It was interesting to see the brilliant red of Gruss an Teplitz against the first snow of November.

The secret of having roses all summer consists simply in having a liberal number of the hybrid teas, and such of the hybrid perpetuals as have an ever-blooming habit—Frau Karl Druschki, Mrs. John Laing, Ulrich Brunner, and so on. Probably the most popular rose in existence is Killarney. It makes a splendid garden rose, and blooms beyond belief.

We began at the outset cutting our blossoms heavily, and with as long stems as possible. This assured us other crops in succeeding months. Roses are things of wonderful vitality. They love to be stripped of their growth in order to show how readily they can put out more; they will send up shoots two feet high on a fortnight's notice.

When November came, we cut the long shoots back to about two feet to keep the wind from tearing the bushes out of the ground; and that left plenty of margin for the further pruning which most of them received in the spring.

No insecticide or other spray was used the first season save an occasional application of tobacco water to discourage the aphids. There seems to be no doubt that the best preventive of pests and diseases of all kinds is good health. Just as the healthy human being repels germs, so the healthy rose bush goes unscathed.

Our roses were planted in the open,

where we could watch them on all sides. We inspected them carefully from time to time, and many a rose-bug did we lift from them. But there was never what could properly have been called a plague.

Roses grown in gardens can hardly be expected to equal those produced under glass. The latter, as a rule, have larger leaves and longer stems, because the strength has been concentrated into one stalk; and they have more substantial flowers, because the buds have had longer to form and have been protected from the softening blaze of the sun. But garden roses too, can be made to develop large fresh-looking leaves and substantial flowers, if the right means are employed.

The deep planting referred to above is one of these means. They must not be too deep, for the roots have to breathe; but, if they are eight or ten inches under the surface and you keep the top soil stirred through the dry season, they will feel little thirst and the foliage will be a thing of beauty and a joy throughout the summer. Then by disbudding and nursing your blooms along, you can produce big flowers on stems which would not disgrace any florist.

Watering has not cut much of a figure in our garden. We made up our minds at the outset that the roses would have to learn to get along without that help, and they have done it. Frequently, to be sure, I turn the hose on them, but more to refresh the foliage and drive the aphids away than to wet the ground. A cold, driving spray from a hose does more to discourage the insect army than any other one thing. When the drought makes watering imperative, I take the nozzle off and apply the water in quantities directly at the roots.

If the roses produce abundant foliage, they make shade about their own roots, and thus preserve the water supply.

The problem of protection for several hundred bushes—if you are doing all

the work yourself and have no money to spend—is a serious one. We solved it by not protecting the hardier varieties.

Mme. Testout, Kaiserin Augusta Victoria, La France, the Bride, and Gloire de Dijon were taken care of thoroughly. First I heaped the earth up three or four inches high about their stems. Then I took the straw jackets of champagne bottles (obtained by presenting twenty-five cents' worth of cigars to a barkeeper) and slipped them over the tops, having first tied the shoots together with raffia. Then I put a coat of about six inches of manure on the ground all around them.

All the other bushes, and the four standards, too, had no protection whatever, except earth heaped about the stems and a few leaves dumped in among them loosely.

Not a single bush died during the most severe winter of some years; and all were healthy and vigorous last summer.

One could go on and give descriptions of each of the varieties enumerated above, for each rose has its own personality, and from comparing their varied merits, one comes to take as much interest in them as if he were dealing with human beings. But I will spare the reader that, and only say that all have proved good garden roses. American Beauty is a parody on the florist's sort, but a fine rose nevertheless. No one of the above named thirty varieties has failed to give its share of pleasure. If we had to limit ourselves to one single white rose, we should probably choose Frau Karl Druschki; although Margaret Dickson, during its brief June stay, is a marvel of stately beauty. For one red rose, we should name Gruss an Teplitz, for its rich, velvety color and its constancy, although Ulrich Brunner is larger, and Hugh Dickson is nobler than either. The greatest pink rose is Killarney, or Mme. Testout. I must confess that our affections are equally divided there.



An ideal site: partial shade, but each part gets some sunshine every day



The garden seen from two opposite directions. When a background of trees arises behind the pergola, screening the houses beyond, the picture will be completely framed and an air of seclusion given to the place

How a Pergola Redeemed a Back Yard—By Mrs. J. W. Dreyer, ^{Illinois}

THE REVOLUTION WROUGHT IN SIX MONTHS AND AN EXPENDITURE OF A SMALL AMOUNT OF MONEY—A PERMANENT PICTURE AND A DISPLAY OF FLOWERS ALL THROUGH THE SUMMER

SIX months before these pictures were made, our back yard was a tangle of quack-grass and weeds, and there was a ditch through it which was full of débris.

The whole lot is 66 x 265 ft., and faces northeast. One of the first improvements we made was the building of a pergola, which we had ourselves planned according to our own ideas.

It is 12 x 36 ft. In building it two points of originality were attained—it has a cement floor eighteen inches above the grade of the lawn, and the central third is provided with a roof which shades some portion all day.

We first built a wall eighteen inches thick and three feet high, half of its height being under ground, and the space inside the wall being filled with cinders. On top of this the cement floor is laid in blocks like a sidewalk. It is four inches thick and projects one inch over the wall. This floor is approached by three broad steps, twelve feet long. At each end of the steps is a buttress on which stands a fluted pillar, supporting the portico of the covered portion of the pergola. A carpenter erected the superstructure and furnished the materials for \$150. The cement work for both pergola and garden walk was done for \$207.

We planted *Spiræa Van Houttei* around the base of the pergola, in front of that salvia, and started a vine at each pillar. We selected Dutchman's pipe, matrimony vine, *Clematis paniculata*, trumpet vine and wistaria. We bought large plants at the nursery, but while all lived, none did any climbing except the wistaria.

To make the garden more secluded, we planted tall-growing shrubs next the fence. They were from three to six feet high and cost 25 cents each. Certainly they have great fortitude. Last summer's drouth in Northern Illinois was very severe, but less than a dozen out of the two hundred

planted succumbed. There are about fifteen of a kind, and they are planted in irregular groups. The tallest ones are sumac that we brought from the roadside. These improve wonderfully under cultivation and make a lovely touch of color in the fall. We have also white lilac, Japanese quince, cut-leaf elder, two kinds of mock orange, Persian lilac, golden elder, ninebark, golden bells, cut-leaf sumac, yellow dogwood, privet, wayfaring tree, high-bush cranberry, Tartarian honeysuckle, red dogwood, Van Houtte's spirea, tamarix.

In front of these are some low-growing bushes—hydrangeas, syringa, althea, deutzia, locust, flowering almond, snow-berry and Judas tree.

The remaining space up to the walk is to be filled in eventually with perennials, and we made a very good start with these last year. We have a good three-sash cold-frame back of the garage in which we raise the perennials. Just for curiosity we counted the Shasta daisy and pyrethrum plants; at fifteen cents each they would have cost us \$27. We raised them all from three packets of seeds.

The perennials are planted in the garden according to height, in large groups, and straight lines are avoided. The shrubs are not yet tall enough, so we planted the whole length of the fence, behind the cold-frame, with single and double hollyhocks in mixed colors.

We have several large patches of sweet William, and dozens of pink and white pyrethrums and Shasta daisies. A long strip of nasturtiums is filled in with tulips after frost, and with gaillardia in the spring. Bordering this is a fine collection of aquilegia of many colors, which blooms very early. The foliage is almost as pretty as maidenhair fern. It is easy of culture and every seed germinates apparently.

In the right-hand lower corner, white

lilacs form the background, golden spirea is before it and then about a hundred larkspurs. We raised them from seed; they bloom continuously and are free from disease. In front of them are several groups of Chinese larkspur and platycodons.

Between this corner and the pergola are two groups of achillea and Oriental poppies. Back of the pergola are fourteen crimson ramblers climbing on the fence. Next to these are *Viburnum lantana* and high-bush cranberry, as a background for several hundred perennial phlox, made by division.

In front of the pergola the space between it and the walk is filled with pink and white peonies, and there are a dozen speciosum lilies in each corner next the steps.

For a yellow effect we planted cut-leaf elder as the background, then canary-colored hollyhocks, golden glow, *Heliopsis Pitcheriana*, coreopsis, and double buttercups.

In the rose-corner, Clothilde Soupert is usually the first to come and the last to go. Last season forty buds were frost-nipped. Magna Charta, Paul Neyron and the Cochets also did very well. Most of the roses were started from cuttings.

In addition we have five thousand crocuses naturalized in the lawn between the walks, and narcissi, tulips, daffodils, Spanish irises, hyacinths, *Lilium speciosum*, var. *rubrum*, *longiflorum* and *superbum* among the perennials and shrubs.

The garden offscapè yet needs screening. As a background to the pergola will be mountain ash and lombardy poplars and both east and west borders will have other trees to hide out unpleasing sights—maples and *Aralia spinosa*. Yet our garden is a relief among its neighbors, and impells me to ask: If I can do these things so easily and so quickly, why are other back yards such eyesores? Why?

Plant Now for Fall Flowers — By Emily Rhodes, Pennsylvania

WHAT THE HARDY CHRYSANTHEMUMS WILL DO IN THE ONE SEASON—MAKE A START THIS SPRING, AND HAVE FLOWERS IN THE LATE FALL DAYS EVERY YEAR AFTER

WHEN in the fall I look around my garden and see the masses of flowers — white, pink, yellow and rich red-browns in a hundred gradations of tone—I am filled with amazement at the easiness of it all. I feel sorry, too, that so many other gardens around are not so well dressed, their floral wealth having utterly vanished with the first real touch of frost. The old-fashioned little button-flowered hardy chrysanthemums of long ago have been outclassed in usefulness by some of the newer kinds which are richer in their bloom. The hardiness was the

one great attraction of those old favorites; to-day we have the same hardiness with added beauty. Even a chosen few of the real large-flowered chrysanthemums of the florist will flourish in the hardy border if given average good conditions.



A border with hardy chrysanthemums, in which there is a riot of beautiful colors every fall

I have seen these flowers in my own garden that measured between two and three inches in diameter, and have picked many dozens from one plant. If I had cut off some of the flower buds, I could have increased the size of the remaining blooms, for by growing only a few blooms to a plant, I have seen those chrysanthemums measure four inches in diameter.

Last fall I had over 1300 of these plants in bloom from the beginning of September until the snow came. The first to bloom was Autumn Queen, deep pink. It is best to plant this alone as a hedge or in front of shrubbery, for it spreads so fast that it will kill any other chrysanthemums that are near it. About ten days later the others begin to bloom. Among the newer ones most worthy of cultivation are Mme. Marthe, Prince Victor, Boston, King Henry, Julia Lagravere, Aiglon d'Or, Golden Pheasant and many others too numerous to name.

The only requirement for these flowers to bloom each fall is to plant them once in the spring — any time in April or May — in good rich soil. You do not even have to cover them in winter to protect them. And they increase easily of themselves, or cuttings taken in spring can be planted in specially prepared soil and will surely root. I now have in my garden 1,000 plants; yet I bought, in these last six years, only about 200 plants! Many of them were grown from cuttings but more by dividing the roots. Up to July 1st each year, the plants grow tall and I keep cutting them back, taking off about

four inches. This induces the development of side branches. The pieces cut off I plant either in a box of earth or in the garden in rows, where they are watered daily, and are sheltered from the sun until they are well rooted. If showy plants are wanted, plant large clumps in the fall. I strongly advise fall planting of clumps; when it is possible to do it. These clumps can be divided the following spring.

In one of the borders of my garden the fall effect of these hardy chrysanthemums is most beautiful. Daffodils come with March and April; the tufted violas bloom all

summer. Then come the irises — a row just inside of the violas. Tall, light-blue larkspur, lilies of all kinds, perennial phlox and monk's hood carry on the succession till in the fall come the chrysanthemums. Every three feet have I planted them. I am never without some bloom in that border.



Aiglon d'Or, a golden yellow, is a larger flowered variety worth having



Autumn Queen, a deep pink, is the first to bloom

The Right Way to Plan Walks, Lawns and Beds—By W. S. Rogers

MAKING A PROPER BALANCE BETWEEN THE THREE MAIN FACTORS OF THE GARDEN PLAN SO AS TO SECURE THE BEST EFFECTS IN SMALL GARDENS AND GIVE A SENSE OF AS MUCH SPACE AS POSSIBLE

IN THE evolution of the garden design the beds (in which term I include borders) should receive first consideration. They may well occupy more space than is usually allowed them. The narrow strips of border, so often seen skirting the fences of suburban gardens, are practically useless for flower culture. A width of 6 feet is not too much for the principal border, and it should be, if possible, in full sun. If the main path defines its near boundary, another border parallel to it may be made on the other side of the path, but narrower, say 4 feet wide. This disparity in width is designed to secure variety, and to eliminate one-sidedness. Two such borders, the wide one planted with shrubs and herbaceous plants, the narrow one with surface-growing flowers, become complementary, and offer opportunity for many charming effects, and for the creation of a fine vista. The narrow border would on one side abut on the grass plot, and short transverse extensions of it might be carried into the grass area to break its inner line and to extend the flower space laterally. Such off-shoots from a long border become partial screens, helping to secure that quality which I have already referred to as "reticence" (See THE GARDEN MAGAZINE, Nov. 1910, p. 174).

It is by no means necessary that every border should be served by a path. On the contrary, variety of effect is assisted by introducing a border between the grass and the boundary fence, say on the side of the garden opposite to the main walk. These points I shall further elucidate when I come to consider special examples. The main point to emphasize is that the borders, in which the gardener aims at securing his principal flower display, be in full sun, and served by the principal path. These borders must be the dominating factor in the design, for they constitute the "garden" in the truest sense of the word. The path is for utility, the grass for repose, and both must be subordinate to the beds and borders.

Just how the further elaboration of the scheme is contrived will depend upon circumstances and the fancy of the garden-maker. If the garden is of considerable length it may be advisable to divert the path before it has traversed the full extent of the plot. How this may be done without sacrificing the welfare of the flowers, and with best results to the garden picture, we will discuss later. The introduction of detached beds also is a matter in which the taste of the designer is the only guide. One expedient is to allow the path to expand into a square at some points of its length, and to install a square bed in its centre. This is a very convenient

device when it is required to effect a slight deviation in the path without altering its direction, as the path may enter the square at one corner, and leave it by the diagonally opposite corner.



Beds in grass, when set near its boundary, should be allowed a verge of at least eighteen inches, to avoid difficulties in mowing.

The use of circles and parts of circles, as well as of figures in which the angles are equal and not less than a right-angle—the hexagon, for example—is not opposed to the rectilinear system of treatment. They become mere details, in no special way related to the leading lines of the garden plan.

Though the principal borders should usurp the best position in the garden, there is no reason why the gardener should not make a border in the shade, where he may grow such plants as thrive best under that condition. The foot of a south boundary fence is well suited for a shady border, because it is warm as well as shady. Ferns, lily-of-the-valley, and Solomon's-seal would thrive in such a border.

When the house does not stand squarely within its boundaries, or when the garden boundaries are straight but not rectangular, the problem requires some special consideration; but usually means may be devised to bring the garden details into harmony.

Besides this, paths have a utility value in linking together the other elements of the garden. Moreover, it is an objective invitation to walk through the garden and enjoy its beauties. A garden without a path would hardly satisfy the eye. On the other hand, nothing is so wasteful of space, or so irritating to the eye, as a multitude of paths cutting up the garden into small compartments and destroying the breadth of the picture.

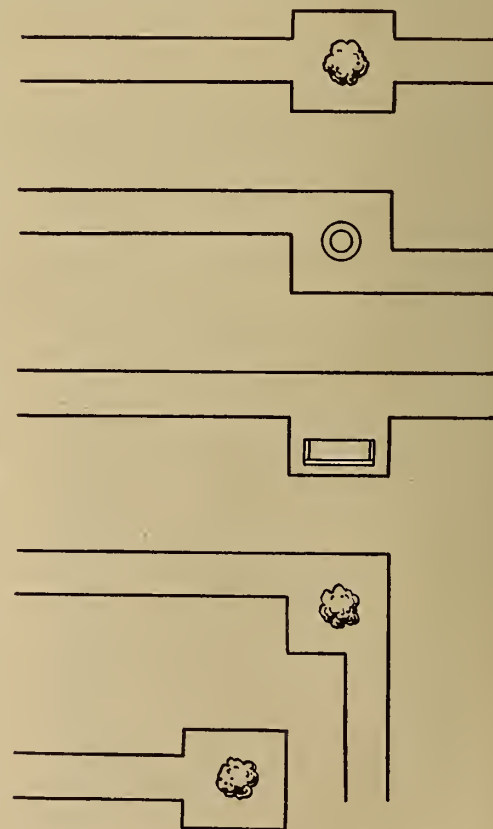
There should be two principal points in every path, the beginning and the end. Paths which start nowhere and end at a blank wall suggest purposelessness. It may be taken as an axiom that the principal path should commence at some point conveniently near, and preferably facing, the door by which the house inmates enter their garden. Its direction should be through the flowers, and it should have a natural destination. The best terminal to a garden path in my opinion is the summer-house, and when that feature is non-existent an arbor, or some other erection, should serve the purpose. Failing that, the path might ter-

minate in a square expansion, in which a seat, sundial, or other appropriate object might be placed. It would be better to end it at a bicycle or motor house, or even at a pretty shed, than to allow it to stop suddenly nowhere.

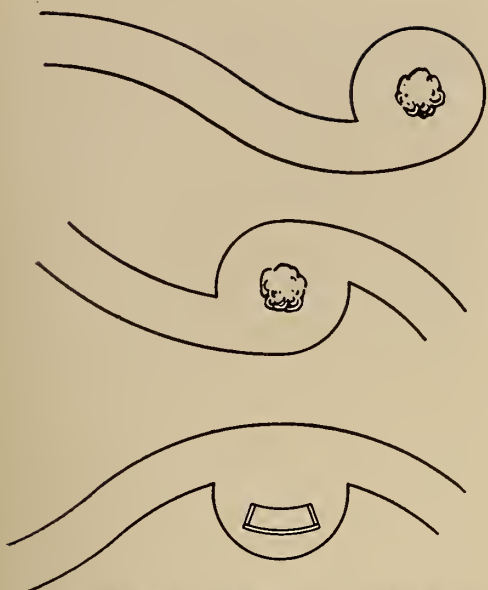
Diagonal paths are not permissible in a small garden. All deviations in direction should be made at right-angles.

The value of a path is mainly in proportion to its utility. After rain or heavy dew the garden would be uninviting without a path. It also preserves the turf from traffic which would soon wear it to bareness. This sums up the path's usefulness. I have seen it laid down that the smaller the garden the more the need for the "winding path," to add to the "apparent length of the garden." I cannot conceive that any such result could follow in a garden the boundaries of which are visible on every side. The winding path in a small plot serves only to cut up the space into irregularly shaped areas, hard to deal with successfully, whilst the additional amount of gravel surface is so much deducted from what might be made productive ground. I do not favor a less width than 3 feet for a principal path under any circumstances.

In larger gardens greater width may be permitted, as there is a certain distinction



Provide some "excuse" for turning and expanding a walk



On a curve expansions may accommodate a sundial or seat

and dignity in a broad walk when all else is in proportion. In a half-acre plot a width of 5 feet might be desirable.

Red gravel, burnt ballast, bricks, and tiles are warm in tone, contrasting well with the grass and harmonizing with the flowers and their foliage. Granite chips, cinders, tarred gravel, shell gravel, and cement are cold and uninviting, and should only be used when other materials are unobtainable.

Red gravel (of the right kind which binds well), bricks, tiles, tarred gravel, and cement make paths with a close, hard surface. Burnt ballast, stone chips, cinders, and shell gravel never bind thoroughly, and therefore make paths with a loose surface, which, apart from the unpleasant feel underfoot, implies that much loose material will adhere to the boots and be carried upon the grass, with disastrous results to the knives of the mower.

Though paths, as a rule, should be made of equal width throughout, it is sometimes advisable when they are of any great length, and particularly if straight, to introduce at some suitable point an expansion in width to break the line.

This should be done in one of the ways indicated in the illustration. These expansions may be utilized to accommodate garden seats, sundials, vases or tubs, trees or beds, so as not to appear quite purposeless.

Expansions of the kind indicated are well placed where a secondary path breaks off from the principal one, or at a terminal. In winding paths they would take a form more in harmony with the lines of the path.

Although the rectilinear system, as adapted to small gardens, demands that path off-shoots should be made to leave the path at right-angles, the rule does not apply to curved paths, in which all by-paths must leave the main path at a more or less acute angle, the curves of

both being laid down to form a pleasing combination of lines.

The use of curved paths, though inadmissible in small plots, is desirable in plots of larger size.

Curves should be set out in good bold sweeps. Grace of line is only to be obtained by a practised eye guided by an intuitive sense of what is pleasing, so that the best achievements in this direction are usually the result of skill, knowledge, and artistic instinct. A hint may be given as to what should be avoided. Thus the curve B in the illustration is better than A.

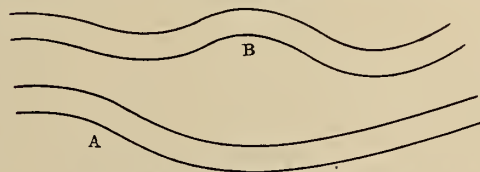
Mawson says of garden walks: "They should be arranged in such a way that the beauties of the place may be exhibited, not by a series of wriggles, . . . but in a simple straightforward manner."

As a rule, these curves are best not modelled on a geometrical basis, *i. e.*, one in which parts of circles do duty as their components. Rely on freehand in the draft, rather than on compasses.

In laying down such a curved path the novice is too apt to overlook the space to right and left. He should ever bear in



The junction of two walks affords a place for an expansion



In laying curves a freehand sweep will be better than where parts of circles are used

mind that his walks subdivide the garden space, and on the course they take will depend the shape of the areas they bound or enclose. Thus in the case of a path skirting the garden boundary the amount and shape of the space between it and the boundary fence must be considered. For instance, it would be bad practise to leave a strip too wide for a border, but too narrow to carry a border with grass in front of it.

In small gardens it is best to confine the grass to a single area, though circumstances may arise to make it desirable to depart from this rule. In such event the second grass space should be subordinate to the principal one, and if possible reserved for a separate purpose.

In small gardens the idea of a "lawn" for games is rarely realizable for want of space, and the grass plot, therefore, is treated with other purposes in view. Its functions are more closely related to the

flowers and general picture. It affords welcome relief to the eye, and by contrast enhances the value of the color effect obtainable with the flowers.

The grass plot should never be isolated by surrounding it on all sides with gravel, and beware of fretting your principal grass plot into a thing of ragged outline and do not pierce it with a multitude of little beds. Remember also that the simpler in shape, the less difficulty you will experience in mowing it and keeping it trim and neat.

Beds in grass are best grouped at one or two points, and the components of the group should be shaped so as to produce unity of effect. Compare the two examples illustrated below.

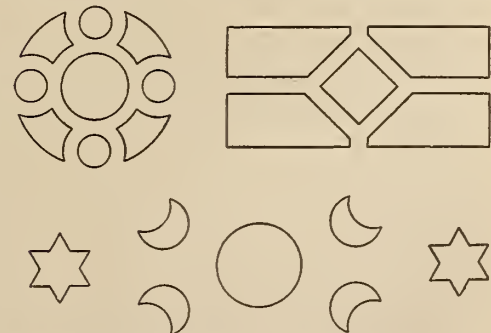
It is generally better that the outlines of the group should preserve a parallelism with those of the grass plot, as this ensures a more harmonious effect.

The principal shadows should fall upon the grass, where they will be welcome as shade, and will not preclude the growth of good turf. Small detached grass spaces, if unavoidable, may be made interesting by planting them with bulbs, for effects in spring and early summer. Or utilize the space for a sunk rock garden, or make a central group of beds upon it, which in the case of a square space becomes an attractive secondary focus.

Give proper access to all grass spaces. This implies that the borders should not bar the way which appears to be the most natural one of reaching the grass. Neglect of this consideration may tempt those who use the garden to skip over the borders. It is well to provide means of access to the grass at all points from which it is likely to be approached, by bringing it up to the path at those points. This is done by curtailing the border some three or four feet at its end, or by breaking through it at some point in its length.

In dealing with grass spaces of irregular outline, such as would occur where the paths are winding, the placing of the beds should take into account the outline of the grass space. For instance, a square group of beds set in a curved promontory would produce a discordant note. Better to adapt the shape of group to the space in which it is set.

There is no need to make the grass level if the ground has a natural slope. On the contrary, sloping ground greatly assists drainage.



Note the disturbing effect of scattering the units of a group of formal beds. The upper plan is better

Making Cosmos Bloom Early — By U. R. Perrine, Michigan

EACH year I “specialize” on some one thing in my garden — that is one of my hobbies. Last summer, in following out this idea, my garden was ablaze with cosmos. As early flowering is sought by all who grow this flower my experience may be of some help to others.

I sowed the seed the first week in March and as I had a very hot hotbed some of the plants started to run up. About the first of April I cut the tops off the tallest ones and set them in the same bed. In an incredibly short time these slips were finely rooted, and the third day of June I picked my first blossom from one of these slip plants.

Another way to have early-blooming cosmos is to move the plants into 6-inch pots about June 1st or earlier, let them become pot-bound and set them out in the open in July. Put the plants not less than eighteen inches apart in rows, or else mass them.

The tops of the plants should be pinched out at an early age — say, when about a foot high — and again in the fall. This induces a bushy growth. By very careful

disbudding of all but one bud on a branch larger and earlier flowers may result.

I had thought the cosmos immune from insect pests but the dahlia bug infested my field. Cosmos should be planted on rich, moist land and mulched heavily — buckwheat hulls are ideal for this purpose.

Lady Lenox is undoubtedly the finest cosmos but I secured a break in the type, a variety having beautifully fimbriated petals and extra large blooms. Pink Butterfly is the next best pink. And Early Dawn is worthy of a place in every collection.

Among the white kinds the varieties most pleasing to me were White Pond Lily and Marguerite; also Titania, a semi-double.

The Giant Crimson Saucer is easily the best of the crimson kinds. It is perhaps really one of the California Giants, superb in foliage and bloom.

Among the early-blooming mixtures the Woodside Early cosmos takes first place. Early Dwarfs are little gems and the Dwarf White Prolific bloomed continuously through five months.

The only yellow variety of my acquaint-

ance is Klondyke, and it is very slow to bloom.

In new shades I secured these kinds: A very delicate pink at the edge of petals changing to white in the centre; the reverse — pink centre fading to white border; pink, except a touch of bright crimson at base of petals; white, flaked with pink; crimson, semi-double; white, semi-double; dark maroon-crimson. There was a notable absence of the washy colors which first characterized the genus.

In a commercial way flowers should be picked when the bud is first opening and placed in a vase of water till wanted for shipment. Only one flower should be allowed to each stem, which should be stripped of the foliage for at least two-thirds its length, the stems being cut two feet long, or over. Use pruning shears to cut with, and gloves should be used to strip the leaves as the juices stain deeply. When placed in water as the bud is opening the petals continue to grow. I have kept bouquets for fully two weeks in a cool place, and the flowers looked as fresh at the end of that time as when first picked.



As a cut flower the cosmos is particularly satisfactory; it lasts a long time in water and the petals continue to grow if the young flowers are gathered. Lady Lenox, a beautiful shade of pink, the finest modern variety, is shown here



(EDITOR'S NOTE.—We want to know how successful workers do things in order to put actual experiences before our thousands of readers in all parts of the country. Every reader is invited to contribute a short note on some interesting experience. Just state the facts about some ingenious idea that you have actually worked out yourself or have seen.)

It is not generally realized that the common blue violet (*Viola palmata*) is worth growing for its foliage. Under cultivation the leaves, after the blooming period, attain to a luxurious growth. Not infrequently the dense foliage is ten inches in height. Used in clumps, as an edging or for carpeting, this violet is very effective during the summer. While it is best for the out-of-the-way places on the home grounds, it may be used anywhere that a "something-for-nothing" result is sought.—H. S. A.

To take away the bare look of newly set shrubbery borders, try setting English daisies, forget-me-nots, and pansies between the shrubs, taking pains to have them placed neatly about midway between bushes, and to have the various kinds scattered evenly all through to give a homogeneous appearance. Carelessly "scattered" plants will only give a ragged effect, as I found last spring to my sorrow. Sow sweet alyssum liberally in a line about a foot from the edge of the bed, and keep cutting it back ruthlessly for the first few weeks until the plants are very bushy. Then leave it to take its own sweet will, and you will have a bank of snow until winter sets in in earnest.—S. H.

I have a brick-walled hotbed about a dozen feet in length in which I start early annuals. In one end, among other things, are some early tomato plants. At transplanting I usually leave a few of these plants and let them bear through the summer, taking them and other things out in the early fall to make room for my late lettuce. Last fall they were full of green and ripe tomatoes, so I left two or three plants, and put on the glass. The plants continued to grow, and I had fresh, ripe tomatoes up to the middle of December. In the other part of the bed I have fine heads of lettuce. These usually keep all right until January 1st. This year, I am planning to start my tomatoes a little later, expecting better fall results. I grow Chalk's Early Jewel.—J. L. M. W.

Last year we had a plague of grasshoppers here in Nebraska, that swept everything before them. Our garden suffered most. Common salsify, scolyumus, okra, cardoon, a variety of sweet pumpkin and artichokes were the only vegetables that stood the test. Mignonette, four o'clock and larkspur also lived right through the plague.—B. E. N.

My home is nearly as far north as Albany, N. Y., but my Christmas rose plant has survived several hard frosts without being covered. The flowers have not been harmed when chrysanthemums standing next were turned black. This plant has grown in the same place for ten years, not having been transplanted in that time, and the only care it gets is the spring mulching with fertilizer that is put on the whole garden. The flowers of the Christmas rose are white and waxy and resemble an anemone. They can be found blooming under the snow.—K. R. V. A.

There has been much extravagant praise showered upon *Lilium Henryi* which, according to my experience, is not altogether deserved. I have found Hanson's lily or *Lilium maculatum* a much better subject. A picture printed in THE GARDEN MAGAZINE some time ago showed a beautiful specimen of *Lilium Henryi*—many flowered and evidently of good height. I have tried bulbs from three different sources but none of them justifies its description. I have also seen this lily as grown by some of the park gardeners in Chicago in the hardy borders and it is far from being "majestic." It would correspond to the description of "yellow speciosum" if it were yellow. Mine was not yellow. Neither were those I saw in the park borders. They were tawny or dull orange in color, with fine spots in the centre of the flower that gave a rather dirty effect. It grows on the bias as do the speciosums, but in my lilies this characteristic was so pronounced as to make them rather awkward. The bulbs I secured were sound, firm and of fair size. The first year I decided that the lily had not sufficient time to establish itself, but when the second and third seasons it showed no increase in the vigor of its stems but continued to lop over, it struck me that perhaps there were variations in this lily and that inferior types were being sold. The first year I had two blooms. The third five. The bulb had one offset in this time. It was planted in a cool corner in soil consisting of leaf mold, well-rotted manure and silver sand. In this situation Hanson's lily grew finely, multiplied rapidly (for a lily) and gave fine clusters of its thick waxy flowers, much the same in color as *Henryi*. At one dollar a bulb, *Lilium Henryi* strikes me as an extravagance. As *Lilium auratum*, *Hansoni*, and *superbum* had done excellently as near neighbors to *Henryi*, I suspect the lily itself rather than the culture I gave it.—C. J.

Last year I saw at Fonthill, an estate in Virginia, white Madonna lilies which were planted about eighty years ago and still bloom every year. The estate is an old one and is filled with many beautiful things, but in my opinion the most striking feature is a long double holly hedge which rises in a dense mass from the ground to a height of nearly fifty feet. This hedge is never pruned and bears an immense load of brilliant berries every year.—P. S. H.

The most important tool in my garden basket is a large pair of long-bladed scissors. If one is a keen gardener, one can never pass by the beds and borders without seeing something that needs attention, and that immediately, and down one goes, and hands are ruined even though the plant is saved. For gloves are not always by. But with the scissors one becomes so dexterous that a weed is wrenched out neatly with a turn of the wrist, seed pods are snipped off, or speedy death is given to worm or beetle.—F. E. McL.

Two years ago I secured a few plants of the double arabis to use in late tulip plantings. Previously I had been using the single arabis. The double form proved so much more floriferous and better in every way that I pulled up the single form and propagated enough of the double by cuttings to cover the bed. The cuttings strike readily in July and make good plants by fall. This arabis resembles a miniature ten weeks' stock and blooms sparingly all summer after its main season in the spring which extends over a month. I found it an easy matter to secure as big a stock of the plants as was necessary by taking the new shoots, planting them in flats and setting them in a coldframe until they rooted.—S. R. D.



The double arabis resembles a miniature ten-weeks' stock and is excellent for planting with late tulips

CHILDREN'S GARDENS EVERYWHERE



HOW A CHILD CAN PLAN AND MAKE SEED ESTIMATES FOR HIS GARDEN.— PROBLEM OF STARTING AND MAINTAINING CHILDREN'S GARDENS—A NEW FEATURE: THE CHILDREN'S GARDENS' CORRESPONDENCE BUREAU

Conducted by
ELLEN EDDY SHAW
New York



Children's Gardens

MARCH is an excellent month in which to prepare for the outdoor garden work. People usually begin to think about the real outdoor gardens in May. It is then too late to start one's thinking. May is a month of outdoor action. So one must have done all preparatory thinking before that time.

There are many questions which you will wish to ask concerning this work. We have not space in the magazine to take up point by point all the phases. So if you wish to get advice and help on your special problems write now to the "Children's Gardens' Correspondence Bureau."

As you read a little of the following story about the Trinity Garden, questions will come to your mind. This story of a first year's garden struggle is printed both to encourage others in the starting of a garden for children and to serve as a basis of estimate.

There are certain things that are necessary in all community gardens. First the garden area should be fenced in. Thus temptation is put out of the way. Fences of fine meshed chicken wire five feet in height are excellent. If the chosen spot has been a dump heap for years you cannot expect the children to do all the cleaning of the grounds. Ploughing and

harrowing are also men's work. The main and side garden paths should be carefully defined before the children start work. Be sure to buy good tools. Make an estimate of the amount of seed required.

The water supply for the garden is one of the matters to have settled before you go ahead with work. Two of the pictures shown here give different methods of supplying water. Water pipes were laid in the Trinity Garden and taps placed here and there. The other method was used in the Women's Club Children's Garden in Melrose, Mass. Permission was given by the city to use the water pipe shown in the picture. A garden in New Rochelle, N. Y. under the auspices of the National Plant, Flower and Fruit Guild, had permission from the city to take water from one of the city hydrants and from this fill large casks which were placed within the garden. The children filled their watering cans from these casks. Certainly the water problem is a very necessary one to solve. Besides all these matters, plan for good summer supervision. Ask us the questions you wish concerning the start and maintenance of a community garden.

Next month we shall take up home gardens. The methods presented will be those used in different places where the work has been carried on with success. This work is a most important one. City and village improvement is really based on the civic pride of individuals. Home gardens stimulate civic pride.

The Trinity Garden School

THE following account is taken from a report that was a requirement of our children's garden contest in 1910. Dr. M. Louise Greene, who wrote it was the director of the Trinity Garden located in Morris Cove, New Haven, Conn. This garden is an outgrowth of the work of the Trinity Parish Vacation Cottage. It is first year work done under certain difficulties. It should stimulate others to start similar work.

Dr. Greene says: "The original condition of this land was a rough, weedy, rank grass land, where twitch grass, briars, ragweed and others held high carnival. A

woven wire fence costing \$69 replaced the 3-foot border that up to 1909 surrounded the field with an impassable barrier of roadside vines, weeds and small shrubs—even seedling locusts and a few small trees. Gates cost \$25. A privet hedge costing \$50 was set on the north and south lines.

The plowing and land preparation cost \$15 and \$45, with the fertilizer costing \$9 extra.

Water was installed by a hydrant in both the southeast and northwest corners of the lot, at a cost of \$118. This location of hydrants, together with some 175 feet of hose, made it possible to reach all but about 40 feet of both the cottage garden and the garden school area. The watering of the whole garden, in any adequate degree, required nearly four hours, and it suffered from lack of assistance in this matter. The pressure of water was too great to allow much use of the hose by children except when under individual and constant supervision. Tubs were at each hydrant for the filling of water cans and for the washing of vegetables. The children were required to put twelve 6-quart watering cans upon each 8 x 16 ft. garden and upon the smaller ones, proportionately.



In Melrose, Mass. city water is used in this way for watering school gardens



In this garden the children fill their watering cans from large casks

The plots were 8 x 16 ft. for seniors—that is, children over 11 years old. Those for juniors being 8 x 8 ft. or less.

The cement summer house cost approximately \$220. It was eighteen feet square inside and was furnished with some Sunday school benches, two kindergarden tables, a camp stool, movable blackboard and a portable closet. In it were kept trowels, weeders, improvised garden lines, some material for nature study and the small necessities of the garden, while the larger tools were kept in a rack in the basement of the Vacation Cottage.

Flowers were, for the most part, selected for the character of the soil and for decorative effect in the late summer and fall, since the garden was to "speak for itself" to many who passed and to many to whom the term "school garden" meant little or nothing.

About \$30 was spent for flower seeds, and plants for decorative effect. Government seeds were also used. Tools supplied were, to each child, a hoe, rake and garden line. Half-moon hoes, with 4-inch and 5-inch blades were used, and an 11-inch, 10-toothed rake. Fifty dollars was allowed for tools, watering cans, barrows, etc.

The mothers help in cultivating the observation crops. Mother's Day was every Wednesday from 11 A. M. to 8 P. M. at the cottage. They brought the young children, and frequently some of the older boys and girls came with them. The Director made them as much sharers in the Garden School as possible, furnishing extra seed for their home gardens, as well as seedlings and slips, and gave as generously as possible to them and to the little children the flowers as they opened."

Plan Making

THIS is the time to sit down at a table and work out the garden plan. Choose a warm day when the snow has melted and then get the measurements of your garden.

A plan is worth having because it clears up all your hazy thoughts on your garden to be. Then, too, it is a real guide when you go outdoors to work.

See the picture of a child's individual garden plan. The scale is not only marked out but all the different things which are to be planted. The places for the tomatoes could be marked off by circles in the area shown on the plan. The drills for the planting of small seed are shown by lines. Show drills on a plan by lines or dotted lines, hills by means of rings or crosses.

Choose easy scales to work with. That is, let one foot be represented on the plan by an inch, half, quarter or eighth inch. Suppose your garden to be 80 feet long. If one inch equals one foot, then the drawing must have a line of 80 inches for the 80 foot line. This or the half-inch is good to use for a large drawing to go up in your school room. But for the individual plan use a much smaller scale.

Make plans on stiff paper, drawing paper or tag board. Use India ink. Place the

plan in the centre of the piece of paper. To find the centre of a sheet of paper draw diagonals with a pencil, very lightly.

Figure out from the garden plan the exact amount of seed necessary for the planting. Suppose there is to be a row of lettuce 50 feet in length. How much lettuce seed does it take to plant 50 feet of drill? Consult this table and so make your estimates.

SEED FOR 100 FT. OF DRILL		SEED FOR 100 HILLS	
Beans (bush)	1 qt.	Beans (pole)	1 pt.
Beets	2 oz.	Corn	1/4-1/2 pt.
Carrot	1 oz.	Melon, musk	1-2 oz.
Kohlrabi	1/2 oz.	Melon, water	4 oz.
Lettuce	1/4 oz.	Pumpkin	1/2 lb.
Onion	1/3 oz.	Squash	4 oz.
Peas	1 pt.		
Radish	1 oz.		
Turnip	1/2 oz.		

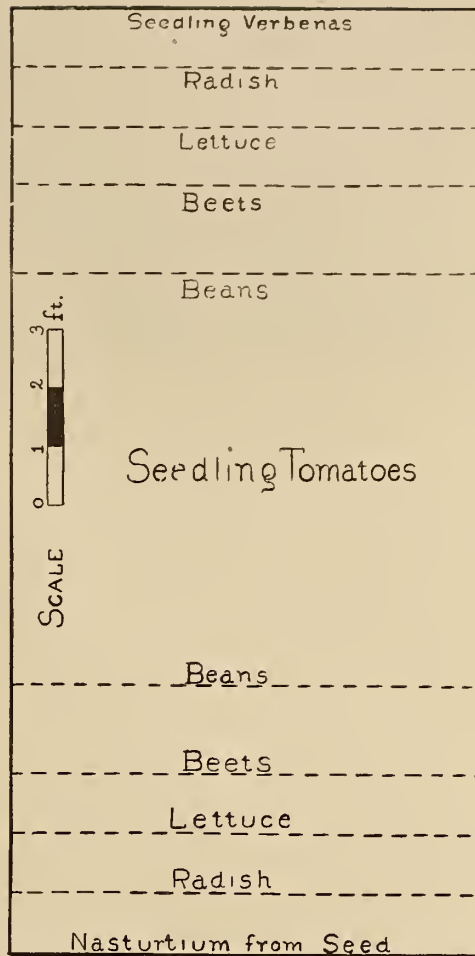
Things to be Attended to

THE following are suggestions for both individuals and schools:

1. Sow in the hotbed or in boxes seeds of lettuce, radish, kohlrabi, tomato and onions.
2. About the middle of March uncover the bulb beds.
3. After the garden plan is made and the seed estimate made, order the seed.
4. Send for a seed catalogue and get acquainted with it. Use it in the school room. Cut out its pictures to use as illustrative material.
5. Plant inside seeds of ten weeks' stock, asters, verbenas and salvia.
6. Look over your tools. Fix the broken ones, oil the rusty ones and replace the hopeless ones with new tools.
7. Make your dibbers.
8. Look over your stock of garden stakes and markers. Be sure to have plenty.
9. Think over the conditions in your garden. See if the following lists of plants are of any help:

Plants for sunny gardens are as follows: Balsam, gaillardia, nasturtium, portulaca, petunia, cornflower, ageratum, snapdragon, poppy, and sunflower.

Plants for shady gardens are: Pansy, fuchsia, begonia, ferns, myrtle, godetia, nemophila, bluebells, phlox, and feverfew.



Be sure to first plan your garden on paper. Know where everything is to be

Plants for rock places: Baby's breath, candytuft, clarkia, nasturtium, portulaca, and columbine.

Plants for shady places: Godetia, portulaca, zinnia, nasturtium, poppymallow, and sunflower.

CONTEST BULLETIN—The prizes in the 1910 Children's Garden Contest have been awarded. A list of the prizes and the prize winners is printed on page 102.



Midsummer in the Trinity Garden — a garden which "speaks for itself"



THE HOUSEKEEPER

The Association of Herbs and Cooked Meats

By ANNA BARROWS, New York

FOR civilized man much of the relish for animal foods is due to what is served with them—the herbs and other accompaniments from the vegetable garden. Whether this is due to the skill of cooks, or is an inherited taste derived from the medicinal customs of our remote ancestors, it is impossible to decide.

The cookery of the meat to serve with the products of the vegetable garden is a simpler matter than it sometimes seems. All kinds of meat may be divided into two classes. One, which everybody desires because there is less of it and less intelligence is needed for its preparation, consisting as it does of tender muscles with small proportion of fat and bone. The other class forms the greater bulk of the creatures, the muscles tough from constant exercise, and the bones and fat.

The tender meat may be cooked quickly by boiling or roasting, the other needs slow cooking, usually with the help of water. A low temperature should be maintained to soften and separate tough fibres, hence the usefulness of the fireless cooker for tough meats. It is when our pocket books are not expanded sufficiently to secure the high priced cuts that we most need to study the savory accessions which may make the cheapest meats appetizing. The bulletin on Economical Uses of Meat from the United States Department of Agriculture, which has had an enormous circulation since its appearance within a year, gives many suggestions for the preparation of the less expensive cuts of meat. (Farmer's Bulletin 391.)

The influence of a species of mint, the catnip, on that domestic animal may have led early housekeepers to test the virtues of that and other mints upon their children. Not many generations ago catnip tea was often administered to babies.

Mint of several varieties is cultivated, especially the peppermint and spearmint. Peppermint long has been recognized as a stomachic and anti-spasmodic remedy and a tribute to its past and its real virtues is the after dinner mint whether combined with soda or sugar.

Spearmint has the reputation of "making a lamb out of an old sheep," and the

sweet sour sauce in which it is the chief ingredient is deservedly popular.

The only secret for a successful mint sauce is to have an abundance of the herb. The younger leaves are tenderer and stronger, but fine chopping will put the larger leaves in suitable condition. After washing the stalks thoroughly, remove moisture in a cloth, pick off the leaves, discarding all that are yellow or withered. The stalks usually are too fibrous to use. Then chop fine. For a large quantity this may be accomplished more quickly with a chopping bowl and knife. But a few sprigs of mint or parsley may be pressed firmly together, held in place by the fingers of the left hand, and from the balls thus formed thin layers shaved off with a sharp knife. This may be done on a sheet of paper on which the particles are easily lifted and turned into a bowl.

A few spoonfuls of actually boiling water poured over the leaves will deepen the color and extract the flavor. No more water should be used than will serve to slightly dilute the later addition of vinegar. The sugar will dissolve rapidly if added after hot water, and when that is accomplished the vinegar should be poured in cautiously. The proportion of sugar and vinegar must be varied according to the strength of the vinegar. This sauce is often served cold, and if properly made a small quantity suffices. It will not chill the meat, yet it may be heated without cooking. A bunch of mint as ordinarily sold, with about one-fourth cup of vinegar, one or two table-spoons of sugar, a little salt and pepper and one-fourth cup of water is a fair proportion for a small family. Sometimes a syrup is made of the liquid and sugar and the mint is left to stand in it half an hour before serving. Lemon juice may take the place of vinegar.

Mint jelly to serve with meats is made in several ways. A tart apple jelly may be highly flavored with mint and colored green with the convenient color pastes. Or an ordinary lemon jelly made with gelatine may be flavored with the mint and tinted. Sometimes the sweet pickle vinegar left in a jar, if not too highly spiced, may be flavored with mint and stiffened with gelatine. In this case the flecks of chopped mint may be stirred through the jelly as it begins to thicken.

Mint ices usually derive their flavor from the crème de menthe cordial, but often water in which mint has been steeped is used in making a plain lemon ice or sherbet.

The vinegar and sugar will preserve the mint. It is in effect a sweet pickle and may be kept a long time in a glass jar ready for use when fresh mint is not obtainable. Or the mint may be chopped and put in vinegar to add to other sauces as capers are kept and used. Moulds and ferments do not readily attack such things. This may be one reason that peculiar digestive functions have been attributed to spearmint—that it retards the action of hostile bacteria.

As an old rhyme has it:

"Mint, St. John's wort, vervain, dill
Hinder witches of their will."

Mint is sometimes boiled with green peas, but that is not to be recommended unless the peas are old and tasteless.

Other familiar herbs—sage, thyme, marjoram—have had various virtues ascribed to them in the past, hints of which appear in the folk lore of foods, which may have had some foundation, but they have been lost sight of in the medical methods of to-day, which appear to be based more on surgery than on the senses.

Certainly all these may be classed among the "pleasure giving" things as the Germans name these food materials of little nutritive value, but which make the substantial foods more appetizing.

A bit of bay leaf in a kettle of stewed lamb or veal is sufficient to give an indefinable delicious flavor which will disguise the characteristic flavor of meats not always popular.

An essential oil, expressed from parsley, has medicinal virtues, and those who enjoy eating this popular garnish should be allowed to do so without the interference of fashion's dictate that "it is not the thing."

A convenient way to distribute parsley, cress, mint or any other green herb on hot meats is to clean and chop it fine and blend with creamed butter, seasoned with salt, pepper and lemon or lime juice. This maître-d'hotel sauce is spread over the steak or chops on the platter just as they are placed on the table. When the parsley leaves are large and

tough they may be dipped in boiling water before chopping. Fried parsley is quickly done in deep fat, no preparation further than cleaning and drying being necessary. Dried parsley is convenient when fresh is not available. To dry parsley, plunge in boiling water to fix the color, then dry without excessive heat, and rub through a coarse strainer.

Horseradish (like cress) owes its pungency to a minute portion — one part in 2,000 — of a sulfurized oil. So penetrating is this flavor that it is often an unpleasant task to put the hard root in usable shape by grating it — the volatile juices getting into one's eyes. The same quality probably induces a flow of the digestive fluids and thus digestion is aided.

Horseradish sometimes is powdered and dried, but is more satisfactory if kept in vinegar. Even then it is liable to darken if exposed to the air. Because of its intensity, horseradish sauce is usually made by adding a small portion of the grated root and vinegar to a bland and harmless mixture of bread or cracker crumbs and cream. It is added to the ordinary white or cream sauce in the proportion of about one-fourth cup of the grated root to one cup of sauce. Often it is combined with a bread sauce or a Hollandaise sauce. The bottled horseradish may be used in this way, most of the vinegar being drained off.

Again the grated horseradish and a small amount of vinegar are often combined with heavy cream. These may be warmed together and, if necessary, slightly thickened with cracker dust.

To serve with cold boiled beef, either salt or fresh, a horseradish sauce may be made with thick whipped cream and served cold like mayonnaise or sauce tartare.

Sandwiches often are made appetizing by adding some of these pungent roots or herbs to creamed butter or a mayonnaise dressing which is then spread on the bread. Either mint or horseradish is especially acceptable in the sandwich filling.

Washing Chamois Gloves

WHEN I wash my chamois gloves I never put them on my hands but just scrub them together in warm, soapy water. I rinse in clean, warm water and hang them up to dry away from the steam heat, which shrinks them. When nearly dry, I rub them between my hands to keep them from getting very stiff. When thoroughly dry they are as soft and pliable as when new.

MARY BROWN.

[EDITOR'S NOTE.—It is our aim to make this department as helpful as possible, and in order to do so we ask our readers to tell us of any practical time- or labor-saving experiment they have carried through in their household duties. Anything to do with the interior of the house will be acceptable, and we shall be pleased to send a check for whatever we publish.]

Housekeeping Discoveries

FINGER bowls should be brought in with the dessert. Place the bowl on a doilie in the plate which is to be used for the dessert. Each person then removes the bowl, setting it above and at the left of his plate after placing the doilie so the bowl may be set on it. Bringing in the finger bowl at this time makes one less move in the serving of the meal.

In cutting hard butter first dip a silver knife into very hot water. The hot knife blade melts the butter just enough to make the cutting easy and clean. This method, of course, is used only when the butter is cut into small pieces before serving. Perfect little squares of butter may be thus cut.

Here is a little plan I tried; perhaps you would like to use the suggestion. I had a dark blue dress and nothing to trim it with. I bethought myself of some old écru lace. It was a rather heavy lace and were it blue would look well on my blue woolen goods. So I bought some blue dye and experimented until I had the right shade to match the blue of my material. This, of course, took more time than money. I recommend this method as a very practical one for using up old lace and making it just match the material you happen to have.

If your dining table is small and the guests numerous, serve the meat and vegetables from a side table. Then the dining table is uncrowded throughout the entire meal. Press the boys of the family into this service of attending to the side table. The lad of twelve can and will serve as deftly and gracefully as any French maid. Let them have a share in the household entertaining and every day work, too.

A good cloth for the tea table is a runner made of crash towelling stenciled at the ends. For a rarebit cloth use a stencil of little bunnies. Make doilies to match.

All butter taken from the plates after meal time should be scraped into a cup kept for that purpose. This butter cup is then drawn upon for the butter used in cooking. How much better this is than making up the table-left-over-butter into butter balls for a second using.

A Unique Dining Table

NO ONE objects to converting the living-room into a dining-room for just the short time it takes to eat. But almost everyone objects to being constantly reminded of this combination arrangement by the visible sign of the dining table. Of course, if one can have sliding doors and movable partitions in his house the case is well settled. But all of us are not so fortunate as this. So the following plan

is suggested as a possible solution for some people's troubles along these lines.

Have a large settle made out of cheap, soft wood. The back is made so that it can be tipped up. It then rests on the heavy broad arms of the settle. So there is formed an ample table surface from the once broad back of the settle.

The wood may be stained any color which harmonizes with the color scheme of the living-room. This settle in itself is an ornament to the room. It serves two purposes — first, that of adding to the general effect of the room, and second that of being a whole dining-room table.

This settle-table idea is not only a good one for those living in restricted quarters, but it is an equally good one for summer cottages. Often a table of any size placed on the piazza takes too much room. But a settle placed against the house would take little of the extra free space on the piazza. Such a convertible settle increases the seating capacity and in the twinkling of an eye makes the table so needed for serving tea, breakfast or luncheon.

Repairing a Piazza

SOME time ago the flooring on my veranda showed signs of decay. Upon examination it was found that the supports underneath were more or less rotted. When the carpenter estimated the job at fifty dollars I asked for time to think it over!

The supports were two-inch planking, decayed on the top for about an inch or two, but beneath that they were perfectly sound. The carpenter's proposition was to rip out everything and put in new planking throughout. After thinking for some time and inspecting the stock of odds and ends in my cellar I decided to do my own repairing. I had about one hundred and fifty feet of 2-inch plank which I cut into suitable lengths and, where needed, I spiked them to the partly rotted supports that were under the piazza. I cut out all the decayed parts and then painted both the old surfaces and the new with white lead. I renailed the flooring to the new boards and my piazza is good for at least ten years more at an expense of probably \$2.50 instead of \$50!

Massachusetts. PERCIVAL MOORE.



These piazza supports rotted and weakened the flooring. Part of it was removed and 2-inch planks were nailed to the old stringers



Vertical Flower Beds

LAST summer the stony face of my all but vertical flower bed fairly cracked into smiles of color and fragrance. A hundred foot wall bounds part of the eastern side of my place, but toward the front where the hill is lower, the mortar-laid wall gives place to one merely piled up, sloping back into the bank of earth and planted up and down its face, and over its top, with low-growing, rock-loving plants. The very stones have a sentimental value, having been the foundations of an old family residence, and I laid most of this dry wall with my own hands, placing in the rooted plants as I built up the strata. The main requirements are to have the strata slope backward into the bank to conserve the rainfall about the roots; and to have the filling earth packed so tightly that there will be no slipping of the wall nor any empty pockets where roots might penetrate only to die from lack of nourishment.

For successful planting one must cram, jam, tread, and then put a stone over part of the roots! Use plenty of gravel, strewing it over the surface and crowding it into the cracks. It keeps the surface soil cool, and allows the dew and rain to percolate to the roots. Bits of old mortar are capital food for the rock garden.

Half shade is the ideal, but seldom attained. The part of my dry wall next the steps is heavily shaded by a big spruce, and there grow half a dozen varieties of ferns, Kenilworth ivy, aubretia, arabis and primulas, forget-me-nots and columbines. Next comes the half-shaded portion where early iris, dwarf campanulas, gypsophilas, hardy pinks, silenes, thrift and yellow alyssum revel; and next the sunny part where erodiums, thyme and helianthemums luxuriate, as well as stachys, sedums, cerastium, white *Phlox subulata*, and gray-leaved lavender-cotton which glorifies some magenta ragged-robins blooming up into them.



An ideal place for a rock garden is a rocky, sloping bank like this. Here a succession of flowers is had all summer

On top of the dryest and hottest bit of the wall where *Iris reticulata*, scilla and puschkinias grow in April, I sow portulaca seed in June, only the double rose and white varieties; and they make a continual glory till cut off by frost.

Captain John Smith, in 1614, made a "garden upon the top of a rocky ile." I hope it gave him half the pleasure my vertical rock garden affords me and my friends!

Ohio.

LUCY ELLIOT KEELER.

Five Crops of Vegetables From the Same Plot in One Season

THE average amateur gardener is apt to be quite content if he succeeds in growing two crops of vegetables on the same ground in one season, but we got five crops last year. Unusually favorable weather had something to do with this particular case, but with a little care in the way of protection from frost the same results might be attained in a normal season.

A strip of ground five feet wide by a hundred and fifty feet long was chosen for our "extra intensive" experiment. It lay along one side of the vegetable garden where stable manure had been used liberally for a number of years, conse-

together in rows eighteen inches apart. Three rows on the 5-foot strip gave a total length of 450 feet of row. Ample space was left on either side of the strip for cultivation with the wheel hoe. The radish seed germinated quickly and in a few days the plants were up sufficiently to mark the rows. With a weeder attached to the wheel hoe the soil was stirred frequently to discourage young weeds and to keep the surface soil loose. The beet was slower to germinate and appear. They grew well for a while; then came a cold snap and we were forced to protect the plants by setting up 12-inch boards along each side of the strip, stretching muslin over the rows.

The first radishes were pulled April 10th. The surplus was tied into bunches and sold to the grocer. The crop at the end of two weeks was 32 dozen bunches, worth, at the grocer's price, over three dollars.

The cabbage plants of Early Louisville Drum-head which had been started indoors in the kitchen window, were put out-of-doors April 16th, in the two outside rows of beets, two feet apart in the row, the beets being pulled up to make room for them. The muslin curtain was used every night to guard against sudden cold. A freeze on April 23rd, and cool weather following, retarded the beets, so that it was May 25th before the first roots were pulled. We found ready sale for our

VEGETABLE	VARIETY	QUANTITY PLANTED	DATE PLANTED	FIRST USED	LAST USED	YIELD	VALUE
1	Radish	Cincinnati Market (450 feet)	March 4	April 10	April 26	32 doz. bunches	\$ 3.20
	Beet	Crimson Globe (450 feet)	March 4	May 25	June 26	24 doz. bunches	
2	Cabbage	Early Drumhead 150 plants	April 16	July 7	Aug. 12	122 heads	4.80
3	Cucumber	White Spine 24 hills	June 20	Aug. 16	Aug. 20	250 pickles	5.25
4	Bush Beans	Speckled Valentine (300 feet)	Aug. 20	Oct. 22	Oct. 28	3 1/2 pecks	.75 1.05

Total value, \$15.05

Table showing the succession, yield, etc., of the five-cropped plot. The vegetables are numbered in the order in which they were grown

quently the soil was well supplied with humus and readily available plant food. But, believing that it is scarcely possible to make the ground too rich, another coat of manure was given late in February and plowed under as soon as the ground was in workable condition. A spike-toothed harrow followed the plow, mellowing and fining the soil until it was an ideal seed bed.

Planting began March 4th with Cincinnati Market radish and Crimson Globe beet sowed

surplus among the neighbors and at the grocery store. As we wanted the ground cleared as quickly as possible the beets were all pulled while small. As those next the cabbages were pulled, poultry manure was worked into the soil about each cabbage plant. In the middle row enough beets had been removed by June 20th to make room for 24 hills of White Spine cucumber, spaced six feet apart. Twelve seeds were planted in each hill, but only four strong plants allowed to grow.

Just about this time the striped beetle made its appearance on the plants. We sprayed with arsenate of lead at once, also sprayed the cabbages, which were heading up nicely but suffering from the green cabbage worm. The spraying kept the worms well in check but was less successful against the beetle. July 7th, a few fine solid heads of cabbage were cut. Some plants failed to head up and these we fed to the poultry; but from the 150 plants we obtained 122 marketable heads.

The ravages of blight, added to attacks of the striped beetle, damaged the cucumber vines so badly that we pulled them up and burned them after they had been bearing a few days, the net result from the 24 hills being about 250 pickles, worth thirty cents a hundred. Having the ground clear earlier than we had anticipated it was decided to try a late planting of bush beans instead of lettuce as we had at first intended. After stirring the ground with the wheel hoe Round Podded Speckled Valentine beans were planted August 20th. They were frequently cultivated and grew rapidly until the cool weather of October checked them somewhat. Preparations had been made to protect them from frost, but favorable weather continued and we picked a few string beans October 22nd. We protected them at night, but a heavy frost and freeze killed them on the 29th. We had gathered three and one-half pecks in the week.

Ohio.

NAT. S. GREENE.

GREGORY'S SEEDS

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Sent out last season for the first time and a proved success among gardeners. Thicker meated than the Warted Hubbard, and more delicious than the excellent Delicious. Very prolific, a good keeper and unexcelled for market purposes. This seed is grown on our own farm.
Fresh seed per lb. \$4.00 postpaid; 1/4 lb. \$1.50; per ounce, 50c; per package 15 cents.

Gregory's Excelsior Peas—Without exception the finest low-growing, second-early pea yet introduced. Best quality, hardy. Stands early planting. Stout vines. Extra large pods. Does well even on poor soil and stands dry weather. Some growers use it exclusively.

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Gardeners and Farmers will find profitable satisfaction in quality and crops in Vickery's Forcing Cucumber, Gregory's Imp. Yellow Globe Onion, and New Swedish Oats. All are Gregory's Honest Seeds and sold



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Special Rates to Market Gardeners

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And Fairfax Roses do thrive in the North—and in the West and the East as well. Wherever Roses are cultivated, my Roses will show most satisfactory results—will put new life into your home Rose garden.

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—hearty, vigorous specimens, every one of them, with ample roots to take hold in the soil of your garden and throw out lusty canes with the return of spring.

This extensive stock covers more than 200 sorts—all the leading varieties that can be successfully grown, particularly in the hybrid tea class.

My book "Fairfax Roses for 1911," tells of the finest stock of Roses I have ever grown and explains my successful methods of Rose propagation. I'll gladly send a copy if you say so.

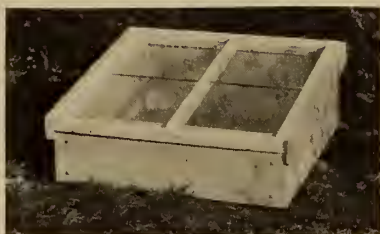
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There's your rhubarb—put a frame over a clump and have "sauce" two to four weeks in advance. Three or more placed on your asparagus bed will give that a goodly boost. You can take single frames and plant one each to lettuce, radishes, pepper grass, swiss chard and so on, and be smacking your lips over the good things weeks ahead of the regular garden planting. Then of course there are your melons and cucumbers—these frames are a tremendous advantage to each, as the plants have a chance to get thoroughly started and strongly rooted before hot weather begins to sizzle them. Melons and "cukes" grown this way are a certain crop. Melons then have that true mouth-watering flavor.

So much for the vegetable garden—and think of the help they would be to your



The melon frames are 22½ x 25½ inches and are made in the same careful way as our larger frames. Shipped knock down.

flowers! You see they are so light and handy you can tote them around anywhere, and put them over tulips or daffodils and have blooms while the snow still lingers. Think of the cosmos—the larkspur—the salvia—the coreopsis—the nasturtiums you could start in them and have things blooming just

that much earlier. It's great this gardening when you have frames to help you. Send for our Two P's Booklet—it tells all about all the different kinds and different sizes of frames we make. There's one we call the Junior that is a size between the melon frames and the regulation garden size. Perhaps you would prefer it to the melon frames. In any event, get your order in, because the robins will be here before you know it. The sap's running a little even now, and that's a good spring sign.



The Junior frames are next in size to the melon and take a sash 34 x 38 inches. We make them for one, two, three or any number of sash.

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SOUTHERN DEPARTMENT

Making a Long Bean Season

THIS month is an excellent time for planting out small rose bushes, which have been grown in a greenhouse. The large outdoor-grown plants should have been set out after the first frost in the fall, but if you neglected to do so, commence planting at once. I always prefer the small bushes as they grow faster and are more likely to live. Here in the South the growing season is nearly twelve months long, so it does not take the small plants long to attain size. When once started they require but little care and produce flowers from March to November in the Lower South.

During the last of the month sow seed of phlox, poppies, balsams, cosmos, petunias, portulaca, zinnia and other annuals. Make the soil rich with manure and spade it in deep so as to get large flowers.

Sow grass seed for a lawn any time during the month. Set out dahlia roots now. For directions as to how to grow dahlias, see THE GARDEN MAGAZINE, Vol. IX, pages 156 and 232. Tuberoses should be planted early in the month.

If you wish to grow cannas from seed, sow them at once. Remember to make a small hole in the hull, and keep the soil where they are sown thoroughly moist. Be sure to select a sunny spot for sowing the seed. Seed of verbenas and carnations should be sown now.

Divide chrysanthemum roots. Plant each shoot separately from twelve inches to two feet apart.

Sow seed of cabbage and cauliflower so as to have a continuous supply during the summer. Also sow seed of lettuce, beets, radishes, turnips, carrots, and parsnips. Set out celery plants and sow seed of onions if you have not already done so.

Sow seed of pepper for main crop; the fruit comes in very handy for making pickles and sauce. During the summer, you will need some of the large, sweet ones (of which the Chinese Giant and Ruby King are best). Sow several varieties of the small, hot pepper. A general assortment is better for making sauce than just one kind.

Sow seed of bush Lima beans during this month—Fordhook and the small seeded Wood's Prolific or Henderson's Improved. Sow seed of early squashes and early cucumbers now.

Plant corn for main crop after the fifteenth of



Sow peppers this month outdoors in the South, in hotbeds in the North. (Chinese Giant, a reliable main crop variety)



It is easy to grow fine hedges when you plant Allen's strong, healthy, well-rooted plants. Our stock is right and our prices are right.

California Privet (*Ligustrum Ovalifolium*) 2 yr., well branched, strong 2 to 3 feet, \$3.00 per 100; \$25.00 per 1,000; 18 to 24 in., \$2.00 per 100, \$18.00 per 1,000; 15 to 18 in., \$1.50 per 100, \$12.50 per 1,000; 10 to 15 in., \$1.25 per 100, \$10.00 per 1,000.
Amur River Privet (*Ligustrum Amurense*) 2 yr., strong 2 to 3 feet, \$3.50 per 100, \$30.00 per 1,000; 18 to 24 in., \$2.50 per 100, \$20.00 per 1,000; 15 to 18 in., \$2.00 per 100, \$16.00 per 1,000.
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Also a long list of other shrubbery and small fruit plants. Get my catalog. It is free.

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Three Beautiful Magnolias



STELLATA



SOULANGEANA



LENNEI

Magnolia *Stellata*, White
 “ *Soulangeana*, Pink
 “ *Lennei*, Red

Three of the most distinct and free flowering in the whole Magnolia group. *Stellata*, with its glossy white and sweet-scented star-like flowers which open before the snow has disappeared in early Spring, to be followed by *Soulangeana* during April. May is ushered in by the wonderful *Lennei* opening its enormous sized dark red, cup-shaped blooms.

As the flowers of the Magnolia disappear, they are followed by a profusion of bright glossy green foliage which retains its attractiveness until late in the Fall. No other tree excels the Magnolia in beauty of flower and foliage.

We offer specimens that will bloom this season

<i>Stellata</i>	2½ feet	\$3.00
<i>Soulangeana</i>	3 “	3.00
<i>Lennei</i>	3 “	3.00
The Collection of 3 for \$8.00		

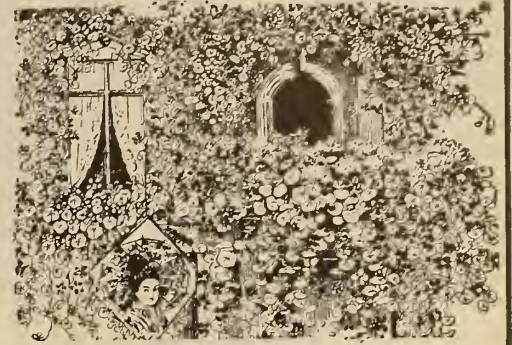
Place your orders now and shipment will be made to suit your convenience during March and April

Cottage Gardens Co. Inc. Nurseries
 Queens New York

SPRING

will soon arrive and Summer follows swiftly in its path. You will then enjoy verandah and arbor shaded by growing vines, cool nooks to rest in.

Vines are the frills of Dame Nature's dress—so gracious, so beautiful, covering with green flower embroidered mantles all bare and unsightly spots.



Our Special March Offer Hardy of Vines

	EACH		EACH
Ampelopsis Veitchi (Boston Ivy)	20c.	Mammoth Beauty (Passion Vine)	15c.
Aristolochia Siph (Dutchman's Pipe)	65c.	Apios tuberosa (Wistaria Flowered)	15c.
Clematis Paniculata (Starry Eye)	25c.	Ipomoea Pandurata (Moonflower)	30c.
“ Jackmanni (Purple)	50c.	Honeysuckle (Golden Rain)	20c.
“ Coccinea (Coral Bell)	15c.	Kudzu Vine (Jack and the Beanstalk, fastest growing vine in existence)	25c.

The entire collection of Ten Hardy Vines **\$2.50, delivery paid.** The vines we send are strong two-year-old specimens.

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Hardy; beautiful glossy bright green foliage; the vine covered in summer with clusters of Hydrangea flowers of creamy white, delicately fragrant. Very strong pot-grown plants, each **\$1.00, delivery paid. Together with above ten vines, \$3.00.**

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Growing vines from seed is most interesting. Plant at once for best results.

Cobea Scandens (white or purple)	Tropaeolum (Canary Bird Vine)
Clematis Paniculata	Wild Cucumber Vine
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Ampelopsis Veitchi (Boston Ivy)	Japan Morning Glory
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Each single package 10c. The ten packets for 60c.

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Send for our 1911 Spring Catalogue. It is full of interesting news for Garden Lovers—and it is honest.

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Grass An Teplitz, richest red; extra fine, White Bougere, a grand white rose; Wellesley, new, fine, pink; prize winner everywhere; Helen Good, the \$3000 beauty Cochet, red and yellow blendings; Etoile de Lyon, best yellow bedder to date; White Dorothy Perkins, climber, a snow-bank in bloom.

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Blue Rambler, climber, violet blue, the wonder of the century; Instituteur Sirday, golden yellow; Rosamane Gravereaux, white flushed rose; Celia, glorious pink; Mme. Segond Weber, rosy salmon; Olivia, the ideal red rose.

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One tuber of any variety for 15c, any 3 for 40c, or the complete set of 6 Dahlias for 75c postpaid.

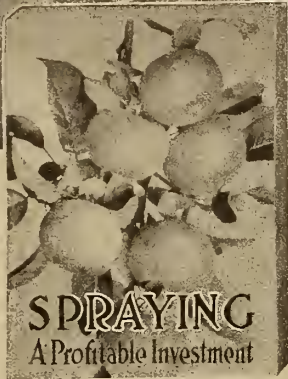
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New Century, Cactus, Black, Striped, Double and Single of all colors. For 10c I will send you 50 seeds—enough for a fine Dahlia Garden.

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IF your fruit trees or garden plants are infested with destructive pests, it is important that you know just what insects are causing the damage and the proper method of extermination as correctly given in "Spraying, a Profitable Investment." A handsomely illustrated book of 120 pages.

It gives you the "How" and "Why" of it in plain language, which is equally as valuable to the inexperienced as to the experienced grower. A great amount of time and money is wasted each year in spraying at the wrong time or with the improper material. How much do you waste?

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INSECTICIDES AND FUNGICIDES
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the month. Plant a small patch of an improved variety this year. Get the seed from a reliable seedsman or farmer near you, as corn that comes from a different section has to become acclimatized before being at its best.

GROWING BEANS

Beans can be grown on almost any soil and with but little cultivation, though their preference is for a moist loam and frequent shallow cultivation. Plant thickly so as to get a good stand, but later on thin out to one plant every five or six inches for the bush type and two to three vines of the running sort to a pole. Set the poles two to three feet apart in rows of the same distance apart; remember that the vines must have plenty of room in which to grow.

Beans repay for having plenty of room. Big crops cannot be had from crowded vines

Use a fertilizer rich in potash and phosphoric acid. Remember also not to cultivate when the vines are wet or they will rust.

Here, in Middle Georgia our first planting is about the first of March and the last about the first of September. Beans from the first planting are ready to eat about the last of May, and those from the last planting until first frost which comes about November. If the bushes are covered with newspapers in the fall, they will furnish beans several weeks later. Of course, our first and last planting is of the early bush sorts; the running sort is not planted until the middle or last of March, and the last planting is made the first of August.

Buena Vista, Ga.

THOMAS J. STEED.

Concerning Celery in Florida

[The following letter, referred to in the editorial note on page 78 is presented for the general benefit of our readers. The writer claims to be financially interested in the district under discussion.]

I WAS much surprised to read in THE GARDEN MAGAZINE for January such a dream of get-rich-quick, via the celery route at Sanford, Fla. The writer confessed that he was there in February, 1910; had he been there several months later, he would have seen an almost universally discouraged community, as acre after acre of celery was plowed under because of lack of markets. I know whereof I speak for I am myself an owner of Sanford soil, as good as any there and fully developed to celery.

The actual truth of the matter is that at the present time Sanford faces the disaster of three unfortunate crops in succession. The lettuce crop of the fall of 1909 was an almost complete failure, many of the crates shipped not paying the express. In many cases I personally know of, the returns in New York per crate were insufficient to pay expressage. Following this came the hardest blow: the celery crop was excellent in quality, but there was so great an overproduction that the majority of growers plowed under their celery in the fields.

Last fall hopes were high again and the community pluckily set out to redeem past losses. In October a tropical hurricane swept down and, as a result, probably three-fourths of the fall seed-beds of lettuce were ruined.

The whole history has been that some years ago



Wonderful Fall Bearing STRAWBERRY PLANTS

Fruit in Fall of first year and in Spring and Fall of second year. **Better than a Klondike Gold Mine.** From 500 plants set in Spring of 1910, we picked from Aug. 20th to Nov. 12th, nearly 400 quarts, which sold at 40c to 50c per quart, netting us over \$2000.00 to the acre. We have the largest stock in the world of "Francis," "Americus," "Productive," and "Superb," the four best varieties; also "Autumn" and "Pan-American." Now is the time to order these plants before everybody begins to grow them. Do not invest in seeds or plants of French or other worthless varieties. We are also headquarters for plants of "Norwood" and "Early Ozark" Strawberries; "Plum Farmer," "Idaho" and "Royal Purple" Raspberries, and all other valuable varieties of Berry Plants, Grapes, Currants, Gooseberries, Asparagus, Roses, "Hastings" Potatoes, etc. 28 years of experience. Catalogue free.

L. J. FARMER, "The Strawberry Man," Box 129, Pulaski, New York

GLADIOLI Grand in vase or garden
Cost little. An excellent mixture.
PEONIES A select list of fine varieties.
Fred W. Card, Sylvania, Pa.

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Write us and we will give you some good pointers. We will also send information about Guns and Rifles.
J. Stevens Arms & Tool Co., Dept. 283, Chicopee Falls, Mass.

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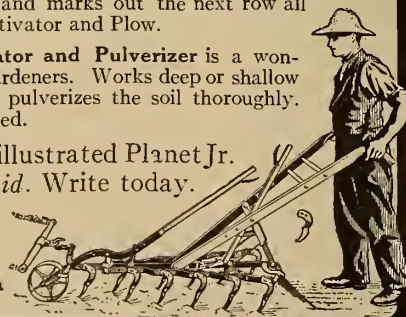


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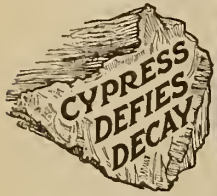
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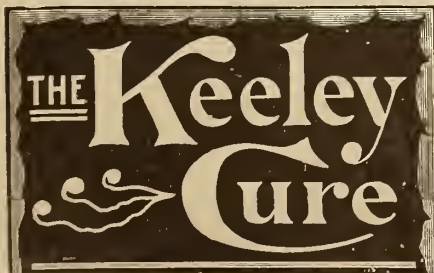
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several men, as an experiment, raised celery at Sanford for the New York market. They had the field all to themselves and made big returns. This led enterprising realty men to rush in and sell land at enormous "boom" prices. This has brought a big tide of new-comers and northern capital. At the present time, after three successive disasters such as I have named, many have either sold out or are vainly hanging on hoping to see a turn in the tide.

One example may be cited. Hearing the tales of wealth so easily acquired, a number of bankers and capitalists of Stamford, Conn., bought up a big tract of land and formed a company to raise celery. They engaged a practical farmer, one who had made a decided success in the North. After many disappointments, they at last raised a fine crop of celery, but were chagrined to find the market over-stocked. They have lost very heavily.

Of those who have acquired sudden wealth from celery, nearly every one sustained heavy losses last spring when hundreds of acres of celery rotted in the field for lack of a market. One woman, Mrs. Tackach, whom THE GARDEN MAGAZINE cites as an example of a successful grower, estimates that she lost \$15,000 last spring on her crop.

One or two statements made in THE GARDEN MAGAZINE I think should be corrected. To be sure there is water transportation, but it is slow and uncertain. Accordingly 90 per cent. of the truck from Sanford is sent by express. The express rate on a crate of celery to New York is nearly \$1.

Then again, very little celery is sold in the field. Last winter nearly all was handled through commission merchants.

The soil is so light that fertilizer for celery costs nearly \$500 an acre. From this alone it can be seen that it is decidedly not a poor man's game.



Guarding Against Insect Pests

DO NOT neglect your orchard. Now is the time, before the buds swell and the sap commences to flow, to spray the trees for insect pests. The liquids may be used in greater strength while growth is dormant than later on toward the end of March and in April.

The commonest enemies are: (1) The San Jose scale, a louse protected by a scale, which infests peach, apple, plum and pear trees as well as small fruits, covering the bark thickly first on the twigs and spreading to the boughs and trunk; (2) borers, which burrow into the twigs and trunk of apple, peach and plum trees—very destructive, and only waiting for warm weather to renew their depredations; (3) numerous insects in a state of hibernation concealed beneath the roughened bark, as well as the spores of different fungi ready to attack foliage and fruit as soon as warm weather comes. Spraying with some liquid containing lime, kerosene, sulphur, arsenic or copper, is usually a remedy for external pests.

Before spraying, go over the trees and remove all dead wood that was not pruned off in the fall. Lifeless twigs may be distinguished by being brittle. The bark is curled away from the wood in some instances and appears much darker than on healthy parts of the tree. Such dead wood may be due to the twig borer or other causes, but in all cases indicating disease cut the wood away at least two inches below the dead part.

If the apple trees are old and the bark rough and loose, carefully scrape it off.

Cut the grape canes back to two buds. Remove

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Money will be Saved by Painting this Spring

PAINT which wears is made from pure white lead,
mixed with linseed oil and colored at the time of
painting. Even though linseed oil is high, the thing to
remember is that paint materials are not nearly so expensive
as the repairing of a neglected house. Linseed oil at even \$1.00
or \$1.25 a gallon makes the painting of the average house
cost only \$4 or \$5 more than it used to cost. Not enough
to warrant letting any house go to ruin from lack of paint.

Furthermore, the flax crop is short again. Linseed oil won't soon
go lower. It may go higher. Paint this Spring and get the benefit of
present prices.

And use "Dutch Boy Painter" white lead and genuine linseed oil.
Don't be tempted, because standard materials are high, to employ some-
thing inferior. This is a mistake because not true economy.

It may surprise you if you do a little figuring yourself.

Get from your local dealer prices on the following ingredients:

100 lbs. "Dutch Boy Painter" white lead	\$.....
4 gallons pure linseed oil
1 gallon turpentine
1 pint turpentine drier

This makes 8 gallons Genuine old-fashioned paint

Compare this with the cost of any other paint you would think of
using. You'll find the best is also the cheapest.

Our Free Painting Helps

We will send you, if asked, color schemes, miscellaneous painting
directions, and names of "Blue List" Painters in your community, men
who use our "Dutch Boy Painter" white lead. Ask for "Helps
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A Brenlin shade will outwear several ordinary window shades. For this reason, it is the most economical window shade for you to buy.

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any dried remains of fruit still clinging to the peach trees. These contain the spores of the peach fruit blight fungus. Burn them.

Remove all wood older than one year from your blackberry and raspberry bushes. And from the currants and gooseberries prune off all wood older than three years. Then burn every twig and branch cut from the trees and bushes.

As a remedy for the scale give a thorough spraying with the California wash—a combination of lime, sulphur, and salt. Dilute by adding twenty-five parts of water to one of wash. A spraying liquid which is a general remedy for fungus as well as scale and other insects is made from limoid, a combination of lime, magnesia and kerosene. These are blended in an emulsion which works smoothly through the sprayer and is less trouble to prepare than the California wash. Or get a ready prepared oil made for this purpose.

If limoid is not obtainable, dry-slake stone lime. Use about twenty pounds of lime for twenty-five gallons of liquid. First pound it to break up the



Before growth starts clean up about fruit trees to destroy insects that have endured the winter

lumps. Put about four or five pounds in a box or pail, and sprinkle enough hot water over it to start slaking. Add the remainder of the lime and cover the box. When the process is complete the lime will be a fine dry powder. Sift it and mix with kerosene in the proportion of four pounds of lime to one gallon of kerosene. Then add to it Bordeaux mixture—three times the quantity of the kerosene. Emulsify this mixture by rapidly agitating it—a mere stirring will not suffice. One way to do this is to use the spraying pump and pump the liquid back into itself for five minutes, working the pump vigorously. The other way is to use a hoe and a covered barrel, and work the hoe up and down through a hole in the cover after the manner of the old-fashioned dash churn. This answers best for small quantities.

When applied to the trees, this emulsion coats them white. If, however, one ounce of lamp-black is added to every five pounds of lime a dark gray color will result which will not be objectionable. This should be applied to the plum, peach, pear, apple, quince, grape and small fruits, using any good spraying apparatus. It is too strong to be used after the buds swell or foliage appears. Twigs, limbs and trunks should be thoroughly covered.

The trunk borers must be reached in other ways. If your peach trees have oozed sap now forming into hard gummy lumps on the lower part of the trunk, these pests are at work. Excavate six inches below the surface at the base of the trees and test the exposed trunk until you strike a soft spot. Open this up with a knife. The culprit, a soft white worm, will be found at the remote end of the channel. Work until you have discovered and destroyed all in the tree, then thoroughly paint the trunk below ground with tar and replace the soil.

New Jersey.

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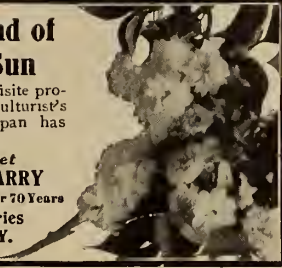
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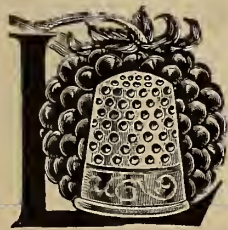
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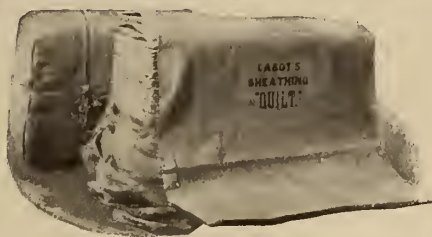


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Azaleas and ornamental shrubs for lawns.

My illustrated catalog containing 75 pages will be of interest to all lovers of wild flowers. Mailed free on request.

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Complete Home Study Course in practical Floriculture under Prof. Craig and Prof. Beal, of Cornell University.

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Beet, Improved Blood Turnip; **Lettuce**, May King; **Radish**, Scarlet Turnip White Tipped;

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Remember these are regular, full size packets and should not be compared with those sent out in some collections. We will mail a copy of our catalogue free to all. Send for the above collection to-day.

M. H. Brunjes & Sons 1581 Myrtle Ave., Brooklyn, N. Y.

The Prize Winners in the Children's Contest

THE contest which THE GARDEN MAGAZINE has conducted for the last two years is a national contest. It is open to all boys and girls. A review of the classes in the last contest should be an incentive for this year's garden work.

Individual and group prizes are given in this contest. A group prize may be competed for by an entire school or by all the schools in a city or town. Again, it may be competed for by a number of children not working in a school garden, but connected with community work.

There are only first prizes under the group heads.

One group prize was The Nature Library — a set of fifteen volumes on nature subjects. This is well worth winning for the school library. Three of these sets were given.

One went to the Roger Williams Park Garden in Providence, R. I., because it was the "finest looking garden of more than three years' cultivation."

A second set was awarded to the Fremont Street School, Lancaster, Pa., for "the finest looking garden of less than three years' cultivation."

The Trinity School Garden of Morris Cove, New Haven, Conn., won the third of these prizes because it represented "the greatest improvement of an unsightly piece of ground." This represented work under city conditions.

A similar prize had been offered for "the greatest improvement of unsightly spots under city conditions." The Waltham School Gardens, Waltham, Mass., and the Huguenot School Garden, New Rochelle, N. Y., were tied for this. So each received a set of nine volumes on practical garden subjects. This set of books is called The Garden Library.

Two other sets of The Garden Library were offered, one for the school "having the best showing of garden products at its annual exhibit" and the other for the school or schools "displaying the greatest variety of annuals." The former was won by the Fairview Garden School, Yonkers, N. Y.; the latter by the schools of Worcester, Mass.

The individual classes had the following classification and the prizes were given thus:

To the boy or girl raising: The best flowers in a home garden; the best vegetables in a home garden; the best flowers in a school garden; the best vegetables in a school garden; the greatest variety of flowers or vegetables. This made five competing classes. Three prizes were given under each head: The first prize in all cases was three volumes from The Garden Library, namely "The Flower Garden," "The Vegetable Garden," and "House Plants and How to Grow Them." These first prizes were won by:

Edward J. Vlasak, Chicago, Ill.
Mabel J. Musser, Cleveland, O.
George Ackerley, Yonkers, N. Y.
Lina Svack, Yonkers, N. Y.
Roger Newton Perry, Worcester, Mass.

Second prizes consisted of two books from The Garden Library. These volumes were "The Flower Garden" and "The Vegetable Garden." The list of second-prize winners is as follows:

Estelle Henckell, Rochester, N. Y.
Howard O'Connell, Providence, R. I.
William Duff, Yonkers, N. Y.
William Suttake, Yonkers, N. Y.
Paul Wilson, Groton, Mass.
R. Greenleaf Bruce, Waltham, Mass.

The third prize, a year's subscription to THE GARDEN MAGAZINE, was awarded as follows:

John W. Nash, Seattle, Wash.
Azelmals Lewis, Garrison, N. Y.
Thomas Halley, Yonkers, N. Y.
Richard Quigley, New York City
Bernard Rich, New Rochelle, N. Y.
Morris Lipetz, New Rochelle, N. Y.

This closes the contest of 1910. The garden year of 1911 is with us. We shall be glad to send out contest conditions to all wishing such information.

New York.

E. E. S.



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Sprays the tallest fruit trees from the ground. Special nozzle for grape vines, shrubs, etc. Sprays quickest and best. Does the work in half the time and does it thoroughly. Always ready. Used with bucket, barrel or tank. Lasts a lifetime. No leathers to dry up, wear out, or make trouble.

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It will not cost you a cent to try it. Our special offer gives complete details. Write for it today and we will also send our illustrated circular showing how this pump pays for itself many times over the first season.

The Standard Stamping Co.
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Your garden will be one to four weeks earlier if you will start your lima beans, melons, sweet corn, etc., in paper pots. Prof. R. L. Watts of the Penna. Ex. Station writes: "They are entirely satisfactory." \$1.25 for 1000. Shipped flat. Shipping weight 18 lbs. 500 for 75c.

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Blackberry Plants by the million

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Our own well-known productions of Aster and Petunia seeds, Dahlias, Gladioli and Perennials.

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RALPH E. HUNTINGTON, Painesville, O.

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Stately hollyhocks

of grand strains, in strong field-grown roots—will flower freely the first season. Large perfected double hollyhocks—each flower a veritable rosette; fringed hollyhock and single, all described and illustrated in our catalog. Write to-day for a copy FREE.

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grown in the open air will stand great cold; from seed grown by the best Seedsmen on Long Island, New York. Price \$1.00 per thousand F. O. B. here. Count and quality guaranteed.

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Are You on the Way?

Last year when I told you that the sentiment expressed in the quotation from Emerson: "If a man can write a better book, preach a better sermon or make a better mousetrap than his neighbor, the world will make a beaten pathway to his door," had been the incentive—the inspiration on which this business had been built, I little thought of how great a portion of "the world" was really then coming my way and how many, after the pathway was well worn, would literally knock at my door in vain.

Again the rose planting season is approaching and so this personal appeal is made to you to start now lest disappointment again be yours.

PETERSON ROSES signify quality—assure success.

And why shouldn't they?

They're the result of ten years of enthusiastic study and devotion to the outdoor culture of the Rose, followed by seven years of helping others to know, love and succeed with the "Queen of Flowers" as I had succeeded.

And in this, too, I have succeeded beyond all expectation as thousands of amateur growers have gladly—warmly testified.

To-day, as I write this, comes a gracious letter from the editor of a leading garden monthly telling me of how an author, unknown to me except as a customer, in preparing a Rose article for them, spoke enthusiastically of the splendid roses (and results) yearly gotten of me. The editor further says: "Altogether the tribute paid you was quite exceptional."

It costs too much to say all I would like to here and so I want to send you a copy of

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It's different from most catalogues—very different. It appeals to intelligent, thinking people—it tells the truth. It tells you in detail how, from the time you take up the spade until the flowers are gathered, to achieve the fullest success.

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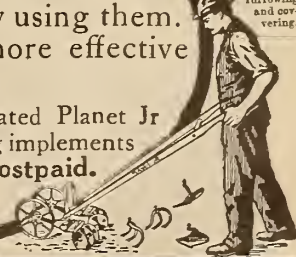
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No. 11 Planet Jr Horse-Drawn Cultivator and Furrower is a great implement for cultivating and hilling crops up to 4 ft. apart. Compact, strong, and steady-running.



No. 14 Planet Jr Double-Wheel Disc-Hoe, Cultivator and Plow has three adjustable discs on each side, pronged cultivator teeth, and steels for plowing, furrowing and covering.



IF YOU'RE OFF TO PHILADELPHIA—

If you're off to Philadelphia in the morning,
 You mustn't take my stories for a guide.
 There's little left, indeed, of the city you will read of,
 And all the folk I write about have died.
 Now few will understand if you mention Talleyrand,
 Or remember what his cunning and his skill did;
 And the cabmen at the wharf do not know Count Zinnendorf,
 Nor the Church in Philadelphia he builded.

*It is gone, gone, gone with lost Atlantis,
 (Never say I didn't give you warning).
 In Seventeen Ninety-three 'twas there for all to see,
 But it's not in Philadelphia this morning.*

☐ This is the first stanza of Mr. Kipling's introductory poem to his capital story of Philadelphia, which appears in his new book, "Rewards and Fairies." Illustrated, \$1.50.

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Another Experience with Asparagus from Seed

MY WIFE said that we must have an asparagus bed; having had one at our home in the North, before we moved to Northern Louisiana, she felt our kitchen garden would not be complete without it, to which I quite agreed. We had bought the crowns for the bed at the old home; this time we concluded to start from seed. We bought a ten-cent packet of Barr's Mammoth, made our seed bed and planted it about March 1st, being guided in the main by Farmers' Bulletin No. 61 on asparagus culture. It seemed as if every seed germinated. I do not remember just how many plants we got from that packet of seed, but it is sufficient to say that we have in our garden seven rows 200 feet long that have been doing duty for the last four years.

The seed bed was kept free from weeds, but had practically no other care during the summer. The following January we plowed out the beds, which were four feet apart, with a 2-horse plow, throwing the soil up in ridges between the beds as high as possible. We then cleaned the loose earth out of the bottom of the beds with a shovel, and on this hard bottom set the young plants, covering with two shovelfuls of well-rotted manure. About six inches of soil was then plowed back on top of that. The earth was drawn up to the plants as they grew, plenty of manure being used. As soon as the frost kills the tops, we cut them off and give the bed a top dressing of fresh manure. Each spring we give the bed a shallow plowing, and harrow the surface about once a week during the cutting season, so as to restrain the weeds and keep the soil mellow. It is the first vegetable that comes in the spring and we cut it as late as July; we serve it hot at dinner and as a salad with lettuce at the evening meal.

A neighbor wished to try the experiment and applied to us for directions, which we gladly gave; they were religiously followed, only she planted a pound of seed! She has appealed to us for further advice as to how she shall get rid of the surplus plants; she cannot use a tenth of them.

Asparagus is not as difficult to raise as celery, requiring less care and less water. The result of getting enough plants from one packet of seed for a large bed, with plenty to give away in perpetuity, is decidedly gratifying.

Louisiana. LOUIS C. BULKLEY.

The Profit of Planting Potatoes Early

IN ONE of the early spring numbers of THE GARDEN MAGAZINE for 1909, the advice was given to get in a few early potatoes during March. That year I had planted my early potatoes on April 6th, and we enjoyed fair sized new ones on June 27th.

But last year I resolved to plant a few potatoes in March, and on Good Friday, March 25th, I put in one peck of Beauty of Hebron. I cut, planted and covered them myself. THE GARDEN MAGAZINE advised cutting down to one eye, as far as possible. This I did, and then sifted fine wood ashes over the pieces. The furrows were eighteen inches apart; the seed was set twelve inches apart in the rows, and covered with about four inches of soil.

March 25th, the thermometer registered 75 degrees. Such weather did not last long, however;

Native Plants and Trees in Carload Lots

Rhododendron Maximum, Kalmia Latifolia (Mountain Laurel), Azalea Nudiflora, Hemlocks, Pines and Ferns, all sizes.

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PAEONIES

A leaflet on how to grow and care for these noble flowers will be sent free to all interested. If you anticipate planting for your very own, either this spring or this fall, I will write a personal letter giving some of my experiences in my ten years of careful study of these plants. I grow Paeonies exclusively and have come to know the best in the world.
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SPRAY with the Empire King

He who attempts to grow fruits without a sprayer is handicapped. Blight and bugs, rot and rust, mold and mildew, all conspire to damage the crop, and in all cases succeed if the farmer does not spray. This is the only hand pump having automatic agitator and brush for cleaning strainer. Valuable book of instruction free.
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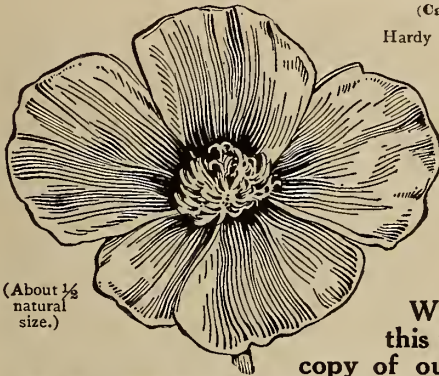
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The unopened buds on outer side of petals are of the deepest crimson, toning down in the inner side to bright flame color and molten gold.

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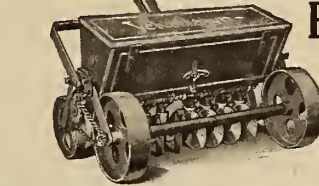
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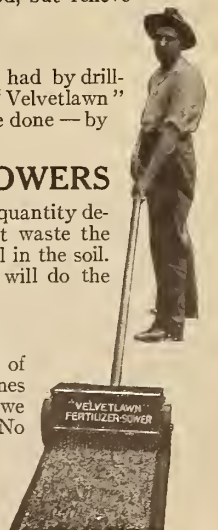
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Just the machine to sow fertilizers between the rows of growing vegetables, strawberry plants, etc. These machines are absolutely and unreservedly warranted to do ALL we claim for them. Satisfaction or your money back. No fuss about it either. Send for Booklets.

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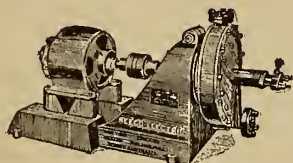
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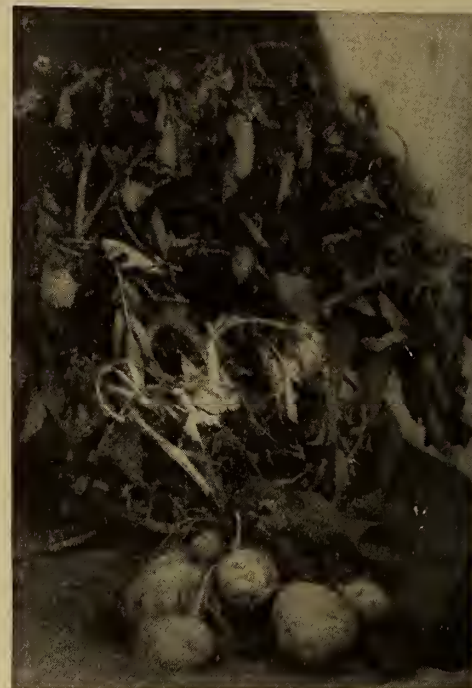
JOHN A. SALZER SEED COMPANY, Box 13, La Crosse, Wis.

for several weeks it was cold and rainy, and my potatoes did not appear above ground until April 20th.

On April 27th, the potatoes were given their first forking between rows. Two days later, when the potatoes were about four inches high, there was a frost in the night. I felt heart-broken when I saw the blackened tops, but I let the plants alone, and in a few days I saw that they were recovering.

On May 4th frost threatened again, and the potatoes were covered with stable bedding. Two nights later there was a heavier frost, and I would have surely lost all the crop had the plants not been covered.

The potatoes grew right up through the litter and on May 10th were twelve inches high. On May 19th, the litter was carefully removed and



Beauty of Hebron potatoes, planted March 25th, were this size on June 18th

the potatoes killed. They were then fifteen inches in height.

On May 26th, I picked off a quantity of potato bugs, and dusted slug shot over the tops. The potatoes were in bloom on June 2nd, and in less than two weeks I grubbed down and discovered potatoes the size of golf balls. On June 18th one hill was dug, and the accompanying photograph shows the result.

The largest potato in the hill weighed three ounces. On June 30th, the largest potato in a hill (which contained eight of edible size) weighed five ounces.

In the Connecticut Valley it would not be safe to plant a large area of potatoes as early as March 25th, on account of the frosts and difficulty in caring for them, but a peck for first earlies might always be successful, as mine were, and no doubt one could have even better luck if an extra early variety should be planted, as the potatoes would mature more quickly than the Beauty of Hebron. The latter potato is a good keeper.

I plant but the one variety, and they keep from year to year. When the sprouts appear they are removed once a week, clean off. Last season I harvested 27 bushels of potatoes, and sold enough to pay for a laborer's time and for slug shot.

As soon as they are dug they are sorted in three divisions. The large and medium sized ones are put together, the small ones by themselves, and any that have been cut in the digging are placed in another receptacle, and carried into an out-building where they are spread on the floor. Last year they were dug October 8th and left in this building, with the window open, until October 31st, when they were carried to the dark, cool cellar where they were stored in large barrels for winter use.

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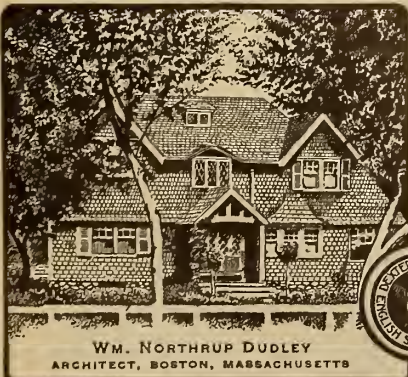
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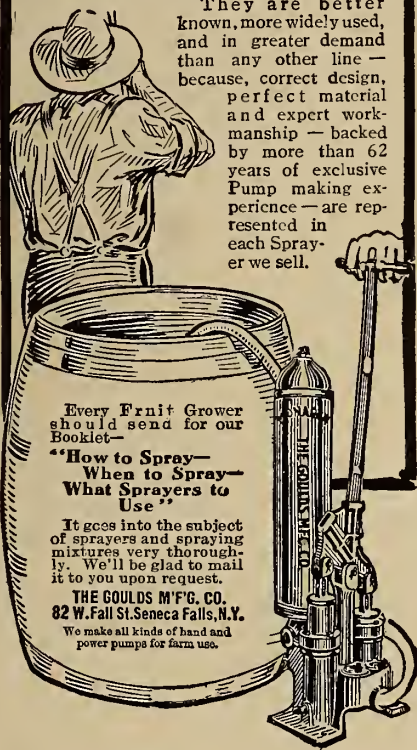


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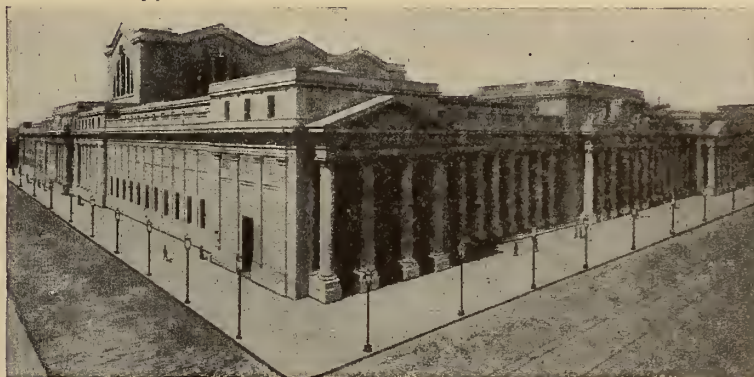
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JULIE A. POWELL.



Make Your Lawn Now

MARCH is a month when one often does those things which either bad weather or the weakness of the flesh has prevented doing earlier. In many seasons it is the last opportunity to get good results in planting trees, shrubs and roses and is generally considered the best time of the year for putting in the tender Australian trees.

Except in cool coast counties, sweet peas cannot be relied upon to do much if put in after this month, but many of the hardy annuals may continue to be sown in March and April for successional bloom and the more tender kinds raised in boxes for filling in later on. Perennial plants should now be set out and old clumps of the later flowering kinds, such as sunflowers, Shasta daisies, phlox and Japanese anemones, should be divided and replanted.

In the vegetable garden continue sowing the harder kinds for succession, but except in frostless localities do not set out melons or tomatoes, or sow corn until April. Globe artichokes may now be increased by separating offshoots and replanting about three feet apart. This is a vegetable which is really so decorative as to merit a place in the flower garden where its great deep-cut, gray-green leaves form striking groups and blend particularly well with adjacent plantings of such blue flowers as larkspurs and lupins.

Keep the weeds down with the hoe and, whenever the ground is not sticky, cultivate it to retain moisture as long as possible. Where you have an adobe soil do not pay to have your coal ashes carted away, but dig them into the soil—not that they possess any fertilizing qualities, but because they loosen the soil and improve its physical condition. Of course manure and vegetable refuse of all kinds will do the same and enrich the land as well.

March, also, is the best spring month for lawn making, but suggestions on this topic have already been given in the December, 1910, number.

Don't be in a hurry to propagate your chrysanthemums or dahlias, or to sow your cosmos seed. These are fall flowers and do best when they bloom in the cooler months of September, October and November.

One fall flower to be raised from seed now is the fine hybrid pentstemons. From seed sown in February in boxes, transplanted once and then put in their permanent places in early June, I had the most beautiful corner in my garden, for they began blooming in late August; and in mid-December, after a couple of rains and some frost, the plants were still bright and gay with their lilac, pink, rose, crimson and scarlet flowers, many of them with white throats and picotee edges rivaling gloxinias in size and color. With their tall spires they do for the autumn garden what their relatives the foxgloves do in spring and, while dwarfier than these latter, they far excel them in range and purity of colors. Pentstemons may be considered hardy perennials on the Pacific slope, but I believe the best results are obtained by sowing each year, and merely retaining the old clumps over one winter so as to get early bloom from them.

California.

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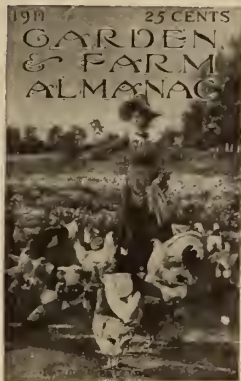
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Lettuce Growing in Florida

FOR actual hard, back-breaking work a lettuce crop carries off the palm, although it is the cleanest, quickest and prettiest crop of all vegetables to raise.

Lettuce is usually planted in Florida about the first week in September. This time of sowing has three advantages: the plants have enough warm weather to grow to a large size; cool nights come just in time to make them head-up with a cabbage-like hardness; and the crop is ready to ship after all lettuce grown north of Florida has been killed by frost. Only the Big Boston variety is planted, though special strains of this stock masquerade under other names. The seed, planted in beds either broadcast or in drills five inches apart, sprouts in two days if well watered and shaded, and is ready to set in the field in twenty or thirty days from planting. Lettuce sown September first should be ready to harvest in November. Sometimes difficulty is experienced in getting the seed to germinate in the hot days of September, but I have found that flooding the bed will start the most obstinate seed, even without shading. This is preferable to sprouting the seed before planting, as is practised by some growers.

At the time of sowing the seed, the field, which has been plowed and harrowed, receives an application of Canada hardwood ashes broadcast, about one ton to the acre. This thoroughly sweetens the land which has become water-logged and soured by the heavy summer rains, and hastens the decomposition of the sod that has been turned under. Besides their potash content, ashes possess other beneficial substances which lime, though cheaper, does not. Ten days later, or about a week before setting out the plants, one to two tons of commercial fertilizer are spread on the field as evenly as possible and harrowed in.

A popular lettuce formula in this locality is a 6-6-6 containing nitrate, blood, bone, acid phosphate, sulphate and muriate of potash. Other formulas showing good results analyze a higher content of ammonia and a lower percentage of phosphoric acid and potash. The 4 to 5 per cent. potash in the ashes supplies the necessary rations of this element sufficient to harden the lettuce and make it carry well to distant markets. Stable manure is seldom used because almost impossible to obtain. Humus is supplied by the green crop that occupied the land during the summer.

When the plants are ready to set out the field is again harrowed, then smoothed and levelled with a board, and marked off in 15-inch checks or squares. Plants left in the seed-bed too long show a tendency to run to seed. If the field is sub-irrigated, the water is turned on until the moisture shows on the surface, and then the plants are set. One man drops the plants on the checks, usually taking three rows at a time, another sets them with a small mason's trowel, and a third follows with a bucket and cup and drops a little water on each plant to settle the earth around the roots. In this way a good setter can transplant about fifteen thousand plants a day, or about half an acre. In two days the lettuce begins to grow, and the water is turned off, not to be used again, as too much moisture on lettuce induces damping-off and "black-heart."

From now on until harvest the only labor involved is frequent cultivation with a wheel-hoe in both directions, and perhaps one spraying of

Says the Baron :

"I pity a pedant; I pity a mind that is made up like a bed the first thing in the morning, and goes on grimly like that all day, refusing to be unmade till a certain fixed evening hour has been reached; and I assert that it is a sign of a large way of thinking, of the intellectual pliability characteristic of the real man of the world, to have no such hard and fast determinations and to be always ready to camp." From

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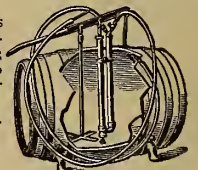
the best high-grade spawn in the market, together with large illustrated book on **Mushroom Culture**, containing simple and practical methods of raising, preserving and cooking mushrooms. Not more than one sample brick will be sent to the same party. Further orders must come through your dealer.

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From San Jose Scale and fungous diseases with a Defender Sprayer. Powerful two-line spraying apparatus. Made of Brass; perfect construction. Quickly attached to barrel; easy working. Saves time, labor and fruit. Satisfaction guaranteed. Descriptive circular and price list, free. Write today.

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No more danger or damage from flying sparks. No more poorly fitted, flimsy fire-place screens. Send for free booklet "Sparks from the Fire-side." It tells about the best kind of a spark guard for your individual fireplace. Write to-day for free booklet and make your plans early.

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A manual of the best foliage and flowering plants for home cultivation their raising from seed and propagation in the window garden.

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Describing a full list of varieties with prices. Also INSTRUCTIONS FOR PLANTING AND CULTURE of STRAWBERRY, RASPBERRY, BLACKBERRY, CURRANT, GOOSEBERRY and GRAPE PLANTS; also ASPARAGUS and RHUBARB ROOTS. All Stock Warranted First-Class and True-to-Name or MONEY REFUNDED. C. E. WHITTEN'S NURSERIES BOX 10, BRIDGMAN, MICHIGAN.



RHODES DOUBLE CUT PRUNING SHEAR

Pat'd June 2, 1903.

RHODES MFG. CO., GRAND RAPIDS, MICH.

THE only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay Express charges on all orders.

Write for circular and prices.

Paris green for the green lettuce worms. A broadcast sowing, before planting, of bran and Paris green sweetened with syrup generally prevents the ravages of cutworms. Some farmers make a second application of fertilizer between the rows after planting, but is it of questionable benefit to this quick-growing crop. Shipping should begin five weeks from setting.

Lettuce is usually packed in half-barrel hampers, averaging thirty heads to the hamper. The heads often attain such a size that a hamper can hold only eighteen or twenty. It is shipped in refrigerator cars to northern and western markets. The average cost of production with an average yield of 500 hampers per acre is about forty cents per hamper, including the cost of crate material. A net profit of \$500 per acre is not unusual with prices ranging around \$1.50 here.

Though lettuce is the salad plant *par excellence*, few people know that the outside leaves, cooked like spinach, make a delicious vegetable; and the heads stripped down to hard little balls, boiled and served whole with a cream dressing, are fit for a gourmet, even though it may offend the ethics of some epicures to cook a salad.

The lettuce crop is usually followed by celery, by potatoes, or by a second crop of lettuce. In the last case weather conditions are just reversed; during the growing period the weather is cold and the plant hardly attains a good size before heading. Frost will not hurt young lettuce, but will detract from the appearance of lettuce about ready to cut. On the other hand, if early hot weather should come when the lettuce is mature, it is apt to make the plant throw up a seed stalk. It is, therefore, evident that this second crop is risky, but for that reason, usually brings a handsome return if successful. Potatoes planted last season after a lettuce crop without additional fertilizer in one case yielded as high as 125 barrels to the acre.

Florida.

P. N. HOLST.

For Quack Grass Pasture

ON MY farm in Central New York State I had a sixteen acre field that had produced nothing but a few scattering weeds for many years; the soil was supposed to be as nearly worthless as any in that locality, being composed largely of a gravel loam with some clay and shale intermixed, with a clay subsoil. The same ridge of poor soil ran through other farms in the vicinity. We had, on the more fertile part of our farm, a field which we wished to grow to winter wheat, but found it nearly impossible to do so because the soil was completely filled with long and very healthy quack grass. We plowed the field to properly prepare the soil for seeding, but the roots left lying on top of the ground would send down their fibrous roots into the soil, and grow and flourish as though they had not been disturbed. We then commenced gathering them, drawing them away and piling them at a distance, but still they grew, and so quickly would they take root and so tenacious were they of life that, if the weather was not particularly dry, we seemed to make but little headway in getting rid of the pest.

Finally we decided that our barren field with the very poor soil should be the repository for all the roots we could gather. By the cart-load we scattered them, after having loosened the soil with a two-horse cultivator. When the work was completed, we paid no farther attention to the field until the following spring, when to our satisfaction, we found the roots alive and flourishing. From the fact that these roots were left on the surface of the soil, we decided not to put the stock into the field until later in the season, so as to give the roots an opportunity to make good their claim upon the soil. In the month of August, the grass was standing about a foot high, so we mowed it and left it lying upon the ground to rot. In October, eighteen cows, one hundred and eighty sheep, and eight horses and colts were turned into the field, our desire being to test to the utmost the staying qualities of the grass under adverse circumstances. The stock were kept in the field constantly from October 1st until the 10th of November, when the eighteen

A beautiful new rose for your garden

WE'VE accomplished what seemed to be impossible. We've taken the beautiful hot-house American Beauty and cross fertilized it with a hardy, outdoor, climbing rose and the result has been this wonderful new plant—the



Climbing American Beauty

It possesses all the charm of the "Queen of Roses"—the beautiful flowers three to four inches in diameter, finely formed on long stems, the rosy-crimson color and the same *delightful fragrance*—a fragrance which is so rare in climbing roses.

But it has these virtues in addition: Whereas the American Beauty is seldom satisfactory when planted in the open ground, the climbing American Beauty is very hardy and will thrive and grow anywhere a pillar or climbing rose will. It will stand heat and drouth as well as any rose.

One plant of our new rose will produce twenty times as many flowers in June as the old American Beauty and continue to bloom occasionally throughout the growing season.

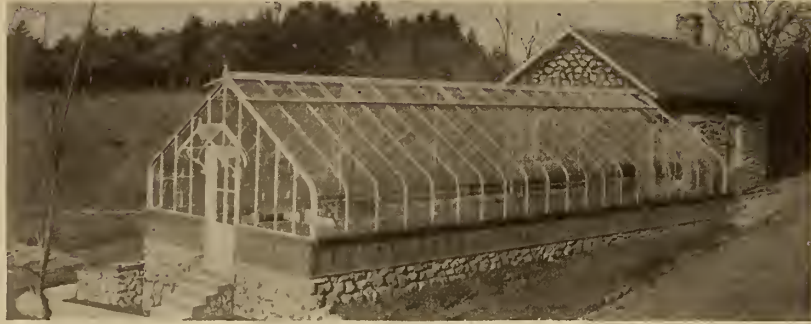
The leaves are large, bright, glossy green and keep on the bush all summer. They will not burn with the sun nor will sudden changes of temperature harm them.

The illustration shown is reproduced from a photograph taken in June and shows over a hundred flowers on one side.

Every rose lover will want some of these wonderful Climbing American Beauty Roses. We are ready to supply a limited number of one-year-old plants at \$2.00 each. Mailed to any part of the United States, postpaid, on receipt of the price.

Should you like to know more about this wonderful plant we will be pleased to send special printed matter.

Hoopes, Bro. & Thomas Company
West Chester, Pa.



The Superiority of U-Bar Greenhouses

THERE are many strong points about the construction of the U-Bar Greenhouse that make it by far the best, not only as a plant producing house, but as best adapted for the home grounds. The absolute simplicity of the construction is one of its strongest points. Every roof bar is encased in a steel U-Bar, giving the house a complete frame work of steel, having great strength and an unequalled endurance. Because of this complete steel frame the house can be made very much lighter than other constructions. Lightness is what you need in a greenhouse. This is especially important in the short, dull days of winter. Fact is, U-Bar greenhouses are as near actual outdoor conditions as possible, and still be indoors. One of the special features of the U-Bar Greenhouse is its Curved Eave; but all curved eave greenhouses are not made with the U-Bar. We are the sole owners and builders of the U-Bar curved eave construction. Our catalog describes and illustrates U-Bar construction points in a pointed, interesting, readable way. Send for the catalog.

U-BAR GREENHOUSES

PIERSON



U-BAR CO.

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head of cattle were taken out; but the horses and sheep were pastured there until December 4th. Although the field had been given so severe a test, on May 10th of the following spring the grass was of sufficient growth to warrant putting the milch cows on it at once.

This was fourteen years ago; the field has been pastured every season since with as many head of stock as any sixteen acres ever accommodated, and it has never failed to respond. This plan has proved successful under various circumstances; in most cases, the land has been plowed and sometimes the roots were plowed under.

In my case, the account for turning a poor field into a good pasture stands like this:

Man and team cultivating four days at \$3	\$12
Spreading grass roots eight days later at \$1.50	12
Mowing field, man and team three days at \$3	9
Total	\$33

There was no charge for collecting and drawing the roots, which we were obliged to do in order to prepare the field for the wheat seed.

On the credit side, we have pasture for sixteen cows (one cow per acre being the usual allotment on farms from May 15th to November 15th), twenty-five weeks at thirty cents per week, or \$120 for one year; a total of \$1,680 for fourteen years, or a credit balance of \$1,647. The pasture is still flourishing. I count this one of the best investments I ever made as the profits are large and easily obtained.

In establishing a permanent pasture, not only once but many times has this species of grass made good when every other has failed. I know it is called the "farmer's pest," but it is adapted to any soil and is so hardy and vigorous that you will often find the root growing through potatoes and other vegetables, if they chance to be in its way. No soil is too hard for it, and the softer woods have often been penetrated by its sharp-pointed, needle-like ends. I remember seeing a basswood rail which had been left lying on the ground where a quantity of these roots had been strewn, and when the rail was lifted from the ground, it was found that many of the roots had passed through the rail and had attached themselves to the soil on each side of it.

New York. C. E. CONNELL.

For Pure Insecticides

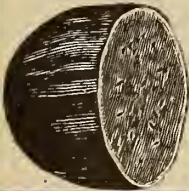
HENCEFORTH, there need be no fear in your mind, when buying prepared insecticides, that you are not likely to get the pure article, for the Insecticide Act of 1910 became effective on the first of January. This act forbids the manufacture or sale in Federal territory of adulterated or misbranded insecticides and fungicides, especially mentioning Paris green and lead arsenate. It also forbids interstate shipment of such articles, which is its most important feature.

Any insecticide or fungicide is misbranded if the label bear any statement, design, or device that is false or misleading in any particular, either as to the character of the article or as to the place of manufacture. If the contents are stated in terms of weight or measure, they must be correctly stated. If an insecticide or fungicide (other than Paris green or lead arsenate) contains arsenic in any form, the total amount of arsenic and the amount of water-soluble arsenic must each be stated on the label. The amount of inert substances (often called "filler") must also be stated.

Paris green is considered adulterated if it does not contain at least 50 per cent. of arsenious oxide; on the other hand, it must not contain arsenic in water-soluble forms equivalent to more than 3 1/2 per cent. of arsenious oxide; and no substance may be mixed with it so as to lower its strength. Lead arsenate is counted adulterated if it contains more than 50 per cent. of water, or if its total arsenic is equivalent to less than 12 1/2 per cent. of arsenic oxide, or if it contains arsenic in water soluble forms equivalent to more than .75 of a per cent. of arsenic oxide, or if any substance is mixed with it so as to lower its strength. If lead arsenate contains more than 50 per cent. of water it must be labeled "lead arsenate and water," and the extra percentage of water must be plainly stated. Any other insecticide or fungicide is considered adulterated if it is intended to be used on vegetation and is injurious to vegetation.

Golden Sweet Water Melon

The most sweet, juicy and luscious of all melons. Bright, golden yellow flesh, without any hard core, but is delicious throughout up to the thin green rind. A genuine novelty which everyone will want. Sold only in packets of 12 seeds at 25 cents per packet.



ORDWAY CANTELOUPE—An elegant, spicy, orange-fleshed variety, price 10 cents per packet, sent free to every reader who orders the watermelon. Catalog of superior varieties of garden seeds, free.

Iowa Seed Co., Dept. 26 Des Moines, Ia.

You Can Have the Newest Dahlias in YOUR Garden

Your garden is incomplete without the new and varied forms, brilliant colors and large flowers of this old, favorite flower. Plant them early this year and they will bloom continuously from July until frost. Such flowers!—the new forms are splendid for vase or table and to give your friends. Plant them along the foundation, beside the walk, among the shrubs or next the fence, and if they get any sun, they're sure to bloom.

6 Kinds for 50c.; 12 for \$1. Postpaid

No matter whether you live in town or country or on the edge of each, this is a collection that will delight you this and each succeeding year, for the tubers need only to be saved in cellar or closet during winter. The live tubers of Dahlias of different shades and forms will be sent you about April. But order now, to insure getting order filled. A postal request brings you our illustrated Catalogue.

CUSHMAN GLADIOLUS CO., Desk 18, Sylvania, Ohio

Fernald's Hardy Plants Grown in the Cold State of Maine

Plants that survive Maine winters can be depended upon to succeed *anywhere*. Send for catalogue of all beautiful hardy Perennials, the best hardy Shrubs and my collection of Iron Clad Roses.

W. Linwood Fernald, Eliot, Maine

Special Offer of Surplus Stock from Hillside Hardy Flower Gardens

- 8 Favorite Hardy Flowers for 50c.—postpaid
- x Boltonia
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 - x Chrysanthemum, large double rose pink
 - x Digitalis (Foxglove)
 - x Iris (Siberian) best hardy for all purposes
 - x Monarda Didyma (Scarlet Bee Balm)
- Secure this stock while it lasts. Send for Catalogue. Address HILLSIDE HARDY FLOWER GARDENS, Turtle Creek, Pa.

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How Any One Can Grow Mushrooms

Delightful Occupation—Delicious Delicacy for the Home Table and a Good Income if you Wish

I have been growing mushrooms for over twelve years. I probably know more about the subject of mushroom culture than anyone else in America. From a start with a few dollars capital I built up the largest mushroom farm in America, with acres of bed space in cultivation. By actual experience I have learned just how mushrooms can be grown, and what's even more important, how they *can not* be grown.

Growing mushrooms is really no more difficult than growing radishes.

It's just a matter of knowing how.

Every failure in the mushroom business can be traced to poor spawn and unreliable information.

I have shown thousands of men and women how to grow mushrooms successfully. Most all of them are now in the business growing for

profit and making a good income without interfering with their regular occupation, with this wonderful, easy, pleasant pastime. I hope soon that a mushroom bed will be as common as vegetable gardens.

I have written a little book which gives truthful, reliable, experienced information about mushroom culture, where mushrooms can be grown, how to have a mushroom bed in your cellar, etc. It also tells about spawn and how to secure really reliable spawn. I shall gladly send you this book Free.

If you have never tried mushroom growing, or if you have tried and failed because of the causes of which I have spoken, write for my free book, in which I will show you beyond the shadow of a doubt that you can have a fine mushroom bed. *Address*

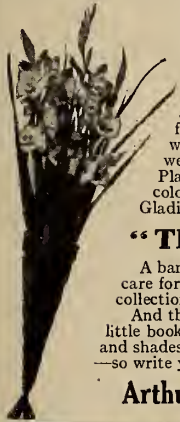
A. V. JACKSON

Jackson Mushroom Farm

6025 North Western Ave.

Chicago, Ill.

You Can Succeed With Gladioli My New Book Tells You How



If you know the Gladioli as I do from long personal experience—then you love it, too—for you have learned that it is the most *serviceable* of flowers—can be grown in nearly all soils, blooming almost the whole summer.

No other flower you can grow will lend itself to so many practical uses as will my Gladioli. Bedded in lawn or garden, they keep up a display for weeks that one cannot pass by; while the long, stiff stems and the wonderful lasting qualities of the flowers, which often "stand up" for a week, make the Gladioli ideal, when cut, for home or church decoration. Planted among Peonies, Irises, etc., they keep up a succession of brilliant color after the other things have stopped blooming.

Gladioli culture is *easy*—I want you to read a book I have just issued, entitled,

"The Uses of the Modern Gladioli"—Free

A handy little work, telling in plain English how to prepare soil, plant and care for the bulbs. Describes the best, and contains an irresistible lot of special collections ranging from 50 cents to \$5.25 and up.

And the *pictures!* You simply can't get away from the illustrations in this little book—pages and pages of true-to-life color work, showing the dainty tints and shades of each individual flower. But you must see it to understand it properly—so write your name on a card and let me send my book NOW—*today!*

Arthur Cowee, Meadowvale Farm, Box 74, Berlin, N. Y.



Farr's Hardy Plants For Spring Planting

A REMINDER

The swelling of the buds in March reminds us it is time to get busy, if the garden picture our fancy has created during the Winter evenings is to become a living reality.

THE LOOK-AHEAD-GARDENER KNOWS

That early spring is the best time to plant most things, and the only proper time to plant some things that should have a prominent place in every hardy garden, as

Anemones, Hardy Asters, Chrysanthemums, Pyrethrums, Primroses, Campanulas, Tritomas, Foxgloves, Hollyhocks, etc.

HE KNOWS

No time may be lost now; that he cannot afford to risk having his garden picture marred by plants inferior, or untrue to name, and that he will save time, annoyance and money, by ordering from

THE LOOK-AHEAD-GROWER

Whose complete collections of the best things enable him to supply all his needs with the assurance that he will get *just what he orders without substitution*. Knowing or wanting to know *my* plants, he will want My Book;

"Farr's Hardy Plants"

For the information and help which its accurate descriptions and suggestions for planting and cultivating will give—*mailed free on request*.

SOME SPECIALTIES

PHLOXES—A superb assortment, including the latest novelties.

IRISES—A surpassing collection of over 500 varieties.

DELPHINIUMS—"Wyomissing Hybrids" equal to the finest named English varieties. (Seeds 25 cents per pkt.)

BERTRAND H. FARR, ^{Wyomissing Nurseries,} 643 D Penn Street, Reading, Pennsylvania.

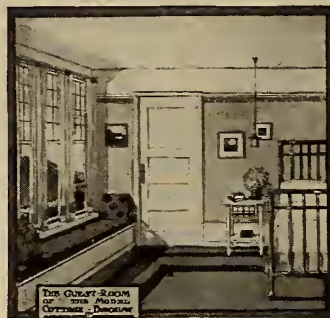
N. B. Dickson's Famous Irish Roses, extra heavy dormant plants up to April 15th. Established in pots for later planting.





Our Decorative Staff will help you select the right colors and materials for painting the outside or decorating the inside of your house.

THEY have made a Portfolio of "Color Schemes for Exterior House Painting," which shows in the right colors many houses, with correct specifications for using the Sherwin-Williams products so as to produce the results shown. If you do not find just what you want in this Portfolio, our staff will make a special suggestion for you. The Portfolio is free. Send for it.



Interior Decoration

This is a small reproduction from the color design of the interior of one bedroom in the Sherwin-Williams Cottage Bungalow Portfolio, which is sent free and which will help you to decorate your house.

Stenciling

"Stencils and Stencil Materials," a helpful and suggestful book for decorating and beautifying the home and the things in it, is sent free upon request to anyone who will ask for it.



An Easy Way to Enjoy a Vision of Roseland

WHEN a man has to leave his suburban home for town at six in the morning and cannot be back there until seven in the evening, Saturdays included, he is scarcely able to figure on being much of an amateur in flowers. As for roses, looking over into Roseland would seem to be his only hope.

But, after all, that first syllable of improbability — and even that of impossibility — is not so terribly hard to knock off, once you make up your mind that it can be done. In the case of my rose border it came easy enough. All that was really necessary was to make a beginning.

As a matter of fact, the beginning had been already made. There were two Madame Plantier roses and one Général Jacqueminot, acquired at a cost of a dime apiece and, in their luxuriant growth and profuse bloom, looked like anything but "thirty cents." That is to say, they had not looked that way the past June; it was now April.

At first it was merely a matter of buying a dozen more hardy roses at the same price and, for their accommodation, rehabilitating, in the direction of the street, the side lawn border in which Florentine iris and two or three of the particularly devilish species of grass were fighting out the question of "might makes right," with a good chance of the latter coming off winner. The roses were brought home, "heeled in" back in the kitchen garden and set out in their new quarters in a straight row the following Sunday morning — of course, while people were not going by to church. The flower product that first season was sufficient to breed enthusiasm at home and attention on the part of the passer-by.

That was some years ago. The rest of the story is merely a tale of improvements, maintenance and repairs. Gradually the border was extended to the street and then made a double row of roses with a final definite limit of some sixty bushes. Each April there have been fresh purchases of about half a dozen plants to make good the ravages of mortality and other rose casualties, the latter including certain tendencies to go manetti-ward and in similar disappointing directions. The casualties short of actual decease, however, have meant merely a transfer of lessened usefulness, as several thriving single and double pink roses now testify elsewhere on the home grounds.

Directly the border was well established the floral output was prodigious and so, from year to

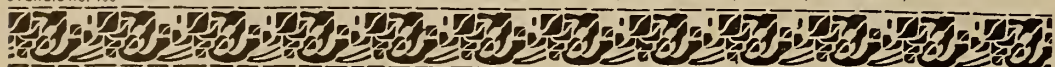


This rose border, started with three ten-cent plants, now supplies "bushels and bushels of roses"

SHERWIN-WILLIAMS PAINTS & VARNISHES

Sold by dealers everywhere. Ask your local dealer for color cards and full information For the Special Home Decoration Service write to The Sherwin-Williams Company, Decorative Dept. 657 Canal Road, N. W., Cleveland, Ohio.

STENCIL No. 100



Moon's Hardy Trees and Shrubs did this



Moon's Nursery Products are used in this garden adjacent to an open-air veranda. It makes a veritable out-door living-room in which the beauty and fragrance of the flowers are enjoyed. Beyond are shrubby borders that give an uninterrupted succession of bloom during the open months. Not only have they added to the beauty of this home, but they greatly enhance its value.

We've hardy plants—shrubs, trees and vines—evergreen and deciduous—in two thousand varieties and ranging in age from one to twenty years.

Our nurseries cover 400 acres in one of the most fertile sections along the Delaware River—far from the gas and smoke of a

Before planting, let us send you our abundantly illustrated catalog—“**Hardy Trees and Plants for every Place and Purpose.**” It tells just *what* to plant, *when* and *where* in order to get best results. Free on request.

THE WILLIAM H. MOON COMPANY

Philadelphia Office: 218 South 12th Street

Makefield Terrace, Morrisville, Pa.



Strawberries—Fresh and Crisp for Your Guests and for You from Your Own Garden.

It is much easier to have a real appetizing breakfast, luncheon, dinner, or a supper, in strawberry time, than in August or at Christmas. Guests appreciate Strawberries, just as the little boy did who said, “I go to the garden to eat Strawberries before breakfast, and before I go to bed, and lots of times between.” If your patch is as big as 50 by 100 feet you will have berries for every meal all season, and plenty to eat from the patch, to preserve, or flavor sherbets, etc. It will give all of you—babies, parents, and old folks, if there are any—a chance to exercise and relax outdoors. Strawberries lead to health, in the eating and in the growing.

Money to be Made from Berries

Neighbors will buy what you can't use. By starting a bigger patch in your garden, and buying crates, it is easy to clear ten, twenty or even fifty dollars. If there is plenty of space—a summer home or a farm—any amount of money can be readily made.

Get King Edward Strawberry

A new one,—berries big, conical, light red, uniform, rich, mild firm but crisp; ripens early and over a long period. Vigorous, healthy, with perfect blossoms and handsome foliage. The best of seventy sorts grown side by side.



Our 1911 Berry Book Sent Free

Get our unusual and complete berry book, which tells about King Edward and two dozen other kinds. It contains a lot of information valuable to growers, and tells how berries can be used in place of other food that costs more and is not so good. Yes, free, of course,—but ask soon, or some one else will get the last one. Use your pen and a postal now.

BERRYDALE EXPERIMENT GARDENS
GARDEN AVENUE, HOLLAND, MICHIGAN

BECOME A SANFORDITE

There is real money in growing celery in Sanford. Net profits of over \$1000 an acre have been realized.

WHAT IS SANFORD?

Sanford is a little dot on the map, 125 miles south of Jacksonville, punctuating the head of the navigable waters of the St. John's river. But its ever-flowing wells and comprehensive drainage system make four crops a year for Northern markets.

The growing season begins in August and lasts until June. Railroads ramify in four directions from Sanford. All water route offers cheap transportation direct to Jacksonville. Many farms and lands are located on street car lines. Shipping is done from the doorstep.

Full information about the flower of productive lands and their flowing wells,—with the unique and world-famous Sanford system of sub-irrigation and drainage,—free for the asking.

Celery Land a Specialty

J. N. WHITNER, Real Estate Sanford, Florida





The only lawn mowers in which *all* the blades are made of crucible tool steel, hardened and tempered in oil, are the **PENNSYLVANIA Quality Lawn Mowers**

This is why they are actually *self-sharpening*—why they will go for years without regrinding or repairing.

All high-grade cutting instruments must be made of crucible oil-tempered steel—that's why it is used exclusively in the "Pennsylvania." If you want a light-running, self-sharpening machine, with over thirty years of painstaking effort back of it, then, ask your dealer to show you the "Pennsylvania"—he knows its true worth.

"The Lawn—Its Making and Care," a text book written by a prominent authority, will prove most helpful to all interested in lawns and shrubbery. Mailed free on request.

SUPPLEE HARDWARE COMPANY
P. O. Box 1575, Philadelphia.



TREES AND SEEDS THAT GROW

We celebrate our 25th anniversary in the Tree and Seed Business this year by offering our customers Anniversary Collections. Send your name and address to-day for list of Collections and Free Anniversary Garden Book, of 136 pages. Also a Free packet "Incomparable Lettuce Seed," the best ever.

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CARL SONNENEGGER, PROP.

All kinds of Farm, Garden and Flower Seeds to select from. Best quality fruit trees, large bearers, grafted stock, not seedlings. Apple 4c, Peach 6c, Plum, 15c, Cherry 12c. Concord Grape \$2.50 per 100. Forest tree seedlings \$1.25 per 1000 up. We pay freight on \$10 orders of nursery stock. Write to-day.

German Nurseries, Box 351 Beatrice, Neb.

year, it remains. Sometimes a market basket full of roses is picked without seriously marring the general effect and always there is plenty of flowers for the house and to send to friends. Moreover the border, all through its June days of brightness, is a delight to the hundreds who pass it daily.

And all it has cost so far is the breaking into a third five-dollar bill and such time as a man away from home thirteen hours a day, six days in the week, could give it in fits and snatches. Not much to exchange for so many agreeable rose years! Doubtless the roses could have had more care; but it has sufficed to plant them, keep the ground well hoed through the summer, protect the bushes with leaves during the winter, cut them back to eight inches in March, work in some fertilizer and replace the dead or degenerated stock in April and gather in June what women are prone to call "bushels and bushels of roses."

Besides the two varieties that the border started out with, the roses grown include Baroness Rothschild, Frau Karl Druschki, Souvenir du Président Carnot, Papa Gontier, Caroline Testout, Coquette des Alpes, La France, Magna Charta, Paul Neyron, Alfred Colomb, Soleil d'Or and American Beauty. All have not done equally well, but few have failed to pay their way with at least a season's bloom. And is not a season's bloom cheap enough at a dime, if only it be a single rose? Connecticut. J. A. DE KENSON.

Letting Roses Climb a Tree

IT IS against the rule to plant roses under trees: but what happy gardener wants forever to be doing things by rule? I have planted roses under three trees and they are all doing well. True the trees are old apple trees, with the lowest branches so high in the air that there is no lack of sunshine, and the roses are planted a couple of feet away from the trunk; but at that I have not compromised such a great deal with the cut-and-dried rule.

I confess to liking to see a rose up a tree; it seems sort of natural for a climber to really climb



Dorothy Perkins rose on an old apple tree gives a most artistic effect



There's But Little Work in a Big Garden

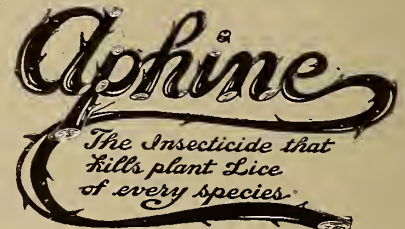
If proper tools are used. Whether a man does his own garden work or hires it done, he naturally wants something to show for his labor or money. Gardening with old fashioned tools is unsatisfactory and unprofitable; with **IRON AGE** tools it is a decided pleasure. Work that formerly required a day is accomplished in an hour, and it's done easier and better. Even a small boy can operate these tools. They save time and labor, insure better cultivation and bigger crops.

IRON AGE No. 9 Single Wheel Hoe, Cultivator, Plow and Rake

one of the many well-known and widely-used **IRON AGE** tools—light, strong, built for many years' satisfactory service. Will plow, rake, cultivate, weed, hill and hoe your garden. Tools from \$2.50 to \$12.00. Write for free Anniversary Catalog, describing all **IRON AGE** Farm and Garden Tools, horse hoes, potato machinery, orchard tools, etc.



Bateman M'f'g Co.
Box 535-M Greenloch, N. J.



Can be used in House and Garden

It destroys the insects; invigorates plant life, and possesses excellent cleansing qualities for decorative plants. For sale by seedsmen.

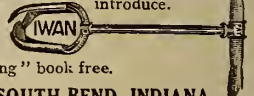
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Best for fence, telephone post holes and wells. Makes hole smoothly and quickly, empties easily. Three full turns complete post hole. Special price to introduce.

Agents wanted where dealers do not handle. Ask dealer for it. Be sure IWAN BROS. is on handle casting. Write for "Easy Digging" book free.



IWAN BROTHERS, BOX 18, SOUTH BEND, INDIANA.

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FLOWER SEEDS that Grow

Try a few plants and seeds from Vermont, if you want something hardy. Do your shrubs and trees kill back in cold winters? Send up for a few of ours and see how they will stand the cold. We can save you money every time, not only in the price but in the quality of stock, and we know how to pack them so they reach you alive and fresh. Our plants for the most part are field grown, and stand the change of soil and climate better than potted stock. Send for catalogue. **FREDERICK H. HORSFORD, Charlotte, Vermont**



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Garden and Porch Furniture

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Walsh's American raised Hybrid Wichuraiana and Polyantha Climbing or Rambler Roses are marvels of wonder, beauty and delight. Single and double flowers; resplendent foliage, proof against mildew and insects.

My collection of Hardy Ever-blooming garden or Hybrid Tea Roses includes the best in the various colors. All the leading varieties of Hybrid Perpetual or June Roses, and Lord Penzance Sweetbriars. All 2 year old stock, dormant, first quality. Hollyhocks, Phlox, and Peonies.

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Rose Specialist
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Our California-grown trees, plants and vines include hundreds of hardy things, besides scores of tender ones to be enjoyed outdoors in summer and inside in winter. Our soil and climate encourage rapid and permanent development; our trees are free from disease, and always true to name. We have unexcelled facilities and equipment; on our staff are men whose life work is the growing of trees; we pack and ship so the stock will arrive promptly and in good order.

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—see what we offer. We are authorized introducers of LUTHER BURBANK'S PRODUCTIONS—and our Catalogue describes and illustrates them. "California Horticulture" and "New Products of the Trees"—two books illustrated in colors; 25 cents each postpaid. Please state where you saw this advertisement.

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The Sturtevant carries household vacuum cleaning to an entirely new point of simplicity and usefulness.

It makes absolute, hygienic, dustless cleanliness not only possible in the home, it makes it easy.

It solves completely the two most baffling problems in household vacuum cleaning:

It does away entirely with the useless and injurious EXCESS SUCTION that has been the serious objection to vacuum cleaning. It will not damage the most delicate fabric. Yet in PERMANENT THOROUGHNESS, it has never been equalled.

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In using the Sturtevant, the machine itself is almost forgotten—one is conscious only of the amazing results.

A vacuum cleaner like the Sturtevant must inevitably be deemed as necessary to right living as a bath tub. It realizes a new ideal of cleanliness, of health, of comfort.

These things have been made possible by the great principle of high-pressure fan suction, the epoch-making advance in vacuum cleaning. No person should buy a vacuum cleaner without knowing the vital bearing of this principle on the practical efficiency of the vacuum cleaning process. *Our booklet gives these facts.*

SEND FOR BOOKLET 69

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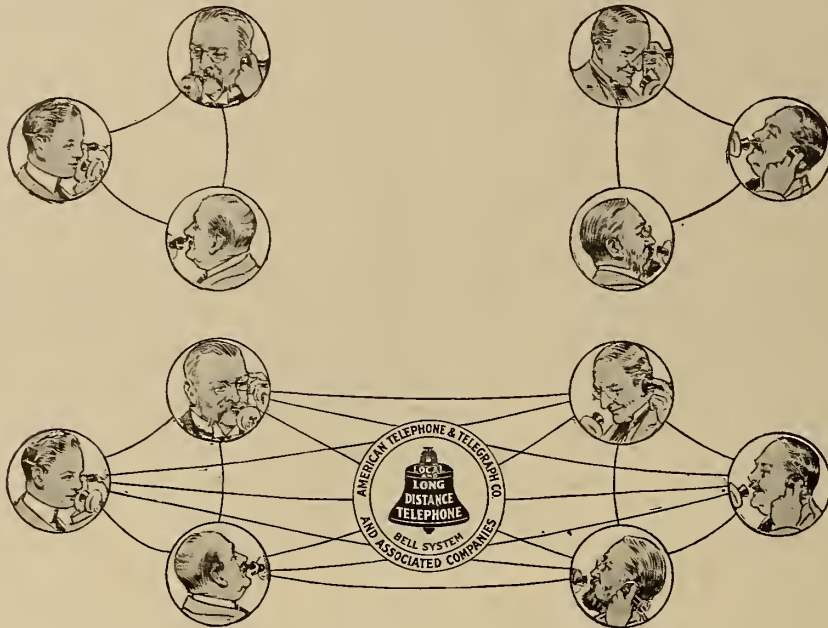
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NORTHERN GROWN EVERGREENS for IMMEDIATE EFFECT.

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Union Increases Use



When two groups of telephone subscribers are joined together the usefulness of each telephone is increased.

Take the simplest case — two groups, each with three subscribers. As separate groups there are possible only six combinations—only six lines of communication. Unite these same two groups, and instead of only six, there will be fifteen lines of communication.

No matter how the groups are located or how they are connected by exchanges, combination in-

creases the usefulness of each telephone, it multiplies traffic, it expands trade.

The increase is in accordance with the mathematical rule. If two groups of a thousand each are united, there will be a million more lines of communication.

No one subscriber can use all of these increased possibilities, but each subscriber uses some of them.

Many groups of telephone subscribers have been united in the Bell System to increase the usefulness of each telephone, and meet the public demand for universal service.

AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

Good Gracious Chrysanthemum



5 for 25 cents

A marvelously large variety, the flowers of which are frequently 22 inches in circumference; beautiful, bright lustrous pink color and perfect form. Plants are really worth 25 cents each, but to readers of this paper, we will send a strong plant of the above and four other choice Chrysanthemums, all different—five plants in all for only 25 cents, with full directions for growing big flowers. Beautiful floral catalog free.

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Dept. 26 Des Moines, Iowa

SUMMER FLOWERING BULBS AND PERENNIALS

From the Growers
Direct to the Planter

Send for list of prices

FRANKEN BROTHERS
DEERFIELD ILLINOIS

with the air, at least, that it is bossing the job and not you. Then I have no time to build trellises, let alone pergolas, and even roses on pillars need a lot of attention. Rather, I prefer an aged tree, which calls for no carpentering, is never too long for a young rose or too short for an old one and through all the long winter does not leave the unclothed canes against a sadly artificial background. To my mind old apple trees are best; they are as apt to be crooked as not; and the crookeder they are the less boosting you have to give the rose, which will climb fast enough if you enrich the soil around it.

My hardy borders have absorbed three of the right sort of old apple trees, and each of them has one or two roses running up it. To one tree I have given the old-fashioned single prairie rose, which has few equals among climbers, and also a Persian Yellow. The latter is rampant rather than climbing, but, when well established, is glad to lean on a tree. Two Dorothy Perkins ramblers are planted by another tree and the second summer they attained a height of twenty feet. This is the best rose of all for the purpose, not only because of its free, graceful habit, but for the reason that the pink blossoms are so well set off by the bark. A third tree has a crimson Rambler for its portion.

Climbing roses may also be used to excellent advantage on dead trees. In that case the trees should be so topped as to leave a few feet of the main branches. The finest ramblers I know of are thus trained. Other good roses for the purpose are those prime favorites, more honored of our grandmothers and mothers than of the younger generation, the Baltimore Belle and the Queen of the Prairies.

Connecticut.

B. GOODRICH.

The Finest of Pentstemons

NO one can realize the height to which culture has brought the pentstemon unless he has grown the so-called gloxinia-flowered type, or, at least, studied it at close range. While the blossoms naturally are not so large as those of the gloxinia, they do resemble the latter in not only form but shades of color and markings. All in all, these hybrids are among the most attractive of the showier perennials.

Unfortunately they are afflicted with a pest that does not appear to bother the other pentstemons that have come under my observation — four or five that are either true species or are only slightly improved. This is a little borer that gets in the flower stem and soon ruins the whole stalk. I have never been able to fight the pest successfully and as I have found it flourishing where there was the best of professional care, I fancy that neither prevention nor cure is easy.

The gloxinia-flowered pentstemon will bloom later in the first summer if the seed is sown early indoors, say in April. It is best treated as an annual, my experience being that hybrid pentstemons do not winter so well as the several species that are in cultivation.

New York.

H. S. A.

Using Torches to Kill the Tent Caterpillar

THOUGH spraying with arsenates early in the season is a preventive of the tent worm, the next best thing is to destroy both the caterpillars and their nests with fire, just as soon as they appear. A bunch of straw or a rag saturated with kerosene and attached to the end of a pole will destroy them if it does not burn out before the task is completed; but it must be prepared anew each time.

The advantage of a kerosene torch is that it is always ready for use and needs but to have the match applied. This often means that the time to burn out these nests can be spared when they are first noticed, as no time need be spent in preparation. A common tin torch will answer, but the three-burner torch made for this purpose will do the work more quickly and once purchased will last for years.

Pennsylvania.

J. L. K.



**For Verandas, Porches, Lawns, Indoors
The Perfect Couch for Outdoor Sleeping**

A Rowe Hammock has hung for eight or ten summers (the owner doesn't remember which) on a porch within two hundred feet of the Atlantic Ocean. Last season a visitor referred to it as "your new hammock." Forty years' experience show that Rowe's Hammocks give ten years of continuous out-of-door service. As far as the signs of wear go, you can't tell whether a Rowe Hammock has been used six months or six years.

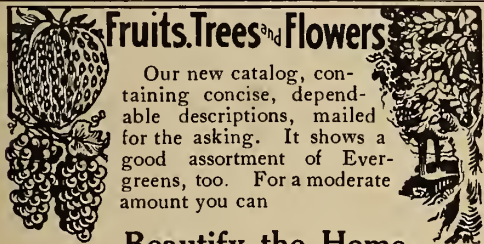
It is made by sailmakers on the model we supplied for years to the U. S. Navy. It is made from duck that is 60 per cent. to 70 per cent. stronger than that in any other, and sewn with thread that is twice as strong. It has sewing and bracing that no other maker has learned the need of. It is handsome, but severely plain—no showiness, just solid merit.

Our Khaki canvas is permanent in color and will not soil clothing. Your home isn't all it should be until you own a Rowe Hammock. A very few first-class stores are licensed to sell our hammocks. If not conveniently situated, you should buy direct from us. We prepay delivery charges, and ship carefully packed, ready for hanging.

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Our new catalog, containing concise, dependable descriptions, mailed for the asking. It shows a good assortment of Evergreens, too. For a moderate amount you can

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add to your comfort and pleasure and have your own fresh fruit. The prices are reasonable—but we don't claim they are the lowest in the country. It's the trees you plant, not the prices. Located on the western slope of the Ozarks, our trees are vigorous and healthy, adapted to north, south, east and west. And there's 35 years' experience back of them.

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who desires to test a number of varieties of Spencer Sweet Peas at modest cost, should send for our list of 30 best sorts which we put up in 5-cent packets. We also have Pansy, Forgetmenot, Bellis and other plants at 65 cents per 100. Write to-day.

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Double Glass Sash

Equip Your Garden Right

Get the new sash that has two layers of glass and needs no mats or other covers. Grow your flowers and vegetables way ahead of the season. Have a garden under glass always growing.

Send For These Two Books

One is our valuable free catalog. In the other Prof. Massey tells what and when to plant in hot-beds and cold-frames. Send 4c in stamps for this booklet in addition to free catalog.

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Victor



What you can do with changeable needles

Adding the Fibre Needle to the Victor is like adding a new group of beautiful pipes to a church organ. It gives new range and variety, as well as beauty.

Some Victor Records sound best played with a Victor Steel Needle, others with a Victor Fibre Needle. With the Victor you can have *both*. You can adjust volume and tone to suit the record and the conditions. Practice soon develops the ability to use the different Victor Needles in bringing out the peculiar beauties of different records.

Learn how to use the changeable needles in playing the Victor, and you will find in it new charms and beauties.

Loud Victor Full-tone Needle gives great volume of sound, that fills a large hall, and is heard above ordinary conversation. It makes music loud enough for dancing.

Medium Victor Half-tone Needle gives a volume that fills an ordinary room. Its reproduction is as *perfect* as that of a full-tone needle.

Soft Victor Fibre Needle is a revelation. Its music is smooth, soft, and delightful. With this needle your records will last *forever*, and you will hear in them a quality that you never heard in records before.

For 50 cents your dealer will have the needle-arm of your sound-box altered so as to hold either Victor Steel or Fibre Needles, which can then be instantly changed at pleasure.

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Berliner Gramophone Co., Montreal, Canadian Distributors

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BEAUTIFUL reproductions of famous models from the gardens of Italy. **WE** have no competition in the quality of our work in composition stone. **A VISIT** to our studio will prove well worth your time. **OUR** catalogue containing more than 800 illustrations of Benches, Sundials, Statuary, Pedestals, Mantels, Vases and Fountains mailed on receipt of twenty-five cents.

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The "Monroe"

The Lifetime Refrigerator



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Easy Payments We depart this year from our rule of all cash with order and will send the "Monroe" freight prepaid on our liberal credit terms to all desiring to buy that way.

Just say, "Send Monroe Book," on a postal card and it will go to you by next mail. (10)



MONROE REFRIGERATOR COMPANY, Station 13, Lockland, Ohio



Easy Construction for a Lily Pond

LOCATED in a natural hollow where one might expect to meet with water lilies, fed by an artificial brooklet and draining into the nearby river through underground tile, my lily pond resembles many others. The pond proper is a concrete cistern about four feet deep with an outline approximating an oval, and the great problem when building it was how to achieve this outline most economically. Making a special mould for it would have been an expensive piece of work, with little likelihood of any future use for the mould.

A hole was dug fully a foot wider than the desired width of the pond, to allow for the thickness of the wall, while its depth was determined by the fact that sufficient fall had to be provided from the bottom of the pond to the level of the water in the river to provide for drainage. This made it necessary to raise the ground about a foot to bring it up to a level with the top of the pond, which happily did not detract from the appearance of the hollow. The sides of the hole were cut perpendicular and as smooth as a spade could make them. On the bottom was first spread a four-inch layer of cinders wetted down and firmly tamped. Where the ditch leading to the river connects with this hole a drain pipe was imbedded so that it would extend about two feet into the cistern beneath the concrete floor. To this pipe was attached a T into which could be fitted an upright and which was likewise provided with a movable plug at the top. Upon the cinders a concrete floor about three inches thick was laid, sloping slightly from all sides toward this drain pipe, where a pocket was formed so that by removing the plug in the T the pond could be emptied completely. By means of the upright pipe the water level in the pond can be determined. The mixture used for the floor consisted of one part of cement to three parts of sand. To this a finishing coat was applied consisting of equal parts of cement and finely screened sand.

The floor was laid from the sides toward the centre, and into it, while still wet, was pressed a row of bricks extending completely around, following in outline, but everywhere a foot distant from the sides of the hole. This was the first course of a single brick wall which was to serve



A single brick wall served as a frame for the concrete walls of the pond

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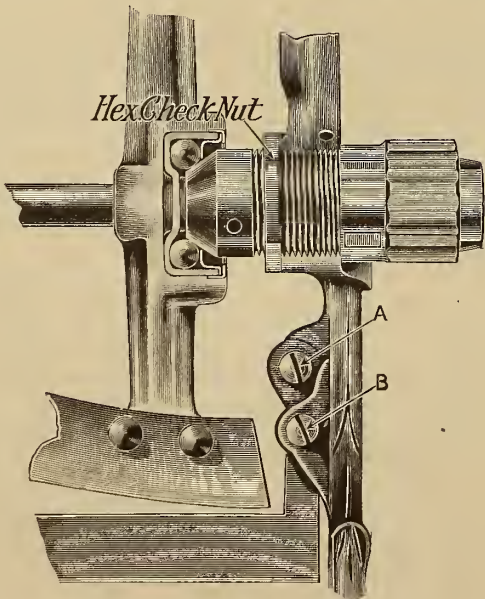
OUR AGENTS IN NEW YORK, BOSTON, PHILADELPHIA, CHICAGO, NEW ORLEANS, PITTSBURG, ATLANTA, DES MOINES, ETC., WILL CONTRACT TO FURNISH AND ERECT FENCE. WRITE OUR FACTORY FOR THEIR ADDRESS.

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Tool steel cones are hardened throughout and guaranteed never to show wear.

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Felt washers — oil saturated — form a dust proof bearing — almost air tight. Ordinary ball bearings — cause trouble — We have never had to replace one of this type.

The acme of perfection — backed by our guarantee and forty years' experience in lawn mower construction.

Ask your dealer to see them, or write us direct.

Our catalogue on request.

The Granite State Mowing Machine Co., Hinsdale, N. H.

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Sharples Tubular Cream Separator

The latest product of the oldest cream separator factory in America and the largest in the world. When you buy a cream separator buy the best; buy one that you will be proud to have your neighbor see. You know who builds the Tubular and who guarantees it. Write for 1911 Catalogue No. 215.



Dairy Tubulars are self-oiling. No oil holes, tubes or cups. Use same oil over and over. No waste

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Let us send you our 25c booklet free. It tells how to make *inexpensive* interior woodwork, furniture and floors as beautiful as the most *expensive* kinds, by the use of

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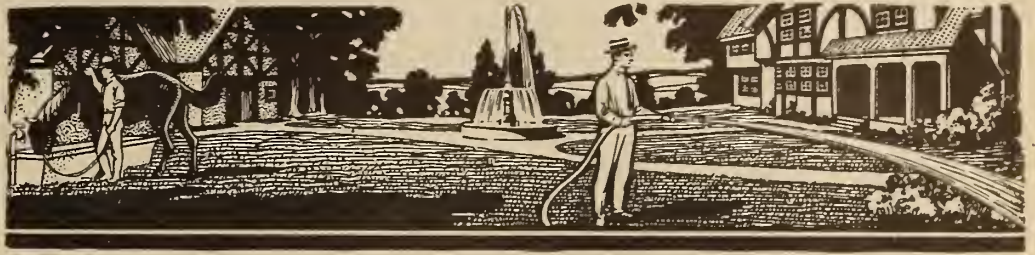
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are made in all styles and sizes, 1 to 45-H. P., vertical and horizontal—stationary, portable, and tractor. Their efficiency, economy, and dependability have been proved by years of service. Thousands of owners consider an IHC Gasoline Engine one of the best paying investments they ever made.

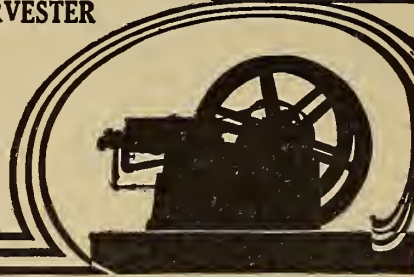
If you want to know more about what an IHC Gasoline Engine will do for you, and why it is that IHC construction insures more power on less gasoline consumption than any other engine, you should call at once on the IHC local dealer, or, write for a copy of the IHC Gasoline Engine catalogue.

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 What is it? A clearing house of agricultural data. What does it do? Helps farmers to help themselves. How can it be used? By sending your farm problems and puzzling questions to the Bureau. We are co-operating with the highest agricultural authorities and every source of information will be made available to solve your difficulties. We shall be pleased to have an opportunity to assist you. Write the IHC Service Bureau.



INTERNATIONAL HARVESTER COMPANY OF AMERICA
 (Incorporated)
 Chicago U S A



as a frame for the final sides of the cistern. Before this wall could be completed, however, the finished floor had to set, a matter of several days.

In making this wall, small projecting strips of corrugated tin were embedded in the mortar to bind the wall more firmly to the concrete to be filled in behind it. Immediately after the wall was complete a concrete coating was applied to the inside, consisting of equal parts of cement and fine sharp sand, put on in the same manner as plaster is applied to laths. It was found necessary



The finished pond, fed by an artificial brooklet and drained by underground tile

to wet the bricks thoroughly that the mortar used might not dry too quickly and thus fail to bind the wall properly. Several days were again required for this mass of brick, sand and cement to set properly, after which coarse concrete was poured in behind it and firmly tamped. This was brought to a level with the rest of the wall, after which the entire mass was given a smooth finish. Thus was the need of an expensive mould done away with.

Needless to say, this construction will serve for any outline; in fact there are two sharp corners in this particular pond where the brook enters it. Such construction will be found to be water-tight, though to make doubly sure a coating of water proofing can be applied.

North Dakota.

C. L. MELLER.

The \$500 Prize Conditions

The following letter is received from a subscriber in South Carolina:

“Is it necessary to have exactly a one-half acre garden to be able to compete in your \$500 contest? I have what is considered by many the best cultivated and most productive garden in this city, but there is less than one-fourth acre of it. Besides lettuce, radish, onions, Swiss chard and young plants for spring setting in coldframe, we were using all through January out of the open garden lettuce, parsnips, onions, celery and collards. Would have had salisfy had it been planted early enough for winter use. From sixty plants we sold over \$10 worth of tomatoes last season, besides supplying a large family for about two months. It is hard to get seed like parsnips, planted in midsummer for winter use, to germinate here. To overcome that trouble I am installing an irrigation system for next season’s operations. It would be hard for me to say what would be the beginning or the end of the season, as I am planting and gathering every month.”

We heartily concur. It would indeed be very difficult to even find several gardens measuring exactly a half acre. As we want to encourage the most efficient gardening, we have decided to modify our offer to include any garden of a half acre or less. Otherwise, the conditions remain the same. Full particulars of this competition appear on page 73 of this month’s GARDEN MAGAZINE.

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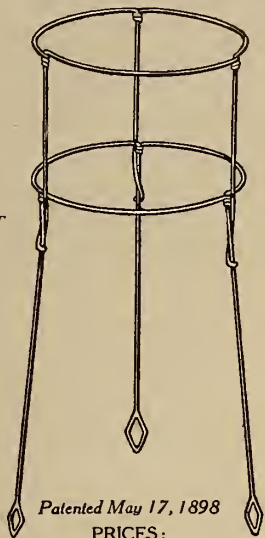
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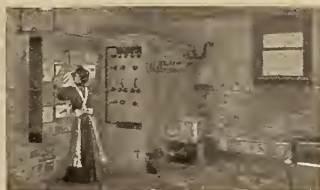
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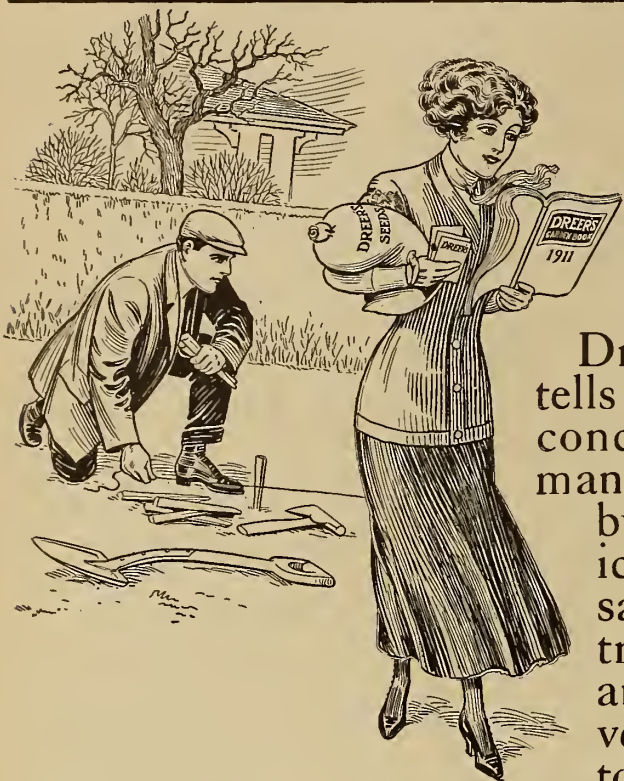
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FOR over three hundred years the gas plant (*Dictamnus fraxinella*) has been in constant cultivation. No new aspirant for garden honors has been able to supplant it in the affection of many. New clumps and new hedges are installed in new homes, and the days of old are represented.

I know of no plant that is better behaved the season through, for it retains its dark green foliage without a blemish until the last, and stands in



The gas plant makes an excellent border plant. It attains a height of three feet

tidy array in spite of wind and storm. Few plants seem to possess the vitality it has, for clumps of it will outlive the generation in which it was planted.

It is suitable for a low herbaceous hedge in a narrow space between a walk and roadway or for a border in large formal gardens, where it is not too tall. When in flower, its stately stalks stand up nearly three feet and last a long time, whether on the plant or when cut. When through blooming, the flower stalks should be cut. The bruised foliage emits the scent of lemon. The name "gas plant" was given it upon the supposition that if a lighted match is held near the flower on sultry evenings it will give out a flash of light. Illinois. W. C. EGAN.

The Everlasting Pea

AFTER having all but disappeared from the old gardens, the everlasting pea (*Lathyrus latifolius*) is making its way slowly into the new ones. It is an admirable climber for the garden gate, wall or fence and it will do for a low cottage porch, as it easily will run up eight feet in good soil. Generally speaking, however, it is not at all particular as to soil, and it may be said of it that it will grow anywhere. It is particularly valuable for planting among rocks, on banks and in low



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Gives the largest flowers, the greatest range of colors, the strongest plants. We have introduced more superb varieties than any other seedsmen in the world.

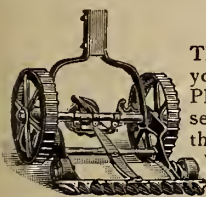
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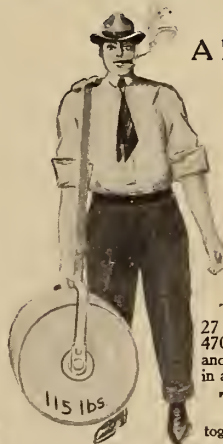
Why buy one of the old style iron or cement fixed-weight rollers that is generally too heavy or too light to do your lawn the most good, paying for two or three hundred pounds of useless metal—and freight on it as well—when less money will buy the better, more efficient

"Anyweight" Water Ballast Lawn Roller.

Remember that a difference of 50 pounds may mean success or ruin to your lawn—a half ton machine will spoil it in early spring, while a 200 lb. roller is absolutely useless later in the season. If you desire a fine, soft, springy turf of deep green, instead of a coarse, dead looking patch of grass, use an "Anyweight."

The "Anyweight" Water Ballast Roller is built in 3 sizes, all of 24 inch diameter and of 24, 27 and 32 inch widths. The machine shown here (our smallest) weighs but 115 lbs. empty, 470 lbs. when completely filled with water and 737 lbs. with sand. The other sizes weigh 124 and 132 lbs. empty and from that "anyweight" up to half a ton. Filled in 30 seconds—emptied in a jiffy. Fully protected by our patents. Runs easy—lasts a lifetime.

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shrubbery, in all of which places it may be left to ramble at its own sweet will, since it never looks so well as when absolutely untrained. As to culture, it takes care of itself, if let alone. I have had no trouble transplanting it, aside from the length of the roots; but, unless it is absolutely necessary, it is better not to disturb it. The pink shades are hardier, but scarcely so beautiful as the white, and comparatively uncommon, kind.



The everlasting pea, an old-time vine worth planting. Hardy and vigorous

The White Pearl is a new variety of the latter with very large flowers. Both are as fine for cutting as the sweet pea, though they lack its fragrance. The blooming period is throughout the summer and into the early fall. Barring a pod or two for propagation, it is better not to allow seed to form. The everlasting pea grows freely from seed, but is "slow as all get-out" about coming up; it will wait a whole year if it pleases. Propagation by division is accomplished most easily by digging carefully at the side of the plant in spring and working off one or more of the roots, taking care not to break the brittle shoots. Good bloom, in such a case, should not be looked for until the second summer. Cuttings may be taken also—in the fall, at the end of the blooming period.

H. S. A.

The Hardiness of the Common Hydrangea

THERE seems to be a pretty general misapprehension as to the hardiness of *Hydrangea hortensis*, the only common species in this country before the introduction of *H. paniculata* from Japan in 1874. The "Cyclopedia of American Horticulture" refers to it as "*Hydrangea hortensis*, which cannot withstand much more than 10 degrees of frost" and says further; "In warmer climates . . . sometimes used for ornamental hedges, but it is not hardy in the north." It is hardy so far north as New York City, however, as I know from personal observation in at least four places. And I have no doubt that the only reason why it has not proved hardy in the part of Connecticut with which I am most familiar is because the experiment never has been tried; it was a tub plant when my grandmother was a girl and a tub plant it is now, with the cellar as its fixed winter home.

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ANY man-about-the-house or carpenter of ordinary ability can set up these pergolas by following the simple instructions we send with the crated sections.

Our new departure places pergolas of a number of the most modern and most approved designs, and of excellent quality, within the reach even of the owners of modest-priced homes.

The saving in money averages about one-third to one-half the cost of such equipment when made to order. The saving in time may amount to many weeks.

Our illustrated catalog will show you how you can acquire a pergola of correct design and proper construction without the usual trouble and excessive cost. Let us send it to you.

You Can Have This Garden THIS YEAR

REMEMBER—You make your selection from more than 600 acres of choicest nursery products—from our own gardens shown below, which have been growing for more than half a century. The finest collection of trees, shrubbery and garden plants in America; all hardy and old, well-established growths.

REMEMBER—Our expert landscape gardeners plan your place for you, selecting plants suitable to soil and situation, with special regard to immediate and permanent effects.

REMEMBER—We make a specialty of moving and planting large trees and shrubbery, and furnish from our nurseries all varieties of large trees, evergreens and conifers to screen unsightly views or to produce woodland effects.

Everything for the home garden, including fruit trees, berry bushes, etc.

Write at once for Catalog A and let us know your plans

**The Stephen Hoyt's
Sons Company**
New Canaan, Conn.
Est. 1848 Inc. 1903

hardiness of this fine old hydrangea—it was introduced to western cultivation in 1790—is on the grounds of Mr. Neils Poulson's place on the Shore Road, Bay Ridge, Brooklyn. There a sturdy hedge of the plant is used to define the easterly boundary line, and it does so very beautifully. This hedge was planted eighteen or twenty years ago and has endured the winters without any special care being given to it, and with no protection whatever.

In another part of outlying Brooklyn I have seen an enormous plant that has lived out-of-doors years beyond memory, and this within a stone's throw of salt water. Two more are thriving in ordinary city back yards, and they not only have no protection but are grossly neglected.

Originally the Poulson hydrangeas were pink, but the color has changed to blue and the tones seem to get deeper each year. Last summer it was the darkest blue that I have ever seen on the hydrangea and the line of hedge was a glorious sight. Although Mr. Poulson is in the iron business, he has not fed the hedge with that mineral, nor has he used alum—the only other way I know of changing a pink hydrangea to blue. There is a great deal of iron in the construction of the house,



Hydrangea hortensis is hardy as far north as New York and will live through the winter without protection

however, and no doubt the natural drainage has carried it to the hedge in solution. Such presence of iron in the soil explains the intense blue color of the hydrangeas that grow in profusion in the vale of Furnas, in the hot spring region of San Miguel, Azores.

The best tubbed specimens of the newer Otaksa type that I have run across are nearly ten years old, and have grown so cumbersome that they are to be discarded very soon. They are made to produce blue flowers by the use of iron filings in the soil. Their wintering is in a cool shed cellar, where they have nothing over them but are not allowed to freeze. So far as I know, this type has not the hardiness of the older one. B. G.

A New Use for Burlap

BE CAREFUL when watering seeds in flats. Although I used a sprinkler with a very fine rose, I found that I washed to the edges the seeds in several flats of foxgloves, leaving the centre bare, while at the edges the plants were too thick. After that I escaped further trouble by soaking burlap in water and laying it on flats. After the seedlings are up the danger of washing them out is small.

Burlap, by the way, is one of the handiest gardening "tools." I use it to shade flats of seedlings, placing it over sticks, a couple of feet long, nailed to each corner of the box, shade transplanted plants with it, and in the fall protect from frost the best of the dahlias. With the present prices of lumber, it is more economical to use over seedbeds than the orthodox lath screen, and appears to give just as good results.

Iowa.

R. P. J.

Kill the Bugs that Destroy Your Vegetables, Fruit and Shade Trees

Spray or dust potatoes, cucumbers, melons, peach trees—all vegetables and fruit with

ELECTRO Arsenate of Lead

(in Powdered Form)

It is sure death to all insect pests of your garden or orchard—50% stronger and more effective than any other arsenate of lead and a sure protection for your garden. It will not injure the tenderest foliage but sticks so rains cannot wash it off and is effective months afterwards.

Mixes instantly with water or is used dry It is always effective.

Use Electro Lime-Sulphur Solution for San José Scale or fungus growths. If your dealer cannot supply Electro Brands, write for prices and proofs; authentic analyses by the Conn. and N. J. Experiment Stations furnished upon request. Write for them.

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St. Regis Everbearing

The Raspberry for the Million and the Millionaire. "There's Millions In It."

You can now have wonderful raspberries from June to October by setting out the plants in April.

Never before has a plant been grown which would fruit the first season.

Then, for four months the St. Regis produces continuously—heavy crops of large, luscious, sugary berries of bright crimson.

Big profits growing St. Regis for market—the fruit keeps in perfect condition longer than any other red raspberry.

Endures drought and severest cold without injury. Awarded Certificate of Merit by American Institute of City of New York.

FREE.—Our 1911 Catalog and Planting Guide—Includes Nut Culture—Fruits, Roses, Shrubs, Evergreens.

GLEN BROTHERS, Glenwood Nursery (Estab'd 1866) Rochester, N. Y.

Grow Chestnuts Like This For Profit



Covers a 50c. piece.

You can get bigger profits per acre from Sober Paragon Chestnuts than from any other crop.

Hardy, rapid, symmetrical growth; luxuriant foliage; spreading boughs; clean trunk; stateliness.

These qualities combined and developed by science to a degree that closely borders perfection, in the new

SOBER PARAGON Mammoth, Sweet Chestnut

Crop, Fall of 1910, brought \$48,000, orchard only 8 years old.

The only large sweet chestnut in the world.

Bears the second year. The nuts average 1 to 2 inches in diameter—and 3 to 5 nuts in a burr.

United States Pomologist, G. B. Brackett, says

"The Sober Paragon comes the nearest in quality to the native chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance and excellent flavor."

Testimony from growers, commission merchants, Forestry Experts, etc., given in our free booklet, together with prices and particulars.



We own exclusive control of the Sober Paragon. This copy-righted metal seal is attached to every genuine tree when shipped.

Write today for the booklet.



Basket of Mantura Pecans

Hardy Acclimated Pecan Trees for Planting In Northern States

Here are Pecan Trees which will thrive in Northern States—producing as prolifically and as profitably as any Southern Pecans.

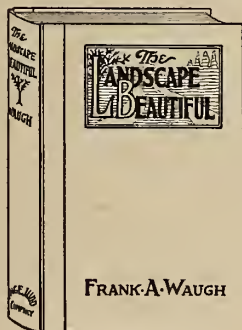
Thus, through a remarkable scientific achievement, an immensely profitable industry becomes available in the North—

For, Pecan Orchards pay far bigger profits per acre than wheat or corn.

And a shade-tree of wondrous beauty, long the pride of the South, may now adorn any Northern landscape.

We have five varieties of hardy trees best suited for Northern planting. These have withstood temperature far below zero,—never been known to "winter-kill." Successful in almost any soil. Begin bearing in 5 to 7 years. Bear hountifully for generations and attain immense size. Valuable information on Pecan Culture in our catalog.

Your Home May Look Thrifty to the Passer-by, But—



The Chapter Headings

1. On the Relation of Landscape to Life.
2. On the Ministry of Trees.
3. On Some Other Elements of Landscape.
4. On Looking at the Sky.
5. On the Weather.
6. On the Art which Mends Nature.
7. Concerning the American Landscape.
8. On American Landscape Gardening.
9. As to the Field of Criticism.
10. On the American Landscape Gardeners.
11. Am. Masterpieces of Landscape Architecture
12. On the Improvement of the Open Country.
13. On the Ownership of Scenery.
14. On the Decorative Use of Landscape.
15. As to the Landscape in Literature.
16. On the Beauty of Landscape Psychologically Considered.
17. Suggesting Some Practical Applications.

have you studied the picture scheme of your trees and shrubbery as carefully as you have studied the harmony of your hangings and carpetings within? Are you willing to have a stranger judge your taste by the appearance of your premises? As with dress, extravagant expenditures often do not produce effective results. You owe yourself the inspiration of this book. It is by Frank A. Waugh, Professor of Horticulture and Landscape Gardening, Mass. Agricultural College, Amherst, Mass. You cannot read it through and fail to get a new outlook as to the beautifying of the landscape around you—a new appreciation of landscape gardening, the great Art neglected. The price of this splendid book is \$2.00.

The illustrations are an attractive feature, numbering 49 full-page engravings from landscapes by the leading photographic artists of America. The text is printed from large, clear type, with wide margins, on an extra quality woven deckle-edge paper. The book is beautifully bound in cloth and boards, gilt tops, with handsome gold side and back stamping. It will meet the most exacting taste as an example of artistic book design.

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Orange Judd Company, Publishers

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There's lots of character blossoming forth in every garden, but in all of the gardens of flowers ever planted, none retain so much of the individuality and spirit of the planter, even though it was made a generation ago, as the garden of perennial flowers. They'll furnish bloom from earliest spring's Arabis and Columbine until after frosts in the fall, with the flame-colored Tritomas and multi-colored Chrysanthemums in full bloom.

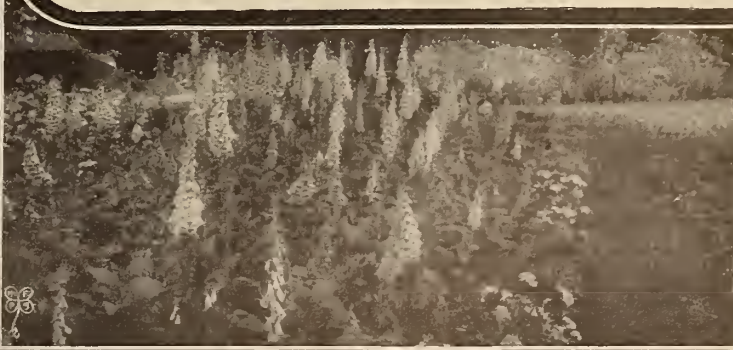
Perennials Need Little Care

Each year sees an increase in the number of persons awakened to the great beauties of the hardy Poppy, Phlox, Peony, Iris, Delphinium, Foxglove and Clove Pink. Very little care is needed, except to divide the clumps every two or three years, so plant a border of them this spring—they're all sure to bloom this year, the year after, and forever.

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A beautiful seventy page book that describes and pictures some of the choicest hardy plants and shrubs. It will show you how to get some of the "spirit" of brightness and happiness and health wrapped up in the planting of really choice, vigorous, fibrous-rooted and mountain-grown stock, able to withstand seventeen degrees below zero. In planning your garden, write us today for the book—it's sent free—but ask us NOW.

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You'll not want another winter to pass without the comfort and convenience of running water in every part of your home. Even if you do live miles from city water mains, you may enjoy the same advantages that city folks have in bathroom, laundry, sprinkling, watering stock, and fire protection.

And these comforts may be yours without the worry of a gravity tank that is bound to decay, freeze and leak, and is but a temporary makeshift. For the modern water supply is furnished by the

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The manufacturer who places his trade-mark upon his product thereby indicates to you that his goods are worthy of your confidence. The word *Leader* on every *Leader Water System* is a symbol of the skill and experience that must go with a perfect water system. Your protection is assured only when this mark appears on the plant you buy.

The plant that you select will operate by compressed air, forcing the water from the air-tight steel tank in basement or underground, beyond all danger to life or property. Every drop of water is delivered cool and refreshing, both summer and winter. No danger from dirt, dead animals, and "wiggers"—outside air does not at any time touch the water. Nor can your plant be put out of business by freezing, if properly installed—and it will last a lifetime without replacing.

Make it unnecessary to carry pail after pail of water from the pump or go out of the house on stormy days—such primitive methods are altogether needless in this day of comfort. The same plant delivers water to the barn as well—your stock need not leave their stalls to quench their thirst—and the water is never freezing cold.

Have you hesitated to investigate, waiting for a perfect system? **Then write us now**, and talk to your dealer and architect. For the *Leader Water System* has already brought water supply comfort and happiness to fourteen thousand homes—your problem can be just as easily and simply solved. And you will be able to afford the cost—a plant of a size to suit you and operated by hand or any style of power, is at your service, no matter where you live.

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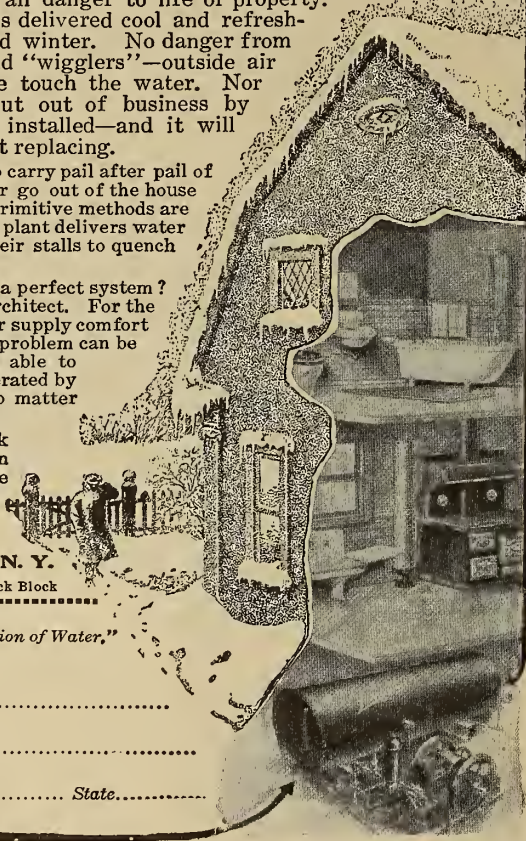
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(We are glad to answer specific questions for the readers of The Garden Magazine, and we are also glad to express an opinion on any suggested planting plan if it is submitted in full detail. It should be understood, however, that we cannot undertake the actual preparation of a plan or elaboration of a planting scheme.—EDITORS.)

PROTECTION AGAINST ROT

What is the best method to prevent the rotting of that part of wooden (chestnut) posts which is to be put under ground?

Maryland.

T. N. S.

—Charring the parts of posts or timbers which come in contact with the ground is a good preventive of decay, provided a thick layer of charcoal is formed and the work is so carefully done as not to cause the timber to crack; deep cracking would cause the interior to decay. If the work is not carefully done the timber may be seriously weakened. The ends of posts are often successfully treated with a coating of creosote or they may be dipped into hot coal tar.

DATURAS IN A BORDER

What is the correct name for the plant commonly known as "wedding bells?"

Massachusetts.

E. F. T.

—The name "wedding bells" is applied more or less loosely to any one of the species of *Datura*, but perhaps more appropriately to *Datura cornigera*. The daturas are easy to grow, some being treated as tender annuals. In the North the woody species can be grown outdoors in the summer and stored in cellars during the winter. Daturas are sometimes kept in cool conservatories the year round, but they rarely flower well in pots, their roots being large and spreading and requiring a constant supply of moisture. Plant them in the border and have great quantities of bloom in the spring. After flowering cut the plants to the main limbs, or a straggling and unsightly growth will result.

IMPROVING THE SOIL

Three years ago the soil in my garden was poisoned or soured by the use of horse manure containing wood shavings instead of straw. All vegetable plants have since been stunted and fertilizers fail to make the soil produce as it should. The surface after a rain shows a greenish scum. What remedy can be applied?

Pennsylvania.

F. M.

—The soil has not been poisoned, but soured. It is probably due to poor drainage and not to the manure; this opinion is strengthened by the statement that after a rain the surface shows a greenish scum, an unfailing sign of imperfect drainage. Wood shavings have been successfully used as a fertilizer on a large scale in certain sections of the country. They have the effect of lightening the soil and therefore are more useful on clays than on lighter loams. It may be possible that your land is over-manured; if so, it will quickly recover after receiving a dressing of lime.

STUDY FARMING POULTRY FLOWERS AGRICULTURE

AT HOME BY MAIL EASY TERMS

Young or old. Why not learn to raise Flowers for Profit and Pleasure even on a city or suburban lot? Why not be more successful with your flowers and at the same time earn money with them?

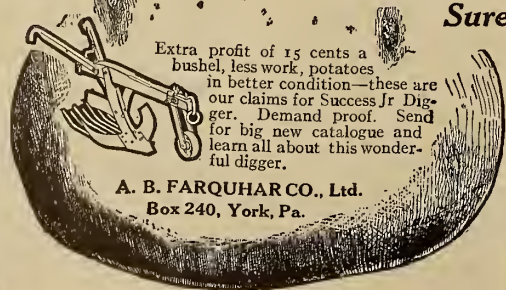
MONEY IN FLOWERS

\$35 in a Single Week

earned by one woman with easily grown, out-door, yard and garden flowers, following our unique course by practical experts. \$5 to \$25 a week can easily be made by anyone. Profit in spare time. Big money if you know how. Easily learned. Cost very small. Special price now. Let us tell you our plan, Excellent Poultry Course. Profit on an acre of hens equals 200 acres of wheat. General Course in Scientific Farming for actual and prospective farmers. Teachers' Course. Farmers' Bookkeeping. Free Booklet "How to Make the Farm Pay More." Which course?

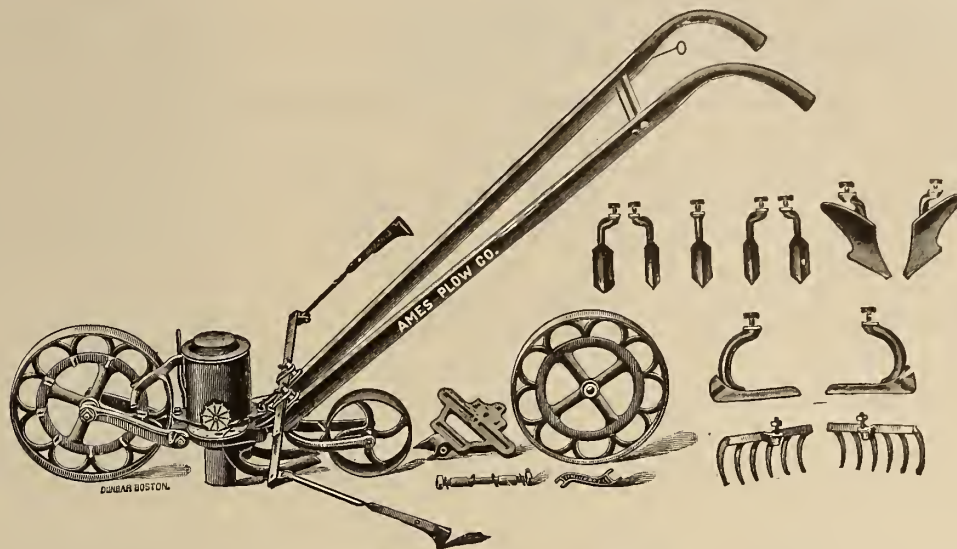
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Cultivator and Seeder

Is a Perfect Implement for the Small Garden

It has every part necessary for all kinds of hill and drill seeding and for both straddle and between the row cultivating and may be used with one or two wheels. It makes gardening a pleasure for man, woman or child, saves arduous labor and gives the best results.

For the family which has a small home in the country or in the suburbs it is the ideal outfit. Its parts are easily adjusted and the construction is the strongest. Adjusting three bolts changes it from seeder to cultivator. A child can use it.

Ask your dealer to show you an Ames Cultivator and Seeder and look for our name on the handle. It can be used with equal facility in all kinds of soils in every part of the country.

The Ames Plow Company has been manufacturing small and large agricultural implements for almost a century and knows what is best for the garden. If your dealer does not carry it write us direct and we will send you a catalog. In writing kindly mention your dealer's name. Address Dept. 1

AMES PLOW COMPANY, BOSTON, MASS.



“HAMILTON-MADE” GARDEN HOSE

What priced hose is cheapest?

“HOW much should I pay for garden hose? Is 6-cent, 15-cent, or 25-cent hose cheapest considering wear?” Everyone ought to get light on this question before buying hose.

With the same care, or the same neglect and abuse, you will find our “HAMILTON” hose, at 25 cents a foot, in the long run the *cheapest* hose you can buy.

Take three neighbors who use garden hose. Suppose one buys 6-cent hose, one 15-cent, and one our 25-cent “HAMILTON” Hose, and that all use their hose with the same care—or *lack* of care, which is more common. At the end of six or eight years the last-named man will have bought only one lot of hose, and spent the *least* of the three. Besides, he will have had *no trouble* and *twice* the satisfaction that the others have had.

There’s a HAMILTON-MADE HOSE for every different use, each grade made BETTER THAN IS NECESSARY to meet the requirements for that use, and GUARANTEED to stand a SPECIFIED PRESSURE. Whatever kind of hose you need, ask the dealer for HAMILTON-MADE, and you will be certain of getting the BEST HOSE OF THAT GRADE that is made.

Here are some of the leading grades of Hamilton-Made Garden Hose. Note that every label bears the words HAMILTON-MADE



How to get the best hose that is made

SOME dealers do not sell the highest-grade garden hose. They argue that everybody wants low-priced hose. We know better, for we know that our stiff, strong, tough “HAMILTON” brand hose is really the CHEAPEST OF ALL, and that many wise buyers will be glad to get it. We therefore make this offer to all who cannot buy it of a dealer:

If your dealer does not keep it, we will deliver to you anywhere in the United States, PREPAID, 50-foot lengths of HAMILTON brand, our highest grade garden hose, complete with standard brass couplings, for the regular price, \$12.50 EACH LENGTH.

This splendid hose stands a pressure of 750 POUNDS to the square inch, and while it is our highest-priced garden hose, it lasts so long that it is really the cheapest hose made.

If hose of such extremely high resistance is not required, we will send KENMORE (guaranteed 650 pounds) at \$10.50, or CYGNET (500 pounds) at \$8.00, for 50-foot lengths. Shipped same day order is received.

Hamilton Rubber Manufacturing Co.
Trenton, New Jersey



Home-Made Plant Protectors

ALMOST all transplanted plants require some protection for a few days after they are set out, and the amateur gardener is often at a loss to find suitable articles for the purpose. Peach baskets, berry boxes, shingles and even newspapers are often used, but these do not answer the purpose well nor are they convenient to handle.

After one season of putting up with such makeshifts I decided to find some better way to protect my plants and finally hit upon the scheme of making “domes” out of mosquito netting, on a framework made of barrel hoops.

I was fortunate in having several old barrels on the place and from these I removed the hoops, being careful not to break them. The best hoops I used for the base, leaving the weaker and broken ones for the semi-circular arches. I used three such arches on each protector, although two would probably have done well enough.

I secured the ends of the arches to the circular base by means of one-inch wire nails, clinching them securely. I found that it took just one



Protectors for newly transplanted seedlings made of barrel hoops and mosquito netting

square yard of mosquito netting for each protector. (I made a few of two thicknesses for use where greater protection was needed.) The netting was drawn fairly taut and fastened with double pointed tacks on the inside of the base.

I used these contrivances in my garden last spring and found them far superior to the old makeshifts. I was most successful in my transplanting and I am sure I have been repaid for my few hours’ work. The cost of the protectors was almost nothing. The netting costs three cents a yard, and the hoops and small amount of hardware could hardly be said to represent any cash value at all. When out of use the protectors nest one within the other, taking up surprisingly little room.

I believe there are similar contrivances on the market that may be purchased, ready made, but I am sure they cannot be any more satisfactory and certainly not as inexpensive as these home-made ones of mine.

New York.

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HIGHEST QUALITY

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**Bulbs, Plants, Shrubs and
Nursery Stock**

Everything for the complete outfitting of the garden and home grounds.

Collection of flower seeds, twenty-five choicest varieties, 75c.

Collection of vegetable seeds, for general crops, twenty-five choicest varieties, \$1.50.

Years of study and experience enable us to offer a large variety of choice products in this line.

Mention The Garden Magazine and we will send free, one package each of vegetable and flower seeds if any of the above collections are ordered.

Large illustrated catalogue free. If you want a garden you will need this catalogue. It will be a big help to you. This is the season for selection. Write today, tomorrow may be a season too late.

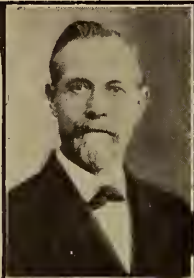
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Expert tree work is far less expensive than cheap tree work because experts get to work quickly, climb more rapidly, waste no time in useless experiment, carry a complete equipment of necessary tools, and—most important of all—they leave your trees in practically perfect condition, as far as human skill can make them so. Your trees are not butchered nor practiced upon. They are treated by thoroughly trained men who are skilled in the use of John Davey's methods—the same methods which have saved many times ten thousand trees. These men know how, and "Know-how" is always less expensive than haphazard experiments and blunders.

The Davey Tree Experts Alone Are Trained in Tree Surgery

First of all, the Davey men are selected carefully. They are gentlemen—intelligent, earnest, ambitious, and trustworthy. This training has been in the organization which created the science of Tree Surgery and which developed every method of worth. The Davey Institute of Tree Surgery is maintained by the company at very heavy expense for the sole purpose of schooling its men regarding tree life, insect enemies of trees, tree diseases, proper remedies, and—most important of all—the theory and practice of Tree Surgery, which cannot be obtained elsewhere. They are specialists in the treatment of trees. There are no successful imitators.

THE WARNER BROTHERS COMPANY, Manufacturers of Corsets, Bridgeport, Conn.
The Davey Tree Expert Company have done work for me both on my place at Augusta, Ga., and Bridgeport. Their treatment of trees is both scientific and sensible and I believe the class of work they are doing will materially prolong the life of trees. I am entirely satisfied with what they have done for me and unhesitatingly recommend them to any one who desires similar work done. I should employ them again if I had any work in their line.
Yours very truly,
(Signed) I. De Vere Warner.

The service of The Davey Tree Expert Company is available, east of the Missouri River, to those who desire quality work at a cost which is not unreasonable. Send to-day for handsome booklet and full information. When you write, tell us how many trees you have, what kind and where located.

THE DAVEY TREE EXPERT COMPANY, INC., 153 Oak St., Kent, Ohio



AN IMMENSE CAVITY IN A GIANT OAK TREE



THE TREE OPPOSITE AS THE DAVEY EXPERTS LEFT IT



Dahlias Dahlias

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- The Newest in Flowers
- The Newest in Vegetables
- The Best in Spring Flowering Bulbs
- Ornamental Shrubs and Fruit Trees
- Perennial Plants

and Sundries for the Lawn and Garden.

This Garden Manual is an addition to any collection of reference books. Write us now and we will mail it free.

Dahlias We want you to know more about our collection and we make this offer to mail to any Post Office in the United States

Ten Dahlias for \$1.00

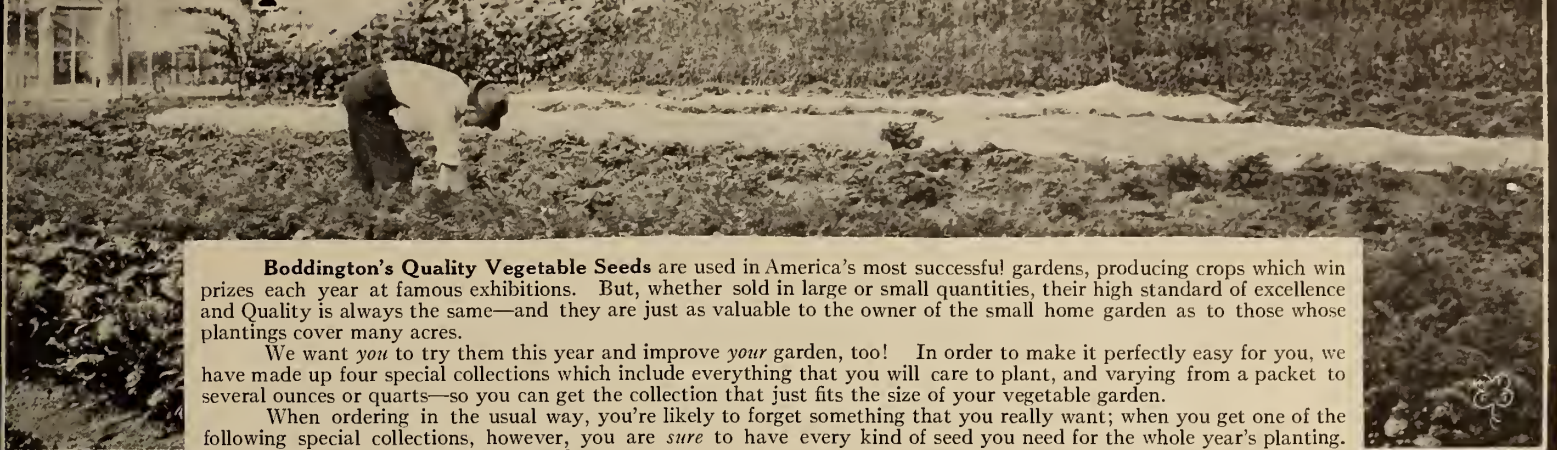
Your selection as to whether they shall be *Cactus, Decorative, Paeony, Flowered, Show or Single*. Our selection as to varieties, all with correct names, mailed to you for \$1.00

If interested in Dahlia or Gladiolus ask for our special catalogue. Over 1,000 varieties to select from. Mailed free for the asking.

Fottler, Fiske, Rawson Co.
Faneuil Hall Square BOSTON

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Have helped to make the Gardens of America Famous



Boddington's Quality Vegetable Seeds are used in America's most successful gardens, producing crops which win prizes each year at famous exhibitions. But, whether sold in large or small quantities, their high standard of excellence and Quality is always the same—and they are just as valuable to the owner of the small home garden as to those whose plantings cover many acres.

We want you to try them this year and improve your garden, too! In order to make it perfectly easy for you, we have made up four special collections which include everything that you will care to plant, and varying from a packet to several ounces or quarts—so you can get the collection that just fits the size of your vegetable garden.

When ordering in the usual way, you're likely to forget something that you really want; when you get one of the following special collections, however, you are sure to have every kind of seed you need for the whole year's planting. Our method saves you uncertainty and worry.

Boddington's Collections of Quality Vegetable Seeds

listed below, comprise what we know to be the finest varieties, and we include those kinds that will provide a succession of fresh vegetables from early till late, with some to store for winter, beside. Order the collection that fits your garden, and you'll declare it the best investment of the season!

Each Collection Prepared by Mail or Express—A, \$3.50: B, \$6: C, \$11: D, \$20

	A	B	C	D		A	B	C	D
PEAS—Boddington's Early of Earlies.....	½pt.	½pt.	1 pt.	2 qts.	LETTUCE—May King	Pkt.	¼oz.	½oz.	1 oz.
Boddington's Early Bird.....	½pt.	1 pt.	1 qt.	2 qts.	Boston Market	Pkt.	¼oz.	½oz.	1 oz.
Boddington's Selected Gradus.....	½pt.	1 pt.	1 qt.	2 qts.	California Cream Butter.....	Pkt.	¼oz.	½oz.	1 oz.
Telephone.....	½pt.	½pt.	1 qt.	2 qts.	(Romaine) Boddington's Eclipse.....	Pkt.	¼oz.	½oz.	1 oz.
Alderman.....	½pt.	½pt.	1 qt.	2 qts.	MELON—Boddington's Selected Emerald				
BEANS—Boddington's Bountiful	1 pt.	1 pt.	1 qt.	2 qts.	Gem	Pkt.	¼oz.	½oz.	1 oz.
Mammoth Stringless Green Pod.....	½pt.	1 pt.	1 pt.	2 qts.	Rocky Ford.....	Pkt.	¼oz.	½oz.	1 oz.
Refugee Wax.....	½pt.	1 pt.	1 pt.	1 qt.	Cole's Early (Water).....	Pkt.	¼oz.	½oz.	1 oz.
Bush Lima.....	Pkt.	½pt.	1 pt.	1 qt.	OKRA—Perkins' Perfected Long Pod.....	Pkt.	1 oz.	2 oz.	¼lb.
Pole Lima.....	Pkt.	½pt.	1 pt.	1 qt.	ONION—Boddington's Bountiful				
BEETS—Boddington's Early Model Globe	Pkt.	1 oz.	2 oz.	¼lb.	The Queen	½oz.	1 oz.	2 oz.	¼lb.
Crosby's Egyptian.....	Pkt.	1 oz.	2 oz.	¼lb.	Yellow Globe Danvers.....	½oz.	1 oz.	2 oz.	¼lb.
BRUSSELS SPROUTS—The Wroxton	Pkt.	Pkt.	¼oz.	½oz.	PARSLEY—Boddington's Triple Moss-				
CABBAGE—Boddington's Early of Earlies	Pkt.	¼oz.	½oz.	1 oz.	Curled.....	Pkt.	¼oz.	½oz.	1 oz.
Early Jersey Wakefield.....	Pkt.	¼oz.	½oz.	1 oz.	PARSNIP—Boddington's Improved Hollow				
Late American Drumhead.....	Pkt.	¼oz.	½oz.	1 oz.	Crown.....	½oz.	1 oz.	2 oz.	¼lb.
Mammoth Red Rock.....	Pkt.	Pkt.	¼oz.	½oz.	PEPPER—Boddington's Selected Chinese Giant				
CARROT—Early Scarlet Horn.....	¼oz.	1 oz.	¼lb.	1 oz.	Sweet Spanish.....	Pkt.	½oz.	1 oz.	½oz.
Danvers Half-Long.....	Pkt.	½oz.	1 oz.	¼lb.	RADISH—Boddington's Early Frame.....	Pkt.	½oz.	1 oz.	2 oz.
CAULIFLOWER—Boddington's Extra-					Olive-shaped French Breakfast.....	Pkt.	½oz.	1 oz.	2 oz.
Early Snowball.....	Pkt.	Pkt.	Pkt.	½oz.	Early Scarlet Turnip and Crimson Giant.....	Pkt.	½oz.	1 oz.	2 oz.
Earliest Dwarf Erfurt.....	Pkt.	Pkt.	Pkt.	½oz.	White Icicle.....	Pkt.	½oz.	1 oz.	2 oz.
CELERY—Boddington's Improved White					Black Spanish.....	Pkt.	½oz.	1 oz.	2 oz.
Plume.....	Pkt.	½oz.	¼oz.	1 oz.	SALSIFY—Mammoth Sandwich Island	Pkt.	1 oz.	2 oz.	¼lb.
Giant Pascal.....	Pkt.	½oz.	¼oz.	1 oz.	SPINACH—Boddington's Triumph.....	1 oz.	2 oz.	¼lb.	½lb.
CORN—Golden Bantam.....	½pt.	1 pt.	1 qt.	2 qts.	Victoria.....	1 oz.	2 oz.	¼lb.	½lb.
Early Cory.....	½pt.	1 pt.	1 qt.	2 qts.	SQUASH—Boddington's Extra-Early Jer-				
Country Gentleman.....	½pt.	1 pt.	1 qt.	2 qts.	sey White Bush	Pkt.	¼oz.	½oz.	1 oz.
Stowell's Evergreen.....	½pt.	1 pt.	1 qt.	2 qts.	Improved Hubbard.....	Pkt.	¼oz.	½oz.	1 oz.
CUCUMBER—Boddington's Selected					English Vegetab'le Marrow.....	Pkt.	¼oz.	½oz.	1 oz.
White Spine (Improved).....	Pkt.	½oz.	1 oz.	2 oz.	TOMATO—Boddington's Early Sunrise.....	Pkt.	½oz.	1 oz.	½oz.
EGGPLANT—Boddington's Improved					Dwarf Stone.....	Pkt.	½oz.	1 oz.	½oz.
New York Spineless.....	Pkt.	½oz.	¼oz.	1 oz.	Earliana.....	Pkt.	½oz.	1 oz.	½oz.
ENDIVE—Moss Curled.....	Pkt.	Pkt.	½oz.	1 oz.	Ponderosa.....	Pkt.	½oz.	1 oz.	½oz.
Broad-leaved Batavian.....	Pkt.	¼oz.	½oz.	1 oz.	TURNIP—Boddington's Model Snowball.....	¼oz.	½oz.	1 oz.	2 oz.
KALE—Dwarf Green Curled Scotch.....	Pkt.	¼oz.	½oz.	1 oz.	Golden Ball.....	¼oz.	½oz.	1 oz.	2 oz.
KOHLRABI—Boddington's Early White					(Rutabaga) Champion.....	¼oz.	½oz.	1 oz.	2 oz.
Delicious.....	Pkt.	¼oz.	½oz.	1 oz.	HERBS—Dill, Fennel, Lavender, Marjoram,				
LEEK—Boddington's Prizetaker.....	Pkt.	½oz.	¼oz.	½ oz.	Savory, Thyme.....	Pkt.	Pkt.	Pkt.	Pkt.

Boddington's Famous Giant Orchid-Flowering Sweet Pea Seed Free If You Order Now
 To encourage early ordering, and to further introduce our Quality flower seed, we will include free, packages of our famous Giant Orchid-Flowering Sweet Pea Seed with these collections, as follows: With Collection A, 2 ozs.; with Collection B, 4 ozs.; with Collection C, 8 ozs.; with Collection D, 16 ozs. With every order we will also include a copy of

BODDINGTON'S 1911 GARDEN GUIDE

—144 pages, handsome art covers, elaborate photographic illustrations from life throughout. The descriptions are accurate, and complete cultural directions are included. This is a really helpful "Guide," and if you have a garden, we want you to have a copy, whether or not you order one of the above special collections. Write for it now—and we will gladly forward a copy free by return mail.

Department G **ARTHUR T. BODDINGTON, Seedsman, 342 West 14th Street, New York City** Telephone 2205 Chelsea



Your Garden and Burpee's Seeds



HERE is one man in this great Country of ours who is helping the Farmers, great and small, in a permanent way, and that man is W. Atlee Burpee, of Philadelphia, California and the Planet Earth.

He mates plants, breeds, and evolves **Seeds that Grow.**

Whether you plan to plant a square yard of ground, an acre or three acres, you should, for your own protection and satisfaction, write Burpee.

Burpee knows what he is talking about, and he gives Service plus. That is, he experiments with Seeds three hundred sixty-five days each Year, at his own expense, but only the **Best** he sells to you.

This is an interesting fact: *Burpee experiments for you—you don't experiment for Burpee.*

The Burpee-Business is more than that—it is a Friendship. "My Friends" (what a fine phrase for a Business Man!)—that means honest treatment, fair dealing, prompt service and **Seeds that Grow.**

Burpee buys no seeds in the Open Market. Burpee seeds are grown by Burpee.

Burpee is a Busy Boy bent on Benefiting you.

Burpee's Customers are always Burpee's Customers.

Any man or woman, girl or boy, who is interested in a Garden, Flowers, or Home-grown Vegetables, would do well to write to W. Atlee Burpee for his Latest "Seed-Book." It's a Garden Guide. . . . The information given has not been gleaned from an Encyclopedia; it's the crystallized Garden Experience of a Man who tells of things as he knows them—W. Atlee Burpee. You should have this Book—and you may. Just Address **Burpee—Philadelphia.**

The above advt. was written by the Editor, ELBERT HUBBARD, and appeared in *The Fra*, January, 1910. That "Fra Elbertus," as the editor is familiarly known, and his fellow "Roycrofters" believe in BURPEE'S SEEDS is even better proven, however, by the annual orders for their own planting at East Aurora, N. Y.

Do You want a Copy of BURPEE'S NEW ANNUAL FOR 1911? If so, name *Garden Magazine* and write TO-DAY!

W. Atlee Burpee & Co., Burpee Buildings, Philadelphia

Thirty-Five Famous Burpee-Specialties Any "Four of the Finest" Novelties,—for 25 Cts.!

25 Cts. buys any Four of the Thirty-five Flowers and Vegetables named in this Advertisement; or you may select any Nine for 50 cts.; any Fourteen varieties for 75 cts., or any Twenty varieties for One Dollar. All these seeds are in regular size packets, costing 10 cts. and 15 cts. per pkt.,—if purchased separately.

Seventeen Superb Vegetables.

Of the varieties enumerated below, all but one were first named and introduced by us!

- 98 Burpee's Giant-Podded Pole Lima.** By far the largest podded and most productive of all Limas. For illustrations and description see pages 8 and 9 of *Burpee's New Annual for 1911.*
- 65 Fordhook Bush Lima.** The only bush form of the popular Potato Lima. For pods in natural colors and description,—see page 6.
- 22 Bush Bean,—Fordhook Favorite.** Quite unique,—the only White-seeded Stringless Green-Pod. For illustration, description and prices,—see pages 10 and 11 of *Burpee's Annual for 1911.*
- 121 Beet,—Burpee's Black-Red Ball.** Extremely early and of finest quality,—see page 12.
- 301 Burpee's Golden Bantam Sweet Corn.** Earliest and best extreme early,—most delicious in flavor. For illustrations and descriptions,—see pages 17 and 18.
- 310 "Howling-Mob" Sweet Corn.** The best large-eared extra early white Sweet Corn. For description,—see page 18 of *Burpee's New Annual for 1911.*
- 393 Fordhook Famous Cucumber.** The most beautiful and best long green cucumber,—see page 53 of *Burpee's New Annual for 1911.*
- 420 Burpee's Black Beauty Egg Plant.** Earliest and best of all large-fruited,—see page 55.
- 476 Burpee's "Wayahead" Lettuce.** Earliest and most solid of all early Butterhead Lettuces,—see page 19 of *The Burpee Annual for 1911.*
- 528 Burpee's Brittle-Ice Lettuce.** The most distinct and largest heading "Crisp Head" summer Lettuce,—see page 59 of *The Burpee Annual.*
- 575 Burpee's Emerald Gem Musk Melon.** First introduced by us in 1886, this has been long recognized as the sweetest of all melons,—see page 63.
- 574 Burpee's Fordhook Musk Melon.** Pronounced equal to *Emerald Gem* in delicious flavor, the melons carry to market as well as *Burpee's Nettle Gem*,—the famous Rocky Ford Melon,—see pages 21 and 63.
- 611 Burpee's "Halbert Honey" Watermelon.** Fully equals the famous *Kleckley Sweets* in luscious flavor and of better form,—see page 26 *Burpee's Annual for 1911.*
- 676 Burpee's Golden Globe Onion.** Earliest and longest keeping of globe-shaped,—see page 72.
- 707 Burpee's Mammoth Silver King Onion.** Introduced by us in 1884 (twenty-seven years ago!), this is still the largest of all white onions,—see page 73.
- 1101 Chalk's Early Jewel Tomato.** The best extra early and the best "all seasons" bright red tomato,—see pages 23 and 90 of *The Burpee Annual.*
- 1095 Burpee's Dwarf-Giant Tomato.** By far the largest fruited and best of all dwarf tomatoes,—see pages 24 and 25 of *Burpee's New Annual for 1911.*

25 Cts. buys any "Four of the Finest" Specialties named above; 50 Cts. buys any Nine, while 75 Cts. buys any Fourteen varieties; 1.00 buys any Twenty of the Thirty-five Vegetables and Flowers named in this advertisement,—in regular packets postpaid.

Make your own selection at the rate of only five cents per packet (provided you buy twenty varieties or more), and thus you will secure the Best Seed of the Choicest Novelties at the same rate your neighbors pay for common seed of old varieties at the village store. And all the trouble you have is simply to check ✓ the varieties wanted and, with your remittance, return the Yellow Circular enclosed with each BURPEE'S ANNUAL with your name and address. Or you can order direct from this advt.,—giving the numbers of varieties wanted.

Nine New Sweet Peas.

Your choice in regular packets (which, if purchased separately, would cost 10 cts. or 15 cts. per packet) of any Four varieties 25 Cts., or all Nine for 50 Cts.,—postpaid to any American address.

- 3146 Florence Nightingale.** The largest and best lavender Spencer,—see page 113 of *Burpee's New Annual.*
- 3162 Mrs. Hugh Dickson.** The best of the cream-pink Spencers,—see page 112 of *Burpee's Annual for 1911.*
- 3168 Purple Prince Spencer.** For description of this most beautiful and distinct New Spencer,—now first offered,—see page 113 of *The Burpee Annual for 1911.*
- 3131 America Spencer.** "Ennobled" type of the popular America,—see page 113 of *Burpee's New Annual for 1911.*
- 3173 Senator Spencer.** Giant waved heliotrope,—see p. 116.
- 3175 W. T. Hutchins.** Beautiful buff and bluish-pink Spencer.
- 3164 Paradise Ivory.** Deep primrose suffused with buff-pink.
- 3181 Superb Spencer Seedlings.** Burpee's Unequaled New Blend for 1911,—see page 118.
- 3013 Rose du Barri.** An entirely new Grandiflora, unique and distinct.

Nine Other New Flowers.

Any Four for 25 Cts.; All Nine for 50 Cts.

- 1526a New Fancy Antirrhinums.** The Burpee-Blend for 1911. For illustration and description,—see page 119 of *Burpee's New Annual.*
- 1906 African Golden-Orange Daisy** (*Dimorphotheca Aurantiaca*). Entirely unique in color,—a most remarkable and truly "sensational" novelty. For illustration and description,—see page 126.
- 1915 Burbank's Fireflame Eschscholtzia.** Most gorgeously brilliant,—now first introduced by us.
- 2860 Variegated Queen Nasturtiums.** Burpee's Superb Mixture for 1911. For description and colored plate painted from nature,—see pages 108 and 109.
- 2327 Best Giant-Flowered Pansies.** The Burpee-Blend for 1911 is the choicest and most complete mixture ever offered,—see pages 123 and 124.
- 2476 New "Cecily" Phlox.** A most charming new strain grown and improved at Fordhook Farms,—see page 145.
- 2479 New Burbank Poppies.** Wondrously varied in color and extra large in size. For Luther Burbank's own description,—see page 125.
- 2524 New Giant-Flowered Portulaca,— "Parana."** A distinct and most attractive novelty from South America,—see page 119.
- 2554 Azure-Fairy Scabiosa.** For illustration of this lovely new double Scabious,—see page 121.

Thousands who plant these new flowers and choicest vegetables will surely remember with pleasure for months, the coming season, that 1911 is the Thirty-Fifth Anniversary of THE BURPEE-BUSINESS IN QUALITY-SEEDS! It goes without saying that if you are not thoroughly satisfied, you can have your money back any time within the year,—for such is the guarantee that goes with all Seeds purchased of

1911

Permanent Garden Materials

Vegetable Planting Tables

25c.

Vol. XIII. No. 3

Planting a Fruit Tree

Balance in the Flower Garden

\$1.50 a Year

THE GARDEN MAGAZINE

FARMING

COUNTRY LIFE
IN AMERICA



DOUBLEDAY, PAGE & CO.
GARDEN CITY AND NEW YORK



THE WORLD'S
WORK



Bobbink & Atkins

WE PLAN AND PLANT GROUNDS AND GARDENS EVERYWHERE WITH OUR
World's Choicest Nursery Products.

The proper way to buy is to see the material growing. We shall gladly give our time and attention to all intending purchasers visiting our nursery, and invite everybody interested in improving their grounds to visit us. Our nursery consists of 250 acres of highly cultivated land, and is planted with a choice selection of Ornamental Nursery Products, placing us in a position to complete plantings and fill orders of any magnitude.

ROSES. It is important to place orders at once, while we have several hundred thousand in choice, new and popular kinds. We are frequently sold out of

many varieties, causing annoyance and disappointment.

RHODODENDRONS. Many thousand of acclimated plants in Hardy English and American varieties are growing in our nursery.

EVERGREENS, CONIFERS AND PINES. More than 75 acres of our nursery are planted with handsome specimens of these popular lawn plants.

HARDY OLD-FASHIONED PLANTS. Hundreds of thousands of new, rare, and popular varieties of these old-time favorites are growing in many acres of our nursery.

ORNAMENTAL SHADE, WEEPING AND STANDARD TREES. 200,000 of these in all kinds can be seen in our nursery. We grow them for every place and purpose.

FLOWERING SHRUBS AND HEDGE PLANTS. We make a specialty of them and can do plantings or fill orders of any size.

TRAINED, DWARF AND ORDINARY FRUIT TREES AND SMALL FRUITS. We grow these for all kinds of orchards.

HARDY TRAILING AND CLIMBING VINES. We grow immense quantities for all kinds of plantings.

BOXWOOD AND BAY TREES. Are one of the many attractions of our nursery. We carry many thousands of specimens.

ENGLISH POT GROWN GRAPE VINES. For greenhouse cultivation.

BULBS AND ROOTS. Spring, Summer and Autumn flowering.

LAWN GRASS SEED. Our Rutherford Park Lawn Mixture has given satisfaction everywhere.

TUBS. We manufacture all shapes and sizes. Ask for special list.

OUR PRODUCTS give satisfaction, because they possess the standard of quality created by the highest grade of cultivation.

OUR ILLUSTRATED GENERAL CATALOGUE NO. 25 will tell you about the above and all our other products for Lawns and Gardens.

Visitors to our Nurseries are always Welcome. We grow everything for every style of garden. The General Supervision of Public Grounds and Private Estates a Specialty. Rutherford is the first stop on the Main Line of the Erie Railroad; 8 miles from New York City.

Bobbink & Atkins

Nurserymen, Florists and Planters

RUTHERFORD, N. J.

Save
Your Trees
-Their Lives
are in Danger



JOHN DAVEY
Father of Tree Surgery

Davey
Tree Experts
Can Heal
Their Wounds

A perfect tree is a rare thing. Only a very small percentage of our American trees are so nearly perfect that they require but a small amount of expert work to make them completely so. In any grove of one hundred trees, native or transplanted, from ten to fifty will be found in a serious condition, as a rule—exceptions to this rule are very rarely found. Probably half of the remainder will show evidences of moderately serious conditions and the other half will grade from that stage to nearly perfect.

The Vast Majority of Trees Need Expert Treatment.

Abuse and neglect are the two chief factors which are at work to destroy trees. If even the tiniest cavity in a tooth is neglected the inevitable result is either a difficult operation in the course of a few years or the loss of the tooth. Just so with the trees—the small and innocent looking hole you see today will be greatly increased in dimensions five years hence. As the cavity grows in size, it weakens the tree and in but a few years the tree will be blown down some windy day.

Prompt Treatment of Tree Ills Saves Money.

While a tree is but slightly affected it is a comparatively inexpensive matter for it to be treated by the Davey experts. They will treat the cavity, stop the decay, fill the hole skillfully, and the bark will gradually heal over it. The longer the tree is neglected the more its life is endangered and the more it costs to save it. It pays to take time by the forelock and give your trees really expert attention when they least need it. As the tree grows worse, treatment becomes more imperative and more expensive.

Write Us Now About Your Fine Trees and Their Examination by An Expert.

The quality service of our experts is available east of the Missouri River. Our special representatives are making up their traveling schedules for spring and summer. It is quite possible we can arrange to have one of them make an examination of your trees without cost or obligation to you—if we hear from you at once. When you write, tell us how many trees you have; what kinds and where located. We will write you promptly and send you booklet explaining the science of tree surgery and the Davey service, giving ample evidence of its practical and permanent value to trees.

THE DAVEY TREE EXPERT CO., Inc.

154 OAK ST., KENT, OHIO.

(Operating the Davey Institute of Tree Surgery.)



Never have you heard sacred music sung so beautifully as it is brought to you on the Victor.

Soul-stirring hymns, magnificent anthems and oratorios, rendered by the ablest singers. Just think of hearing such selections as these:

- | | | | | | |
|-------|--|------------------------------|-------|---|---------------------------------|
| 4917 | Almost Persuaded..... | Stanley and Macdonough | 16451 | Nearer My God to Thee..... | Whitney Bros. Quartet |
| 5760 | Face to Face (Herbert Johnson)..... | Percy Hemus | 16465 | { The Light of the World is Jesus..... | Whitney Bros. Quartet |
| | Adeste Fidelis..... | Westminster Chimes | | { He Leadeth Me..... | Mr. and Mrs. Wheeler |
| 16053 | { Lead Kindly Light and Nearer My God to Thee..... | Westminster Chimes | 16490 | { I Heard the Voice of Jesus Say..... | Mr. and Mrs. Wheeler |
| | The Palms..... | Harry Macdonough | | { Ave Maria (Gounod)..... | Elizabeth Wheeler |
| 16408 | { The Holy City..... | Harry Macdonough | 16500 | { Beyond the Smiling and the Weeping..... | Peerless Quartet |
| | Where is My Boy To-night..... | Haydn Quartet | | { Softly Now the Light of Day..... | Mr. and Mrs. Wheeler |
| 16412 | There is a Fountain Fill'd with Blood..... | Trinity Choir | 31770 | Hallelujah Chorus from "Messiah"..... | Victor Chorus with Sousa's Band |
| 16431 | { Throw Out the Life Line..... | Macdonough and Haydn Quartet | 31781 | Festival Te Deum (Dudley Buck)..... | Trinity Choir |
| | Onward Christian Soldiers..... | Westminster Choir with band | 16709 | { Full Surrender..... | Trinity Choir |
| 16451 | Yield Not to Temptation..... | Percy Hemus | | { Come Ye Disconsolate..... | Trinity Choir |

Victor Red Seal Records

- | | | | | | |
|-------|---|--------------------------|-------|--------------------------------|---------------|
| 88138 | Silent Night, Holy Night (in German)..... | Ernestine Schumann-Heink | 88016 | Ave Maria (in Latin)..... | Emma Eames |
| 88059 | Stabat Mater—Inflamatus (in Latin)..... | Johanna Gadski | 85102 | Elijah—O Rest in the Lord..... | Louise Homer |
| | | | 64092 | Lead Kindly Light..... | Evan Williams |

Hear this beautiful sacred music today. Any Victor dealer will gladly play any Victor music you want to hear.

And be sure to hear the Victor-Victrola

The new Victor Record catalog lists more than 3,000 selections—both single- and double-faced records. Same high quality—only difference is in the price. Buy double-faced if the combination suits you.

Victor Talking Machine Co., Camden, N. J.

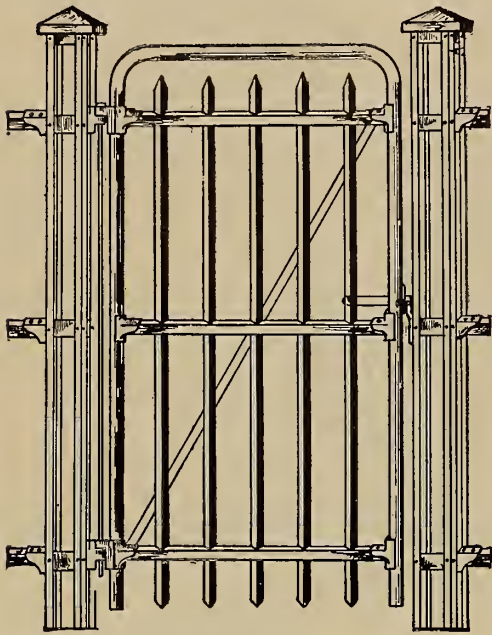
Berliner Gramophone Co., Montreal, Canadian Distributors

To get best results, use only Victor Needles on Victor Records



Victor

New Victor Records are on sale at all dealers on the 28th of each month



Protect and Beautify Your Grounds

Only one moderate-priced fence has adequate strength for protective purposes and a beauty of outline that harmonizes perfectly with its surroundings—

Barcalo Sensible Steel Fence

Barcalo Sensible Steel Fence is almost as much superior to iron fence as iron is to wood fence—a truly modern fence.

It meets every requirement for estates, schools, parks, cemeteries, railroad and factory yards.

Strength of Steel—Price of Wood



Barcalo Steel Fence is extremely light, but possesses marvelous resisting powers.

The Barcalo V-Joint is the greatest improvement made in this type of fence in years. It gives the entire fence a present and permanent unity. The price is practically what a wood fence would cost. Very easy to erect.

Let us tell you about the unduplicated points of superiority in The Barcalo Fence. Information and prices mailed free on request.

We need aggressive representatives. If you appreciate an attractive offer on an easily sold fence, send for our agents' proposition.

Barcalo Mfg. Co.
Dept. D-41, Buffalo, N. Y.

A Sweet Rocket for Semi-shady Situations

NO OTHER free-flowering plant that I know of will bloom, increase, and seem so happy and at home in such trying places as the rocket (*Hesperis matronalis*). In full sunlight and fairly good soil it makes a plant two to three feet tall and as broad, but in less congenial situations and even where hardly any other attractive plant would grow, it sends up only a single stalk which branches as it blooms. It self-sows, however, and as plants come up every few inches, it presents a mass effect when in bloom.

It flowers from the middle of May until the last of June, the blossoms being a pale pink and a fair white. I have it growing along the edge of a shady roadway, and in between the bordering shrubs. Here it sows itself and, being a hardy, lasting perennial, it does not take long to establish a colony. Plants that would thrive at



The free-flowering sweet rocket (*Hesperis matronalis*) is at home in most trying situations

all—other than early spring-blooming ones—in semi-shady places are scarce, and one having such situations should try the rocket. Scattering seed early in the spring will, in a couple of years, create quite a group.

Illinois.

W. C. EGAN.

Repotting Forced Plants

IN "The Rejuvenation of Azaleas and Poinsettias," in the February, 1911, GARDEN MAGAZINE, I noted the statement that a florist told the author afterward it would have been better to have repotted the azalea in the spring. My experience has been that repotting in the fall, as the author of that article did, produces more flowers the succeeding winter. If the repotting is done in the spring the plant does not have a sufficient period of rest in which to recover from having been forced and the new earth stimulates wood and leaf growth at the expense of the flower buds.

If the plant is watered occasionally after flowering and, when all danger of frost is passed, is plunged, pot and all, into the ground in a partially shaded place, it will have an opportunity to recuperate and end development will be stimulated. Fall repotting gives a new supply of food which is utilized in developing flowers.

Massachusetts.

H. D. P.



Wilson's Outside Venetians Blind and Awning Combined

For town and country houses. Very durable and artistic. Easily operated from inside. Admit air; exclude sun rays.



Wilson's Piazza Blinds

Special Outside Venetians for porches and piazzas, exclude the sun, admit the breeze. Virtually make an outdoor room.

Orders should be placed now for early summer.

Write for Catalogue 4. Also Inside Venetians, Rolling Partitions, Rolling Steel Shutters, Burglar and Fireproof Steel Curtains, Wood Block Floors.

JAS. G. WILSON MFG. CO.
3 and 5 West 29th St. New York



BARTON'S LAWN TRIMMER

TAKES THE PLACE OF SICKLE AND SHEARS—NO STOOPING DOWN

SAVES 90% OF TEDIOUS LABOR

Cuts where lawn mower will not, up in corners, along stone-walls, fences, shrubbery, tomb-stones, etc.

It is simple in construction and made to endure. Makes a cut 7 inches wide.

Price only \$3.75 each. Send Money Order to
E. BARTON, Ivyland, Pa.

Garden Furniture

In Marble, Stone and Pompeian Stone



Beautiful reproductions of famous models from the gardens of Italy.

We are the largest and oldest manufacturers of Garden Furniture in imitation stone. More than 1,500 models.

Special Attention Given To Original Designs

A visit to our studio will prove well worth your time.

Our catalog, containing more than 800 illustrations of Benches, Sundials, Statuary, Pedestals, Mantels, Vases and Fountains, mailed on receipt of twenty-five cents.

The Erkins Studios
223 Lexington Avenue, New York

Factories:
Astoria, Long Island; Carrara, Italy.

GILLETT'S

Hardy Ferns and Flowers for Dark Shady Places

NO corner is so shady but that certain hardy ferns and flowers will thrive there. There is no soil so light and sandy but that some of these plants will beautify it. For 25 years we have been growing these hardy ferns and flowers and know something of the conditions necessary to their growth. Have you a shady nook, a bit of woodland path, a brook or swampy spot, or a rocky hillside you wish to re-establish and grace with ferns and flowers and rhododendrons and so bring out the natural charms? Do you wish the little wooded path bordered with bright hepaticas, bloodroots, trilliums, wood-violets and dainty yet hardy ferns; or the low marshy place brightened with brilliant lobelias, yellow marsh-marigolds and bright blue gentians? We are in a position to help you, and shall be glad to send our descriptive catalogue which may aid you in selecting. Pictures of some of these wild wood plants have been taken by us here and are shown by half-tones in the catalogue, including the clump shown in this ad of *Aspidium Goldianum* and *Asplenium Angustifolium*.

EDWARD GILLETT

Box C, Southwick, Mass.



A shady corner at Gillett's showing a clump of Hardy Ferns and Rhododendrons

Lasts a Lifetime.



Removable Steel Clothes Posts

fit into sockets driven level with the ground, leaving it free for lawn mower. Posts are held rigidly but can be removed in a moment.

No Holes to Dig and No Skill Required to Drive the Sockets.

Why spoil your lawn with ugly wooden posts that will rot in a few years?

Our posts are cheaper, last a lifetime, cannot be destroyed, do not obstruct the lawn (being removable). The Adjustable Hook makes clothes hanging easy.

Write for folder A.

Milwaukee Steel Post Co.

Ask your dealer. MILWAUKEE, WIS.

Gregory's 1911 Seed Book

FREE The book that solves all the problems of planting and successful crop growing from hand selected, honestly tested seeds. Have you sent for a copy? **J. J. H. GREGORY & SON** Marblehead, Mass.



WHOLESALE PRICES



STRAWBERRY, RASPBERRY, BLACKBERRY, GOOSEBERRY, and ASPARAGUS.

GRAPE, CURRANT, RHUBARB, PLANTS.

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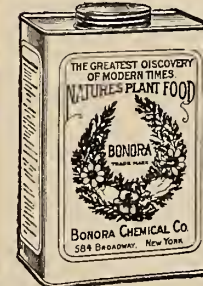
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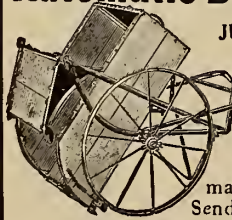
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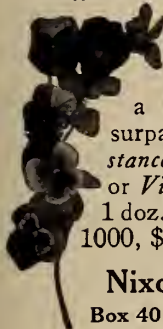
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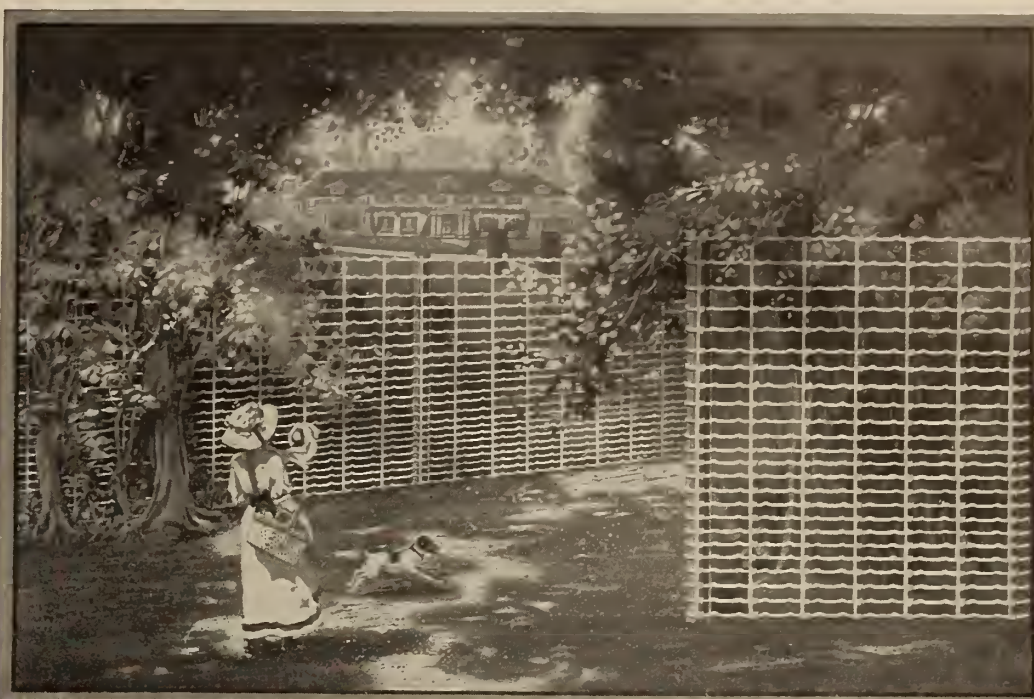
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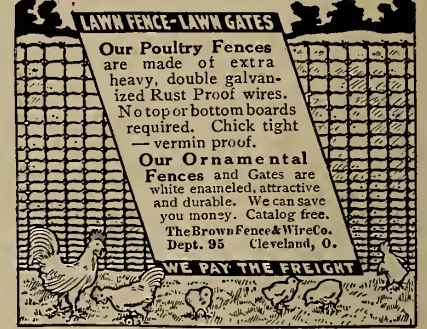
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and circulars (over 120 illustrations) showing **POTTER PORTABLE SANITARY POULTRY HOUSES**, Roosting and Nesting Outfits, Perfection Feed Hoppers, Trap Nests, Feeds, and supplies of all kinds. Potter Fixtures have been on the market nearly 10 years. They are made in 3 styles and 12 sizes, and are complete, convenient and sanitary. Our Portable (K. D. made in sections) Hen-houses, Brood Coops, Pigeon Lofts, are made in 20 styles and sizes, from a coop 2 ft. square to a complete house 8 x 80 feet, or longer, at lowest prices. House shown is 8 x 10 feet, complete with 8 ft. Potter Outfit for 30 hens, for \$40. A fine house at a low price. If you need a house or coop of any kind do not fail to find out about the Potter line before buying or building.

DON'T KILL or sell your laying hens, use the **POTTER SYSTEM** and pick out the layers from the loafers and diseased hens. Keep only healthy laying hens. The **POTTER SYSTEM** is a secret and the greatest discovery of the century in the poultry world on the subject of Egg Producing Hens. Used by over 30,000 satisfied poultry keepers who are saving dollars every year. Our New 100 pp. Potter System book, "Don't Kill the Laying Hen," contains the secret and knowledge about laying and non-laying hens. It's a revelation to poultry keepers and you will learn how you can use the Potter System on your flock; keep less hens, get more eggs and make more money using it. Write today sending 2 **RED STAMPS** to cover postage on our large catalog and circulars telling all about Potter Poultry Products made for Particular Poultry People. If you are particular and want to make more money on your flock you will write us today.

A \$40 HOUSE



T. F. POTTER & CO., Box 22, Downers Grove, Illinois, U. S. A.

OHIO HERD OF MULE FOOT HOGS

"Have never had Hog Cholera" I have the largest herd in the land represented by all the leading families of this vigorous and healthy breed, and can positively fill orders of any size with stock not related. My herd took the **eight Blue Ribbons** at only state fair where shown in 1910. Write for particulars and investigate my herd.

JOHN H. DUNLAP
Box 758 Williamsport, Ohio



SHETLAND PONIES

An unceasing source of pleasure and robust health to children. Safe and ideal playmates. Inexpensive to keep. Highest type. Complete outfits. Satisfaction guaranteed. Illustrated catalogue free.



BELLE MEADE FARM
Box 32 Markham, Va.

Jersey Reds are Lively Growers

and lively growing pigs are quick money-makers. Jersey Reds are the most satisfactory, all-round breed. Those who have tried them say so. Fatten easily and quickly, are small-boned, long-bodied, vigorous and prolific; quality of meat unsurpassed. Have some choice offerings now. Satisfaction guaranteed. Write quickly. Free Catalog. Arthur J. Collins, Box T, Moorestown, N. J.

LARGE BERKSHIRES AT HIGHWOOD

Mature animals weigh 600 lbs. to 950 lbs. Several litters last spring of 12, 13 and 14; one of 15 and one of 17 so far. Litters last year averaged 11. Spring offering of pigs 8 weeks old in pair or trios, no skin. Every animal registered at our expense; if not satisfactory return and get your money back.

Write for booklet.
H. C. & H. B. HARPENDING
Dundee, N. Y.

Money In Poultry

Write today for our big, Free Year Book—tells all about America's billion dollar industry—how to raise poultry and market eggs at big profits—212 pages—illustrated. It describes and illustrates

CYPHERS INCUBATORS AND BROODERS

The world's Standard, genuine non-moisture; fire-proof; insurable; guaranteed. Made for practical poultrymen and women who want a *real* incubator. Don't buy any incubator till you have read this book—free to you on postal request. Address

CYPHERS INCUBATOR CO.
Dept. 61 Buffalo, N. Y.
Chicago, New York City, N. Y., Boston, Mass.,
Kansas City, Mo., Oakland, Cal.



CANINE DISTEMPER SERUM

The latest scientific step in advance. Preventative, curative. 4 c.c.c. vials, 75c. **Eucamphol** Antiseptic, germicidal, disinfectant. Veterinary, Medical and Surgical uses. 75 cents per 1 pint bottle, \$2 per 5 pint bottle

Pasteur Laboratories Rat Virus
Destroys rats and mice. Harmless to Poultry and all animals. 50c. to \$1.50.

PASTEUR LABORATORIES OF AMERICA
New York Paris Montreal Chicago
366-8 W. 11th St. San Francisco 323-5 Dearborn St.

The Dog Book

By **JAMES WATSON**

Covers every phase of the subject with full accounts of every prominent breed. 128 full-page pictures, complete in one volume.

Net, \$5.00 (postage 35c.)

Doubleday, Page & Co., Garden City, N. Y.

Amateur, Fancier, Professional Breeder or General Farmer—the Book you need is

"THE POULTRY BOOK"

372 illustrations. One handsome large volume. \$5.50 postpaid

Doubleday, Page & Co.,

Garden City, N. Y.



Baby Chicks of Quality
Shipped direct to you by express

From the finest exhibition or utility matings of **Fishel Strain White Plymouth Rocks**

Single Comb White Leghorns, Bared Plymouth Rocks, Single Comb Rhode Island Reds.

Each breed the product of a specialty breeder

I absolutely guarantee the chicks to reach you in good condition. You take no chances. Prices moderate.

Send six cents in stamps for my chick catalogue—the finest ever issued.

R. C. CALDWELL, Box 1025, Lyndon, Ross Co., O.

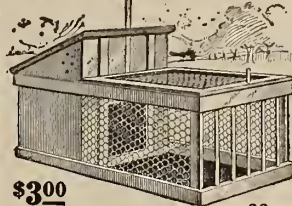
“Wigwarm” Specialties For Poultrymen

“Wigwarm” Setting and Brood Coop

For a hen and her chicks and while she is sitting. Gives protection from rats, skunks, hawks, and other enemies. Insures larger hatches—fewer broken eggs. The runway is 20 x 24 inches. This coop is just the thing for colony raising and has proved its success for 22 years. Shipped knocked down. Size, 2 x 4 ft., 2 ft. high.

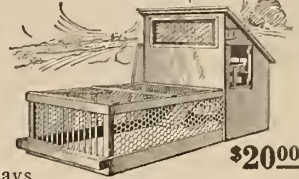
\$3.00

Size, 2 x 4 ft., 2 ft. high.



No. 0 Colony Laying House

Fitted complete with nests, fountain and feed trough. Sanitary. Easily cleaned and aired. One man can easily raise several hundred birds. Nicely painted. Can be put together in fifteen minutes. Winter or summer the stock is always comfortable. In stormy weather the run may be covered at top and sides, giving protection and scratch room. Size, 10 x 4 ft., 5 ft. high.



\$2.00

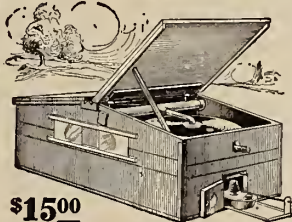


“Wigwarm” Brooder

Uses the least oil of any brooder made. Storm proof. Hot water and hot air heating combined gives perfect healthful ventilation. No danger of over-heating and an even temperature is maintained in the brooder regardless of the outside cold. Used and endorsed by poultry experts and by experiment stations. Size, 3 x 5 ft.

\$15.00

Size, 3 x 5 ft.



5 Section Poultry House

These are houses that will grow with your business. You can add additional sections at any time. A more sanitary or comfortable house could not be built. Made in 10 x 10 ft. sections, each fitted with roosts, nests, fountain and complete in every detail. Open fronts with canvas covered frames—far better than glass windows. Easily erected. One 10 ft. section \$75. Additional sections \$60 each.



Write to-day for Poultry Catalogue

E. F. HODGSON CO., 120 Washington St., Boston, Mass.



LATHAM'S BARRED PLYMOUTH ROCKS

THE MOST RELIABLE STRAIN as PRODUCERS of Fine Birds. The best layers—fine table qualities—leaders in the show room. STOCK and EGGS for sale.

Spring Circular mailed on application

C. H. LATHAM

Box G

Lancaster, Mass.

1st Priz. Pullet winner of Sweepstakes Champ. and Color Special Przs. at Madison Sq. Garden Show Dec., 1910. Bred, raised and exhibited by C.H. Latham.

How to Raise 'em After you Hatch 'em

This free little book shows how to make the big profits in poultry raising, and to eliminate nearly all the risk. It describes a tried and successful system of one of the biggest poultry raisers in New England. Shows how professionals or amateurs in city or country can raise chickens to get the high prices or to save them, without the usual worry, trouble, loss of time or money. Describes the wonderful Slumber Brooder, and is sent free for the asking. A penny postal will bring it by return mail.

A. E. EASTMAN
49 Birch Street
Manchester N. H.



NEW BREEDS OF GREAT MERIT

Write for Circular, Picture, Information.

Sicily Buttercups Imported Island Sicily, bring comfort and success.
Silver Braekels Imported Belgium; enormous layers; for generations supply England with her favorite breakfast eggs.
White R. I. Reds—as the Irishman says.
Big Egg R. I. Reds Largest eggs produced.
Little Buttercup Farm, Dedham, Mass.

There's Money in Poultry

Our Home Study Course in Practical Poultry Culture under Prof. Chas. K. Graham, late of the Connecticut Agricultural College, teaches how to make poultry pay.

Personal instruction. Expert Advice.

250 Page Catalogue free. Write to-day.

THE HOME CORRESPONDENCE SCHOOL
Dept. G. P. Springfield, Mass.



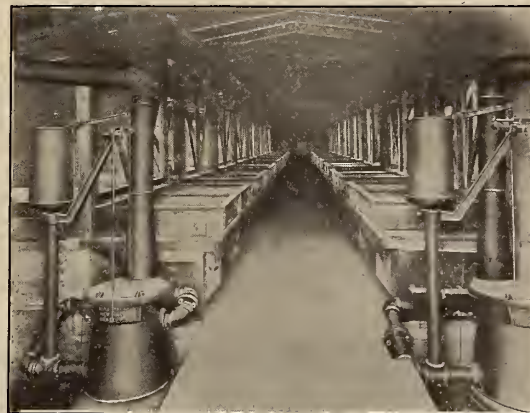
Prof. Graham

WANTED: 5000 Squabs Daily

by only one New York commission firm. See what they say in National Squab Magazine (monthly), specimen copy from us Ten Cents. Squab breeders as far west as Missouri are shipping steadily to eastern markets. See great demand for squabs by dealers in Chicago, the South, St. Louis, Denver, California, Seattle and the Northwest. Read also in our big 1911 FREE BOOK how to make money breeding squabs, how to get six dollars a dozen, how to start small and grow big. Demand for squabs this winter greater than supply. Write at once to

PLYMOUTH ROCK SQUAB CO.
151 Howard St., Melrose, Massachusetts.

THE HALL 1911 CATALOGUE IS READY NOW!



Two Hall Brooder Systems and interior of the Brooder House at Kenotin Farm, Washington Mills, N. Y.

Describes and illustrates the Hall Mammoth Incubator and Hall Brooder Systems, and shows some of the farms on which the Hall Equipments are proving *satisfactory* beyond competitive comparison.

Also, a new Edition of the “RESULTS” Booklet is from the press. It contains 31 letters on *satisfactory service*.

THE HALL MAMMOTH INCUBATOR CO., Utica, New York

Sturtevant

Sturtevant vacuum cleaning:

Absolute thoroughness, without a vestige of the unnecessary excess suction that injures every fabric it cleans. The great step forward in household vacuum cleaning.

Complete absence of gears, bellows, diaphragms whose rapid wear means almost immediate loss of efficiency. The Sturtevant will deliver perfect results for generations.

An ease and speed of operation that are a constant delight to the user.

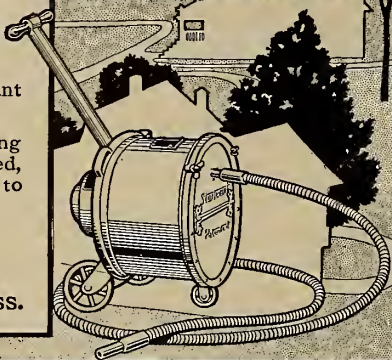
The Sturtevant has made household vacuum cleaning practical in a new sense of the word. Its price, delivered, is \$130. Our booklet explains clearly the real points to consider in buying a vacuum cleaner.

SEND FOR BOOKLET 78

Branches and dealers in 200 cities-

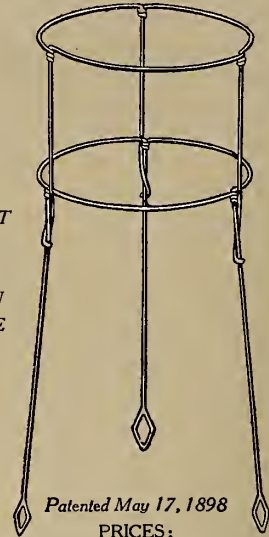
B. F. STURTEVANT CO., Hyde Park, Mass.

Electric Vacuum Cleaner



The Model Plant Support

For Tomatoes, Peonies, Dahlias, Golden Glow, Chrysanthemums, etc.



REPAYS THE COST MANY TIMES OVER IN A SINGLE SEASON

MADE STRONG AND LIGHT OF HEAVY GALVANIZED WIRE

Patented May 17, 1898

PRICES:

Per dozen, \$1.75; per 50, \$7.50; per 100, \$12.50
A Lighter Support is also made for Carnations
50 Complete Supports, \$2.25; 100 Complete Supports, \$3.50
Flower Bed Guards, Trellis Lawn Guards

Send for Price List and Catalogue of our Full Line of Flower Supports
IGOE BROTHERS, 67-71 Metropolitan Ave. Brooklyn, N. Y.

CHOICE FRUITS AND BERRIES

Make Your Country Place Doubly Delightful

Ornamental Trees, Hedges, Shrubs

Fruit Trees, Vines and Roses Direct from Grower at Wholesale prices. Strictly High-Grade Stock. Government inspected. Catalog free. LANDSCAPE DESIGNS and planting plans prepared without charge for our customers.

GROVER NURSERY CO., 94 Trust Bldg., ROCHESTER, N. Y.



Vick Quality Seeds will give you a Garden of Beauty

Test their Good Qualities with this SPECIAL COLLECTION

1 Pkg. Poppy Miss Sherwood, pink; 1 pkg. Phlox Drummondii Grandiflora, mixed colors; 1 pkg. Summer Cypress, light green, turning to crimson. All three packages for 10c., and a free copy of our "Garden and Floral Guide for 1911." Write for it today.
James Vick's Sons, 362 Main St., Rochester, N.Y.



A YEAR FROM A TEN ACRE FARM

This is what has been done with small fruits when the best varieties were selected and proper culture given.

KNIGHT'S BOOK ON SMALL FRUITS

Tells you how this can be done again, and describes all of the Money Making varieties of Strawberries, Raspberries, Blackberries, Dewberries, Gooseberries, Currants, Grapes, etc., and how to grow them for best results.

This book is not mere theory, but the result of over thirty years of experience and study. Send for it today. It's FREE.
DAVID KNIGHT & SON, Box 50, Sawyer, Mich. Growers of Plants That Produce Fruit.

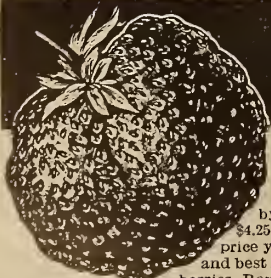
Peter Cooper's Lawn Dressing

A specially prepared plant food for the growing of beautiful lawns; superior to all others; try it and be convinced.

PETER COOPER'S FERTILIZER, 111 Broadway, New York City



Start a Fruit Garden NOW



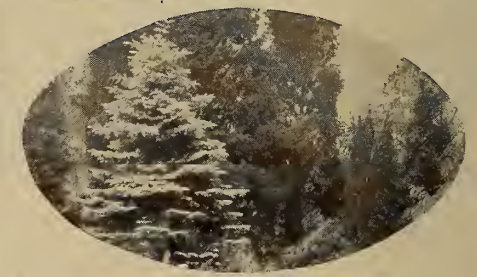
In order to get people to buy our plants, we have decided to cut prices in two on the following leading varieties, knowing that if we sell you once, we will hold your trade for years to come.

All plants securely packed for shipment by express. If you order all these, you save \$4.25. If you want plants in large quantities, let us price your list. We are headquarters for the newest and best in everything, including Fall Bearing strawberries, Royal Purple and Idaho raspberries, Early Ozark

Strawberry, Hastings potato, etc. 28 years of experience. Catalogue free. Address

L. J. FARMER, Box 129 Pulaski, New York

	Our Price	Others Ask
2 dozen Dunlap strawberry plants	25c.	50c.
2 dozen Norwood " "	50c.	\$1.00
2 dozen Champion " "	25c.	50c.
2 dozen Cuthbert red raspberry	35c.	70c.
2 dozen Plum Farmer blk. rasp.	50c.	\$1.00
2 dozen Snyder blackberry plants	50c.	\$1.00
2 dozen asparagus roots	30c.	60c.
6 Concord grape vines	30c.	60c.
6 red gooseberry plants	45c.	90c.
6 red currant plants	30c.	60c.
6 rhubarb roots	30c.	60c.
2 outdoor roses	25c.	50c.



Your Trees Will Thrive

and add the greatest artistic value to your place if your selection is made from the numerous specimens of Hardy Evergreens, Trees and Shrubs at the

HILL NURSERIES

A half century's experience in tree planting enables us to make a recommendation based on the particular soil and climatic conditions of your place - insuring you lasting satisfaction and most beautiful effects.

Hill's Annual Catalog

Is full of valuable information for any one interested in tree growing for pleasure or profit. It is beautifully illustrated in color and contains many offerings of exceptional value. Free to readers of Garden Magazine.

D. HILL NURSERY CO. INC.
Founded 1855 Box 106, Dundee, Ill.



The Little Gardens Number

"I want every single man, woman, and child, who reads this Little Gardens Number, to start right now to make his own garden. If it is only one two-inch pot of soil and a seed from the orange or the apple you are eating, it is worth while. We want America to be all a garden, to be a land of the people's gardens, the mother's garden, the child's garden, and not alone a land of the rich man's gardener's gardens."

WARREN H. MANNING

Consulting Editor

This Extract from Mr. Manning's Opening Article Sounds
the Keynote of this Special Number of

Country Life in America

A Partial List of the Special Illustrated Features:

"Unique Little Gardens," by Warren H. Manning. Mr. Manning, conceded to be the greatest landscape gardener in America since the elder Olmsted, acts as Consulting Editor of the issue.

"The Right and Wrong Kind of Little Gardens," by Wilhelm Miller. The noblest ideals in home grounds and flower gardens, and how to realize them—practical and impractical fruit and vegetable gardens.

"Perfect Home Grounds of One Acre," by Wilhelm Miller. Descriptive of the Cook place at Brookline, possibly the best old place of its size in America. How to blend all desirable qualities. Sixth article in the series on Successful American Gardens.

"Why a Walled Garden is the Best," by Thomas McAdam. Describing a formal architect-gardener's garden that is distinctive and attractive. How a walled garden makes outdoor life possible the year round, and gives the most charm.

"A Charming Wilderness on One Acre," by Henry Maxwell. Describing the Perkins garden at Rochester, which shows how a space only 114x300 ft. may shut out ugliness and give privacy, flowers, and a new picture at every step.

"A Prize-Winning Front Yard Garden," by W. E. Pendleton. A Canadian garden 84 x 110 ft. which has won five medals in a city where garden competitions are probably the keenest in America.

"Vegetables For Five Persons From 400 Square Feet," by I. M. Angell. How a garden spot one-sixth the size of a city lot supplied a family of five with fresh vegetables from June to November.

20c ON ALL NEWS STANDS

24 ISSUES A YEAR FOR \$4.00

OUT APRIL 15TH.

Doubleday, Page & Co., Garden City, N.Y.

THE TALK OF THE OFFICE



"To business that we love we rise betime
And go to 't with delight."—*Antony and Cleopatra*

A FEW REMARKS ABOUT SPRING and DOUBLEDAY, PAGE & CO.

The advent of spring is generally hailed with joy by all the world for reasons fully explained by every poet who ever lived, but we have a few private reasons for acclaiming it which we would like to set down.

To Doubleday, Page & Co., the spring of 1911 has been looked forward to with special keenness and many have been the preparations made for its arrival. Among other things it is our first spring in the country and while we have enjoyed the winter and things have gone well with the Country Life Press in Garden City, we are naturally eager to get at our planting and complete our plans for beautifying our forty acres.

There are other reasons, and, we suppose, from a business point of view, better ones. For instance:

It is the season when the advertiser gets cheerful and grows optimistic. The real estate man combines with us to lure the city people from town and he has done it with wonderful success in *Country Life in America*. We have been able to trace sales aggregating several millions of dollars to these attractive advertisements. We would like to give ourselves the pleasure of printing paragraphs from letters received on this subject—a few taken from a drawerful.

DEAR SIR:

I feel it my duty to write you that had I had the stock the two one inch Ads. in *Country Life* would have sold about \$1,200.00 worth of Great Danes. The results were simply astounding and I have been selling Great Danes for a good dozen years.

DEAR SIR:

I have your letter of the 11th inst. relative to the advertisement for *Country Life in America*. I have this to say regarding the advertisement in your magazine, that even if I did not want to run the Ad. I would have to or lose, say on the average of twenty inquiries a month. You know as well as I do what inquiries lead to. Truthfully speaking, it would be hard to do without *Country Life*.

The two one-inch ads. above referred to cost \$7 each.

The nurserymen and the seedsmen come from their winter hiding places and tell the readers about their great catalogues of magnificent floral splendors, and these cata-

logues are increasingly fine. Each year they become more elaborate and less gaudy, more useful and practical and less extravagant.

The man who deals in every sort of thing that grows or is used in or connected with the garden and the country home, begins to send in his copy and makes glad the heart of the Advertising Department, if a department can be said to have a heart—and it has.

For the March numbers the composing room was called upon to set up nearly one hundred and twenty thousand lines of advertising for all our magazines, a figure which may mean more to the layman when we say that this is the equivalent of more than five hundred pages of the regular magazine size. The quantity is, of course, only part of the success of the month's business; it is the quality of the things advertised that pleases us. Among these hundreds and hundreds of announcements are put forth—in most wonderfully attractive shape—the articles that first-class people want and ought to want, and we think there is not a degrading line among the lot, no patent medicines, no gambling games, no financial fakes—at least, so we honestly believe. If we are wrong tell us of a bad advertiser and we will gladly go after him.

A SUGGESTION DEPARTMENT FOR ADVERTISERS

If a man spends his good money in advertising and he loses money on his investment, the results are not only bad for the advertiser but very bad for the publication. We have noted a great difference between the merits of the "copy" supplied by advertisers.

For our mutual benefit we have started a suggestion department at the head of which is an experienced man whose business it is to help advertisers now with us and people who have goods to sell to our readers, but who are not yet represented in our columns, and to prepare "copy" which we think will help to bring success.

The announcement of the starting of this department brought so many requests for suggestions that for the first few weeks the work of the office was overwhelming, but we have added to the staff and are prepared for more letters from those who are

studying the question of copy. We may say that behind the experts is a collection of nearly one hundred thousand photographs owned and being constantly added to by Doubleday, Page & Co., and a photo-engraving department, all on the ground at Garden City, waiting to help.

If you are interested, write to "Suggestion Department," Doubleday, Page & Co., Garden City, L. I. The service is absolutely free and you place yourself under no embarrassing—or any other kind—of obligation in consulting us.

EGOTISM AND LETTERS

As it has been frequently said in these pages we receive a good many letters which we should like to reprint for our own gratification (and some which we are willing to grieve over in silence and in private) and we realize that they cannot be as interesting to our readers as they are to us, but here are two, one of which fairly offsets the other and they will go to show what an interesting sort of a letter box is ours. We would like to add that the *World's Work* Financial Department is constantly receiving letters from subscribers who have saved money by information given by the financial editor. For example, a Superintendent of Public Schools in Ohio writes:

DEAR SIR:

Please send the *World's Work* to ———. He is a former pupil of mine and I have advised him to read your articles on investment closely for some years and then he will be safeguarded.

As a result of reading these articles I have not made a bad investment for seven years.

The best of all my investments, therefore, is the *World's Work*.

But the *World's Work* has harder problems than the answering of financial questions. Its editorial staff was called upon the other day to reply by mail to the following question:

"If a squirrel is on the side of a tree and I go around the tree and the squirrel keeps on the opposite side of the tree from me, when I have gone around the tree have I gone around the squirrel?"

Mid-Month Country Life for March 15th, which is now just ready on the newstands, is the "Back to the Land" number, Liberty H. Bailey, consulting editor. 20 cts.; \$4.00 a year.



Fairfax Roses Will Put New Life Into Your Home Rose Garden

This is a sample of Fairfax Roses as I grow them in my Nursery—right in the heart of the best Rose-growing section of the United States, where the seasons are long and mild, yet cold enough to provide that period of “ripening” and rest so essential to the production of Roses that will thrive in the North.

And Fairfax Roses *do* thrive in the North—and in the West and the East as well. Wherever Roses are cultivated, my Roses will show most satisfactory results—will put new life into your home Rose garden.



I Have More Than 100,000 of These Splendid Plants

—hearty, vigorous specimens, every one of them, with ample roots to take hold in the soil of your garden and throw out lusty canes with the return of spring.

This extensive stock covers more than 200 sorts—all the leading varieties that can be successfully grown, particularly in the hybrid tea class.

My book “Fairfax Roses for 1911,” tells of the finest stock of Roses I have ever grown and explains my successful methods of Rose propagation. I’ll gladly send a copy if you say so.

W. R. Gray, Box 6, Oakton, Va.

Big Crops from Little Trees

Dwarf Fruit Trees Solve the Problem of Fruit Growing in Small Gardens.

Dwarf Apples

Baldwin	Wallbridge
Spy	Alexander
Wealthy	Ben Davis
Wolf	Fameuse
Duchess	Gano
King	Red Astrachan
	Greening

Dwarf Pears

Duchess	Seckel
Keiffer	Clapps
Bartlett	Flemish
	Anjou

Other varieties listed in booklet

Prices

4 Trees, carefully packed,	\$ 3.00
8 “ “ “ “	5.50
12 “ “ “ “	8.00
20 “ “ “ “	12.00

Larger quantities subject to special arrangement

Price includes packing. Any varieties of pears or apples in list may be selected

Why You Should Buy Dwarf Trees

1. They bear bigger, better fruit; come into bearing several years earlier, and produce more fruit from the space than standard size trees.
2. They are easy to care for, because the heads are so low that insect pests can be controlled. Picking is easy, because the fruit is within reach.
3. With dwarf trees, you can use the land for vegetables, as the shade is less dense.

You can have forty trees, with a variety, in a space 20 feet square, save several years, get better fruit, and each tree should bear a bushel a year.

We offer the best stock ever produced in this country. Our apples are grafted on Paradise stock, and the pears on quince stock. They will succeed in many places where standard trees would fail.

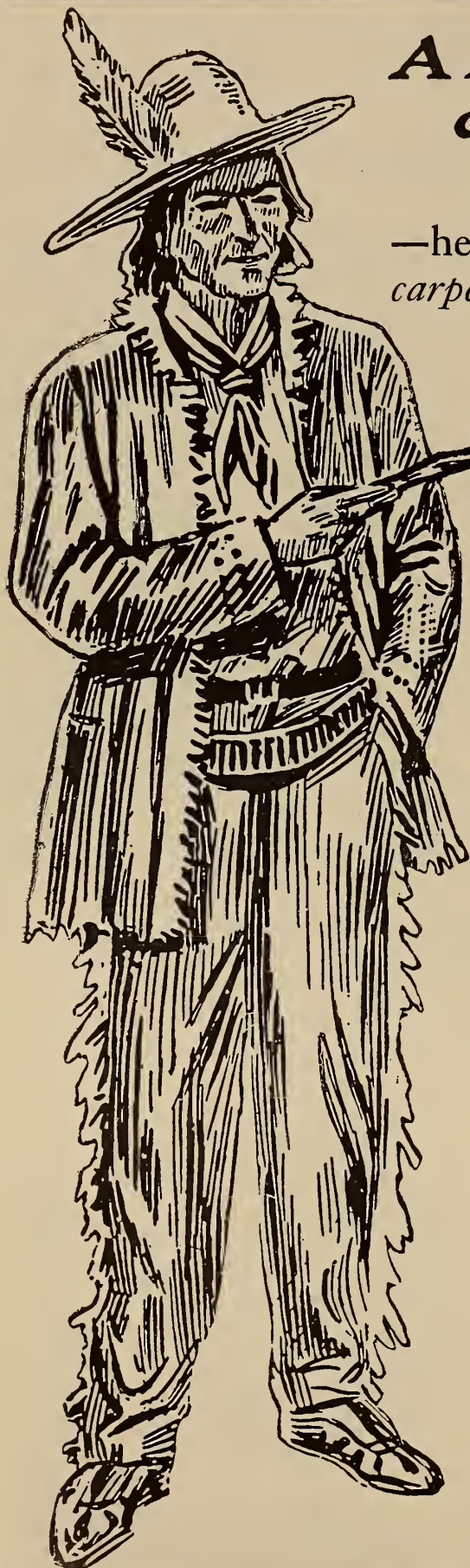
To secure full season's growth, order at once for Spring planting. Our Illustrated Booklet including descriptions of Varieties and Cultural Directions sent on request.



The Coneal Co.

Sheepshead Bay

Long Island, N. Y.



A Lawn that will be Your Pride and Your Neighbor's Envy

Why not have a lawn of real, green grassy grass—healthy and velvety, with close knit turf—a *fairy carpet* of infinite beauty—a lawn that will call forth admiration from all who see it? You can just as well have such a lawn—it's easy to get it with

KALAKA

The Wizard Lawn Producer

the Twentieth Century invention that restores life to old lawns and magically produces new lawns where no grass grew before.

KALAKA is a mixture of choicest selected grass seed and a powerful concentrate of dried animal manure from which all chaff, weed seeds and impurities are eliminated. Seed and fertilizer are mixed in scientific proportions, the mixture goes into the ground together, the seed germinates with moisture and the grass comes up *in any soil*.

**Ideal for public and private grounds
where a thickly knit turf and
luxuriant green grass is demanded**

Hundreds of users have proven the efficiency of this magic grass grower. It is sown like any seed but goes further, hence, is more economical and it is more easily planted and cared for than common grass seed.

KALAKA comes in 5-lb. boxes—enough to sow 1,000 square feet of new lawn or renew 2,000 square feet of old lawn.

If your dealer can't supply you, let us. Express prepaid East of Missouri River on receipt of \$1.00 per box; West of the Missouri River for \$1.25 per box. **FREE:** Our instructive booklet, "HOW TO MAKE A LAWN." Send for it to-night.

The Kalaka Company,

832 Exchange Ave.

Union Stock Yards

Chicago, Ill.



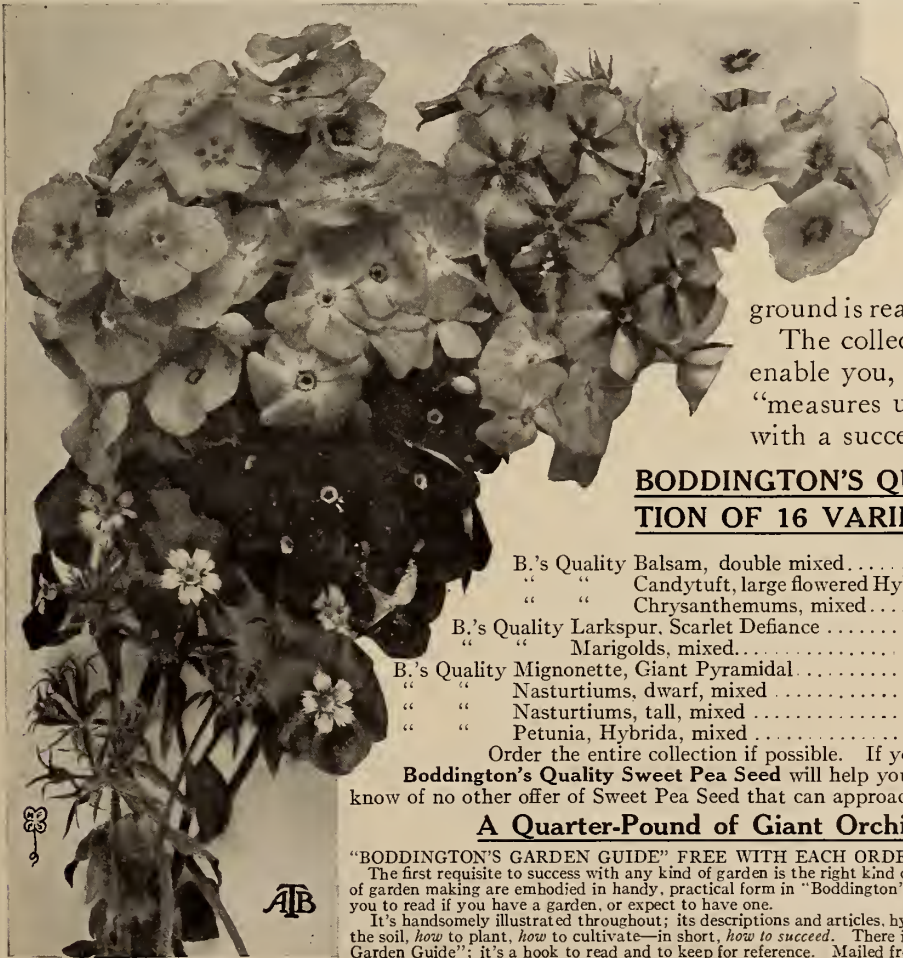
APRIL, 1911

COVER DESIGN—Lilies and phlox in a sheltered garden	- - - - -	Arthur G. Eldredge
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The Garden Magazine

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FIFTEEN CENTS A COPY



[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

Getting Down to Business

DURING April you must give your garden a proper start, if you mean to get the most out of it this season. But do not be in any unreasonable haste. There is no arbitrary date for starting the garden. You can begin earlier on light soils than you can on heavy, unless the heavy ones are well underdrained. If you want the best result from your garden and have not made a plan before, it will pay you to follow one of the charts given in this month's GARDEN MAGAZINE, or in one of the April numbers of former years.

Good vegetable gardening rests on good cultivation. You must fertilize the soil with barnyard manure.

Before actual work begins, look through the back numbers of THE GARDEN MAGAZINE and refresh your memory on points that most interest you. Send for seed catalogues before the real work begins.

For the last time we urge you to make a complete plan to scale for your garden. Try a few of the season's novelties, by all means; even if they are not better than the older ones, you will have a great deal of satisfaction from the trial.

Also, plant a few dwarf fruit trees if you have only a very small plot. They are beautiful as well as useful and occupy hardly any space.

Plant your flower garden for harmony of color and succession of bloom. Read the articles in the April and May, 1910, GARDEN MAGAZINE.

Buy the best seeds the trade offers. The difference in money between the best and the common grades is infinitesimal compared with the results.

Buy any tools, machinery and other garden sundries that you will need. Have everything ready for immediate use.

Write all labels. The proper way is to smear a piece of wood with thin white lead paint and write on it with pencil before the paint is quite dry.

Give your last spraying to fruit trees before the buds open.

Look to stored roots and bulbs in the cellar. Throw out any that are rotted.

Do not plant the dahlias in a hurry. Wait for the May GARDEN MAGAZINE if you wish to know the latest about them.

Resolve this year to keep an accurate diary of your work. Some of your experiences will be worth telling about, and we will pay for anything that we can use, even though failures, which will help other people to avoid trouble. Of course, we want a photograph if possible.

Actual Planting

AS EARLY as the ground will permit—that is, when peaches bloom—plant trees, shrubs, vines, including all fruits and nuts.

Before April 1st, plant out roses for immediate effect. Sow sweet peas; and if the fall-sown peas do not appear, resow at once. The secret of good sweet peas is to sow as early as possible.

Try, at the risk of the seed, a few extra early rows of peas, beans and corn, but be ready to cover if frost threatens.

Prune only autumn-flowering shrubs. Leave the spring-bloomers alone except roses newly planted.

Make lawns. You cannot have the soil too deep. If possible, give at least two feet, with plenty of fertilizer down at

the bottom. Repair holes in old lawns by filling in with top soil and reseeding. If the turf is old, raise it with a spade and fill in with soil underneath.

All construction work should be done before April 1st. This includes grading, draining, making paths, roads and walks. Be sure that poultry wire or brush for peas and beans is all ready.

Do not forget to start seeds in coldframes and plant early potatoes—the earlier the better. It is only early potatoes that are worth while growing on the small home plot.

Sow the Seeds

IN the open ground without transplanting: Jerusalem artichoke, asparagus, bush bean, carrots, chickory, field and pop-corn, corn salad, mangel, mustard, parsnip, parsley, potatoes, radish, salsify, seakale, spinach; hardy annuals, half hardy annuals, annual larkspur, mignonette, poppy, snapdragon, sweet peas, zinnia.

On seed bed indoors to transplant: French artichoke, broccoli, cabbage, cardoon, cauliflower, celeriac, celery, eggplant, endive, kohlrabi, leek, lettuce, onion, tomato, cosmos, morning glory, nasturtium, petunia, salvia, verbena.

Twice during the month in the open ground: Sweet corn, peas, spinach.

Indoors, to be transplanted as soon as the ground can be worked: Beets, cucumber, okra, melon, pepper, squash; hardy lilies, peony, hardy perennials. Sow cress every week in greenhouse or frame to have succession.

If it is the most productive and the best managed plot during the season of 1911.

We want the actual records of a well-managed home garden—its plan, its operation, yield, successions, etc., because we believe that besides better living, there is actual money to be made or saved in making the garden work for you.

This award will be made for the best account of a well-managed garden of a half-acre or less in the year 1911, provided the account really tells how the greatest productivity may be achieved.

This competition is open to all, whether present subscribers or not.

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BEST HOME GARDEN

OF

Half an Acre

OR LESS

The only conditions are:—

1. Notice of intention to compete to be given not later than May 20th, 1911.

2. A complete record of work to be submitted at the end of the season, with names of varieties grown, yields, etc., and an exact record, in detail, of all labor and expense, with bills and vouchers.

3. All entries must be accompanied by a plan of the garden and its succession plantings.

4. All contestants must submit their manuscripts not later than October 31st, 1911.

5. The prize-winning manuscript, with photographs, etc., to become the property of THE GARDEN MAGAZINE. The right is reserved to purchase any other MSS. at our regular rates, or not to award the prize at all, if the MSS. submitted are not sufficiently worthy.

Permanent Materials for Your Garden—By Wilhelm Miller, ^{New York}

HOW TO SAVE MONEY NOW AND ALWAYS, AND HOW TO MAKE YOUR HOME GROUNDS LOOK BETTER EVERY YEAR FOR THE NEXT HUNDRED YEARS

PART I.—HOW TO PLAN YOUR HOME GROUNDS

IF YOU want to make THE GARDEN MAGAZINE worth \$100 or more to you this year, compare this article with your home grounds and see if you cannot do two things:

1. Save money every year in the care of your place by substituting permanent for short-lived material.

2. Make your place more comfortable and beautiful every year for the next hundred years without worry or extravagance.

Here is an easy way for you to accomplish both objects. Hitherto there has never been an easy way by which anybody could find out what he really wanted and what he didn't. I do not say this way is perfect. But all methods must embody the same principle, viz., to help you analyze your own needs. No one else can dictate what you need. Ready made plans are no good. After you know what you want nothing could be more convenient than the nursery catalogue. The method here proposed supplements the nursery catalogue because it helps you discover what you want. And what you want to know is which plants are the best for each particular purpose.

TRUE AND FALSE ECONOMY

The *wrong* way to plan a place is to draw up a list of the plants you like best, or employ an architect or jobbing gardener. The *right* way is to employ the best landscape gardener you can get, or if you think you cannot afford that, then study the subject and draw a plan to scale. The *first cost* of your place may be more if you employ a designer, but you will save years of waiting and the cost of ripping up your whole place and redesigning it five years from now, or whenever you learn better.

The *wrong* way to plant a place is to use too much short-lived material, such as bedding plants, annuals, poplars,

privet hedges and other "quick growers." The *right* way is to plant long-lived material, like perennial flowers, oaks, and hedges of Japanese barberry. The *cost of maintenance* will be less and your place will be more dignified and beautiful every year as long as you and your children live.

It is *false economy* to buy the cheapest nursery stock and send your list to half a dozen nurserymen in competition.

It is *true economy* to employ a first-class designer to help you to decide on your material and to select the sizes and quantities to be used.

WHAT YOU NEED FOR COMFORT

Consider *use* first — then beauty.

Do you want *fruit*? The best way to keep out thieves is to have a high wall around your garden. Next best is a fence. A hedge robs the garden. You can't train fruits on wires a foot away from the wall. Plant small fruits and dwarfs only.

Do you want *vegetables*? The best way to have fresh vegetables the year round is to have a greenhouse. Next best is to have some hotbeds and coldframes. Without these you can make your garden bear a fortnight earlier in spring and two months later by having a windbreak on the north and west sides, e. g. a wall, fence, or hemlock hedge.

Do you want *hide unsightly objects*? Evergreen plants are better than deciduous. Will large cedars do it now? Japanese ivy covers the most wall space. Poplars are the worst solution.

Do you want *privacy*? Let passersby see your front yard, if you like, but surround the rest of your place with trees and tall shrubs.

Do you want *cut flowers*? Then don't

have formal flower beds. Have informal borders of shrubs and perennials. Grow a row of your favorite cut flower in the vegetable garden.

GET YEAR-ROUND BEAUTY

Most places are bleak and ugly five-twelfths of the year — while the leaves are off. Don't you want to make your place comfortable and beautiful every day of the year? First, make a list of the months and provide three main attractions for each month.

Second, *ward off the winter winds*. Save coal. Provide a winter playground. Perhaps a hemlock hedge is necessary. Perhaps only a clump of red cedars, edged with young hemlocks.

Third, plant *cheerful evergreens* — not gloomy ones. Plant white spruce instead of Norway, concolor fir instead of European silver fir, red pine instead of Scotch and Austrian. Quick-growing evergreens soon get shabby.

Fourth, plant shrubs with *berries that are attractive all winter*, especially those with red berries, since red is the cheeriest color against the snow. Plant common and Japanese barberry, high bush cranberry, multiflora rose, Regel's privet, white fringe, *Viburnum Sargentii*.

Fifth, plant shrubs with *brightly colored twigs*. They are full of warmth and color as soon as the leaves drop off and are brilliant every sunny day until April. Plant plenty of Siberian dogwood, silky dogwood, salmon and yellow willow, green twigged forsythia and kerria.

HAVE PERMANENT BOUNDARIES

As soon as you have drawn a diagram of your property to scale, walk clear around the boundary lines studying these big items:

First, locate the unsightly objects outside your property which you wish to hide. The permanent way to do this is to



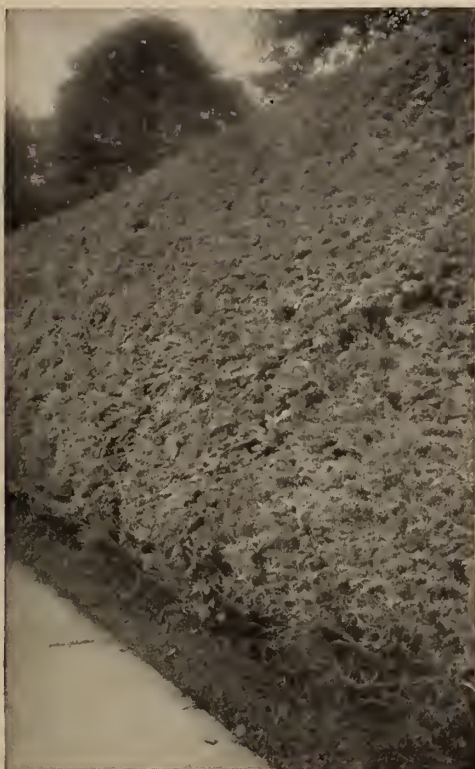
Example of a permanent specimen tree for the lawn — hemlock



Example of year-round beauty near the house. Muhgo pine, ground hemlock, and Japanese yew are more permanent than retinisporas



Example of a permanent flower — oriental poppy. Not resown every year



Example of a permanent evergreen hedge—hemlock. Less permanent is Norway spruce

move large evergreens which may do the work at once, e. g., red cedars. The temporary way is to plant poplars or willows, which are short-lived and ineffective in winter.

Second, locate the beautiful objects outside your property which you can bring into view. If trees hide the view, sacrifice as much as is necessary. If the view is good in spots, frame those spots and block out the rest. Probably deciduous trees will do for this purpose. They will be cheaper than evergreens and perhaps you can afford to buy some large ones so as to save years of waiting. For example, sugar and Norway maples are more permanent than silver or ash-leaved maples.

Third, plant all the rest of your boundaries with a thick border of trees and shrubs, grouping them informally. Such borders are cheaper to maintain than hedges, because you do not have to trim them to a line three times a year as you must do with privet.

Borders are more artistic than hedges, blend better with the landscape, do not make artificial lines, and usually give more privacy.

In the back row plant *tall growing* shrubs, e. g. viburnums, lilacs, ninebark, mock orange, hydrangea, forsythia.

In front of these plant *medium-sized* bushes—those that grow three to five feet high, e. g. barberry, Regel's privet, aromatic sumach, Van Houtte's spirea.

HAVE A PERMANENT LAWN

Nearly all the rest of your place which is not covered by buildings, drives and other utilities should be in lawn.

The lawn that costs least at the start costs the most in the end, because you have a great expense every year for fertilizers, reseeding, and fighting weeds.

The most permanent lawns are the ones for which the land has been most thoroughly prepared, by repeated plowings, and harrowings and by heavy liming and manuring.

If the top soil is bad, you can get a permanent lawn only by carting on a foot or more of good soil.

Your lawn will cost more to maintain if you scatter trees and shrubs over it. Leave the lawn open. Plant trees and shrubs only at the sides. This way is more artistic and the lawn can be mowed and rolled more cheaply. If you want to see how money goes for nothing watch the men dodging trees on a lawn peppered with specimens.

PERMANENT PLANTING NEAR THE HOUSE

The temporary style of planting round a house is to use flower beds. Evergreen borders are better. Beds are mud heaps five-twelfths of the year. Evergreens are beautiful the year round and the right kinds last a lifetime.

The best evergreens for planting around the foundations of a house are *broad-leaved* evergreens, e. g. rhododendrons, mountain laurel, American holly, mountain andromeda, boxwood, *Ilex crenata*, the Hinodigiri azalea, and the fire thorn. They cost more than any other class of plants, but they do more, because most of them have attractive flowers or fruits in addition to year-round beauty. The



Example of a permanent flowering tree—magnolia. Only small trees are fit for gardens



Example of a permanent screen for unsightly objects—red cedars. Fine background for dogwood

first cost of making a suitable bed for them is also greater than for other plants, but the cost of maintenance is less.

The best solution is narrow-leaved evergreens. The cheapest and showiest plants for the purpose are the golden and variegated conifers and the retinisporas, but they are short-lived. More permanent and dignified are Mugho pine and Japanese yew.

The first method is ideal if supplemented with evergreen vines. The best climbers are English ivy and climbing euonymus, but they must not be used on wooden walls. The popular idea is to plant climbing roses or large-flowered clematis, but they require more care than evergreen vines and their beauty is shorter lived. Put climbing euonymus on your walls and you have the best possible foil for your rhododendrons, and other flowers.

The more permanent way to hide every square foot of earth around your house is to carpet your rhododendron beds with running myrtle, English ivy, or *Pachysandra terminalis*. But if you feel the need of more color you can plant bulbs of the permanent kinds of lily, e. g., madonna, tiger (variety splendens), Henry's, and speciosum. The golden banded lily is more gorgeous, but short-lived.

HAVE A PERMANENT GARDEN

Flowering trees are more permanent than shrubs; flowering shrubs are more permanent than perennial flowers: perennials are more permanent than annuals or bedding plants.

No garden can get along without a few of these temporary flowers, e. g. poppies and geraniums, but the economical thing



Example of permanent winter beauties — black alder, a shrub with red berries

is to make the bulk of your planting of shrubs and perennial flowers. They cost more at first but are cheaper in the end, because they require less care, and labor is the greatest item in gardening. Even with trees and shrubs, labor usually costs more than material.

The fewer trees in and near a garden the better, because they rob flowers of moisture and sunlight, the roots are sometimes poisonous, and they increase your bill for fertilizers. Bay trees or boxwood in tubs will give height, but must be taken to a shed in winter. The best permanent trees for gardens are small ones, e. g. flowering dogwood, Chinese magnolia and its hybrids, silver bell, styrax, white fringe. These should live longer than white birch, laurel-leaved willow, Carolina poplar and their relatives.

The best evergreen trees for gardens are small, permanent kinds that are not dull in winter. For example, red cedar is more appropriate than arborvitæ; dwarf hemlock than dwarf retinisporas; Mugho pine, *Pinus densiflora* and Korean pine than Swiss, Himalayan and umbrella pine;

prostrate and Chinese juniper than Irish or golden; dwarf Japanese and spreading yew than English, Irish or golden.

The most valuable shrubs for gardens are evergreens, especially the broad-leaved kinds, e. g., box, rhododendrons, mountain laurel, mountain andromeda, and *Ilex crenata*. They are more permanent than most deciduous shrubs. The only plant which usually lives more than a century in neglected gardens is box.

The best way to choose deciduous shrubs is not to make a list of those famous for their flowers, because they generally have uninteresting foliage. Flowers last a fortnight; foliage lasts seven months. Famous flowers that have comparatively interesting foliage and no winter value are lilacs, hydrangeas, althea or rose of Sharon, weigela, pearl bush, Tartarian honeysuckle, mock orange, golden chain and snowball. It is right to put some of these in the back of the border where their deficiencies will be obscured, but you should also plant bushes that give more for the money, especially viburnums and shrubby dogwoods. Other bushes that have good flowers and better foliage are white fringe, Morrow's honeysuckle and Japanese snowball. Worth growing for foliage alone are *Aralia pentaphylla*, Hercules club, bayberry, silver thorn, aromatic sumach.

HOW TO PREVENT COLOR DISCORDS

One simple principle will enable you to prevent nine-tenths of the most serious color discords. One color is responsible for nearly all the trouble, viz. magenta and tones near it.

Therefore the best purchasing plan for a beginner is this: Buy now nothing that you have never seen which is catalogued as purple, crimson, crimson-pink, or mauve. Next year purchase whatever colors of this sort you need, selecting the varieties when you see them in bloom.

Another good buying principle is founded on the fact that green and white are the great peacemakers. Buy green-leaved plants instead of variegated, or abnormally colored, and buy white-flowered varieties of plants that have trouble-making colors.

For instance, instead of purple-leaved



Example of broad-leaved evergreens — Kalmia. Best permanent material to plant round a house

barberry, golden elder, variegated weigela, golden evergreens, golden privet, and other bushes margined with white or yellow, buy their green-leaved or normal varieties.

Whenever you wish a change from green foliage buy gray, because it is quieter and more harmonious than the strong colors. For example, instead of *Prunus Pissardii* buy sea buckthorn, Japanese oleaster, silver thorn, and buffalo berry. Gray is a peacemaker.

Buy white-flowered varieties of such dangerously colored plants as peony, phlox, chrysanthemum, foxglove, pyrethrum, Lychnis, pinks, Michaelmas daisies, Japanese anemone, rugosa rose, lilac and rebud. Avoid the Anthony Waterer spirea, desmodiums, etc. Buy Azalea Hinodigiri instead of *A. amurensis*.

The following lists are designed to help beginners analyze all their needs. Two solutions are indicated in every case. One costs less at the start but more in the end. The other may cost more at the start, but is cheaper to maintain. Choose the permanent way!

PART II.—THE BEST PLANTS FOR SPECIAL PURPOSES

ALL YOUR SERIOUS PLANTING PROBLEMS CONVENIENTLY ARRANGED IN ALPHABETICAL ORDER — SHORT-LIVED AND COSTLY METHODS ARE ALSO INDICATED SO THAT YOU CAN AVOID THEM

AGE EFFECT QUICKLY GOTTEN

The wrong way is to plant "quick growers," e. g. poplars and silver maples. The right way is to plant big trees of long-lived species, e. g. red, pink, and scarlet oak, red cedar, sugar maple. It is right to plant big evergreen shrubs, e. g., box, rhododendron and laurel, but don't waste money on big deciduous shrubs. The small ones will catch up in three or four years.

ARCHES

Save three to five years by buying trained arches of red cedar. They are better than privet.

AUTUMN ATTRACTIONS

The costly way is to try to keep up a floral display in September and October by sowing of annuals in June, etc. The economical way is to plant trees and shrubs, because all have attractive autumn colors and many have attractive berries.

AVENUES

An avenue, strictly speaking, is a formal approach to a large building. Japanese yew is probably best, if one can wait. The best round-headed trees trimmed to balls and avail-

able in large sizes are usually sugar maples and lindens. The worst is *Catalpa Bungei*. The best columnar tree is red cedar; the worst Lombardy, poplar.

BANKS AND BLUFFS

The costly way is to use grass, which is hard to establish and cut. Use vines and shrubs, and if necessary cheap trees, e. g. pitch pines. *Rosa Wichuraiana*, which is nearly evergreen, propagates itself without cost. Use Virginia creeper, Hall's honeysuckle, Indian currant, bayberry, red-twigged dogwood.

BEDS OF FLOWERS

The costly and inartistic way is to use tender plants and annuals. The economical and artistic way is to use hardy plants. For centrepieces use low shrubs (e. g. hydrangea, Baby Rambler rose, Japanese barberry, *Magnolia stellata*) or perennials, (e. g. peonies, bleeding heart, Miss Lingard phlox, veronica, chrysanthemums). For fillers use bulbs, e. g. daffodils, tulips, lilies. See also *Edging and Carpeting*.

CARPET EVERY FOOT OF GROUND

Instead of fighting weeds in your shrubberies, why not plant trailers that will smother the weeds, hide the dirt, and make an evergreen background for flowers? The best are English ivy, trailing myrtle, *Pachysandra terminalis*, wintergreen, part-ridge berry, bearberry. Nearly evergreen are Hall's honeysuckle and memorial rose. Non-trailers: Yucca, hardy heaths, e. g., Calluna, Galax.

CEMETERY

Buy perpetual care. Mounds unnecessary and expensive. Grass levels cheapest to care for. Small stone markers more permanent than ivy or periwinkle. Plant long-lived evergreens free from troubles, e. g. Japanese yew — not showy golden evergreens. Avoid cut-leaved, weeping or variegated trees and shrubs. Plant native trees, e. g. oaks, beech, hemlock.

COOL EFFECTS FOR MID-SUMMER

Have running water. Have plenty of greenery. Have some white flowers. Use some plants with gray foliage, e. g. sea buckthorn, Elæagnus, pinks, rock cress, gold-dust, woolly chickweed, lavender cotton.

DRIVES

Border your drives with shrubs and after the second year they will be cheaper than grass. When the grass is dead you can get color from barberries, viburnums, shrubby dogwoods, Rhodotypos, sumach, etc.

DROUGHT RESISTERS

Instead of spending a fortune for watering lawns over gravel, or swamp-loving plants on upland, use plants native to desert conditions, e. g. red cedar, bayberry, pitch pine, yucca, blue wild indigo, lupines, butterfly weed, stone crops, house leeks.

EDGINGS FOR FLOWER BEDS

Instead of tender plants (e. g. alternanthera) or annuals, save money by using hardy perennials, e. g. goldentuft, moss pink, rock cress, bugle,

tufted pansies, woolly chickweed, woolly yarrow, Carpathian harebell, coral bells, hardy leadwort or Napoleon III. pink.

EDGING FOR LAWNS

Avoid sharp edges of grass. They are expensive to trim and even at their best are painfully neat. Shrubbery is cheaper. These shrubs arch over and meet the grass: Lemoine's deutzia, Japanese barberry, Thunberg's spirea, Van Houtte's spirea, Stephanandra, yellow-root.

EVENING ATTRACTIONS

White flowers are the only ones visible on dark nights. Fragrant flowers are particularly enjoyable at night. The following are permanent and have white, fragrant flowers: white lilac, *Azalea viscosa*, sweet pepper bush, wild clematis, *Clematis paniculata*, poet's narcissus, lily-of-the-valley.

FRAGRANT EDGINGS

Flowers appeal more to the imagination but last only a week or two. Herbs are fragrant for seven months, or whenever their foliage is brushed against. Why not sow seeds or buy plants of these permanent materials for edging your garden paths? Balm of Gilead, lavender cotton, lemon balm, lemon thyme, lovage, mother of thyme, rosemary, sage, spearmint, thyme, woodruff.

FRAGRANT FLOWERS

Most people rely on annuals, but labor is the greatest expense in gardening. Why not save labor by growing shrubs with fragrant flowers, e. g. winter sweet, March honeysuckle, winter jasmine, Mezereon, flowering currant, lilac, Carolina allspice, roses of many kinds and odors, mock orange, bush honeysuckles, sweet pepper bush. Shrubs with fragrant foliage are bayberry, sweet fern, aromatic sumach and sweet gale.

HEDGES

Privet costs the least at first but the most in the end because it has to be trimmed three times a year. Also it winter kills inland. Japanese yew and Japanese barberry need not be trimmed, and are longer-lived and more beautiful.

HILLSIDE GARDENS

Formal terraces are expensive to mow and keep in order. Instead of steep grassy banks why not have low, retaining walls of rough stone, without mortar, and make a series of wall gardens as the English do. While laying the wall put in alpine plants, e. g., wall flowers, rock cress, woolly chickweed, wall bellflower, cheddar pink, goldentuft, etc.

NORTH SIDE OF BUILDINGS

The costly thing is to try to maintain a flower show here, but permanent foliage plants are more dignified and cheaper to maintain, e. g. English ivy, climbing euonymus, boxwood, Japanese yew. If flowers are necessary why not rhododendrons and mountain laurel rather than fuchsias or tuberous begonias?

PERGOLA

Plant a great variety of vines — not merely one kind. A Crimson Rambler pergola has a short-lived and gaudy beauty. Make your pergola beautiful the year round by planting wistaria, Hall's honeysuckle, Dorothy Perkins rose, memorial rose, Jackman's clematis, trumpet creeper, wild clematis, Henry's clematis, paniced clematis, bitter sweet, English ivy, climbing euonymus (green, round-leaved variety).

QUICK GROWING TREES

The *wrong* kind are those of short-lived beauty, e. g. poplars, willows, silver maples, box elder. The *right* kind are the long-lived species, e. g. red, scarlet, and pin oak, which will soon overtake the above and last for centuries.

ROCK GARDENS

Do not make a mound of cobble-stones and plant nasturtiums on it. Omit the rock garden or else buy "Alpine Flowers," by W. Robinson, make a rockery according to his methods and grow flowers you can grow in no other way, e. g. gentians, primroses, edelweiss, rock roses, etc.

ROSES

Buy field-grown plants two or three years old. The stock that costs most at the start gives the best results the first year and is less liable than cheap mail-order plants to be killed the first winter.

SAND-ENDURING PLANTS

Most of the popular flowering shrubs will prove short-lived on sand. Use plants native to sand, e. g., barberry, locust, pitch pine, red cedar, Virginia creeper.

SCREENS FOR UNSIGHTLY OBJECTS

The temporary and unsatisfactory way is to use poplars and willows which are of no value in winter and are short-lived. The ideal way is to move large evergreens, of which red cedar is cheapest. Big evergreens may seem costly but they blot out ugliness at once and save ten to twenty years of waiting. Cedars, hemlock and white pine are cheaper in the end than Scotch and Austrian pine or Norway spruce. Japan ivy will hide more brick or stone wall than anything else.

SEASIDE

Red pine will stand the strong winds better than Scotch, Austrian or white. Red cedar succeeds and hemlock fails. White spruce does better than Norway. Concolor fir is longer-lived and in better taste than Colorado spruce. Mugho pine will live longer than dwarf retinisporas. Pin, scarlet and red oak will outlive English oak and are easier to transplant than white oak. Bayberry, beach plum, barberry, tamarisk, inkberry, holly, bearberry, and marsh elder are native and fit. Shrubs with variegated, weeping or cut-leaved foliage are usually too gardenesque.

SHADE ENDURING PLANTS

Beware of silver maples and elms near gardens. Nothing worth having will grow beneath them permanently. You cannot maintain a perfect hedge beneath these trees. The appropriate and least expensive plan is to grow hardy foliage — plants in deep shade — and not try to get flowers there. Why not plant running myrtle, wintergreen, mahonia, ferns? If you must have flowers, why not shrubs native to shade (e. g., flowering currant, shrubby dogwoods, or sweet pepper bush) instead of garden flowers?

SHRUBS WITH TRIPLE ATTRACTIONS

The following are attractive in flower, fruit, and foliage: Spice bush, Buffalo berry, cornelian cherry, common and Japanese barberry, Regel's privet, Morrow's honeysuckle, Tartarian honey-



Example of permanent "vine" for porch — *Forsythia suspensa*. Yellow flowers an inch across



Example of permanent way of getting flowers. Shrubbery cheaper to maintain than flower beds

suckle, slender-stalked honeysuckle, Ramanas rose, wayfaring tree, cranberry bushes.

STREET TREES

The longest-lived trees and the cheapest to maintain are the sugar, red and Norway maples and the pin and red oaks. Elm seems doomed. Box elder, silver maple and poplars are short-lived. Horse chestnut and catalpa make too much litter.

TEA HOUSE FOR CHILDREN

The Camperdown elm, formerly trained for this purpose, is now subject to many insect troubles. Weeping mulberry will doubtless live longer and needs no spraying.

TREES WITH TRIPLE ATTRACTIONS

The following are attractive in flower, fruit, and foliage: Flowering dogwood, cocksbur thorn,

Washington thorn, European bird cherry, choke-cherry, wild black cherry, garland crab, Japanese crab, Siberian crab, swamp bay, large-leaved magnolia, umbrella tree, cucumber tree, mountain ash.

TROPICAL EFFECTS

The costliest to maintain and least appropriate are tender plants, e. g., cannas, coleus, castor oil. The long-lived and appropriate plants are the hardy members of tropical families, e. g., hardy bamboos, Aralia, honey locust, redbud, Siberian pea tree, Cassia, wistaria.

VINES FOR YEAR ROUND BEAUTY

See *Pergola*. For winter attractions use English ivy, climbing euonymus, native and Japanese bittersweet. Hall's honeysuckle holds its leaves through November.

WET PLACES

The *wrong* thing is to fill them. The *right* thing is to make a water garden or peat garden, and plant flowers that will grow nowhere else, e. g., lady-slippers and other hardy orchids; pitcher plants and other insect-eating flowers; *Shortia* and other exquisite members of the heath family; and bog-loving lilies, e. g., *Lilium superbum* and *Canadense*.

WINDBREAKS ALWAYS NECESSARY

Few people realize the necessity of windbreaks. They may save coal, make the kitchen garden yield one or two months longer, make winter playgrounds, and incidentally hide unsightly objects. Why not save ten or twenty years by transplanting large evergreens now?

Red pine will last longer than Scotch or Austrian. White spruce will last longer than Norway. Perhaps tall cedars and small hemlocks will be best.

Ready-Made Planting Tables for Any Garden—By E. L. D. Seymour, ^{New York}

TELLING YOU EXACTLY WHAT, WHEN, WHERE AND HOW TO PLANT YOUR VEGETABLE GARDEN TO GET THE GREATEST EFFICIENCY ACCORDING TO THE SPACE AVAILABLE—PRINCIPLES OF PLANNING TO HELP YOU FIT YOUR OWN PLOT

A GOOD many so-called "vegetable" or "kitchen-gardens," would be better described as small plots, on each of which is grown a little of a few kinds of vegetables "because they are easiest." A

few hills of potatoes use up much of the ground most of the season and then yield enough for perhaps a score of meals. The rest of the space may produce some beans, turnips and corn, in varying amounts,

but probably all in one crop, so that after several feasts, the supply of that vegetable ceases till the next year.

Potatoes, corn and cabbage are actually field crops and not suited to the very small



The vegetable garden of a business man, from which nearly thirty dollars was saved last year. (See page 170)

garden; moreover, except for the corn, they can be bought at any time, of perfectly good quality, and cheaply, whereas many other kinds of "garden truck" are obviously at their best and cheapest only when obtained directly from the garden. There is no more excuse for giving the valuable space of a small garden to potatoes and cabbage, than there is for using Tiffany cut glass and Limoges china in place of Mason preserve jars and tin milk pails.

In the accompanying plans, therefore, I have made most important the utilization of space, a variety of crops, and an all season supply. You, who care to adapt them, can further augment these features, by additional plantings wherever you discover vacant spaces. The plantings and successions that I have indicated, will, I think, supply the general spirit of intensive cropping, and the data with which to work.

Dates are but suggestions in any plan

or table, so you cannot hope to follow them to the letter. This year may be two weeks earlier than last, or several days later than next spring will be. But always keep as near the first dates as possible; better to have a crop grown and harvested before the cold days come, than to have part of it destroyed by frost because "the table said that you didn't *have* to finish planting till-such-and-such a date." The earlier you get the seeds in, the more time you can give to the other duties that will come cropping up when you don't expect them.

The seed-bed is nothing more than a small area especially well prepared. The soil here should be lighter, and free from stones, rubbish, etc., so that the seedlings will have every favorable condition. If you can substitute a hotbed on this space you will be able to start the seeds earlier, and have larger plants for later setting. But primarily the plans that follow are for "outdoor gardens," from first to last.

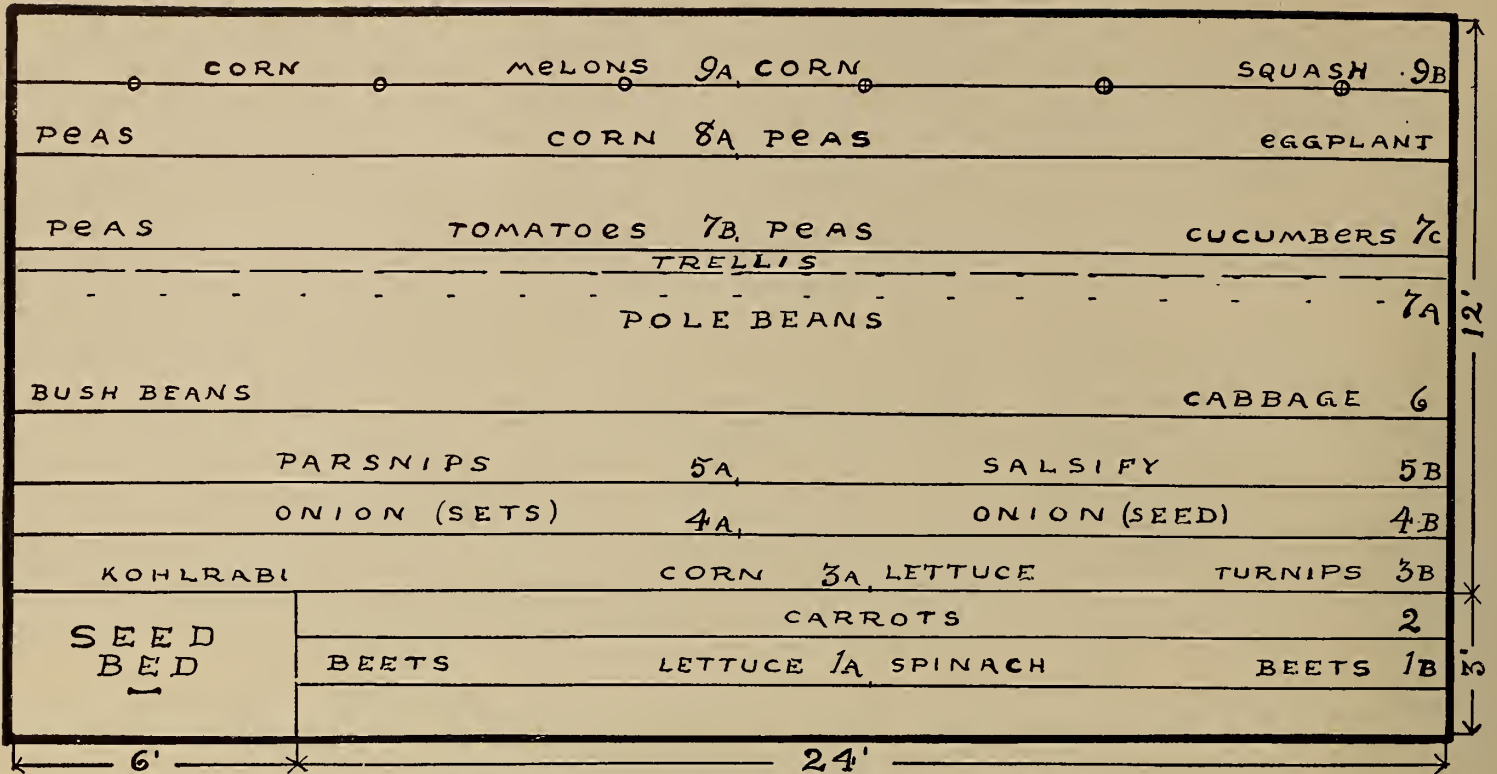
Granted that you are going to follow the directions in the accompanying tables, you are entirely relieved of all indoor planning work, and can start digging at once. If the garden is small, after the manure is spread thickly (that is, two to four inches deep), spade over the whole area. Do this thoroughly, taking out eight inches to a foot of soil, and pulverizing and mixing it with the manure. After spading, smooth and rake the surface two or more times until you have a fine, level bed, free from stones, sticks, and any sort of weedy litter. It is much easier to *keep* a garden weedless than it is to make it so after the vegetables and weeds have started.

By a novel method of thinning you can double the supply and lengthen the season of onions, beets, and other roots. Instead of pulling all the small plants and throwing them away, thin out first the very smallest, useless seedlings, and later on the larger. Use these, and the rest as they mature.

I.—A Planting Table For a Vegetable Garden 15 x 30 Ft.

VEGETABLES	REQUIRED				PLANT					TRANSPLANT OR THIN			HARVEST	
	Feet of Row	No. of Hills or Plants	Between Rows (Inches)	Amount of Seed	What	Where	When	How	Plants or Seeds Apart (Inches)	To	When	Space (Inches)	First	Remove by
Beans, Bush	30		18	1 pt.	Seed	Row 6	Apr. 20- May 15	Drills	1½				June 10- 30	August 15
Beans, Pole	30	10	18	¼ pt.	Seed	4 in. from Row 7	May 20- June 10	Hills	36				July 20 Aug. 10	
Beets (1)	12		12	¼ oz.	Seed	Row 1a	Apr. 1-12	Drills			3		June 1-10	Aug. 30
Beets (2)	12		12	¼ oz.	Seed	Row 1b	May 15	Drills			3		July 15	
Cabbage	30	15	18	Pinch	Seed	Seed Bed	May 15	Drills		Row 6	July 15-30	24	Sept.	
Carrots	24		12	¼ oz.	Seed	Row 2	Apr. 1	Drills			2		July 15	
Corn (1)	30	15	18	¾ pt.	Seed	Row 9	May 15	Hills	24				July 20-Aug. 1	August 30
Corn (2)	15	8	18	¼ pt.	Seed	Row 8	July 10	Hills	24				Sept. 15	
Corn (3)	15	8	12- 18		Thin- nings from 2	Row 3a	July 10	Hills	24	Row 3a	Aug. 15	24	Sept. 20	
Cucumbers	15	3	36- 40	½ oz.	Seed	Seed Bed	May 1-10	Drills		Row 7b	June 10-15		July 15	
Eggplant	15	8	18	1/10 oz.	Seed	Seed Bed	May 30	Drills		Row 8b	Aug. 1	24	Aug. 30	
Kohlrabi	12		12	5/8 oz.	Seed	Row 3a	March 31	Drills			3		June 1	Aug. 15
Melons, Musk	15	3	36	oz.	Seed	Seed Bed	May 15	Drills	1	Row 9a	June 15	60	Aug. 30	
Onions (1)	15		12	½ pt.	Sets	Row 4a	May 15-31	Drills	1½				June 1-15	
Onions (2)	15		12	5/8 oz.	Seed	Row 4b	April 15- May 1	Drills			3		Aug.	
Parsnips	15		12	1 oz.	Seed	Row 5a	April 1-15	Drills			2		Aug.	
Peas (1)	30		24	1 pt.	Seed	Row 7 by Trellis	March 15-31	Drills	1				May 15-30	June 1-10
Peas (2)	15		18	1/3 pt.	Seed	Row 8	April 15	Drills	1				June 10	July 10
Peas (3)	15		18	1/2 pt.	Seed	Row 9	May 1	Drills	1				July 4	Aug. 1
Salsify	15		12	¼ oz.	Seed	Row 5b	April 15-May	Drills			2		July 15	
Spinach	12		12	oz.	Seed	Row 1b	September 1	Drills					Nov. 7 Apr.	May 10
Spinach, N. Z.	15		18	¼ oz.	Seed	Bet. Rows 6 and 7a	June 15	Drills					July	
Squash, Late	15	3		1/10 oz.	Seed	Seed Bed	May 1	Drills	2	Row 9b	June 30	60	Sept.	
Tomato	15	8		3/10 oz.	Seed	Seed Bed	May 15-June	Drills	2	Row 7a	June 15	24	Aug. 15	
Turnip	15		12	1/8 oz.	Seed	Row 3	July 1	Drills			3		Sept. 10	
Lettuce (1)	12	16	12	oz.	Seed	Row 3b	March 15-31	Drills			9		May 30	July 1
Lettuce (2)	?	?	12	?	Seed	Seed Bed	April-June	Drills	3	Vacant Spaces	When 1 in. high	9	?	?
Radish	?	?	6	?	Seed	Vacant Spaces	Anytime	With Carrots Pars- nips, etc			1		3-5 weeks	

In all three tables the letters (a) (b) etc., indicate the subdivisions of the rows. (See plans)



The plan of the 15 x 30 ft. garden, to be used with the table on page 159

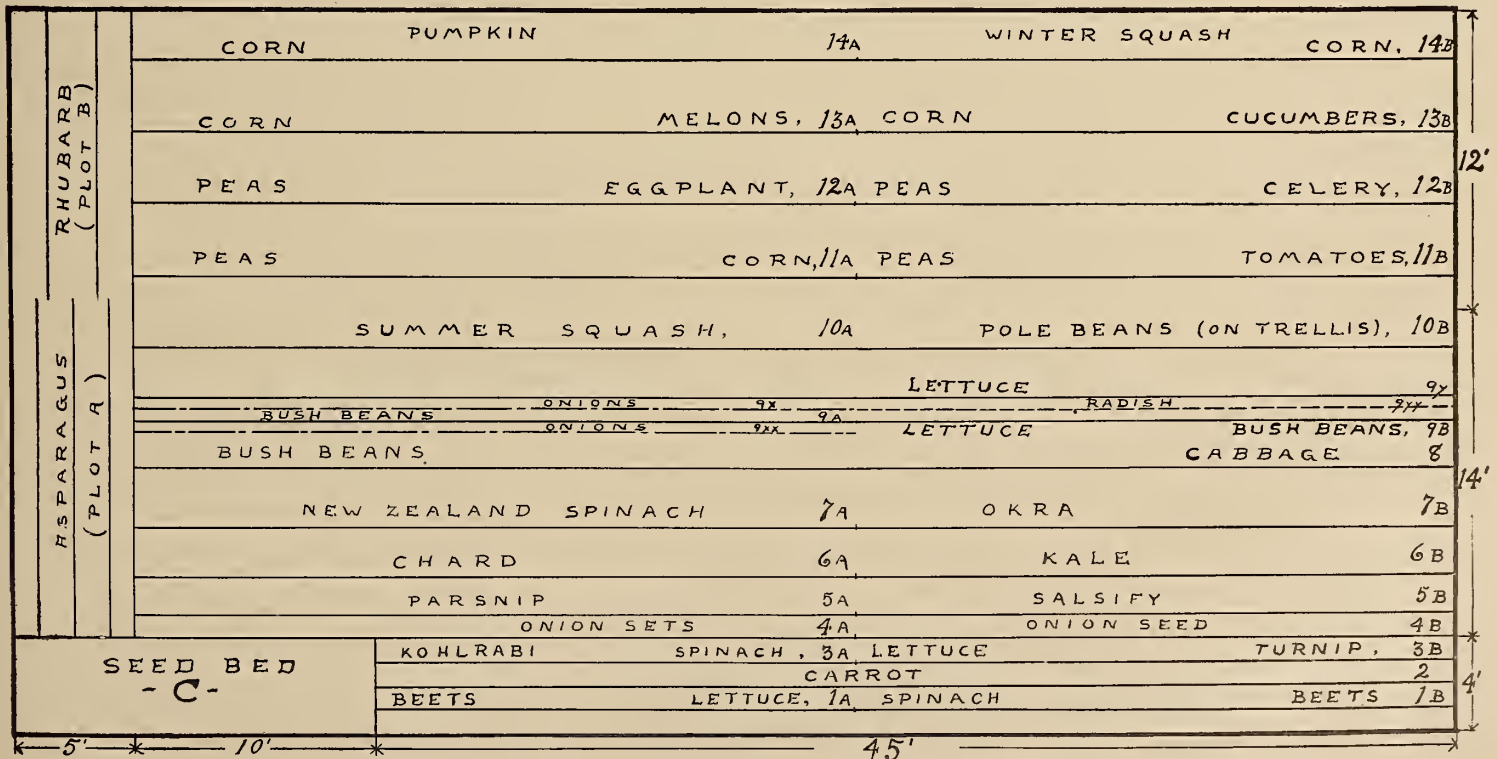
II.—A Planting Table for a Vegetable Garden 30 x 60 Ft.

VEGETABLES	REQUIRED				PLANT					TRANSPLANT OR THIN			HARVEST	
	Fect of Row	No. of Hills or Plants	Between Rows (Inches)	Amount of Seed	What	Where	When	How	Plants or Seeds Apart (Inches)	To	When	Spaces (Inches)	First	Remove by
Asparagus	14x5	21	18	21 Roots	Roots	Plot A	March-April	6" deep	24				14 mos. or 2 yrs.	
Rhubarb	12x5	8	36	8 Roots	Roots or Cuttings	Plot B	September or April	3-4" deep	36				8 mos. or 1 yr.	
Beans, Bush (1)	80		30	1 pt.	Seed	Row 8	April 20-	Drills	1 1/2-3				June	Aug. 15
Beans, Bush (2)	30		30	1/2 pt.	Seed	Row 9a	May 15	Drills	1 1/2				Sept.	
Beans, Pole	30	10	36	1/4 pt.	Seed	Row 10b	August 1	Hills	36				Aug.	
Beets (1)	20		12	1/4 oz.	Seed	Row 1a	May 1-12	Drills				3	June 1-10	Aug. 30
Beets (2)	25		12	1/8 oz.	Seed	Row 1b	May 30	Drills				3	Aug.	
*Brussels Sprouts	20	15	30	Pinch	Seed	Bed C	May 1-15	Drills	2	Row 8	July 30	18	Sept.	
*Cabbage	20	16	30	Pinch	Seed	Bed C	May 1-15	Drills	2	Row 8	July 30	18	Aug.	
Carrots	45		12	1/2 oz.	Seed	Row 2	April 1	Drills				2	July 15	
*Cauliflower	15	12	30	Pinch	Seed	Bed C	May 1-15	Drills	2	Row 8	July 30	15	Aug.	
Chards	25	25	18	1/4 oz.	Seed	Row 6a	May	Drills				12	July	
Corn (1)	55	36	36	1/2 pt.	Seed	Row 13	April 15-May 1	Hills	18				July 1	Aug. 10
Corn (2)	55	28	36	1/2 pt.	Seed	Row 14	May 1-15	Hills	24				Aug.	
Corn (3)	30	20	36	1/4 pt.	Seed	Row 11a	July 1	Hills	18				Aug. 30-Sept.	
Cucumbers	25	8	36	1/8 oz.	Seed	Bed C	June 15	Drills	4	Row 13b	July 15	36	Aug.	
Eggplant	25	12	36	Pinch	Seed	Bed C	May 15-30	Drills	2	Row 12a	July 10	24	Aug. 25-30	
Kale	30	30	18	1/8 oz.	Seed	Row 6b	September or April	Drills	1			12	150 days	
Kohlrabi	20		12	1/8 oz.	Seed	Row 3a	March 31	Drills				4	July	Aug. 15
Lettuce (1)	25	33	12	oz.	Seed	Row 3b	April 15	Drills				9	May 30	When gone sow again till July 1st
Lettuce (2)	60	80	12	1/4 oz.	Seed	Row 9a and 9y	April 1-15	Drills				9	May 15-30	Aug. 1
Lettuce (3)	20	26	12	1/8 oz.	Seed	Bed C	July	Drills	1	Row 1 a bet. Beets	Aug. 15-30	9	Sept.	

II.—A Planting Table for a Vegetable Garden 30 x 60 Ft.—Continued

VEGETABLES	REQUIRED				PLANT					TRANSPLANT OR THIN			HARVEST	
	Feet of Row	No. of Hills or Plants	Between Rows (Inches)	Amount of Seed	What	Where	When	How	Plants of Seeds Apart (Inches)	To	When	Spaces (Inches)	First	Remove by
Melons, Musk	30	6	36	1/16 oz.	Seed	Bed C	May 30- June 15	Hills	3	Row 13a	July 30	60	Aug. 30- Sept.	
Okra	30	20	24	1 oz.	Seed	Row 7b	May 1-15	Drills	1			18	Aug.	
Onions (Sets)	20		12	1/2 pt.	Sets (Bulbs)	Row 4a	March 1-15	Drills	1			2	June	Replace as used
Onions (Seeds) (1)	25		12	1/4 oz.	Seed	Row 4b	April 15- May	Drills		Some to Rows 9x and 9xx	July	3	July-Aug.	Transplant thinnings
Onions (Seeds) (2)	36		12	1/2 oz.	Seed	Plot A Bet. Rows	June 30	Drills				3	Aug.-Sept.	Sow after end of asparagus cutting
Parsnips	25		12	1/16 oz.	Seed	Row 5a	April 1-15	Drills				3	Aug.-Sept.	
Peas (1)	30		36	1 pt.	Seed	Row 11b	March 15	Drills				6	May 15-30	June 10
Peas (2)	25		36	1/2 pt.	Seed	Row 11a	March 31	Drills				6	June 10	June 30
Peas (3)	25		36	1/4 pt.	Seed	Row 12a	April 15	Drills				6	June 25	July 10
Peas (4)	30		36	1 pt.	Seed	Row 12b	May 1	Drills				6	July 4	Aug. 1
Pumpkins	25	3	60	20 Seeds	Seed	Row 14a	May 15	Hills	96			3 plants to hill	Sept.	
Radish (1)	30		6	1/2 oz.	Seed	Row 9 yy	March 15-31, April 15, etc.	Drills				1 1/2	April, May etc.	July 15
Radish (2)	Sow	between any rows	any rows	12 inches or more	Seed	Row 5b	April 15- May	Drills	a little often			2	July 15	
Salsify	30		12	1/2 oz.	Seed	Row 5b	April 15- May	Drills				2	July 15	
Spinach (1)	20		12	1/4 oz.	Seed	Row 1b	September	Drills	1			6	Mar.-May	May 25
Spinach (2)	20		12	1/4 oz.	Seed	Row 3a	August 15	Drills	1			6	Winter	Mar. 31
Spinach, N. Z.	25		24	1/2 oz.	Seed	Row 7a	May 15	Drills	1			6	June 30- July	
Squash, Summer or Bush	25	8	36	1/8 oz.	Seed	Row 10a	May 5-30	Hills	36			5 plants to hill	Aug.	
Squash, Winter	25	4	60	1/8 oz.	Seed	Row 14b	May 5-30	Hills	72-84			3 plants to hill	Sept.	
Tomato	30	10	36	Pinch	Seed	Bed C	April 15- May	Drills	2 x 2	Row 11b	June	36	Aug.-Sept.	
Turnips	25		12	1/8 oz.	Seed	Row 3b	July 1	Drills				4	Sept. 10	

* According as your taste inclines toward one or the other of these crops, you may give more or less space to that one. The treatment is similar in each case.



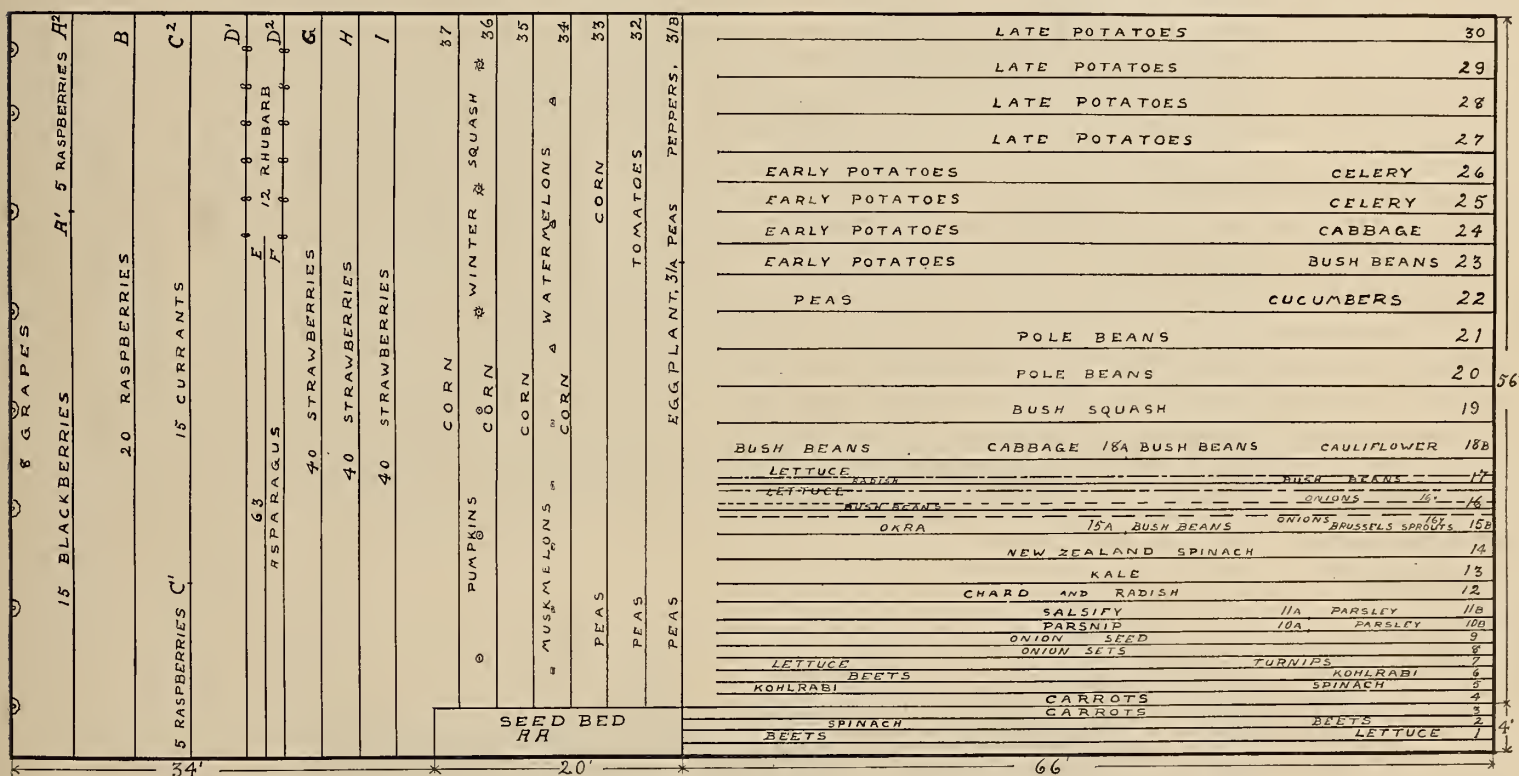
This plan, in conjunction with the foregoing table, provides for an economical and profitable treatment of a 30 x 60 ft. area

III.—A Planting Table For a Vegetable Garden 60 x 120 Ft.

FRUIT AND VEGETABLES	REQUIRED			PLANT					TRANSPLANT OR THIN			HARVEST		
	Feet of Row	No. of Hills or Plants	Between Rows (Inches)	Amount of Seed	What	Where	When	How	Plants or Seeds Apart (Inches)	To	When	Space (Inches)	First	Remove by
Grapes	60	8	60		Plants	Along N. Boundary	March		96				18 mos.	
Blackberries	45	15	60		Bushes	Row A1	March		36				15 mos.	
Raspberries	90	30	54		Bushes	Rows A2 B and C1	March		36				15 mos.	
Currants	45	15	54		Bushes	Row C2	March		36				15 mos.	
Strawberries	180	120	36		Plants	Rows G H I	March-April		18				14 mos.	40 mos.
Asparagus	126	63	18		Roots	Rows D1 E1 and F1	March-April	6" deep	24				14 or 24 mos.	
Beans, Bush (1)	156		24	2 pts.	Seed	Rows 15b 16 and 18	April 20-May 10	Drills	1-3				June	Aug. 15
Beans, Bush (2)	126		24	1½ pts.	Seed	Rows 17 and 23	August 1	Drills	1-3				Sept.	
Beans, Pole	126	42	36	¾ pt.	Seed	Rows 20 & 21	May 1-15	Hills	36				Aug.	
Beets (1)	126		12	2½ oz.	Seed	Rows 1 & 6	April 1-12	Drills			3		June 1-10	Aug. 30
Beets (2)	63		12	1½ oz.	Seed	Row 2	May 30	Drills			3		Aug.	
Brussels Sprouts	30	20	24	Pinch	Seed	Bed AA	May 1-15	Drills	2	Row 15b	July 30	18	Sept.	
Cabbage	96	64	24	Pinch	Seed	Bed AA	May 1-15	Drills 2" apart	2	Rows 18a and 24	July 30	18	Aug.-Sept.	
Carrots	126		12	1½ oz.	Seed	Rows 3 and 4	April 1	Drills			2		July 15	
Cauliflower	30	24	30	Pinch	Seed	Bed AA	May 1-15	Drills		Row 18b	July 30	15	Aug.-Sept.	
Celery	126	250	36	¼ oz.	Seed	Bed AA	May 1-15	Drills 2" apart	1	Rows 25 and 26	July 30	6	Sept.-Oct.	Cover and leave till used
Chards	63	63	18	1½ oz.	Seed	Row 12	May	Drills	1			12	July	
Corn (1)	112	75	36	½ pt.	Seed	Rows 34 and 35	April 15-May 1	Hills	18			5 stalks to hill	July 1	Aug. 10
Corn (2)	112	56	36	½ pt.	Seed	Rows 36 and 37	May 1-15	Hills	24			4 stalks to hill	Aug.	
Corn (3)	56	36	36	¼ pt.	Seed	Row 33	August 1	Hills	18			4 stalks to hill	Sept.-Oct.	
Cucumbers (1)	30	7	36	½ oz.	Seed	Row 22a	July 5	Hills	54			3 plants to hill	Sept.	
Cucumbers (2)	33	6	48	½ oz.	Seed	Bed AA	June 1	Hills	60	Row 22b	July 5	3 plants to hill	Aug.	
Eggplant	36	18	36	¼ oz.	Seed	Bed AA	May 15-30	Drills 2" apart	2	Row 31a	July 10	24	Aug.	
Kale	63	42	24	¼ oz.	Seed	Row 13	September or April	Drills	2			18	150 days	
Kohlrabi (1)	63		12	¼ oz.	Seed	Row 5	March 31	Drills				4	June	Aug. 15
Kohlrabi (2)	63		12	¼ oz.	Seeds	Row 6	July 15	Drills				4	Aug.-Sept.	
Lettuce (1)	63	84	12	½ oz.	Seeds	Row 7	April 15	Drills				9	May 30	July 1
Lettuce (2)	126	168	12	¾ oz.	Seeds	Rows 17x & 17y	April 30	Drills				9	June	Aug. 1
Lettuce (3)	?	?	12	Sow seed	in bed	and trans	plant to any	empty	spaces	as wanted	for late	succession	crops	
Melon, Musk	26	5	66	36 Seeds	Seed	Bed AA	May 15-30	Hills	2 x 2	Bet. Rows 34a and 35a	July	60	Aug.-Sept.	
Melon, Water	30	3	66	15 Seeds	Seeds	Bed AA	May 15-30	Hills	4 x 4	Bet. Rows 34b and 35b	July	120	Sept.-Oct.	
Okra	33	22	24	1 oz.	Seeds	Row 15a	May 1-15	Drills	1			18	Aug.	
Onion (Sets)	63		12	1½ pts.	Sets (Bulbs)	Row 8	March 1-May	Drills	2	Replace as used			May	
Onion Seed (1)	189		12	2 oz.	Seed	Row 9	April 15-May	Drills		Rows 16x and 16y	July 30-Aug. 15	3	Transplant thinnings	
Onion Seed (2)	If more are wanted				sow bet	ween aspa	ragus rows,	after cut	ting is	discontinued			120 days	
Parsley	30		12	Very Little	Seed	Rows 10b and 11b	September or March	Drills				3	Aug.	
Parnsips	48		12	¼ oz.	Seed	Row 10a	April 1-15	Drills				3	Aug.	
Peas (1)	56		36	1½ pts.	Seed	Row 32	March 15	Drills	1				May 15-30	June 10
Peas (2)	56		36	1½ pts.	Seed	Row 33	March 31	Drills	1				June 1-15	June 30
Peas (3)	119		36	2½ pts.	Seed	Rows 22 and 31	April 1-15	Drills	1	In Row 22 cucumbers	remove space July 10	plants to give	June	July 5-30
Peppers	20	12	36	Pinch	Seed	Bed AA	May 20-30	Drills	2	Row 31 b	July 10	18	Aug.-Sept.	
Potatoes (Irish) 1	189	126	36	10 lbs.	Tubers (Cuttings)	Rows 24, 25, 26	March 15-30	Hills	18				June	July 25
Potatoes (Irish) 2	252	126	36	15 lbs.	Tubers (Cuttings)	Rows 27, 28, 29, 30	April 1-15	Hills	24				Aug.-Sept.	
Pumpkin	30	3	72	¼ oz.	Seed	Bet. Rows 36b and 37b	April 15-May 15	Hills	120				Sept.-Oct.	
Radish (1)	63		6	¼ oz.	Seed	Bet. Rows 17x and 17y	April 30	Drills				1	May	Aug. 1

III.—A Planting Table For a Vegetable Garden 60 x 120 Ft.—Continued

FRUITS AND VEGETABLES	REQUIRED				PLANT					TRANSPLANT OR THIN			HARVEST	
	Feet of Row	No. of Hills or Plants	Between Rows (Inches)	Amount of Seed	What	Where	When	How	Plants or Seeds Apart (Inches)	To	When	Space (Inches)	First	Remove by
Radish (2) Radish (3) Rhubarb	63 20	12	6	3/4 oz.	Seed often	Row 12 between a Rows D1 and D2 Row 11a	April 15 any two rows September or March April 15- May	Drills where Hills	there 36	Remove as is 10 in.	Chards clear sp ace	need room	May	
Salisfy	48	12	12	1 oz.	Seed	Row 11a	Aug. 15 September	Drills	1 1/2		2		8 mos. or 1 yr. July	
Spinach (1)	63	12	12	3/4 oz.	Seed	Row 5	Aug. 15	Drills					Winter	Mar. 31
Spinach (2)	63	12	12	3/4 oz.	Seed	Row 2	September	Drills					Mar.	May 25
Spinach, N. Z.	63	24	6	1 oz.	Seed	Row 14	May 15	Drills	1				June-July	
Squash, Bush	63	15	36	1 oz.	Seed	Row 19	May	Hills	48			3 Plants to hill	Aug.	
Squash, Winter	26	4	72	1 oz.	Seed	Bet. Rows 36b and 37b	May	Hills	84			3 Plants to hill	Sept.-Oct.	
Tomato	56	18	36	Pinch	Seed	Bed AA	April 20-May	Drills	2 x 2	Row 32	June 15-30	36	July-Aug.	
Turnips	63	12	12	1/2 oz.	Seed	Row 7	July 1	Drills				3	Sept.	



Use this plan with the table that precedes it. The fruit area (Row A-1) remains unplowed from year to year

If you decide to take the accompanying plans merely as hints the following points will serve as useful principles in garden planning.

(1) Run the rows north and south if possible, to admit the maximum sunshine to every row.

(2) Keep the perennial crops together in one place which need not be disturbed by the spring plowing.

(3) If there is any choice, put the tallest vegetables at the north end. They don't shade the others there.

(4) In successions don't follow one crop with another of the same kind, unless it be lettuce or onions, both of which are less seriously harassed by insects.

(5) Plant in long rows, not in beds, and save time when cultivating with the wheel hoe.

(6) Keep vegetables requiring but twelve inches of space together, the same with the eighteen inch ones, and so on. This makes a neater, more convenient garden.

(7) Make the plan to scale. Mark off each foot of ground on paper. Then when planting, measure the ground just as accurately.

(8) Use the earliest varieties for both very early and very late crops. Sometimes you can get a crop of corn, radishes or even peas, long after their orthodox season has passed. But don't try to count too much on these successes. Build the plan a little more conservatively, and let the

special features and experiments be side issues. Keep in mind that in the very little vegetable garden, we are trying to make the most of everything, and can hardly afford experimental risks merely for the sake of the fun they offer.

(9) In very small gardens, substitute a wire or lathe trellis for the historic bean-poles. It is more convenient, more accessible, and more easily obtained by the city or suburban gardener. In plan No. 1, given above, the beans will be immature while the pea vines occupy the other side of the trellis, and will have passed their prime by the time the succeeding tomato and cucumber vines cover the support.

Balance in the Flower Garden—By Mrs. Francis King, ^{Mich-}_{igan}

PLANTING FOR THE MOST ARTISTIC EFFECTS OF MASS AS WELL AS HARMONY OF COLOR AND SUCCESSION OF BLOOM THROUGH THE SEASON—WHAT THE AMATEUR SHOULD THINK OF IN MAKING THE DESIGN

WHEN the chance to arrange the planting of a formal garden of my own fell into my hands about eight years ago, I felt strangely the need of advice in what I was about to do. Advice, however, was not forthcoming, and at the outset I fell, of course, into the pit of absurdity. Without any reason for so doing, I decided to arrange the planting in this garden, (a balanced design in four equal parts with eight beds in each section) as though the whole were a scrap of perennial border a few feet wide and a few feet long. The ridiculous idea occurred to me to have the garden a picture to be looked at from the house alone. The matter of garden design was to fade out of sight except with regard to the few beds immediately surrounding the small central pool. These were planted more or less formally with heliotrope in the four parallelograms nearest the centre and iris and lilies in four other spaces near the rest. I endeavored to produce irregular crosswise banks of color from the far end of the garden to the part nearest the house; scarlet, orange and yellow with a fair sprinkling of hollyhocks in yellow and white on the more distant edge; before these, crowds of white flowers, gray-leaved plants and blue-flowering things, and nearest of all to the beholder, brighter and paler pinks.

The result was nothing but an ugly muddle; indescribably so when one happened to be in the midst of the garden itself. For two or three years I bore with this unhappy condition of things; indeed nothing but the fact that the flowers conducted themselves in remarkably luxuriant and brilliant fashion due to the freshness and richness of the soil, could have saved me from seeing sooner the silly mistake I had made; when chancing to look down upon the garden from an upper window, the real state of things suddenly revealed itself, and from that day I set about to plan and plant in totally different fashion.

With Mr. Robinson, I feel against the wretched carpet-bedding system, while I quite agree on the other hand with the spokesman for the formalists,

Reginald Blomfield, who declared that there is no such thing as the "wild garden," that the name is a contradiction of terms. The one thing I do maintain, is that advice, the very best advice, is the prime necessity. For those who can afford it, the fine landscape-architect; for those who cannot, the criticism or counsel of some friend or acquaintance whose experience has been wider than their own. The time is sure to come when experts in the art of proper flower grouping alone will be in demand.

There is no doubt about it, our grandmothers were right when they preferred to see a vase on each side of the clock! With a given length of shelf and a central object on that shelf, one's instinct for equalizing calls for a second candlestick or bowl to balance the first. My meaning may be illustrated by Mrs. Tyson's beautiful garden at Berwick, Maine. Charming as is this lovely garden-vista, with its delightful posts in the foreground, repeating the lines of slim poplar in the middle distance, it would have given me much more pleasure could those heavy-headed white or pale colored phloxes on the right have had a perfect repetition of their effective masses exactly opposite—directly across the grass walk. These phloxes cry aloud for balance, placed as they seem to be in a distinctly formal setting.

So it is in the formal flower garden. I have come to see quite plainly through several years of lost time that balanced planting throughout is the only planting for a garden that has any design worth

the name. It is difficult to conceive of that formal garden in which the use of formal or clipped trees would be inappropriate; and these we must not fail to mention, not only because of the fine foil in color and rich background of dark tone which they bring into the garden, but of their shadow masses as well and their value as accents. And that word "accents" brings me to the consideration of the first important placing of flowers in a garden, which like my own, is, unlike all Gaul, divided into four parts.

Two crosswalks intersect my garden, causing four entrances. To flank each of these entrances, it can be at once seen, balanced planting must prevail. In the eight beds whose corners occur at these entrances, this planting is used: large masses of *Thermopsis Caroliniana* give an early and brightly conspicuous bloom. Around these the tall salmon pink phlox, *Aurore Boreale*, much later; below this—filling out the angle of the corner to the very point—the blue lyme grass (*Elymus arenarius*), gladiolus William Falconer, and lowest of all, *Phlox Drummondii*, var. Chamois-rose. None of these colors fight with each other at any time, and the large group of tall-growing things is well fronted by the intermediate heights of the lyme grass and the gladiolus when in growth or in bloom. The four far corners of my garden I also consider more effective when planted with tall-growing flowers; in these the Dropmore *Anchusa Italica*, first shines bluely forth; this soon gives place to the white *Physostegia* with phlox Fernando

Cortez blooming below the slim white spikes just mentioned; and last, to light up the corners, comes the mauve *Physostegia Virginica*, var. *rosea*, whose bloom here is far more profuse and effective than that of its white sisters. This grouping gives almost continuous bloom and very telling color from mid-June to mid-September; the periods of green when they occur are short, and the vigorous looking plants are not at all objectionable before they blossom. The effect of balanced planting in these corners, I consider good. The eye is



The large increase of the lower growing plants, evenly repeated in each quadrant of the garden, give it harmony of mass

carried expectantly from one angle to another and expectation is fulfilled.

In the centre of this garden are four rectangular beds, corresponding in proportion to the size of the rectangular pool. These, as forming part of the centre of the garden, are always planted exactly alike. Purple of a rich bluish cast is one of the colors which bind instead of separate, and purple it is which here becomes an excellent focal color for the garden. In the middle of each bed is a sturdy group of the hardy phlox Lord Rayleigh, surrounded on all sides by heliotrope of the darkest purple obtainable. This year, however, I expect to replace the heliotrope with even better effect by tall blue ageratum which I saw in one or two Connecticut gardens, as the paler color is more telling and quite as neutral for such a position. Speaking of this ageratum I may perhaps digress for a moment to mention a charming effect I saw on an out-of-door dining-table last summer, obtained by the use of this flower. The color of the table was a pale cool green and most of its top was exposed; in the centre stood a bowl of French or

Italian pottery, bearing a careless gay decoration and at the four corners smaller bowls. These were filled, to quote the words of the knowing lady whose happy arrangement this was, "with zinnias which had yellows and copper reds with the variety which resulted from an order of salmon pinks and whites. We really had almost everything but salmon pink."

The zinnias, I who saw them can affirm, made a most brilliant mass of color not altogether harmonious; but all was set right by the introduction, sparingly managed, of the lovely ageratum, Dwarf Imperial Blue. The eye of her who arranged these flowers saw that a balm was needed in Gilead; the ageratum certainly brought the zinnia colors into harmony as nothing else could have done, and a charmingly gay and original decoration was the result. What a suggestion here, too, for the planting of a little garden of annuals!

We are apt to think of balance in the formal garden as obtained for the most

part by the use of accents in the shape of formal trees, or by some architectural adjunct. I believe that color masses and plant forms should correspond as absolutely as the more severe features of such a garden. For example, in practically the same spot in all four quarters of my garden there are, from perhaps four to six weeks, similar masses of tall white hardy phloxes, the blooming period beginning with Von

trimmed) offering a rarely interesting medium for obtaining balanced effects.

But the tall plants are not the only available means for producing balanced effects. Lower masses of foliage or flowers have their place. They must be masses, however, unmistakable masses. Thus, in the illustration on the preceding page, each of the large flower masses of baby's breath (*Gypsophila elegans*)—consisting of the bloom of but a single well-developed plant—is repeated in every instance in four corresponding positions in this garden. There was too much gypsophila in bloom at once when this picture was made, but because some was double the effect was not as monotonous as the photograph would make out. In a fine garden in Saginaw, Michigan, designed and planted by Mr. Charles A. Platt, balance is preserved and emphasized in striking fashion by the use of the plantain lily (*Funkia Sieboldii* or *grandiflora*), with its shining yellow-green leaves. Masses of this formal plant are here used as an effective foreground for a single fine specimen bush, not very tall, of Japan snowball (*Viburnum plicatum*)

The poker flower (*Tritoma Pfitzeri*) is also used in this garden to carry the eye from point to corresponding point; and speaking of tritoma, which Mr. Platt in this garden associates with iris, let me mention again that delightful ageratum, as I lately saw it, used below tritoma. The tritoma must have been one of the newer varieties, of an unusual tone of intense salmon-orange, and while the ageratum would seem too insignificant in height to neighbor the tall spike above it, the use of the lavender-blue in large masses added enormously to the effect of the torches.

In the second illustration, the rather thin looking elms seem to flank the garden entrance rather fortunately. A certain pleasurable sensation is felt in the balance afforded by the doubly bordered walk with its blue and lavender Michaelmas daisies or hardy asters. It is surely the repetition of the twos which has something to do with this; two borders, two posts, two trees, the eye carried twice upward by higher and yet higher objects.



Repetition by twos of the main factors of the composition largely discounts the incongruous house roofs which unfortunately intrude

Lassberg and closing with Jeanne d'Arc, the white repeated in the dwarf phlox Tapis Blanc in four places nearer the centre of the garden.

For accents in flowers, the mind flies naturally, to the use first of the taller and more formal types of flowers. Delphiniums with their fine uprightness and glorious blues; hollyhocks where space is abundant and rust doth not corrupt; the magnificent mulleins, notably *Verbascum Olympicum*, might surely emphasize points in design; and I read but now of a new pink one of fine color, which, though mentioned as a novelty in Miss Ellen Willmott's famous garden at Warley, England, will be sure to cross the water soon if invited by our enterprising nurserymen. Lilies of the cup-upholding kinds, standard roses, standard wistarias, standard heliotropes are all to be had. The use of the dwarf or pyramidal fruit tree in the formal garden is very beautiful to me, recalling some of the earliest of the fine gardens of England, and (where the little tree is kept well

The Right Way to Buy and Plant a Fruit Tree—By W. H. Jenkins, ^{New York}

A LARGE percentage of the fruit trees planted each year never lives to bear fruit. Generally the loss is due solely to wrong planting and subsequent neglect. Of course the best beginning is to get good thrifty trees.

Plant in early spring before the leaves start. Buy your trees from the nearest reliable nursery, and preferably where climatic and soil conditions are similar to your own. This may not be practical, and you must then rely on the established reputation of a given nursery. Order what are called No. 1, two-year-old trees. Culled trees graded as Nos. 2 or 3 are usually crooked and less vigorous. If you are near a nursery go there and pay for the privilege of making your own selections. If the order is a small one have the trees shipped by express; then there is no danger of delay and injury from frost or drying out.

Plan to have the trees shipped to arrive when the soil is just right for working. If possible plant the trees on the highest ground on the place. A dry knoll or

sloping land is generally preferable to low, moist, rich soil; but even if the soil has to be artificially drained and specially prepared, have a few fruit trees, any way. Land on which cultivated crops were grown the previous year is best, plowed as early in the spring as the surface soil will crumble in the hand.

In the small fruit garden, where plowing is not easy, trees are best planted by digging holes with a spade. For the family orchard, plow and harrow, then open deep furrows, so as to plant the trees in check rows twenty to forty feet each way, forty feet for apples, thirty for pears and peaches, and twenty for cherries and plums.

When the trees arrive, if you are not ready to plant at once, unpack them and "heel in," keeping roots moist until permanently planted. This merely means that the trench is opened, the roots put in and loosely covered with earth. When ready for planting take a few trees from this trench and keep the roots covered as much as possible while planting. First root-prune—it is generally best to cut back the longest roots at least one-third with a clean slanting cut from below upward and outward, so that the exposed surface easily gets in contact with the soil. Also cut off all broken roots. Spade out the hole a little larger than the diameter of the roots and scatter a few spadefuls of fine, rich surface soil in the bottom of the hole. Place the tree in the hole, scatter more of the fine surface soil over the roots, working it around them with the hand, and lifting the tree a little to get the soil all around the fine roots. When the hole is partly filled press the soil down over the roots with the feet. If the soil is dry, pour a few quarts of water very slowly into the hole, and shovel in soil around the tree so that it is planted a little deeper than it stood in the nursery, or just above the place where the tree was budded.

Press the soil again around the tree with the feet and place over it a mulch of straw or something that will hold moisture, perhaps a foot deep and three feet in diameter, and hold in place with stones. The last thing to do is to head the tree back to the shape desired. One must be governed in this, somewhat, by the shape of the tree when received from the nursery. Two to four feet is the best height for the low headed tree in the family orchard, for it is more easily pruned, sprayed, and the picking is facilitated.

During the first summer keep watch to see if the mulch stays in place around the tree, and if the summer is very dry, pour a little water on the mulch occasionally. It is much better to grow some crop between the trees the first year or two, the cultivation and fertilizing required by the crop, putting the soil in good condition for the root growth of the trees in succeeding years. It is always safer to protect young trees with a good fence, for my experience is that some will be broken down unless so protected.



Put a few spadefuls of fine surface soil in the bottom of the hole



Root-prune the tree before placing it in the centre of the hole



Draw some soil over the roots to hold the tree erect



Then, place some fine surface soil around the roots



Firm well with the feet close around the trunk



Slowly pour on a few quarts of water, and mulch

The Story of a Boy's Successful Market Garden—By Roger N. Perry, Massachusetts

A BOY'S EXPERIENCE IN STARTING A BUSINESS—EIGHT YEARS OF GROWTH, BEGINNING WITH A FEW SQUARE FEET FOR FUN, UNTIL NOW HE HAS A REGULAR TRADE

I BECAME a gardener nine years ago when I was eight years old. Because of ill health, outdoor occupation was necessary and as I was not strong enough to play with other children, my parents gave me a little garden of my own. The large kitchen garden had already been planted, but that year, wherever I could find a bare spot, I planted hills of potatoes, corn, sunflower and radish seed.

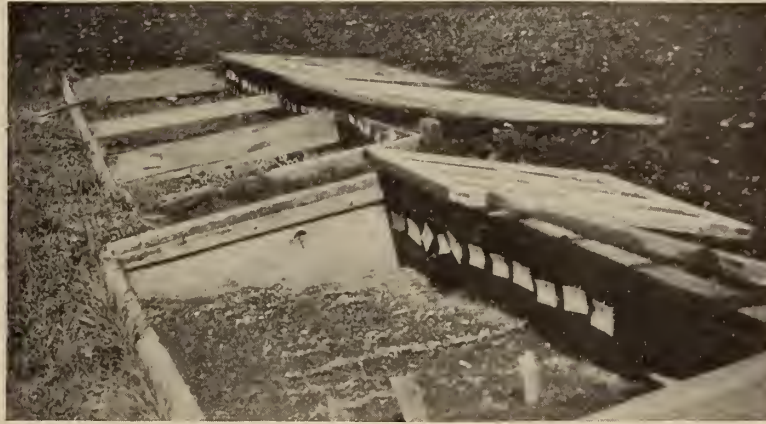
The next year, when I was nine, I had a garden of four rows twenty-five feet long. When my vegetables were large enough I thought it would be fun to become a peddler, so loaded up my express cart and went to a neighbor who had asked me to dig dandelion greens for her. She bought of me and encouraged me to go to other neighbors.

At ten my joints were so sore and stiff from rheumatism that I could not use a hoe and I had to crawl on my hands and knees, using a trowel to loosen the soil around my plants; that year I had a garden 25 x 30 ft.

The next year my garden area was increased to eleven hundred square feet. That same year a skylight was taken out of my room and I used the window and frame for a hotbed. The bed was made two feet deep. I put the window frame, which was two by three feet, over the hole, sinking the south side five inches lower than the north side to get all the sun possible.

We put a foot of fresh horse manure from under the stable in the bottom of the bed and covered this with six inches of garden soil. I put the window on and let

it stay four or five days. The manure heated the soil so that it was very moist and the window was all steam. Then I sowed cabbage, lettuce and celery seed, and covered them with about one-fourth inch of soil. If my hotbed seemed dry I



These hotbeds, made out of old window sash and rough boards, raised all the seedlings

would sprinkle it, and as the days got warmer, I would take off the window to let the plants harden. If any of the nights were cold enough to freeze through the glass I would get an old blanket and cover the window. When I was fourteen a man gave me two windows six by four feet. The soil was the same as I used in the first hotbed except that I mixed in sand where I sowed celery.

About this time I heard the Massachusetts Horticultural Society was offering prizes for children's home gardens. I entered mine and took first prize. In 1906 I made a harness for my dog out of some old straps and my grandfather made me a real little dump-cart. I delivered my goods to the neighbors and to stores in the town.

In 1907 my father bought an adjoining strip of property and I had a flower garden on part of it, growing such plants as balsam, bachelor's button, zinnia, candytuft, stock, coreopsis and snapdragon.

In 1909 I grew parsley. My private customers could use but little, but I found the hotels and restaurants would use a quantity. This opened a new line of trade and the next year the restaurants took all the sweet corn I could produce.

In 1908 I raised some flowers. A neighbor ordered one hundred aster plants.

I wanted my garden for 1909 to be the best ever! This was the last year I could exhibit in Boston, for I was fifteen years old, so I increased my garden to 5,000sq. ft. Sweet peas, narcissus and asters were sold to a florist, marigolds for medicine and cut flowers for bouquets.

My seeds were given me until I was twelve years old. Then I wanted a larger variety to exhibit so bought more and more each year until last year I paid out four dollars for seeds. This is the record of my eight years' gardening:

Year	Veg. Sales	Flower Sales	Flower Prizes	Veg. Prizes	2nd Prize Essay	Total	Age
1902	\$2.50					\$2.50	8
1903	9.00	I have	no reco	rd this	year	10.00	9
1904	11.15			\$1.00		17.30	11
1905	22.48			6.15		30.48	12
1906	31.58		\$4.10	8.00		43.68	13
1907	70.22	\$1.93	11.00	7.40	\$5.00	92.65	14
1908	57.21	7.00	7.50	4.50		76.21	15
1909	32.01	22.95	2.50			57.46	16
	\$236.15	\$31.88	\$25.10	\$31.55	\$5.00	\$329.68	



The young market gardener at work among his crops



Which he marketed successfully in a "dog cart"

Some Old New England Gardens Showing the Mellowing Touch of Aged Trees



The Low garden at Salem, Mass. Big masses of peonies and mature growth of trees



Time has overcome the neatness of newness and heavy masses give character. The old Hoffman garden at Salem, Mass.



Sturdy old oaks and other trees and shrubs with well-clipped hedges lend seclusion. Whittier's garden, Danvers, Mass.



Despite the modern bedding plants, dignity comes from this old tulip tree. The old Peabody garden at Danvers, Mass.



Hardy perennials, though newly planted, look old in the Poore garden at Newbury, Mass., thanks to the background of trees



A hundred-year-old garden at Newburyport, Mass., where the original design is yet unaltered

A Few Newer Gardens of the West in Which Masses of Flowers Are Dominant



At Glenco, near Chicago, Illinois. An effect made from absolutely nothing. Only the water was there.



A good beginning in a Dakota garden. The trees are yet young. Masses of roses in flower



Where irises are lavishly planted in a Madison, Wisconsin, garden. Every way equal to the East



Naturalized daffodils are as much at home in Portland, Oregon, as in the fields of New England



Formal gardening on a large scale in a garden at Grosse Pointe, Michigan. The setting of trees gives the note of permanency

Money in Backyard Gardening—By Adolph Kruhm, Ohio

WE hear much about "the high cost of living" these days. True, it costs to live. But there are a number of chances to save; we managed to save nearly thirty dollars on vegetables last summer from a garden 40 x 50 ft.

In May, 1910, we moved into a house surrounded with ample room to have such a garden. One evening I mapped it all out and during the spring did the digging before breakfast and the hoeing after supper.

I now know the soil needs lime, what vegetables do best in heavy clay soil, and a number of other things I could not have learned except from actual trials. I also expect to save about ten dollars more this season from very early vegetables, by starting in March and April. There are just a few things which stand out boldly in my memory as being especially noteworthy.

One of them was Swiss chard Lucullus, a row of which was planted between the tomatoes and beans and radish beds. I never thought it possible to get so much from a 15-foot row. Planted and treated exactly like beets, the plants stood five inches apart in the row. From thirty-five plants we had fine greens nearly every week from July till October.

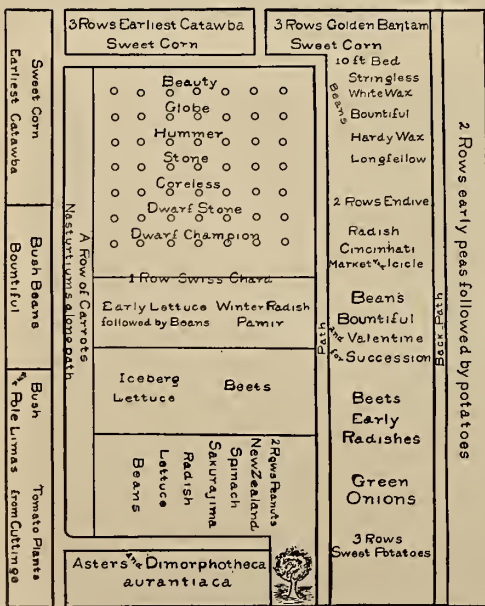
Another one of my "leaders" was the green-podded bush bean, Bountiful. Flat, fleshy pods, stringless at all stages of growth, and of delicate flavor, even when old. Bountiful only "fell down" in the late fall when Stringless Refugee came to perfection. But for early spring and summer work in stiff clay soil and dry seasons give me Bountiful.

Earliest Catawba corn has been called "the only rival of the famous Golden Bantam," but I cannot quite agree. Earliest Catawba showed tassel earlier than Golden Bantam and we pulled very young ears about three days sooner, but Golden Ban-

tam has a flavor all its own! Earliest Catawba has handsome ears and the quality is tip-top, but I think Golden Bantam is best for backyards.

I grew a few plants of the Giant Podded pole Lima. They were whoppers. I can still see Baby stand in the garden beside me and say: "Daddy, that are beans." I took her picture with the beans (page 158). I guess you'll agree with the baby. Sixty-five pods on one plant, forty on another and all were large, many seven inches long with six beans to the pod. Shelled beans were large, green, thin skinned, of finest flavor.

A final word about some of the tomatoes. I think Coreless took the prize for large, handsome, perfectly round fruits of unsurpassed "slicing" qualities, while Improved Dwarf Champion yielded the largest number of fruits per plant. This may seem strange. But staking and pruning put the dwarfs on the level with the tall sorts, and clay soil must have agreed particularly with Dwarf Champion. It made immense bushes, some four feet tall and was less affected by blight (on account of its heavy foliage) than any other sort except Dwarf Stone.



Plan of the 40 x 50 ft. garden

SORTS OF VEGETABLES	COST OF SEED	DATE PLANTED	SPACE DEVOTED	YIELD	VALUE	NOTES
BEANS, Stringless Green Pod	\$.10	5-17	10 ft.	3 qts.	\$.15	Blighted badly
" Valentine Red	.10	5-17	10 ft.	2 qts.	.10	Gets stringy
" Longfellow	.10	5-17	20 ft.	4 qts.	.20	Gets stringy
" Bountiful	.25	5-18, 6-1, 15-7-1, 15	60 ft.	1 bu.	2.50	Best on trial
" Stringless Refugee	.10	7-1	20 ft.	3 qts.	.30	Good late sort. Prolific
" Hardy Wax	.25	5-18, 6-15, 7-12, 8-1	40 ft.	18 qts.	1.25	Does well in spring and fall
LIMAS, Fordhook (bush)	.10	5-19	20 ft.	2 qts. sh'd.	.30	Had to replant twice; cold, wet spring
" Burpee Improved	.10	5-21	10 ft.	1 qt. sh'd.	.15	Replanted one-half on June 10th
" Giant Podded (pole)	.10	5-20	6 hills	2 qts. sh'd.	.30	Secured only 2 plants
BEETS, Detroit Dark Red	.10	6-2	20 ft.	6 doz.	.60	Extra fine and sweet
" Crimson Globe	.05	6-20	10 ft.	2 doz.	.25	Good, early and round
SWISS CHARD, Lucullus	.10	6-2	15 ft.	10 meals	1.00	Finest ever, crisp and tender
CARROT, Danvers	.05	6-10	30 ft.	10 doz.	1.00	
CORN, Golden Bantam	.10	6-5	35 ft.	3 doz.	.75	Superb backyard garden sort
" Catawba	.15	6-5	50 ft.	4½ doz.	1.00	Very early
ENDIVE, White Curled	.05	5-21	10 ft.	12 plants	.50	We cooked both together like spinach
MUSTARD, Giant Curled	.05	5-21	10 ft.	20 plants	.25	
LETTUCE, May King	.05	5-17	10 ft.	8 heads	.40	Best early head lettuces
" Wayahead	.10	5-17	10 ft.	7 heads	.35	
" Iceberg	.05	6-5	20 ft.	16 heads	.80	We prefer it to all others
ONION SETS, white	.10	5-10	20 ft.	5 doz.	.50	Gave us the green "scullions"
PEAS, Prolific Market	.10	6-1	50 ft.	4 qts.	.40	Very free-bearing
" Gradus	.15	6-2	20 ft.	2 qts.	.30	Excellent pods, but shy yielder
POTATOES, white	.20	6-1	80 ft.	1 bu.	.75	Poor yield; were neglected; bugs ate vines
" sweet		6-5	10 hills	1 peck	.25	
RADISH, Rosy Gem	.05	5-17	20 ft.	10 doz.	1.00	
" Cin. Market	.10	5-19	40 ft.	15 doz.	1.50	Good all round sort
" Livingston's Pearl	.05	5-17, 30	20 ft.	10 doz.	1.00	Best of the White Icicle type
" Scarlet Pamir	.05	6-5	15 ft.	3 doz.	.30	Planted too early for a summer sort
" Cal. Mammoth	.05	7-17	10 ft.	10 roots	.20	Much under size. Neglected to thin
" Black Spanish	.10	7-17	20 ft.	½ bu.	.50	Best winter keeper
" Sakurajima	.10	6-15	10 ft.	6 roots	.30	Averaged 10 lbs. apiece
SPINACH, Victoria	.05	5-17, 23	20 ft.	4 meals	.40	Good; does not stand hot weather
" New Zealand	.05	7-3	10 ft.	3 plants	.10	Finest summer spinach
TOMATOES, Globe				80 fruits	1.50	All tall sorts were more or less damaged by blight. Pruning and staking was done. Plants stood 2½ feet apart each way
" Hummer				40 fruits	.75	
" Coreless				65 fruits	1.50	
" Beauty	.80	5-24	6 plants of each	50 fruits	1.00	
" Stone				45 fruits	1.00	
" Dw. Stone				35 fruits	.75	
" Dw. Champion				85 fruits	1.50	Not good for stiff clay soil
PEANUTS, Mammoth	.10	7-3	10 hills	1 qt.		
	\$3.90				\$27.65	
SEED left over, about ½	1.00					
ACTUAL COST	\$2.90					

CHILDREN'S GARDENS EVERYWHERE



MAKING ARBOR DAY A LIVING REALITY—METHODS OF CONDUCTING HOME GARDEN WORK—A TALLY CARD FOR CHECKING UP CHILDREN'S HOME GARDENING EFFORTS

Conducted by
ELLEN EDDY SHAW
New York



Arbor Day

ARBOR DAY should be a real live sort of day in schools. It should be an active, doing day; not a day of recitation only.

What sort of things shall we do? Let us plan for outdoor work. Suppose it rains! Then if it does let us have the whole school meet together and each grade can tell the others what its special piece of work was and what it will do the next pleasant day. For example: the boys of the seventh grade were to plant trees; then the whole piece of work may be told by aid of blackboard and crayon:

Here is a list of some Arbor Day pieces of work, and since the date of the day is not the same in all states the list is a varied one:

(1) Plant trees either in the school yard or along the street. In choosing the tree for the school grounds select one of our native kinds. In choosing one for the street keep in mind such points as beauty, shade, rate of growth and brilliancy of foliage. Why not make out a list of suitable ornamental and shade trees.

Farmers' Bulletin No. 173, "A Primer of Forestry," gives a good history of the life of a tree. Send to the Department of Agriculture at Washington for this. For simple directions on how to plant trees send to our "Children's Gardens Correspondence Bureau."

(2) Clean up the school grounds, assigning sections to different grades. Burn all rubbish. Fill in all holes in the lawns. Clean paths and gutters.

(3) Make a plan of the grounds as they are to be with all improvements made. Draw this plan to scale. Have it where it may be constantly referred to. The Government issues a bulletin on the subject of improvement of school grounds.

(4) Fix that old stone wall. Set posts for the new chicken wire fence. Be sure the boys know how to use the spirit level. The making of a level is a piece of manual work for boys.

(5) The small boys and girls can beautify unsightly objects with vines of nasturtium, morning glory, scarlet runner beans and cucumber.

(6) Dig dandelion and other weed roots out of the lawn.

- (7) Start a rose garden.
(8) Prune old wood from the trees and shrubs.
(9) Set out some shrubs. Make a study of shrubs as was done for the trees. Make



These morning glory vines made the summer camp beautiful

out a shrub planting table telling: time of blossoming; color of blossom; nature of fruit; the kind of soil to plant in and points of interest about the shrub.

(10) Look around the town and see if there is an ugly spot to be fixed up.

(11) Dig up the garden and manure it properly.

(12) Plant whatever can be planted in the garden.

(13) Send to the departments of education in different states for a copy of their Arbor Day manuals. New York State always sends out to its teachers an attractive and helpful annual; so too, does Wisconsin.

(14) Let us know what you did on Arbor Day toward making a more beautiful world.

An Arbor Day Garden

THE following is an account of two lads' real Arbor Day work by Jessie J. Carpenter of Colorado:

"Arbor Day was a holiday in our town, and the children celebrated by planting a garden. The ground had been plowed, and it took nearly the entire day to clear off the rocks, pulverize the clods and mark off the rows. But they succeeded in getting the seeds into the ground late in the afternoon. Radishes, lettuce and peas were used.

The ground was so cold that it was two



The back yard may be made beautiful by the children at slight money cost and some real labor

weeks before the plants began to make their appearance. The first Saturday after they were all up so the rows were clearly defined, the boys hoed their garden thoroughly. This was done every two weeks until the peas began to blossom.

Three weeks from the time the plants were up we began to use the radishes—delicious, little, round, red ones—and had all we wanted for a family of four for nearly a month, with quantities of crisp, crinkly lettuce. From this little garden we had ten quarts of peas which matured all at one time.

The boys did not sell any of their garden stuff, but if we had bought all that we used it would have cost not less than \$3. But here is a photograph of morning glories that these same small boys planted and watered all summer, hauling the water from an irrigating ditch nearby, using for the purpose their little farm wagon and an old milk can. (See preceding page.)

They built a trench along the front and one end of the porch, driving stakes at the ends and corners, one foot from the wall to which they nailed a board one foot wide. This made a trench ten feet long in front, six feet long at the end, one foot wide and one foot deep. They filled it with the clay soil of the place mixed with a quantity of barn yard manure and planted it thickly with morning glory seed. When the plants came up they were too thick to grow well, so a good many of them were taken up and transplanted on the west side of the house. These were slow at first in getting a start, but watering each day kept them

Address			
Name			
North Andover Improvement Society Home Garden Report.			
First Visit		Second Visit	
Kinds Growing		Care	
Taste in Planting		Condition	
Care of Garden		Date	
Condition		Date	
Date	Special Features	Visitor	Visitor
Visitor		Visitor	
Mark answers by letter. E—Excellent. G—Good. F—Fair. P—Poor.			

alive. The morning glories shown here are on the south and east of the kitchen porch.

Home Gardens

THE back yard beautiful is beginning to be a realization here and there in our country. The best methods of carrying on this home garden work for children are to be earnestly sought out in order that it may be of real benefit to the child and the community.

Many schools would take up the work gladly, but hesitate on account of the summer supervision. For even the home garden needs some supervision, and it surely needs to be visited if the children are to be given prizes for the work. A

very good method of carrying on the work is used in Andover, Mass. There is a village improvement society in North Andover. This society coöperates with the public school. During the summer or school vacation season members of the society visit the different home gardens. Three visits are made to each garden during the season. The North Andover report card shows the points upon which the child's garden is marked. This seems an excellent and business-like method of procedure. The parents may compete also in these contests. When the fall meeting of the children is called and the prizes awarded it is understood that these report cards are the basis of the ratings. The prizes are given by the society.

Mr. E. K. Thomas, who has charge of the garden work in Providence, R. I., sends the following about his work. This is especially suggestive for schools: "In regard to the home gardens here, I have had such a limited amount of time for the work that no well organized system has been developed. Early in the year when talking up school gardens and receiving applications for the same, I encouraged the pupils to make home gardens as well, and invited them to bring a sketch of their home yards, drawn to scale if possible, to the school on the day I was expected there, also a sample of the soil. Then I advised them what to plant or instructed them in planting the crops they desired.

"At the State Normal School, these weekly consultations were very interesting and valuable. The teachers encouraged the pupils to have questions ready, and the intelligent way in which they were asked and the nature of the questions proved that they were really seeking information upon the practical problems which must have come up in connection with their work.

"Whenever time would allow, I would visit some of the home gardens and take pictures. In some places, the parents became so much interested that they decided to spade up the whole yard and have a garden themselves."

For further help on planning home work write directly to the "Children's Gardens Correspondence Bureau," care of The Editor.



A method of watering used in Cleveland, Ohio. The water pipe can be rotated so that the water jets may be sent all over the garden at will



(EDITOR'S NOTE.—We want to know how successful workers do things in order to put actual experiences before our thousands of readers in all parts of the country. Every reader is invited to contribute a short note on some interesting experience. Just state the facts about some ingenious idea that you have actually worked out yourself or have seen.)

After trying several methods of labelling plants which would be inconspicuous and at the same time sure and always available, I have found that, by putting the label in a small glass phial and inserting this in the earth at the root of the plant, the glass protects the label and at the same time the writing is always legible. By using a tight cork the weather has no effect on the label and also the phials can be used indefinitely and for many purposes.—C. G. M.

Among many suggestions for a second crop in the tulip bed I have never seen the California poppy (*Eschscholtzia*) mentioned. If given a little room between the tulip rows, it will be ready to flower by the time the tulips have become unsightly; it will continue to blossom until heavy frost, and will resow itself indefinitely. I also give the ordinary poppies liberty to come up anywhere and everywhere, weeding out what I do not want. They reward me by all sorts of unexpected combinations. This year they grew with the blue cornflower and were enchanting. And the carnation-flowered poppies covered my bed of annunciation lilies as soon as the lilies were out of bloom.—L. A. S.

For two years I have tried to get watercress started but without success. Once on the margin of a beautiful clear brook, I sowed it at intervals of two weeks from February until late in spring, but not one seed seemed to germinate; so last year I tried another plan in another place. I sowed my seed on damp ground and kept it wet for weeks, and I also put some of the cress seed in a coldframe. The seed in the ground disappeared entirely, and I was so discouraged that I paid no attention to what I had put in the coldframe. Last fall the soil in the frame was hoed up several weeks before it was actually needed and in pulling up the second crop of weeds, I was amazed and delighted to find a sturdy crop of cress. The seeds must have been dormant all summer, survived the working of the ground and came up, in the cool fall weather.—A. G. W.

I have a better recipe for making bird glue (or lime) than that which appeared on page 296 of the January GARDEN MAGAZINE. Fill an iron pot one-fourth or two-thirds full of raw or boiled linseed oil. Build a fire out in the open, away from buildings, and boil the oil in the centre of the fire. The oil will soon start to boil. Let it boil for eight or ten minutes until about half of the quantity is boiled away. Have an iron cover or a stove lid handy, and cover the pot. When cooled off the oil will be thick like molasses, and may be spread on short branches of birches or other thin sticks and placed where the birds feed. The oil should be pure linseed oil; if adulterated with mineral oils it will not thicken.—R. J.

Three years ago I bought a two-year-old fig tree and planted it at the south end of my house. Just to the north of the tree is a porch which breaks the north wind, and the tree gets the full sun against the house and is protected by a stone wall on one side and by a cement sidewalk on the other, with a space of thirty inches between. The roots are rather crowded but have kept healthy. Michigan winters are rather severe. The first two winters I bent the tree to the ground and buried it with earth and litter, but the third it was so large that such treatment was not practical, so I covered the roots quite heavily with coarse manure, thoroughly wrapped the tree with old carpet and burlap, then set corn stalks all around it and securely fastened burlap over all. This treatment seems to be just as satisfactory as burying it. I headed the tree quite low so as to make it spread. It bore quite a number of figs last season and this year I expect a large yield.—W. L. S.

An experience that I have had here in California which I want to pass on to other amateurs is one with the much catalogued achillea, *The Pearl*. The universal and everlasting boom given this plant by growers everywhere is easily accounted for. Once a plant is started, they can go right on digging and selling, for the supply will never fail. If the plant gets well started in a home garden, the roots are there to stay and will twine around and choke out everything near them. Even if this achillea had great beauty, this trait would be against it when it is planted among other valuable plants. But the flower is really ugly—a muddy white, instead of a pure color—and in form not even equal to the old-fashioned feverfew, which was a nonentity. *The Pearl* is ugly in flower, and an undesirable and persistent "stayer" if given room.—E. A. S. (This is only further proof that the East cannot prescribe for the Pacific slope, and *vice versa*. The Shasta daisy of California is not half so good with us, and despite our correspondent's condemnation of "*The Pearl*," it will be considered as a worthy, pure white, hardy perennial by us in the East.—EDITOR).

The water arum (*Calla palustris*) grows wild and in profusion in a large swamp near where I live in western New York. I have found it growing in about eight or ten inches of water in a rather open place where the trees had been pretty well thinned out. In my opinion this calla ranks with Jack-in-the-pulpit, being fully as attractive, with its pure white spathe, contrasting yellow spadix and its glossy green leaves just above or riding on the water.—V. B.

I grew the vegetable marrow in my garden in New Hampshire last year and found it most delicious. We slice, salt and press it; then dip it in egg and flour and fry. We have it for lunch instead of meat, and we think it far superior to the eggplant in delicate quality, while retaining the meatiness that gives it the name of marrow. The Japanese cucumber, which scrambled over the rustic gate, was a most artistic feature and furnished us with long, pale green fruits of a delicate flavor and crispness.—N. D. F.

In preparing bordeaux mixture I make a saturated solution of blue vitriol putting it in a 2-quart bottle, which holds slightly under one pound of bluestone. I slack two or three cans of whitewash lime (which can be bought anywhere) in a stone jar, and keep it covered with water. To fill a 4-gallon spray pump I use about one-third of the contents of my 2-quart bottle, add two gallons of water, then stir up my lime and dip out enough of this so as to make about two gallons more. I pour these together into the spray tank and then test with a solution of ferrocyanide of potassium. If the mixture does not change the color of the ferrocyanide it is all right to use, but if it does add more lime water. It should be a beautiful blue color. By keeping the vitriol and lime in solution a canful can be made in perhaps three minutes.—E. P.

Do not be flattered by strong vigorous sprouts from the roots of newly planted tree peonies. They are a delusion and a snare. The writer planted a collection of Japanese tree peonies several seasons ago. A few of them bloomed and they were exceptionally fine. They made a vigorous growth from the roots and the next season failed to bloom. Another year came by and they were getting to be quite sizable plants. A number of fat buds unfolded in April; and these peonies had done a chameleon stunt of changing color. They were all alike, a dark purplish red. These blossoms were not to be despised and the plants are now fine bushes, but they are not the beautiful colors they were their first season. Since planting them I learned that all suckers from the roots must be suppressed, as these peonies are grafted. And the public prints tell us daily of the pernicious influence of grafting! The choice varieties had been choked out of existence.—S. R. D.



What Fuel Is Most Economical?

By MYRON T. SCUDDER, New Jersey

IF I could have my way about housework, I would have everything done by electricity — the cooking, washing and ironing, as well as the heating and lighting, and the running of sewing-machines, dish washers and vacuum cleaners. But at present only the rich can afford this ideal fuel. Cheap electricity will come, though, so abundantly and so cheap that departed spirits will gasp with surprise when they compare its cost and convenience with the gas they used at eighty cents or one dollar per thousand, or coal at six dollars and upward per ton.

If one cannot have electricity what is next best? In some parts of the country it would be natural gas. In others wood is the staple, for in many places this is still the cheapest and most important fuel.

But I think we shall have to admit that among all the fuels coal is "King." He may not be holding us down to "coal-hod slavery," we may succeed even in banishing his black majesty from our homes in the shape of actual lumps of pea, chestnut or stove coal; but he comes back in the form of gas or of electricity and domin-

ates the situation as of old. Yet in recent years a formidable rival has appeared on the scene and King Coal's title is vigorously disputed. This rival is petroleum, and the contest is between coal on one side and oil on the other. Oil, like coal, yields valuable fuel-gas, kerosene giving blue flame while gasolene gives carburetted air gas.

We are told in producing steam in a steam boiler 1,000 pounds of coal will accomplish approximately as much as will one cord of wood, or 84 gallons of oil or gasolene, or 20,000 cubic feet of coal gas. That is, estimating coal at \$6 per ton, its power to produce steam is as great as is \$9 worth of wood at \$4.50 per cord, or \$20 worth of oil at 12 cents per gallon, or \$40 worth of coal gas at one dollar per thousand cubic feet. This would seem to show that coal is the cheapest fuel.

Perhaps this is so in some cases. For instance, with steam engines or with heating systems for houses — for we may as well concede at once that coal is the most practical fuel for the heater in the cellar. Yet even in these cases petroleum is making some gains. But it must be remembered that in fuels like wood and coal a large proportion of the heat, some say 90 per cent., goes up the chimney or is radiated into the room. A ton of coal may be able to do as much as \$20 worth of oil will if we can really capture all the heat there is in it and place it where we want it. But this is just what we haven't learned how to do. And if we lose 90 per cent. of the heat, then we are paying our \$6 for the 10 per cent. remnant, and it really requires \$60 worth of coal to do what \$20 worth of oil or \$40 worth of coal gas can accomplish.

We can see now why gas and oil may be far more economical as fuel than coal. In cooking, for instance, see how time, patience and money can be saved. In gas and oil stoves the flame can be instantly produced and as quickly put out, no kindlings, no coal to carry, no ashes or dirt or soot or dust, no waiting for the fire to come up, no faulty drafts, always ready at a moment's notice, and no banking the fire at night.

And there is saving again because your fire is burning only when you actually need it. Three or four hours a day of heat is enough for cooking, isn't it? Even half

of that will do if you use a fireless cooker. Think how many hours a day a coal stove blazes away doing nothing but burn up good money! Then the further saving is effected because the heat is concentrated just where you most need it, on the article to be cooked. Then see how easily gas and oil are adjustable from slight warmth to intense heat. Another great saving, for, having brought the water to a boil or the oven to the required temperature with the full flame you may turn the



A steel oven for oil stoves, which will bake and roast meat to perfection

flame well down, for a comparatively small amount of heat will now keep the pot a-boiling and the oven a-baking.

In warm weather, too, instead of the superheated kitchen there is a refreshing freedom from the excessive heat of the coal stove. They tell us, too, that there is less loss in weight in meat when it is cooked over oil or gas, tests showing that a 10-pound roast loses two pounds in a coal range but only two or three ounces when cooked by gas. With a few more improvements in adapting gas to housewarming systems, coal may be banished from our homes even before electricity comes.

In this matter of house warming, of course there are gas furnaces in natural gas regions, but with artificial gas the cost at present is greater than with coal. As for the little portable heaters for warming rooms, they should be used sparingly and for as brief a time as possible, for they burn the oxygen in the air which you yourself need. Of course a coal stove



You can bake fish and cake at the same time in this gas-range oven

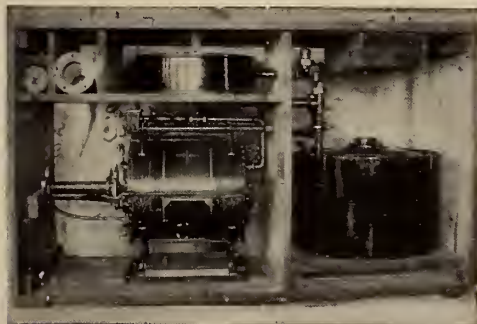
consumes air in great quantities, but as it is connected with a chimney the air from which the oxygen is taken passes out of the room and is replaced by air that comes in through door, window or cracks. With these little gas heaters, the vitiated air stays in the room and keeps getting worse and worse.

Can city people who live in flats and use gas ranges economize with fuel? Certainly, by using an oil stove. There are several makes, and I have used them all. Beware of the old-fashioned wick stoves. They are a nuisance. The wick blue flame is particularly good. It is smokeless because a mechanical contrivance prevents the wick from being turned too high. It is better than the wickless in that it starts quicker, has fewer parts to clog and does not emit such a disagreeable odor when it is put out.

Stoves, with oil at twelve cents a gallon, burn at an expense of two-thirds of a cent per burner per hour, whereas coal gas at one dollar per thousand costs one and one-third cents per burner per hour. Oil, then, would seem to cost about half as much as gas.

Kerosene and gasolene used in new ways and in the latest appliances are a boon to people outside the cities and large villages. Wood is rising in value, coal is getting more and more costly. Large areas of the country cannot have either wood or coal without importing them a long distance. But the petroleum fuels can go easily where coal and wood are transported with difficulty, and are able to do all that coal could do under the same conditions and even more. "Kerosene is recognized as the coming fuel" has been said with emphasis. Whether this be so or not it is eminently the most economical cooking fuel for people of moderate income, and the wide-spread use of blue-flame stoves and of oil-driven machinery would seem to indicate that kerosene has a far greater future than has been suspected.

The best fuel for rural dwellers, however, is gasolene when generated into gas. Take the equalizing gas machine. It consists of a tank for gasolene buried in the ground a short distance from the building, connected with apparatus in the house for driving air over this gasolene, thus producing carburetted gas, which then is



An "equalizing" gas machine, for lighting, cooking, heating, etc.



Wick blue-flame oil stove, smokeless, quick to start and practically odorless when put out

distributed through pipes wherever it may be needed. After the machine is installed the operating expenses are very low: "Cheaper and better than city gas:" "Two dollars per month as against six dollars per month for the same kind of use in the city." This machine furnishes gas to cook the food, to light the house, to run pumping engines and other kinds of engines, run an instantaneous water heater, and to do any number of other useful things that the owner may arrange for. It can also furnish fuel for the hot water heating system.

Here then, is a fuel for the country which bears the same relation to country life that coal gas does to city life, and does it at about one-third of the expense.

Plant for Winter Beauty

I WAS much impressed with the beauty of my garden during last winter, as seen from my window. All December there was thick, deep, dazzling snow and on some days there were twigs cased in ice, other days thick masses of snow on all the trees; and in the midst of this winter scene the oaks were wearing all their thick foliage; hardly a leaf had fallen from the scrubs and the larger white oaks and red oaks that mass in the valley. This foliage was in all possible, wonderful shades of deep maroon and tapestry tints; all the shades imaginable of purple and wine colors and dull red browns, besides light tan that shows gold against the sky in the sun and dark tan and a rare ashes-of-rose color, and some beautiful deep chestnut browns and copper browns. Wonderful suggestions for indoor color combinations if only such exquisite tints could be obtained in manufactured articles! And I ask: Why do we not plant more with an eye to winter beauty and comfort?—L. L. D.

Destroying Scales on Ferns

I HAVE a splendid great ostrich fern which has been infested with scales for three winters. It is kept in an east window of a living-room, and because of its great size is not moved except to be taken in the spring to a sheltered porch and brought back in the fall. It cannot be sprayed in a room properly carpeted and papered. The scale cannot be fumigated to their last sleep, because my family insist that cyanide gas is not their poison, and carbon bisulphide gas is nasty. Therefore, once a week, generally on Sunday morning after breakfast, I take a small sharp cutter or a penholder with a new steel nib and scrape off scale bugs by hand.

I used to let the fallen enemy lie on the field—that is to say, on the table edge and the carpet. Some of the scales were soft, juicy, and pretty colored; some were bright, shiny brown hard-shell, full of white powder and fine webs. In going over the fern regularly once a week, I came to notice that young scales were most numerous where the fronds brushed the edge of the table and lay upon the carpet, the stems near the roots and the three feet between the table and floor developing few new insects. When a magnifying glass showed the white powder of the grandfather hard-shells to be little bugs, I began to suspect that I was spreading scales as fast as killing them. In their first stages they were able to crawl, and I was helping them to new pastures via the table edge. Latterly I have been burning the old bugs and all heavily infested twigs, and the birth rate is going down steadily.

Pennsylvania.

E. S. J.

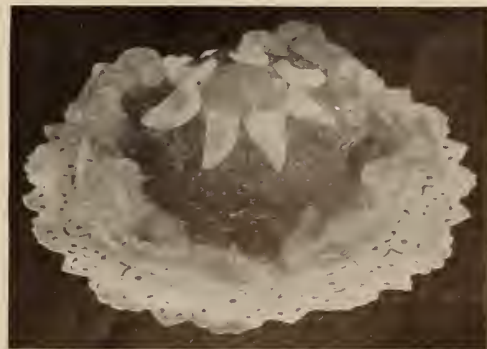
Spinach Salad

LEFT-OVER food may often be "re-made," as it were, into very appetizing dishes. Spinach is particularly tasteless when cold.

However, a delicious salad may be made by chopping very fine a quantity of cold spinach. Season to taste with salt, butter and pepper. Shape into individual nests and on each place the yolk of a hard-boiled egg, cutting the white into strips. Garnish with small, crisp lettuce leaves and stuffed olives and serve with mayonnaise dressing.

Massachusetts.

M. H. N.



A salad made from cold spinach, decorated with boiled egg, lettuce and olives



Cucumbers for Six on Ten Square Feet

IT MAY seem hard to believe, but nevertheless it is true, that one may grow cucumbers enough for a family of six on a space of ten square feet. When we saw the remarkable product last year in a neighbor's garden late in July, he said his family had already consumed a great many, in addition to having pickled a large quantity. There were then on the vines at least a half bushel of cucumbers, all sizes, and the vines were still blooming and fruiting. The leaves, too, were of good color, indicating plenty of vigor.

This gardener had planted his cucumbers ten inches apart, in a row ten feet long, in soil that had been very highly manured with poultry manure, mixed with wood ashes and lime. The ground had been thoroughly broken with a spade and the soil stirred two or three times with a digging fork in the spring before the planting. When the plants came up he built a trellis ten feet square, leaning at about 45 degrees angle with the ground and toward the north. The low side was eight inches from the ground and almost directly over the row of plants.

As the latter grew he trained them to run on the trellis, which was built of laths on a frame of one by four boards. The laths were two inches apart. In very dry weather he occasionally poured water on the ground under the trellis, and, of course, being shaded, the ground kept cool and moist, while the vines had all the sunshine possible.

South Carolina. R. S. SHANNONHOUSE.

Planting Fruit Trees With Dynamite

WHEN you buy your fruit trees for growing in the garden, get a good strong trunk, two or three years old, cut it back to twelve inches from the ground surface before planting, trim back all roots to clean growth and set as follows:

Get the family crowbar — if the family hasn't one, take your largest poker and a spade, or even the fire shovel — into the garden. Pick out your location so that water will run away from it, shovel off a circle of top earth and lay to one side. With crowbar or poker, bore a hole into the ground at least eighteen inches deep and one and a half inches across. An old one-and-a-half-inch carpenter's auger will do the trick nicely. Cover the hole up to keep dry.

Hurry down to your hardware man, and ask him to give you a half stick of dynamite with cap, and two feet of best fuse firmly attached. If you understand working with powder you can do it yourself. Get your dynamite home and lay it in the sun to warm up until it pinches soft like butter that spreads nicely. If you have no sun, take the lid from the kitchen stove, cool enough to bear your hand on, wrap your dynamite in newspaper and let it lie outdoors on the warm stove lid until it is sufficiently warm and soft.

Shut the family pup and the children in the house, and carry your warm dynamite and attached fuse and cap to your bored hole; drop it in gently, urge it downward to the bottom of the hole and tuck in a little fine, loose dirt. Now pour in a bucket of water, just blood warm. Light a bit of candle and hold to the end of fuse above ground until the

powder in fuse begins to spit at you like a big firecracker. Now run, say twenty-five feet.

When you go back to that inch and half hole after the explosion you will find your ground nicely pulverized for several feet. Also you can dig out the subsoil with your shovel and throw it away. Put your scraped-off topsoil into hole to fill to proper depth, depending on length of root stock from graft to end of longest root.

The tree should be set with graft two inches below the surrounding surface. I set a tree with my bare hands, tucking each rootlet into nice fine earth, until all is covered, and then I tramp it viciously. Put on a little more loose earth, add a bucket of water, and let it settle. Lastly fill in with soft fine crumbly soil. If the top earth packs, work in lawn cuttings, bedding from the horse or even old leaves. But never let that top ground get hard or caked.

I can assure you from experience that that tree will make you the envy of all your friends and you will need a hat several sizes larger!

The dynamite kills out all animal eggs and pests, digs up your subsoil so that your ground never dries out, and chemists claim it fills the soil with nitrogen and other desirable fertilizer.

An apple orchard of four acres, set in this manner two years ago, has not lost a single tree, and is often mistaken for a five-year-old plantation.

Oregon. ESTELLE M. RAWLEY.

Planting For Succession

IN PLANNING the rotation of crops for the kitchen garden, the idea is never to let a foot of the ground remain idle. For instance:

Sow peas in rows four feet apart. Between these sow two rows of spinach one foot apart, and radishes one foot apart. Both of these vegetables are ready for use before the peas. Early varieties of the latter, such as D. O'Rourke and Nott's Excelsior, are ready for use early in June.

They are succeeded by early celery, corn or string beans; or, for instance, where early cabbage was grown, fall turnips, rutabaga, etc., can be sown. In July, sow onions in rows fifteen inches apart and a space of two feet should be left at every fifth row to accommodate three rows of celery eight inches apart.

As soon as the earthing-up process begins for the celery, the two inside rows of onions can be utilized for the table. Lettuce can always follow any crop. Late cabbage can follow early beets and carrots, so that as one crop is taken off another is immediately put in.

New York. GEORGE STANDEN.

Root Pruning Before Starting

NEVER plant a tree or shrub without properly trimming up the roots. It stands to reason that they have been damaged in the moving and there is some danger of the broken surfaces rotting and giving trouble later. Take a sharp knife and make smooth all ends of the larger roots by an upward and outward cut. The illustration shows



exactly how this is done, although the operator would find he worked far more easily if he used a proper pruning knife with a curved blade. This will ensure perfect contact with the soil and give no lodging place for water. Also new roots will spread out in a normal manner from this kind of cut.

Transplanting from the Wild

AMONG the many wild shrubs which may be easily grown in cultivation, and which cost nothing but a trip to the woods or meadow, the various dogwoods, viburnums, elderberry and the barberry are prominent. The dogwoods and the elderberry are very rapid growers; the viburnums and the barberry are strikingly handsome, but do not increase so quickly.

In the latitude of Boston the best time for lifting and resetting such plants is in late April and early May, before the foliage has made much growth.

Plant firmly on a damp morning or evening, after cutting back the tops until they have a spread



These native white pines, transplanted from the woods years ago, have made rapid growth

not much larger than the roots. Water plentifully until the shrub becomes well fixed, then give judicious cultivation and fertilization.

Below I give a list of plants I know to be satisfactory, rapid growers being marked with a star:

Viburnums	Elderberry*
Cranberry tree	Great flowering*
Arrow wood	Alternate leaved*
Barberry	Privet*
Hawthorn	Sweet pepperbush
Sweetbrier	Meadow rue*
Evergreens	White pine*
Balsam fir	Black or red spruce
American yew	Hemlock*
Savin	Larch*
Various ferns	Waxwork
Clematis*	Blueberry
Chokeberry	

Massachusetts.

HELEN W. ROSS.

A Bit of Blue and White

IN ONE corner of my garden, blue and white reigns supreme from April to October with no great effort, and I wonder if any one else has ever tried my simple combination. Before the snow has gone in early spring, snowdrops and blue scillas are a mass of bloom. I have cut bunches of snow drops (the giant *Galanthus Elwesii*) when only the white bell was to be seen above the snow and the stems were to be cut only by plunging one's hand deep in the snow. These are succeeded by blue hyacinths and *Narcissus odorata* and early single white tulips; before these have all gone the hardy double blue violets and the late white tulips come on. Then the delphiniums — can enough be said in praise of the hardy kind? Against an 8-foot trellis, mine often overtop it by more than a foot. In front of these are white Japanese iris.

The larkspur keeps on all summer, after the iris is gone. In back of the iris is a row of white annual larkspur that continues to bloom till frost comes.

Pennsylvania.

MRS. N. B. GRAVES.



The beauty of this approach has been accomplished with Moon's trees, shrubs and vines and is representative of the excellence of Moon's Nursery Stock. Planting of this sort is a permanent improvement—an investment with an ever increasing value.

ACT NOW—if you are going to improve your lawns and gardens—round out corners, cover walls, beautify bare spots and screen objectionable outlooks. We can help you to quickly and inexpensively solve your landscape problems by supplying trees and shrubbery that have been developed especially for lawn decoration. Our catalog for 1911—

“Moon's Hardy Trees and Plants for Every Place and Purpose”

—tells of our 2000 varieties of outdoor plants—how each is allowed ample space for symmetrical development; how the young plants are treated to produce an abundance of fibrous feeding-roots; how quickly they take hold; how sturdily they grow; how satisfactory in results. Abundantly illustrated and full of information of value to the professional as well as amateur landscape gardener. Get it before planting.

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Makefield Terrace
Morrisville, Pa.



St. Regis Everbearing

The Raspberry for the Million and the Millionaire. "There's Millions In It."

You can now have wonderful raspberries from June to October by setting out the plants in April.

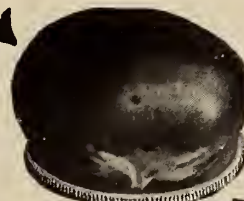
Never before has a plant been grown which would fruit the first season.

Then, for four months the St. Regis produces continuously—heavy crops of large, luscious, sugary berries of bright crimson.

Big profits growing St. Regis for market—the fruit keeps in perfect condition longer than any other red raspberry.

Endures drought and severest cold without injury. Awarded Certificate of Merit by American Institute of City of New York.

Grow Chestnuts Like This For Profit



Covers a 50c. piece.

You can get bigger profits per acre from Sober Paragon Chestnuts than from any other crop.

Hardy, rapid, symmetrical growth; luxuriant foliage; spreading boughs; clean trunk; sturdiness.

These qualities combined and developed by science to a degree that closely borders perfection, in the new

SOBER PARAGON Mammoth, Sweet Chestnut

Crop, Fall of 1910, brought \$48,000, orchard only 8 years old.

The only large sweet chestnut in the world. Bears the second year. The nuts average 1 to 2 inches in diameter—and 3 to 5 nuts in a bur.

United States Pomologist, G. B. Brackett, says "The Sober Paragon comes the nearest in quality to the native chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance and excellent flavor."

Testimony from growers, commission merchants, Forestry Experts, etc., given in our free booklet, together with prices and particulars.



We own exclusive control of the Sober Paragon. This copy-righted metal seal is attached to every genuine tree when shipped.

Write today for the booklet.



Basket of Mantura Pecans

Hardy Acclimated Pecan Trees for Planting In Northern States

Here are Pecan Trees which will thrive in Northern States—producing as prolifically and as profitably as any Southern Pecans.

Thus, through a remarkable scientific achievement, an immensely profitable industry becomes available in the North—

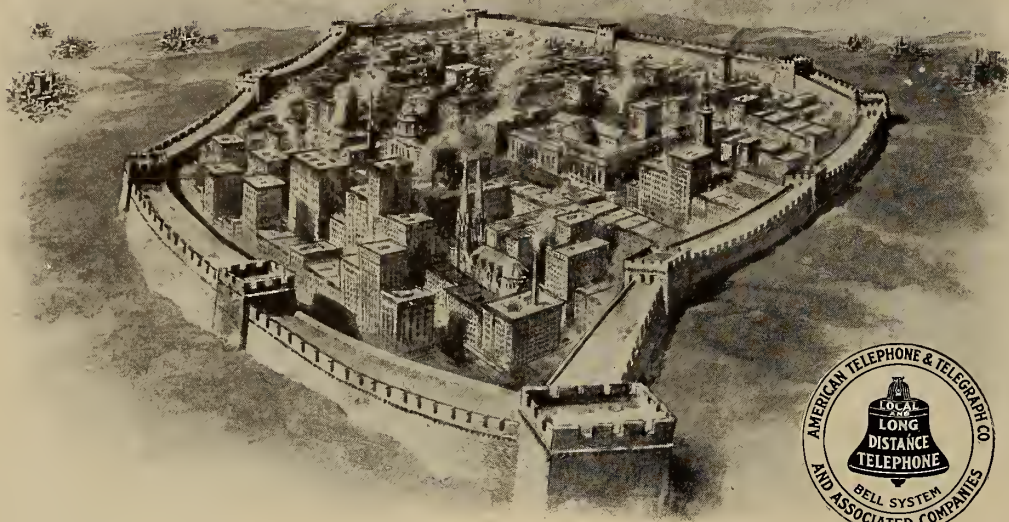
For, Pecan Orchards pay far higher profits per acre than wheat or corn.

And a shade-tree of wondrous beauty, long the pride of the South, may now adorn any Northern landscape.

We have five varieties of hardy trees best suited for Northern planting. These have withstood temperature far below zero, never been known to "winter-kill." Successful in almost any soil. Begin bearing in 5 to 7 years. Bear bountifully for generations and attain immense size. Valuable information on Pecan Culture in our catalog.

FREE.—Our 1911 Catalog and Planting Guide—Includes Nut Culture—Fruits, Roses, Shrubs, Evergreens.

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an impenetrable barrier, to prevent telephone communication with the world outside.

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In response to this universal demand the Bell Telephone System is clearing the way for universal service.



Garden Reminder

PLANT out cannas now. Get good-sized roots and you will have flowers from early summer until frost. All varieties are pretty and easy to grow, but if you want exceptionally large flowers get strong roots of Pennsylvania and plant them in a rich soil. The stalk grows very tall and the flowers are from five to six and a half inches in diameter, of a rich bright scarlet.

Very few plants produce a more beautiful tropical effect on a lawn than the banana plant. As far north as Middle Georgia it will bear fruit in the open. If you have such a plant, set out the suckers now in a moist, sunny spot where the soil is rich.

Don't forget to keep the old flowers picked off the sweet peas, nasturtiums and pansies, so that they will continue flowering.

Plant lima beans now. Bush varieties are more productive than either the large or small limas, Fordhook being the best for the South.

If you have not already sown seed of tomatoes



The yard-long bean which grows from two to four feet in length

for a main crop, do it at once. Ponderosa is the largest of all and Dwarf Giant is the largest and best of the dwarf varieties.

Plant peanuts and chufas, or earth almonds. Sow seed of sunflowers. Black Giant and Mammoth Russian are probably the best varieties to grow for furnishing seed and shade for poultry.

Plant a few yard-long beans simply as a curiosity.

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These vines will grow anywhere and will bear the year after planting. We guarantee them to be as represented or money refunded. We also offer 10 strong, hardy, two-year-old vines for \$1.00. This is a remarkable collection of grapevines at an exceedingly low price. Order now, vines will be shipped proper time to plant.

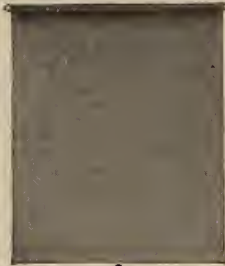
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Ordinary shades crack because they are stiffened with a "filling" of chalk or clay, which breaks, falls out and leaves unsightly streaks and pinholes.

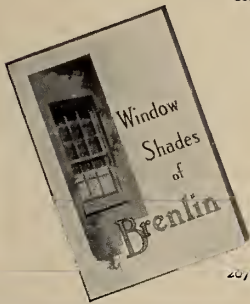
Brenlin, the new window shade material, is made entirely without "filling" of any kind.

It is supple, not stiff. Yet in the darker colors it affords absolute privacy; in the lighter colors, it admits a soft and mellow glow.

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Won't wrinkle—

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This book contains valuable suggestions on the artistic treatment of windows and shows actual samples of this new window shade material in all colors and in Brenlin Duplex. Get the book today.

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It can be set to stir the soil any depth desired and to cultivate astride the row or between the rows.

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No gardener can afford to be without one.

If your local dealer does not handle them, write to us for descriptive catalogue and special introductory price.

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Rocker \$2.50 Chair \$9.00 Table \$6.50 Chair \$4.00 Rocker \$9.75 Tabourette \$2.50

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"Old Hickory" Furniture

The rich tone of the natural bark finish and the graceful outlines will blend with any surroundings, adding an air of rustic charm to your home that is refreshing.

You will get more comfort from the hand-woven seats and backs than you'd expect from finest upholstery. "Old Hickory" chairs, settees and swings are acknowledged to be the most restful seats on earth.

Combined with this beauty and comfort, there is endurance to withstand the severe use that out-door furniture receives. It lasts a lifetime. Many of our chairs made over fifty years ago are in use to-day.

To aid you in selecting the chair, table, lawn swing or settee that you want, we have prepared a complete catalogue, illustrating over 110 designs of this dependable furniture, from a simple tabourette to a sleeping porch suite. We will be glad to send you this handsome book FREE.

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EVERGREENS that add a tone of warmth and verdure, and impart a charm to landscape,—**HARDY FLOWERING SHRUBS** that add beautiful bits of color to the garden work,—**CALIFORNIA PRIVET**, the ideal hedge plant, are some of my specialties, and **GROWN IN NEW JERSEY** under soil and climate advantages, are ready to start growth again anywhere as soon as planted.

Beautiful illustrated catalogue, mailed free.

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Strokum is a finely shredded preparation incorporated with a vegetable extract harmful to the caterpillars but absolutely harmless to the trees. Strokum fills in the chinks of bark, so caterpillars can't crawl under it. They won't crawl over it.

Mail us \$2.00 and we will send you, express paid, enough Strokum to band ten trees, averaging 1 foot in diameter. West of Mississippi, see extra.

Strokum Stops Caterpillars

Don't make the mistake of waiting until the caterpillars begin to crawl before you protect your trees. Band them with Strokum now. They can't crawl under it—they won't crawl over. Easy to apply. Is not unsightly. Guaranteed not to injure your trees. One banding lasts entire season. Easy to remove. Leaves no disfiguring evidences. Use it this month. Next may be too late. Send for booklet.

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161 Cornelison Ave., Jersey City, N. J.

There are two varieties of this wonderful bean or pea (I say "pea" because the plant and the flavor of the pods when cooked are like the cow pea). The pods of French Asparagus do not usually grow over two feet long with me, but the plants are very prolific. The seed is red. The other variety is known as the Japan long runner bean. The seed is black and with me the pods grow from twenty-four to forty-two inches long. The vine makes very little foliage, but produces great quantities of pods.

Profit in Sweet Potatoes

CONSIDERABLE profit is made in the South by growing sweet potatoes for market. While they are grown in the Northern States for home use, I don't think it would pay to grow them for market as the northern season is short and the crop would not have time to fully mature. In the South they are profitable to grow even for hog and other stock food. Soil that would produce only twenty bushels of corn per acre will produce from fifty to a hundred bushels of sweet potatoes.

First make a seed bed in which to start the plants. In a very sunny place in the garden dig a trench one and a half or two yards square for each bushel of seed potatoes, and six or eight inches deep. Fill up the trench with some good manure, spread the potatoes over it and cover them two inches deep. Do this in the South early in March and about a month later in the North. This bed should furnish plants for setting out in four weeks from the time the seed was planted.

Sweet potatoes will grow on almost any soil, but their preference is for a rich, loose, sandy loam. Green cotton seed and commercial fertilizer used together are the best fertilizers. For a large crop use sixty bushels of cotton seed and six or seven hundred pounds of fertilizer to every acre. If cotton seed is not obtainable, use the fertilizer alone at the rate of one thousand pounds per acre. A fertilizer containing 8 per cent. phosphoric acid, 7 per cent. potash and 3 per cent. nitrogen is best. Do not use stable manure alone as it contains too much nitrogen, which produces vines and foliage at the expense of the root crop.

Dig the soil early in the spring with a 2-horse plow, making it fine and loose to a depth of twelve or fourteen inches, and about three weeks before setting out the plants lay off rows three feet apart. Distribute the fertilizer in the furrow and run a small shooter or shovel plow in the furrows to mix the fertilizer with the soil. Then ridge it over by running twice along each side of the furrow with a shovel or turn plow. It is not necessary to have a very high ridge; four inches above the level of the soil is sufficient. Set the plants two feet apart on the ridges. The fastest and easiest way to set out the plants is to get a board, one or two inches wide and three feet long with a notch cut in one end, and use this to push the roots into the soil. The best time for setting them out is just after a rain.

After the plants have made vines, pieces of the vines can be removed and used for planting additional beds. These cuttings take root and grow the same as the plants, but the cuttings form tubers more quickly than the plants; therefore, in the South, they can be set out as late as the last of July.

Give sweet potatoes a thorough cultivation every two weeks so as to keep the soil loose and free from weeds and grass. After the vines cover the soil no cultivation will be necessary.

The Yellow Yam or Pumpkin Yam is the best variety to grow as it keeps better and is sweeter and better to eat than the other sorts.

Potatoes should be harvested some time in September or October, before or just after a frost. Dig them on a clear, sunny day when the soil is not wet. If the field is small, the potatoes can be dug with a spading fork.

Let the potatoes lie out in the sun and thoroughly dry; then carefully gather them up so as to avoid bruising. Store as you would other root crops, in a dry, frost-proof place where the temperature will be even.

Georgia.

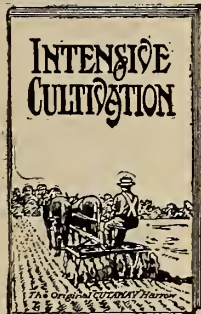
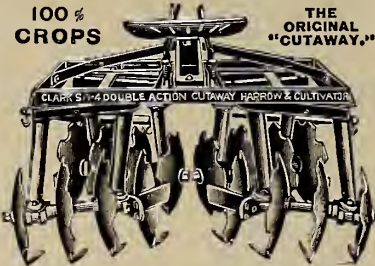
THOMAS J. STEED.

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Buy this \$250 greenhouse now—right now, and start your plants in it. When those first glorious spring gardening days come, while the other fellow is planting seeds you will be planting out PLANTS—good, strong chaps, just aching to get out in the open and do things. Tomatoes, for instance, a month earlier. Doesn't that strike you? And who wouldn't give of their good money to have their flowers all abloom before the robins bring off their first nestlings! Order the house today. \$250 covers everything—no extras—boiler, benches, iron posts and all, ready to set up the day it arrives. We have been building greenhouses, big and little, for considerably over a quarter of a century. You can depend on our being dependable. If you want more facts—send for booklet—it fairly teems with them.

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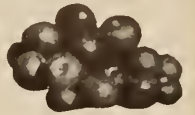
Aster, Queen of the Market, mixed; Sweet Peas, Finest mixed.

Remember these are regular, full size packets and should not be compared with those sent out in some collections. We will mail a copy of our catalogue free to all. Send for the above collection to-day.

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Wormy fruit on right



Spraying kills the fruit worms

THIS is a decided fact, as is shown by recent government tests conducted in different states and the every-day experience of practical growers throughout the country. In orchards where the percentage of good fruit was as low as 48 per cent. and less, spraying accomplished wonders, bringing the average up to as high as 99 per cent. No matter if you have one or a dozen trees, it doesn't pay to grow wormy or scarred fruit when you can have clean, well-colored fruit for your table or the market with but a slight effort and small expense.

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NEW PROCESS ARSENATE OF LEAD

is a practical insecticide for leaf-eating insects. It is as strong a poison as is consistent with the absolute safety of the tree. S-W New Process Arsenate of Lead is easy to mix and apply, stays in suspension, does not burn the foliage and has splendid adhesive qualities. It destroys the insects, improves the quality and increases the quantity of the crop.

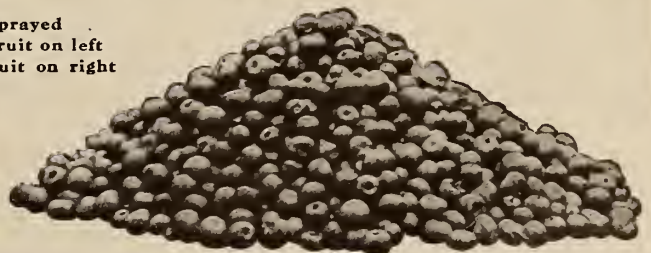
We publish a 120-page book, "Spraying a Profitable Investment," which should be read by everyone interested in fruits and vegetables. It describes the insects and gives a remedy for each. The book is mailed free; write for one.

THE SHERWIN-WILLIAMS CO.

MAKERS OF HIGHEST GRADE INSECTICIDES AND FUNGICIDES
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Unsprayed
Good fruit on left
Wormy fruit on right



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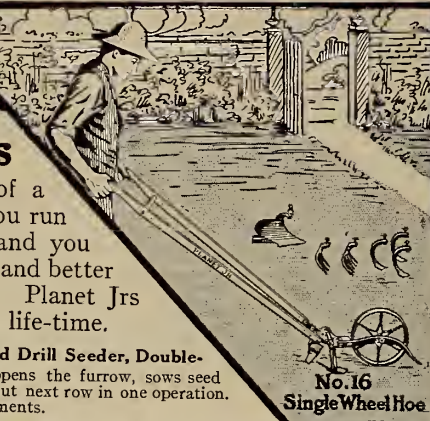
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How to Prune a Shrub

WHILE the work of pruning a shrub is simple, some knowledge of the nature of the shrub is necessary in order to do the work intelligently. Specimen shrubs with few exceptions should carry their foliage down to the ground and present a full, round, almost "corpulent" appearance. One sees so many shrubs trimmed to a few bare stems sparsely foliated that one might conclude that the



Bad pruning. This lilac should have been headed back to induce bushiness

fashion in shrubs were something on the order of a feather duster. Women are sometimes to blame for this. A woman gets the notion that her shrub needs trimming, a stray "Jack of all trades" happens along, she puts him to work with directions to clean the shrubs, and the result will be anything but what it should be.

The rule for pruning is simple. If a shrub gets too lanky, cut it back somewhat so that it will bush out. If it grows too dense cut out some of the older stems, but do it so that the shrub main-



Good pruning. This shrub presents a full, round mass of greenery

tains its balance. Root sprouts at a distance from the shrub are never to be tolerated and are not so apt to spring up where the normal growth of a shrub is not unduly interfered with.

The time of pruning of course differs. The spring-bloomers should be pruned immediately after they have flowered, the fall-bloomers in early spring before growth starts.

North Dakota.

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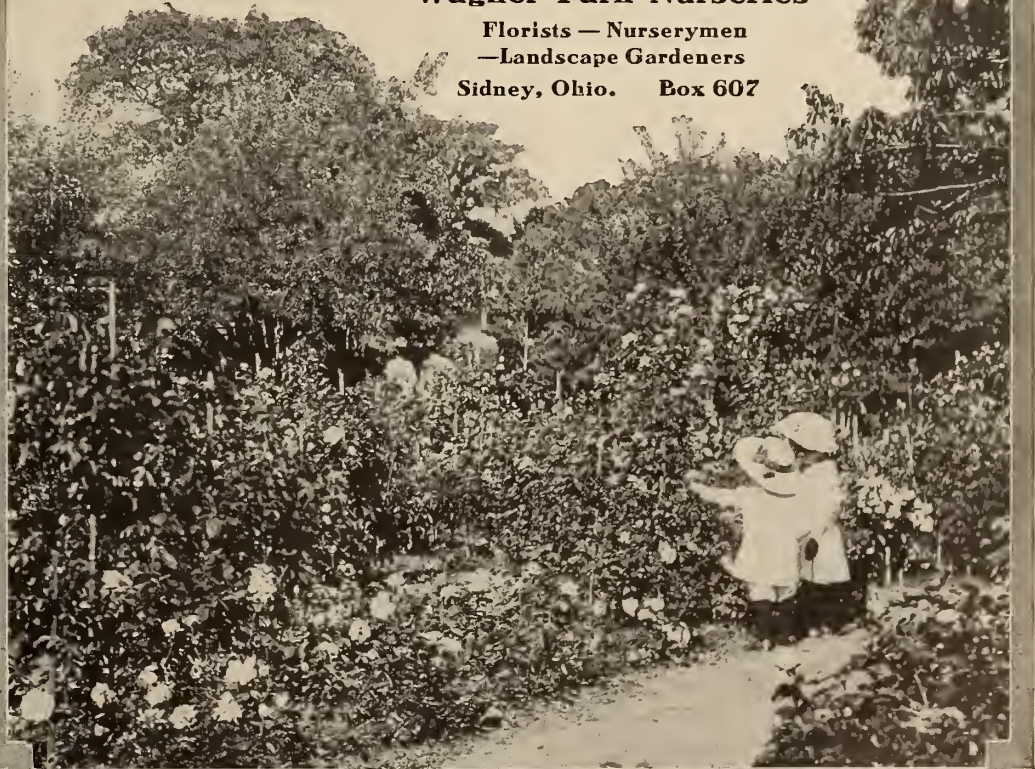
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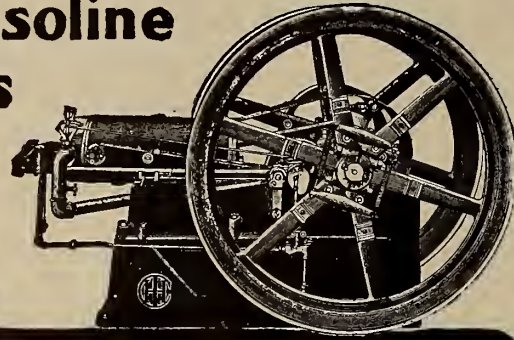
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10 Broad-Leaved Evergreens for \$1

One each of *Rhododendron maximum, *Kalmia, *Leucothoë, *Am. Holly, Boxwood, Euonymus Japonica, Hardy Evergreen Bamboo, Euonymus radicans variegata, Abelia grandiflora, Vinca minor. Ten of any starred sort (thrifty young seedlings) for \$1.

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A lawn roller whose weight can be adjusted to the conditions of your lawn, garden or tennis court

All in one {
A light Machine for the soft, wet spring lawn.
A heavy Machine for the hard, dry summer lawn.
A heavier Machine for the driveway or tennis court.

Why buy one of the old style iron or cement fixed-weight rollers that is generally too heavy or too light to do your lawn the most good, paying for two or three hundred pounds of useless metal—and freight on it as well—when less money will buy the better, more efficient

"Anyweight" Water Ballast Lawn Roller.

Remember that a difference of 50 pounds may mean success or ruin to your lawn—a half ton machine will spoil it in early spring, while a 200 lb. roller is absolutely useless later in the season. If you desire a fine, soft, springy turf of deep green, instead of a coarse, dead looking patch of grass, use an "Anyweight."

The "Anyweight" Water Ballast Roller is built in 3 sizes, all of 24 inch diameter and of 24, 27 and 32 inch widths. The machine shown here (our smallest) weighs but 115 lbs. empty, 470 lbs. when completely filled with water and 737 lbs. with sand. The other sizes weigh 124 and 132 lbs. empty and from that "anyweight" up to half a ton. Filled in 30 seconds—emptied in a jiffy. Fully protected by our patents. Runs easy—lasts a lifetime.

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WILDER-STRONG IMPLEMENT CO., Box 6, MONROE, MICHIGAN.



Spring Work for Every New Englander

IT IS not too late this season to do serious damage in the ranks of the gypsy and brown tail moth army, which is menacing the existence of our foliage and fruit trees in northeastern United States. But this is the last call for active spring work, which is, by the way, the most convenient and most effectual phase of this kind of fighting. As long as the leaves are still in the bud we can easily distinguish the unkempt winter webs of the brown tails, and the neat, compact egg masses of the gypsy. Let us sally forth, therefore, and destroy them wherever they may be found, before the increasing warmth quickens into devastating activity the myriads of worm enemies in egg and leafy nest.

A word or two as to the life habits of these pests will explain the efficiency of the spring campaign. The adult moths of the gypsy (*Porthetria dispar*) appear from the middle of July to the middle of August; of the brown tail (*Euproctis chrysorrhæa*) from July 1st to 20th, both depending on the season and the prevalence of the moths. The female gypsy cannot fly, but, crawling into some more or less sheltered position lays, within a few days, a mass of eggs. This would be approximately in August, but the larvæ do not hatch out until the following May. Of course the late fall, and any time through the winter, when the snow is not too deep, offer excellent opportunities for destroying these nests and the many hundreds of potential worms in each one. But upon the supposition that this task is one of those "easy, little jobs that we can do any time," and that, therefore, it has been put off again and again, I want to stir up some excitement now, before it is too late.

The most powerful weapon we have for use in this crusade is creosote, plain, undiluted; of pungent, disinfectant odor, and persistent, caustic power. Whether you have an orchard, a woodlot, or merely a few shade trees, put some creosote in a tin pail or wide-mouthed bottle, take a good, strong brush, round, perhaps an inch in diameter, then set out with an unflinching determination to examine every tree on your place, thoroughly. Pay particular attention to the white birch, the willow, the cedars and the fruit trees, especially the wild straggly seedling apples in pastures. The moths seem to prefer a smooth area on which to lay their eggs, but more valuable than this, they deem a hidden crevice or a sheltered corner. For this reason, look with extra care about the base of trees right among the grass blades, in cavities, (although there really should be no such refuge for diseases and decay in your trees), under bits of bark and, most of all, in the chinks and crannies of stone walls and fallen trees or logs. I have even found them in old tin cans and wooden boxes, as well as on the under side of the top of a step ladder left in the woods in egg-laying time. Paint the mass thoroughly with the creosote, and those eggs, at least, will give you no further trouble. If the nests appear well up the trunk or on to the branches, attach the brush to the end of a light pole; you can dab the masses sufficiently at long distance. But if you do much of this up-in-the-air work, wear automobile goggles. Creosote is a most unpleasant substance in the eyes.

Any one who lives within the gypsy moth area will know what the egg mass looks like. For fortunate others I can say that it is an oval or

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Absolutely Nothing**

Think of what it means to you when you can have a Sharples Tubular Cream Separator, the "World's Best," delivered by our representative at your home town; demonstrated in your own home; left with you for free trial without its costing you one cent for freight, in fact, without any investment whatever.

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Write for 1911 catalogue No. 215



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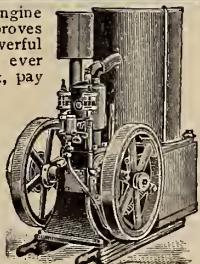
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ARE always sharp, because they have crucible, tool-steel blades, hardened and tempered in oil. The kind of steel used in making all high-grade cutting tools. No other mowers use this grade of steel; that is why "Pennsylvania" Quality Mowers have been in a class by themselves for 30 years.

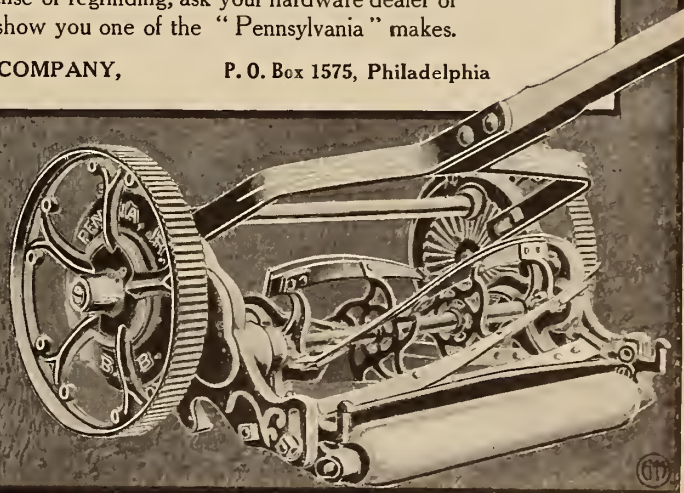
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Puts three tools in your hand at one time — cultivator, weeder and hoe. Indispensable for Flower or Vegetable Gardens. Overcomes danger of using hoe in cultivating young plants and vines. By arrangement of the teeth you not only cultivate on three sides but at the right place with one stroke. A great saving to your knees and back. If your dealer does not carry The Handy Gardener send us his name and we will send you descriptive circular and see that you are supplied.



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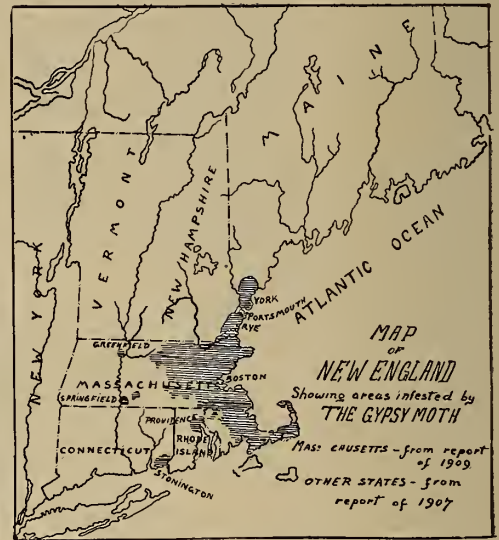
roundish, gray mass usually about one inch wide, from an inch to two inches long, and possibly a third of an inch thick. It looks like a bit of dirty wet cotton wool molded into an egg-shaped lump then plastered down on the tree or stone. The tiny, spherical, hard-shelled eggs are covered and hidden by this gray material which is composed of the hairs from the abdomen of the moth.

THE BROWN-TAIL MANGEUVRES

The brown-tail moths, which I mentioned above, can fly; no doubt you have seen them in July evenings fluttering about the street lamps. Throughout many towns in Massachusetts they completely cover the pole, hood, wires, etc., with their pasty white bodies and wings. At such times the small brown "tail" area of the abdomen is not apparent.

The females lay their eggs some time in late July, on the under side (almost invariably) of leaves. The masses resemble those of the gypsy closely except in size, being rarely more than three quarters of an inch in length, and three-eighths of an inch wide. Then, too, they are more often somewhat cylindrical rather than elliptical. There seems but little choice as to the trees the brown-tails infest. But they rarely overlook fruit trees, alders, willows, elms, and such soft-leaved species.

The eggs hatch within a month, rarely in less



Where the gypsy moth has become a menace

than twenty days, and the minute caterpillars live for a time within the shell of abdominal hairs covering the egg mass. They make forages out among the tender leaves, and return to shelter at night. Later, as they grow, they pull first one leaf, then other leaves, about their original hiding place, and fasten them into a nest with strong silky webbing. Beginning about September, they complete these winter webs in time to withdraw into them before cold weather, being then about one-fourth grown.

After the other leaves have fallen, these nests, fastened by the silk to the twigs, remain as very prominent, very ugly, and very ominous decorations, mostly on the tips of the branches. It is these which you can clip off and burn, at any time during the winter, and which you *must* put an end to before the new leaves hide them in the spring or before the worms begin to renew their devastations early in May or June. For this work, the best thing I know of is the regular pruning pole, with the moving knife blade worked by a handle. The nests as cut can be put in a grain bag, and later burned in the stove or furnace. This method is much safer than burning them in piles on the ground, in which case not a few of the worms are likely to get away.

As I say, this winter and spring work is the most effective and, especially on the small place, the easiest, for other tasks are not so imperative at this early season. There is nevertheless an additional precaution that you can take later on. This is the banding or burlapping of trees, from

Possess A Perfect Lawn

Old England's historic estates are carpeted with the most beautiful stretches of lawn. Through centuries of careful study and trial coarse, undesirable grasses have been supplanted by a uniform durable species, almost the texture of velvet.

Let English lawns surround your own home.

Barwell's Imported English Lawn Grass Seed Mixture

comes across the Atlantic in large quantities every season. It is literally the finest, straight from its "Native Heath." It has proven harder than the average domestic mixture and grows luxuriantly in sun or shade.

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but they should know something about the paint their painters use.

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"Yes," was the reply, "but she should go farther and interest herself in *how* it is painted. Then she wouldn't have to call John's attention to the shabbiness of the house so often."

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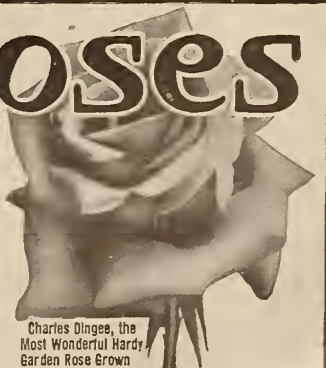
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May 15th or so until August. The growing gypsy larvæ, after feeding all night, descend the trees in search of shelter for the day. Many retire under the strips of burlap and may be caught and quickly despatched—with a knife, brick or other missile. Later, many of the mature caterpillars choose this place for pupating, and at this time you can often discover individuals of the brown-tailed species. However, the burlap bands are worse than useless unless carefully tended, for they offer splendid haunts for other injurious species as well. Visit every tree at least once in three days, and do away with every caterpillar you see.

Occasionally you find under the burlap a beetle, large and with a metallic lustre, or else small, flat, and brilliantly colored with red, blue, and yellow. In either case salute him with respect and thanksgiving, and wish him well. For these two are parasites on the gypsy-moth larvæ and with a little fostering will become important allies in your elimination work.

I have spoken particularly to New Englanders, but I am not sure that New Yorkers and even others cannot also look to their trees and gird up their loins against the invaders. The accompanying diagrams are developed from a Massachusetts bulletin of 1909, and two Federal bulletins



Where the brown-tail moth has overrun

of 1907, and I am afraid the onward march of both pests since those years has been continuous if not rapid. Only by the coöperation of the tree lovers on the outskirts of the infested area as well as those in the most severely affected sections, can the spread of the moths be checked. In this work not even the owner of half a dozen trees, no, nor of one single specimen, can be spared from the ranks. If you doubt it, listen:

One gypsy-moth egg-mass contains on an average two hundred and fifty eggs, and a brown-tail winter nest about the same number of hibernating worms. I have found fifty such egg-masses on six feet of the trunk of a single white birch sapling! I have seen neglected apple trees on which the number of brown-tail nests was checked only when every twig had been covered!

Is it possible that you fail to see the gravity of this situation, and the value of the destruction of every nest? And can you in any way justify a neglect of this comparatively simple task, whereby you can assist in a great and an essential work?
New York. E. D. L. SEYMOUR.

[EDITORS' NOTE.— Since the above was written it has been reported that both the gypsy and the brown-tail moths have been located in several parts of New York State in the past year; but that in each instance prompt measures on the part of the authorities have checked the outbreak and exterminated the pests in that locality. It is by means of just such vigorous action as this, and of public-spirited coöperation between citizens and authorities, that we can control isolated appearances of these pests, and, let us hope, effect their eventual extermination.]



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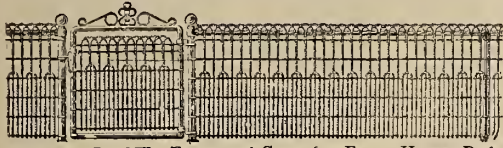
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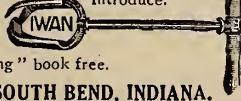


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Plowing serves another purpose aside from mixing the manure and softening the soil so that the plant roots can penetrate. It also aerates the soil and stimulates root growth. Furthermore the mellowing aids in draining and also in retaining the moisture. If the water, after a rainfall, could



Stir the soil to a depth of four or five inches with an ordinary plow

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not penetrate the soil more than an inch or so, it would soon evaporate. Mellow soil allows much of the water to filter through and as soon as the soil particles become packed together a portion of the moisture rises again to the surface by capillary attraction. Now, if the soil of the plant-growing stratum is kept mellow its lack of capillary hinders evaporation and the plants get the benefit of the moisture.

The garden plowing should stir the soil to a depth of four or five inches. Use an ordinary one-horse plow. Make the furrows in a different direction each successive year so as to maintain the proper grade of surface. For instance, start



After plowing smooth the soil with a straight-toothed harrow

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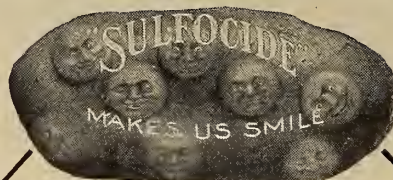
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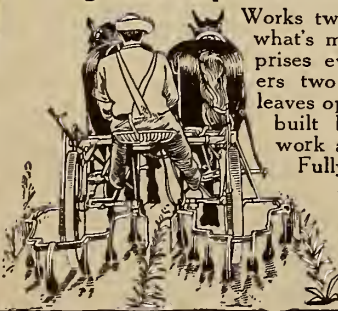
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on the outer edge of the tract and plow around it, gradually approaching the centre, or lay the furrows lengthwise or crosswise, working the ground in sections. The former method, if followed each successive year, tends to leave a declivity in the centre and is best employed where the ground rounds up in the centre. The latter method disturbs the grade to the least extent.

After plowing smooth the soil with a straight-toothed harrow drawn over the ground two or three times. A finer surface is secured by subsequently raking with a garden rake.

After the seeds are planted and the first rain has particularly evaporated the soil will form a slight crust. It is gradually establishing capillary with the soil particles below. Remedy this

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It is a pure culture of nitrogen gathering bacteria now made practical for the farmer and the gardener. Anybody can use it and if you follow directions, good results must follow.

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E. A. PEARCE, Webb, Ala., says: "The peas that were treated with your Farmogerm bore for three weeks after the untreated plot were dead. The peas tested were the dwarf or early variety. I used Farmogerm on all the tall or late varieties and never before saw such luxuriant vine, and for the first time in my life had garden peas until I got tired of them."

THOMAS ALLEN, J. C. HERZ, Union Rockaway, N. J., says: "This spring I received from you Farmogerm for peas and beans, and I must say that I was surprised at the difference between those that I put Farmogerm on and the seed that there were none on. I have never had such a good crop of peas and beans produce as well as I have this year."

L. I. N. Y., Course, says: "My results from the use of Farmogerm on the inoculated beans on the 23d of June and the uninoculated beans on the 28th of June. The uninoculated peas and beans that were planted two days later were ten days later in maturing. The yield from my inoculated peas and beans was much heavier and the rows were sparse and irregular and the uninoculated."

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FARP-THOMAS FARMOGERM CO., Bloomfield, N.J., U.S.A.

condition at once. When weeds have not yet grown and the crust of dry earth is very thin use a garden rake, working between the rows before the seeds have germinated.

New Jersey.

M. R. C.



The Blue-Eyed African Daisy

I MAKE it a practice to grow something new in my flower garden each season, not because I tire of my old, tried and true flower friends, but to discover new and wonderful treasures.

Last summer I was more than pleased with my plants of *Arctotis grandis*, a splendid annual from Africa, sometimes called the blue-eyed African daisy. Seeds were sown in the house in March, and germinated in a few days. By the last of May the sturdy little seedlings were transplanted into the garden, where they had full sunshine. They were given no special care except that the soil around them was kept well cultivated. They grew rapidly and soon formed well-branched bushes from two to three feet high and about as wide. The foliage was a handsome light green,



Arctotis grandis continues to bloom after most frost-resisting annuals have succumbed to the cold

but the crowning glory was the large, showy daisy-like flowers over two inches in diameter. The petals are narrow, rather sharply pointed and of a peculiarly glistening white, the undersides being pale blue. The eye, or centre, is bright blue surrounded by a narrow ring of yellow. Each plant bears a profusion of flowers. As a cut flower it is particularly charming, keeps perfectly in water for a week or more, and the buds open as freely as on the plant.

Another valuable characteristic about the *Arctotis* is that it continues to bloom after most of the frost-resisting annuals have succumbed to the cold. Referring to my last year's garden note-book, I find that the last blossoms were gathered on November 4th.

New York.

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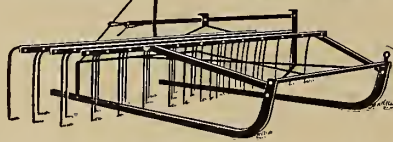
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Wallflowers for November Flower

MANY gardens have wallflowers in bed or border through the summer, but I have found a number of people who do not in the least know their unique value for late autumn flowering, or for winter house plants.

Our Maine season is short. We cannot depend upon late-flowering roses, and even the hardiest chrysanthemums can hardly stand our early autumn frost. They blossom so sparingly, and are killed outright so often, that they are not worth while. In our own garden we depend for autumn flowers upon pansies, or various of the hardier daisies and sunflowers, or a little late mignonette; but chiefly and with greatest comfort on our wallflowers. When everything else in the garden is black with frost (in spite of hasty covering at night with every available shawl or rug the house affords), they are in full beauty. I have even picked them, fresh and fragrant as in summer, in the second week of November.

Our soil is heavy clay. We sow the wallflowers in the hotbed, a little later than the other seedlings. Through July and August the plants grow green and strong and vigorous, but show no signs of flowers. In early September the massed flower heads begin to appear, and then come the first yellow or maroon-crimson blossoms.

By the middle of September the bed is in full beauty of rich color, velvety soft petals, and delicious fragrance, and it stays so, as I have said, long after practically all the rest of the garden is a blackened wreck. We have wallflowers for the dining-room table and for the parlor through November, though by that time they mature slowly because of the cold nights.

And the pleasure even then is only beginning. Wallflowers in full blossom seem scarcely to notice being taken up and potted. All they ask is a cool room (an unheated bedroom or entry is just right, if the doors are left open, and the rest of the house is comfortably heated; direct furnace or stove heat they cannot stand, unless they are close to a *very* leaky window), full sunshine, and almost unlimited water. They will blossom almost without limit. I have had six great plants over two feet high literally a mass of golden or golden-brown blossoms from November till June, and the whole house fragrant with their violet-like perfume. We have had our windows filled with them all winter now for eight years.

Maine.

ROSALIND RICHARDS.



Making a Strawberry Bed

BY ALL means set out a strawberry bed now. About the only land that *won't* grow strawberries is a very wet or sour soil. I know of nothing better than new timbered land provided there is not a heavy sod on it. Old pasture land is well suited except that there is the danger of grubs, which will destroy the young plants unless some other crop has been grown the year before the plants are set. If you have a plot of ground which is convenient to the house and well drained, make the strawberry bed there. First scatter over the plowed ground stable manure at the rate of twenty or thirty loads to the acre and harrow it in early in the spring. If possible the ground should be broken in the fall, but I have had as good success by plowing as early as the ground could be worked, and harrowing and otherwise

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packing the soil before setting the plants. The ideal soil has a red clay subsoil and is well drained, though manuring and ditching or tiling will make almost any soil productive. While new land is more productive, it would be best to have it in some cultivated crop for a year before putting it to strawberries in order to kill the wire worms and grubs of various kinds.

Whether you select plants from the field of a neighbor or buy them from a nurseryman, remember that there are what is known as perfect flowering as well as imperfect or pistillate plants.

The imperfect flowers will need the perfect kinds in close proximity in order to fertilize them so that they will set fruit, while the perfect flowering will bear alone. It is desirable to have both of these since some of our most valuable kinds are imperfect bloomers. At least every fourth row should be set to the perfect bloomers. Old plants that have borne fruit are not fit to set out, and these may be distinguished from the new plants by having dark roots and the crown thrust above the ground, while the new plants which have just formed the previous season have clean white roots.

When the ground has been prepared and the plants selected you will determine on one of several different ways of setting the plants — matted row, hedgerow or single hill. Each has its advantages. For the small bed where space is of some consideration, the matted row will probably be selected, as the rows may be as close as three feet and the plants set eighteen inches apart. The plants are allowed to root and mat across half of the space. Where there is plenty of ground the hedgerow may be used with the rows three and a half or four feet apart, and the plants set two feet apart in the row. They send out runners which should be trained lengthwise of the row and the row kept within the bounds of a foot in width. With the hill system the runners are cut when they have grown out to the first stolon and not allowed to root. This system requires more work, but it produces better fruit which is more easily picked.

Whatever the system of planting, the plants must be set and cared for in a similar manner. When ready to set the plants put them in bunches and with a sharp pair of shears cut off an inch or so of the tips of the roots, and if there seems to be an unusual number of leaves, remove some of the larger ones. The roots should be placed in as natural a position as possible, and this may be done by making a hole in the soil with a dibble or trowel and setting the plant in place with the roots distributed fan shape. If the weather is dry pour a little water into the hole and afterward press the soil firmly about the plant.

As to the time of setting, this depends largely on the latitude. In the South the fall will be the best time, while as far north as the Ohio River I prefer April and in some cases a little later. For two years past I have set new plants, and our best success has been with the plants set in June after the fruit has been picked and new runners taken root. This work has been done, however, by taking the plants from the old beds as soon as the runners had taken sufficient root and putting them into the ground at once, in some cases with a lump of dirt hanging to the roots.

Use plenty of stable manure on the ground before the plants are set, as this is the last time you can use such manure on account of hay and weed seed contained in it. Weeds can be kept down the first year while the plants are small and may be well cultivated. Keep on cultivating till August, allowing the plants to throw out runners or develop a compact root system, as you desire either the matted row or single hill.

When the ground has frozen in the fall, apply a mulch of clean oat or wheat straw, but never use hay as it contains weed seed. There is just one other way of mulching that I consider better than straw, and that is by sowing sorghum and oats the first of September right among the plants. This will die down when frozen and form an excellent mulch.

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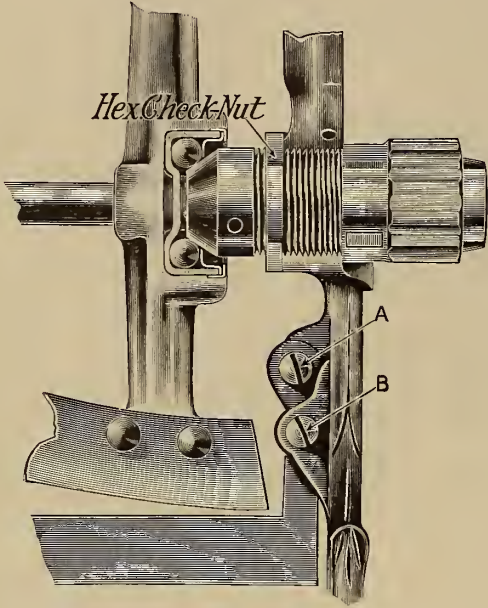
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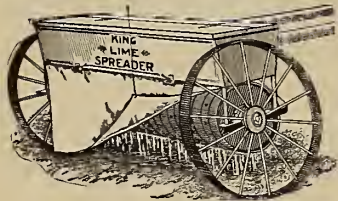
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IN THE spring of 1910, I did not know what to profitably do with a piece of land 88 by 85 feet. I had read that the United States annually consumed about sixteen million bushels of onions, so I decided to try putting my field into onions. Accordingly the place was manured, plowed, harrowed and then was planted rather thick with Large Red Wethersfield onion seed. In two weeks the seed germinated; on April 17th the young plants were frozen to the ground. But this apparently had no ill effects.

During the summer the space between the rows was hoed and cultivated twice and the rows themselves were weeded three times. This took but little time and left the patch clean.

After the plants were large enough they were thinned out to about three inches apart and those pulled up were sold as young onions. In this way enough was made to pay the expenses of the crop.

When it came to harvesting the crop in the fall I found I had fifty bushels of large, red onions which sold for \$1 per bushel.

My itemized accounts of time expended, expenses and profits were as follows:

Planting seed, one-half day's labor	\$.75
Cultivating twice (half day each time)	1.50
Hoing twice (half day each time)	1.50
First weeding	1.80
Second weeding	2.40
Third weeding	1.50
Thinning and selling, three days	4.50
Harvesting, four days	6.00
Selling, one day	1.50

\$21.45

DISBURSEMENTS

Plowing and harrowing	\$1.00
Seed cost me	3.50

\$4.50

After the team was paid for I found I had made \$1 on the manuring because the neighbors, from whom I got the manure, paid me fifty cents a load for hauling it.

RECEIPTS

50 bushels of onions at \$1	\$50.00
\$1 made on manuring	1.00
Young onions	9.35

\$60.35

Disbursements and time value 24.95

\$35.40

Profit

South Dakota.

ERNEST ELLERMAN.

Starting Vegetables Indoors

THE advantages of a small greenhouse are manifold. One can have choice vegetables from two to four weeks ahead of one's less fortunate neighbors and, by planting successional sowings, two or three crops of vegetables can be raised from the same piece of ground.

The soil should be gathered from an old compost heap or pasture land and laid up for a few days to dry out. Then thoroughly mix it with well decayed manure, one part to four of soil, removing all stones and rubbish.

Flats 12 x 21 in. and about three inches deep are a convenient size to use. A condensed milk box, sawed in two lengthwise, makes an ideal flat. A few drainage holes should be bored in the bottom of each flat, and a one-half inch layer of some coarse manure or sod spread over the bottom. The soil should always be level and firmed well before sowing the seed.

Ventilating and watering are the two principal

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An Eight Year Test,

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THOMAS SHIELDS CLARKE
N. Y., May 9, 1910.

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cost half as much as paint, to buy and to apply, and they give artistic and harmonious coloring effects of guaranteed durability. Their base is specially refined Creosote, which thoroughly preserves the wood. Our Stains are the only appropriate colorings for

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is wind and frost proof. It is a thick matting that retains heat as a bird's feathers do. It is forty times as warm as common building paper, and will make your house warm in winter and cool in summer. It will pay for itself over and over again in saving fuel and doctor's bills. The most essential thing in your new house is warmth.

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that I cannot afford to mark my fruit with Bordeaux," says Mr. George T. Powell of Ghent, N. Y., a grower of fancy apples. "I have less scale and finer foliage than ever before." REASON: Six years consecutive use of

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The Fireless Cook Book

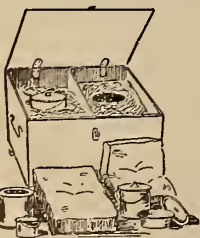
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items to success. Never allow the plants to suffer for want of water, and give an abundance of air on all favorable occasions. The best temperature for growing these plants is, at night, 50 to 55 degrees and during the day 60 to 65 degrees.

String beans, bush varieties. Sow about the middle of April in well drained, 4-inch pots, from five to seven seeds to a pot, covering with one-half inch of soil and firming well. Water rather sparingly till the seeds germinate; then give an abundance of water. Give air on all favorable occasions. The best varieties are Early Mohawk, Valentine and Early Refugee. For succession sow every two weeks.

Pole lima beans can be grown in precisely the same way as string beans, and a gain of two to three weeks can be had in this manner. They should be hardened off in coldframes before being planted in the open ground. Grow Early Levitan, Dreer's Improved, or King of the Garden.

Cauliflower. Sow in early March in flats. Make drills about three inches apart and put the seed about one inch deep, covering very lightly and firming the surface with a piece of board or brick, watering thoroughly with a fine rose watering can as soon as the seedlings have made their true leaves. Transplant into 3-inch pots, or into flats three inches apart each way. Shade the plants for a few days and gradually harden off. Varieties: Early Erfurt, Early Snowball.

Cabbage can be treated precisely the same as cauliflower. If, after cutting the heads, a few sprouts are allowed to grow out on the old stump, you will have small and tender cabbage till hard freezing weather. Plant Early Jersey, Charles Wakefield. For succession sow every four weeks, and for fall and winter use, from May 8th to 15th, Autumn King, Flat Dutch, American Drumhead.

Beets. Sow moderately thick in drills one inch deep and three inches apart. Water thoroughly, and as soon as the seedlings have made their true leaves transplant into other flats. Or, if the weather permits, they can be transplanted into the open ground in rows twelve to fifteen inches apart, four inches apart in the row.

Sweet corn. A gain of three weeks can be had by sowing corn the middle of April. Put six to eight seeds in each 5-inch pot, cover lightly and firm well. Water sparingly till the young sprouts appear, as they are liable to rot if kept too wet. Give an abundance of air on all favorable occasions, and when the pots are well filled with roots harden off for transplanting outdoors. Plant two feet apart in well enriched soil in rows, and three feet from row to row. Best varieties to grow are Early Cory, Premo, and Peep o' Day.

Lettuce. In order to have good, crisp heads, broadcast the seed in flats, covering lightly and firming and watering well. Do not have the seed too thick. The best varieties in my experience are May King, Private Stock, and Trianon Cos. For succession, seed should be sown every two weeks. As soon as the seedlings are ready pot off into 2-inch pots, using a good rich soil, and shade for a few days. After they are well rooted transfer to frames or outdoors, according to the weather, nine inches apart in rows, twelve inches from row to row. I prefer pots, as when transplanting later in any kind of weather the roots hold the soil and the plants receive no check. Keep the surface soil constantly stirred and water copiously when necessary.

Tomatoes. Sow seeds in pans or flats about the middle of March in shallow drills one-half inch deep and three inches apart, firming and watering well. As soon as they have made their first set of leaves transplant into 3-inch pots, shading for a few days till the roots take hold of the new soil. After the pots become filled with roots transfer to 6-inch pots, making the soil rather firm. Give more air from now on and give rather too little than too much water so as to induce a good stocky growth and early fruiting. I like to have one or two sets of fruit on the plants before planting out, which is usually about May 15th. I have usually picked tomatoes about June 20th. Plant Earliana, Early Jewel, Dwarf Champion, Liberty, Stone, and Table Queen. A sowing can also be made about May 1st for very late use. Tomatoes do not require an over-rich soil; they then make too much growth and are liable to core rot.

Peppers and egg plant. Sow in March. A few

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plants of each will suffice for a moderately sized family. They demand a good deal of heat and can be treated in much the same way as tomatoes. Egg plants require an occasional syringing to keep down red spider. The best varieties to grow are New York Improved and Black Beauty. The best peppers are Large Bell, Chinese Giant and Long Red Cayenne.

Parsley. Sow a few pots or a flat in March or April. Parsley is slow to germinate; the soil should be thoroughly firmed when the seed is sown. It is one of the hardiest of vegetables and requires no special treatment.

Onions. A few of the large mild varieties, such as Prizetaker and Ailsa Craig, can be sown during March or April in flats for extra early use. Broadcast the seed moderately thick. As soon as the plants are of sufficient size, transplant to other flats, in good rich soil, three inches apart each way. As soon as the plants have attained the size of lead pencils transfer to permanent quarters in open ground. The soil cannot be too rich for onions. Plant nine inches apart in drills two inches deep, allowing eight inches between the rows.

Celery is always in demand. Sow a small flat in February for early use, barely covering the seed. Shade for a few days till it germinates, and then give an abundance of air and water at all times. As soon as the second pair of leaves appears transplant to other flats, about three inches apart each way. For main crop sow in frames or open ground about April 15th. For early celery grow White Plume, Golden Dwarf, Self Blanching; mid-season, Fin de Siècle, Giant Pascal; late, Winter Queen, New Rose.

New York. GEORGE STANDEN.



A Glassless Hotbed

MANY a small home garden would be the richer for a small hotbed. But the cost of sash is to be considered, the glass is always breaking and, if not carefully tended every day, the baby plants under glass are burned up.

We enjoyed the advantages of a hotbed for years in our garden without a foot of glass. This was in Northern Michigan where planting-out time delays until the last of May. A neighbor who did truck gardening in a small way, and who had been nursing cabbage and tomato plants on racks in his windows since the middle of February, laughed at us when we made a glassless hotbed the first of April and declared that our plants would equal his. At planting-out time he had to admit defeat. Our plants were larger, greener, sturdier than the window-grown ones; best of all they had not stopped growing, which is one of the essential things in the development of young plants.

This hotbed was made of some hemlock boards we happened to have, digging out to a depth of eighteen inches. Fresh horse manure was tramped in, ten inches deep, and eight inches of garden soil over that. Since we meant to let our plants grow here until settled weather, we made the frame twelve inches high at the back and eight at the front, sinking it three inches and banking the outside a little. The frame for the cover was of very light strips hinged to the back of the bed, and upon this frame we tacked unbleached cotton cloth—two widths seamed in the middle.

When the heat in the bed fell to 90 degrees we sowed our seeds, both flowers and vegetables. They flourished remarkably because the weather was warm enough to allow the cover to be raised nearly every day and the plants had an abundance

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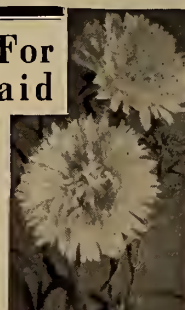
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Rich Blood-Red Japanese Maples

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2 Red Fern-Leaved Japanese Maples	1 to 1½ ft.
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of fresh air. The cover was put snugly down at night, of course, and during cold winds and rains. The cloth cover became wet, to be sure; but the slant of the frame—four inches in fifty-four—drained off most of the water and no part of the bed was too damp except about three inches at the front. We took off the cover and stored it when warm weather came, thus making it serve for three seasons.

A fine arrangement for growing perennials, cuttings, etc., is a box nearly filled with rich earth. It need not be sunk in the ground. Hinge the cloth cover into place to protect the contents from scorching sunshine, as the hotbed cover protects from cold. The yard-square, hundred-pound flour sacks, to be had at bakeries for four or five cents each, make excellent covers.

There is scarcely a perennial plant desirable for gardens in the frost belt that cannot be raised from seed with comparative ease in such a covered box. Sow the seeds any time after the spring rush is over—the earlier, the better. Sprinkle the box carefully when the soil looks dry, keep shaded through the middle of hot days but open to the air from late afternoon until nine or ten in the morning. Thin the plants as they become crowded, transplant to the garden when big enough to handle nicely, and hoe them well.

Michigan.

GLADYS H. SINCLAIR.

Some Points About Celery

WHENEVER celery can be stored in trenches outside, the following plan can be used with great saving of time and labor. Instead of digging and storing, it is grown on an intensive scale and protected where it stands. In small gardens the old plan of growing celery in trenches four feet apart requires too much room. On this plan five hundred stalks can be grown on a plot 6 by 50 feet. Besides, it is almost as easy to hill up the bed as to hill a row. To begin with, an early crop of lettuce and radishes can be grown while the celery is still too small to set out.

Make the bed six feet wide and as long as needed. The soil must be thoroughly worked and well enriched. It will take the loamiest and best soil in the garden to make celery. A board five feet long and one foot wide is laid off with notches six inches apart along each edge. A garden line is stretched the length of the bed, six inches from the edge, and the end of the board is placed exactly square with this line. Standing on this board the gardener sets a plant at each notch across the bed. The board is then moved, and the notches made to correspond with the plants just set out. Another row is then planted, and so on down the bed. In this way the entire plot is planted without walking on the soft earth, and the bed stands, when finished, perfectly uniform, with rows one foot apart across the bed and six inches apart in rows. The whole is then soaked, and the plants left, with occasional cultivation to keep out weeds, to develop.

When "handling" time comes two cords, several feet longer than the width of the bed, with pegs at each end, are used. A peg is thrust into the ground at the end of a row, a turn is taken around each plant to hold it upright, and the other peg is set to hold the plants until handled. The other cord is used on the second row, and enough earth shoveled carefully in to hold the plants erect. This earth is drawn by hand close to each plant, tight enough to hold it erect when the cord is removed. The next rows are then treated as the first until all are done.

When hilling time comes the same process is repeated until the plants are ready for the final covering. In the South celery does best during the early fall and must not be hilled until then. By hilling time the crop will be off the ground at the side of the bed and plenty of earth is at hand for hilling. Frosts improve the quality of celery as nothing else will, but on the approach of freezing weather about eight inches of earth is thrown over all and the bed is well banked at the sides and ends. The top of the banked bed can slope to shed water, and straw and manure can be thrown over all as a final protection.

North Carolina.

C. E. R.

Plant for Immediate Effect

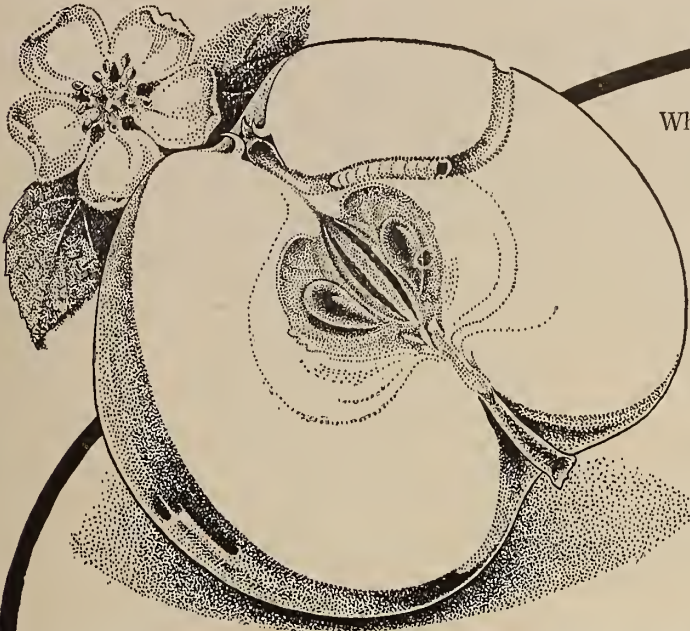
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WM. WARNER HARPER, Proprietor



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SWIFT'S Arsenate of Lead.

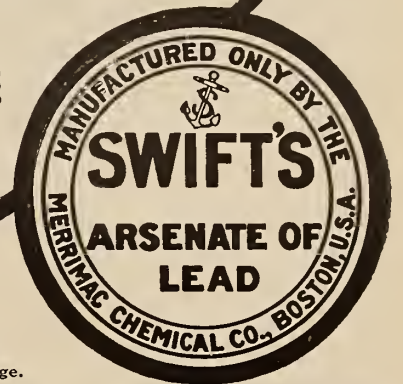
The arsenate falls into this calyx cup and when it closes a few days later the poison is there ready for the worm's first meal any time thereafter, whether a day or a month. The use of Swift's is insurance against wormy fruit. The worm feeds upon this poisoned calyx and never enters the apple.

In hundreds of orchards sprayed last spring with Swift's Arsenate of Lead there was practically no wormy fruit. Before the owners of those orchards took up spraying the codling moth alone reduced their possible yield 20 to 40%.

Write for Our New Illustrated Book—Raising Apples. From Planting the Trees, to Caring for the Crop, this Book is a True Guide.

Your former losses in fruits and vegetables will be reduced 90% by thorough spraying with Swift's Arsenate of Lead. Swift's mixes readily with water. The fine particles remain a long time in suspension and will not clog the pump. Only the heaviest rains can wash it off.

MERRIMAC CHEMICAL CO.
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IT is not without good reason that for over a century and a quarter the Landreth farms and storehouses have been considered collectively as the "Home of Seeds." It means satisfied patrons over a long period,—and a large number of them.

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Picea Pungens Kosteriana compacta.

This variety is a great improvement on the well known Kosteriana, being more symmetrical and compact of growth, with foliage of a rich silvery blue.

The Blue Spruce is one of the most beautiful and distinctive of trees and, owing to its extreme hardiness, will thrive in the most exposed situation.

The illustration shows a block of these trees in our Nursery. We offer 2½ to 3 feet specimens at \$5.00 each.

Place your orders now and shipment will be made to suit your convenience during April and May.

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QUEENS, NEW YORK



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IN hose, *quality* is everything. Looks count for nothing. You can't tell the quality of rubber hose by examining it. You must depend upon the *maker*, and the reputation of his hose. Therefore always buy hose with the *maker's name* on it.

If you buy Hamilton-Made Hose, you get not only the maker's name, but his **GUARANTEE**. This is very important, for very few makers will guarantee their hose to stand a specified pressure.

On every length of **HAMILTON-MADE HOSE** you will find on the label the words "Guaranteed 600 pounds pressure," or 650 pounds, or 750, according to its grade.

Our splendid "Hamilton" brand, our highest grade, is tested under an actual pressure of *750 pounds to the square inch*.

Do you think hose could stand such a pressure if it were poor in *any* respect?

There's a **HAMILTON-MADE HOSE** for every different use, each grade made **BETTER THAN IS NECESSARY** to meet the requirements for that use, and **GUARANTEED** to stand a **SPECIFIED PRESSURE**. Whatever kind of hose you need, ask the dealer for **HAMILTON-MADE**, and you will be certain of getting the **BEST HOSE OF THAT GRADE** that is made.

Here are some of the leading grades of Hamilton-Made Garden Hose. Note that every label bears the words **HAMILTON-MADE**



How to get the best hose that is made

SOME dealers do not sell the highest-grade garden hose. They argue that everybody wants low-priced hose. We know better, for we know that our stiff, strong, tough "HAMILTON" brand hose is really the **CHEAPEST OF ALL**, and that many wise buyers will be glad to get it. We therefore make this offer to all who cannot buy it of a dealer:

If your dealer does not keep it, we will deliver to you anywhere in the United States, **PREPAID**, 50-foot lengths of **HAMILTON** brand, our highest grade garden hose, complete with standard brass couplings, for the regular price, **\$12.50 EACH LENGTH**.

This splendid hose stands a pressure of **750 POUNDS** to the square inch, and while it is our highest-priced garden hose, it lasts so long that it is really the **cheapest** hose made.

If hose of such extremely high resistance is not required, we will send **KENMORE** (guaranteed 650 pounds) at **\$10.50**, or **CYGNET** (500 pounds) at **\$8.00**, for 50-foot lengths. Shipped same day order is received.

Hamilton Rubber Manufacturing Co.
Trenton, New Jersey

Growing Tree Tomatoes

WHILE ordinary tomato culture is both simple and easy, tomato "trees" seven to eight feet high are another story. To have plants of a good variety is the first essential. I grow the Ponderosa which has the vitality to stand frequent pruning, an essential in growing tree tomatoes. In planting we put a half-wheelbarrow load of manure beneath each plant. Horse manure is preferable as it feeds the plant slowly all through the season.

When the plants were set out on May 5th, they were staked with 1½-inch round, smooth, ash stakes, seven feet long. When the plant was twelve inches high, it was tied to the stake perfectly straight with two-ply jute twine, tying the twine first around the pole in a hard knot, then loosely around the plant. The time of setting out the plants, of course, varies with the locality. But do it as soon as the ground is workable and there is no danger of frost.

Two weeks later all side shoots were clipped from the main stalk close to the tree, slipping the string up the pole. After a few days, we trimmed again.



Try growing tomatoes as trees: 400 pounds were obtained from 16 trees in this field

slipping the string up the stake, cultivating the ground all through the season. All branches and some of the blossoms nearest the ground were clipped off, the tree maturing strength of trunk before its vitality goes into the fruit.

From sixteen trees, we picked about four hundred pounds of luscious, rich, red, juicy, almost seedless fruit, all of it sizable and smooth, each tomato weighing from ten to nineteen ounces. Before frost, we clipped the tree-top down to the pole, and "bagged" it. October 10th, we picked all ripe fruit, leaving only green tomatoes which would have been killed by freezing.

We then slipped a paper flour bag over each tree, tying and winding it down to the ground. Later we removed the bags and found most of the remaining tomatoes ripe. All fruit not fully ripe or matured was then picked and paper-wrapped (like oranges) and packed away to ripen.

New York.

L. H. NELSON.

Getting Choice Petunias

THERE is perhaps no plant whose blossoms show so great a difference in quality as the petunia, some being decidedly plebeian, others true aristocrats. I have a choice collection of both single and double varieties and this is how I have obtained it:

Early in the spring I sow seeds in frames of the best variety I can obtain. When the weather becomes warm enough they are transplanted to the garden. In a few weeks they begin to bloom,



**ROWE'S
GLOUCESTER
BED HAMMOCK**

For Verandas, Porches, Lawns and Outdoor Sleeping — Made by Sailmakers — Holds Six Persons — Lasts Ten Years

If your neighbor has had a Rowe Gloucester Hammock, and you have had another kind, you know their comparative worth. He will not need another hammock for ten years, while yours must soon be replaced. The Rowe was the original Gloucester Bed Hammock — built after the model which we made for years for the U. S. Navy. After we introduced this style of hammock, other manufacturers began to make hammocks which looked like ours. Purchasers paid for the manufacturers' lack of experience. How could they know that 21-ounce (to the sq. yd.) duck was necessary, and that 12-ounce or 8-ounce duck couldn't stand the strain? How could they know that heavy thread was vital to durability? How could they know the score of devices and secrets for bracing and strengthening which forty-five years of sailmaking had taught us? There

is no useless show in our hammock — every cent goes for lasting service and comfort. A cheaper hammock absolutely must be lacking at some point which time and usage will quickly reveal. Our hammocks are the highest in price, but far and away the cheapest by the year. If you want a durable hammock, your only protection is to get the genuine Rowe. We guarantee our Khaki absolutely permanent and not to soil the most delicate gown. Don't buy a hammock without first writing us. A very few high-grade stores are licensed to sell the Rowe Gloucester Bed Hammock. If not convenient to deal with them, you should order direct from us. We prepay delivery charges, and ship carefully packed, ready for hanging.

Write for Descriptive Booklet and prices of different styles and sizes. Small silk name-label on every Rowe Hammock
E. L. ROWE & SON, Inc., Sailmakers, Ship Chandlers 462 WHARF STREET, GLOUCESTER, MASS.

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MECHANICS BUILDING, BOSTON, MASS.

March 25th to April 1st, Inclusive

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In Connection With

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Applications for Space in Trade and Competition Departments now receivable

Write for complete Premium List for the \$10,000 in Prizes, and diagrams of floor space to

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Hardy varieties — carnations that flower in six weeks and bloom all the season supplied on application through our personal service plan of selection.

- RED
- WHITE
- SALMON
- DARK PINK
- LIGHT PINK
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EACH PLANT PRODUCES 8 TO 12 FLOWERS

....Chrysanthemums

Yellow, Pink and White; sturdy, weather defying plants that blossom large flowers from September to October, may be secured through us at an attractive price.

Now is the time to put in your order. Keep ahead of the rush of the shipping season and take advantage of a first choice from our full quota of varieties. Information furnished promptly on application. Ready for shipment April 15th.

Send \$1.00 and get 12 Carnation or Chrysanthemum Plants.

Hurane Floral Company, HEMPSTEAD, NEW YORK

OUR Melon Frames make the handiest kind of little portable cold frames. You can tote them about anywhere and use them in endless ways, as starting early vegetable and flower plants—forcing hardy flowers in bloom earlier. For melons they are little wonders. They cost only \$1.35 complete—sash included.

Order some right now and give things a boost. It's really amazing the way they will help you to have things early with the least possible trouble.

There's your rhubarb—put a frame over a clump and have "sauce" two to four weeks in advance. Three or more placed on your asparagus bed will give that a goodly boost. You can take single frames and plant one each to lettuce, radishes, pepper grass, swiss chard and so on, and be smacking your lips over the good things weeks ahead of the regular garden planting. Then of course there are your melons and cucumbers—these frames are a tremendous advantage to each, as the plants have a chance to get thoroughly started and strongly rooted before hot weather begins to sizzle them. Melons and "cukes" grown this way are a certain crop. Melons then have that true mouth-watering flavor.



The melon frames are 22½ x 25½ inches and are made in the same careful way as our larger frames. Shipped knocked down.



The Junior frames are next in size to the melon and take a sash 34 x 38 inches. We make them for one, two, three or any number of sash.

So much for the vegetable garden—and think of the help they would be to your flowers! You see they are so light and handy you can tote them around anywhere, and put them over tulips or daffodils and have blooms while the snow still lingers. Think of the cosmos—the larkspur—the salvia—the coreopsis—the nasturtiums—you could start in them and have things blooming just that much earlier. It's great, this gardening when you have frames to help you. Send for our Two P's Booklet—it tells all about all the different kinds and different sizes of frames we make. There's one we call the Junior that is a size between the melon frames and the regulation garden size. Perhaps you would prefer it to the melon frames. In any event, get your order in, because the robins are already here and the crocuses are even now peeping through the ground.

Lord & Burnham Company

New York
St. James Bldg.

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The Rookery

when all but the finest are pulled up and destroyed. Whenever I see at the florist's a plant with an unusually pretty blossom I buy it; or, if it happens to be in a friend's garden, I beg for a slip, which I root in damp sand or in a bottle of water.

In September two or three cuttings are taken from each plant which I wish to reproduce the next season. These are inserted about four inches apart in a box of rich, sandy loam and a glass placed over them to retain the moisture. The cuttings are placed close together, as the idea is



Petunias make a fine display in the garden. Select only the best seed from year to year

not so much to make a large growth as to carry over to the next season as great a variety as possible. The cuttings have rooted and have made some growth before it is time to take them indoors. The box is then carried to a cool room which has plenty of sunshine but no artificial heat. Here the growth is slow and the tips are pinched out to induce branching.

In February the box is brought into a warm room and the plants are encouraged to make a growth from which cuttings are taken about the first of April, rooted in damp sand and potted about four inches apart in boxes of light, rich soil. These will be nearly ready to begin blossoming by the middle or last of May, when they are planted out in beds, in boxes—in fact, everywhere. Nothing can be finer for a sunny window box than a riotous growth of single petunias, and they will also grow without direct sunshine if given plenty of light. They will bloom and make a brave showing long after frost has killed all tender things in the garden.

New York.

MRS. E. E. TRUMBULL.

Grafting Wild Apples

WHEN I went to my New Hampshire camp last April to make our vegetable garden there were a few days before the ground could be worked, and in looking about for occupation I discovered among the birches innumerable small wild apple and thorn apple trees. The thought occurred to me that possibly these could be grafted with a choice fruit. On inspection I found the thorn apple trees were such a haven for brown tail caterpillars that I cut down and burned every one I could find.

With the wild apple trees it was different. These were clean and thrifty. I selected half a dozen for my experiment. I remembered having seen—when a child—some pear trees being grafted by my uncle's German gardener, and I was so piqued with curiosity that I pulled out one of the cions to see how he had put it in—much to the gardener's wrath. But that incident, occurring nearly fifty years ago, was my only teacher now. I secured some grafting wax and melted it in a can set in boiling water. I went to a neighboring orchard where I had reveled in "windfalls"



THIS BOOK sent free for the asking, is full of reliable information concerning Trees and Plants hardy in New England. It is well worth sending for.

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Biltmore Nursery can fill your orders promptly—because of a good business organization. Biltmore Nursery trees and plants will grow anywhere in the United States—because they are propagated high up in the North Carolina mountains where the extremes of climate give great hardiness. Biltmore Nursery products will start off into vigorous growth as soon as transplanted—because they have been bred, and fed and trained to make them do just that.

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Hardy Perennials. Our stock of old-fashioned flowers has become famous. We were among the first to recognize the value of this material, and have planted many gardens.

Fruit. Special offer in large Apple, Cherry, Pear, Grapes; a grand lot of dwarf fruit trees, all transplanted.



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and tried varieties of Evergreens, Ornamental Trees, Flowering Shrubs, Vines, Hardy Perennials, Privet for Hedges, Roses, Bedding Plants, Etc., at most reasonable prices.

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Each year sees an increase in the number of persons awakened to the great beauties of the hardy Poppy, Phlox, Peony, Iris, Delphinium, Foxglove and Clove Pink. Very little care is needed, except to divide the clumps every two or three years, so plant a border of them this spring—they're all sure to bloom this year, the year after, and forever.

Get Peter's Book of Perennials

A beautiful seventy page book that describes and pictures some of the choicest hardy plants and shrubs. It will show you how to get some of the "spirit" of brightness and happiness and health wrapped up in the planting of really choice, vigorous, fibrous-rooted and mountain-grown stock, able to withstand seventeen degrees below zero. In planning your garden, write us today for the book—it's sent free—but ask us NOW.

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Is the smartest and handsomest of pleasure carriages and an absolutely storm-proof buggy all in one. Just think of the comfort of a buggy that is instantly adjustable to every need of every day's drive. In a few seconds and without leaving your seat, you can close it so tight that not a drop of rain can beat in. Yet you aren't penned in as you are by the storm curtains of the ordinary buggy. In case of accident the door curtains can be opened quick as a flash, while you leap to safety from the low-cut box through the roomy door. If the wind blows chill or the dust annoys, one side of the cab can be quickly closed. No matter what the condition of weather, no matter how muddy the roads, it's always safe, dry, and comfortable inside the COZY CAB. There are no points of disadvantage to mar these wonderful advantages. The COZY CAB is simply perfect—it's the neatest, handsomest buggy on the road today. It's the lightest closed buggy made, the roomiest and the most serviceable.

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Even though you may not need a new buggy just now, put yourself on the COZY CAB. It is the one buggy that is abreast with 20th-century improvement. A buggy, so improved over the conventional types that you'll never forgive yourself if you learn its wonderful comfort and convenience after you've put your money in an ordinary buggy. Don't put this off, but mail us the coupon today or drop us a post card, if that is more convenient. We'll send you prepaid our handsome COZY CAB book and our 30-day trial offer by return mail.

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GERMAN NURSERIES AND SEED HOUSE
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All kinds of Farm, Garden and Flower Seeds to select from. Best quality fruit trees, large bearers, grafted stock, not seedlings. Apple 4c, Peach 6c, Plum, 15c, Cherry 12c. Concord Grape \$2.50 per 100. Forest tree seedlings \$1.25 per 1000 up. We pay freight on \$10 orders of nursery stock. Write to-day.

German Nurseries, Box 110 Beatrice, Neb.

the previous autumn, and secured from a Two Pound Pippin and a Golden Sweet tree a large pitcher of fruit-bearing twigs, or cions. There is a difference between the fruit and leaf twigs—the former grow from the sides of the branches and the leaf twigs from the ends. I filled the pitcher with water to keep the cions fresh and was soon at work on my own wild apple trees.

I clipped the trunks clean of branches and leaves to where the trunk of the tree was two inches in diameter; then with a small saw I cut off the top. These leafless trunks looked denuded of every promise, but I took a sharp meat knife and wooden mallet and slightly spilt the ends of the stubs. Then I took two cions about six inches long and whittled the cut end to a wedge, each cion having a bud left at the apex of the wedge. These I inserted into the split of the tree stub in such a way that the bud was outside and on a line with the bark where it was split. I bound them firmly into their exact places with soft grafting twine, and applied the soft grafting wax to every cut and bruised place so that the tree could not bleed. Each stub was treated in the same way, and I waited for developments. After I had clipped the trunks clean I was haunted with a fear, for I realized too late that a tree breathed through its leaves and that the wild trees leafed earlier than the trees from which I had secured my cions—a good thing for the growth of the cions if I had not deliberately taken the lives of the grafted trunks.

But out of the six trees experimented with, three are flourishing and are my pride; two more are living but the cions died; the sixth met with the same fate the German gardener's did fifty years ago, and when I saw some one had pulled the cions from my grafted trees I felt the German gardener was avenged!

Our state experimental station tells me that from these grafted wild trees I will get a better fruit than from the nursery trees I set out at the same season, and that in two years these wild trees should bear fruit.

New Hampshire.

NUSHKA.

Exhibitions Worth Seeing

A GREAT national flower show will be held in Boston March 25th to April 1st. This is the second national exhibition to be held by the Society of American Florists and is in cooperation with the Massachusetts Horticultural Society. The exhibition will take place in Mechanics' Building. Besides the organizing societies there will be on successive days meetings of the various allied associations, such as the American Rose Society, the American Carnation Society, etc., with special displays of their particular flowers all the week. The leading novelties of the season will be on display at the combined exhibitions and will afford excellent opportunities for amateurs to see the very latest introductions.

The Massachusetts Horticultural Society schedules the following exhibitions for the coming year, in Horticultural Hall, Boston.

- May 20th, 21st: May exhibition.
- June 10th, 11th: Rhododendron exhibition.
- June 24th, 25th: Rose, peony, and strawberry exhibition.
- July 15th, 16th: Sweet pea exhibition.
- August 19th, 20th: Exhibition of flowers, fruits, and vegetables.
- September 2d, 3d: Children's exhibition, collections of flowers and vegetables from school gardens and children's home gardens.
- November 9th, 12th: Chrysanthemum show.

Visitors to New York City should not fail to visit the monthly meetings and exhibitions of the Horticultural Society of New York, which are held in the American Museum of Natural History in February, March and April. Other exhibitions during the summer are held in the museum of the New York Botanical Garden, Bronx Park. This Society meets on the second Wednesday of the month.

The program of the Pennsylvania Horticultural Society, at Horticultural Hall, Philadelphia, is as follows:

- Spring exhibition: March 21st, 22d, 23d.
- Peony exhibition: End of May or in June. The National Peony Society will hold its exhibition in connection with the sweet pea show, late in June.
- Outdoor-grown rose show in June or according to season.
- Dahlia exhibition: September 19th.
- Annual chrysanthemum show in November.



Natives digging and loading asphalt at Trinidad Lake

All "asphalt roofing" is not Trinidad Lake Asphalt Roofing—there's a great big difference. Look out for that when you buy your roofing.

Ordinary so-called asphalt roofings are made of artificial products masquerading as real asphalt. They are nothing more than the residue from petroleum oil or native bitumens made into a black pitch, which is easily affected by changes in weather.

Genasco

the Trinidad-Lake-Asphalt Roofing

is made of genuine natural asphalt—perfectly stable and uniform in quality.

Trinidad Lake asphalt is endowed by nature with natural oils; and they stay in it. This gives Genasco its wonderful resistance to rain, snow, sun, wind, heat and cold—and keeps it lastingly waterproof.

The artificial asphalts have oils mixed with them, but they haven't the quality of the oils in the natural product; and they soon evaporate and leave the roofing "dead"—and it cracks, breaks and leaks, although at the first it may look like Genasco, the real Trinidad-Lake-Asphalt roofing.

To make sure of roofing that will permanently protect, ask your dealer for Genasco, the Trinidad-Lake-Asphalt Roofing, with either mineral or smooth surface. Fully guaranteed.

The Kant-leak Kleet waterproofs the seams of Genasco Roofing without cement, does away with nail-leaks, and gives the roof an attractive finish. Ask your dealer for Genasco with Kant-leak Kleets packed in the roll.

Write for samples and the Good Roof Guide Book.



The Barber Asphalt Paving Company

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

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Cross-section Genasco Model Roofing



- Crushed Quartz
- Trinidad Lake Asphalt
- Asphalt-saturated Wool Felt
- Trinidad Lake Asphalt
- Asphalt saturated Burlap
- Trinidad Lake Asphalt

EQUIP YOUR GARDEN RIGHT

Get the new sash that has two layers of glass and needs no mats or other covers. Send For These Two Books. One is our valuable free catalog. In the other Prof. Massey tells what and when to plant in hotbeds and coldframes. Send 4c in stamps for this booklet in addition to free catalog.

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ROCKY MOUNTAIN

flowers, shrubs and evergreens, the native sorts from northern Colorado, are hardy and of remarkable vitality, thriving where many plants fail. Their ornamental character is distinct, and they take first rank for beauty and refinement. Our illustrated catalogue (18th year) offers and describes the best. You will find it interesting and instructive. Mailed free. Besides natives, we grow the best hardy ornamentals for the West and Northwest. Don't fail to see our catalogue.

ROCKMONT NURSERY, Boulder, Colorado

WHITE HOUSE

A wonderful new Carnation

¶ The largest and best variety ever sent out for greenhouse culture. Won Silver Cup at Morristown for best new variety, and has won many certificates.

¶ Nice pot plants, Spring delivery, \$3 per dozen, \$20 per hundred.

¶ We catalogue all other varieties of Carnations in addition.

¶ If you have no greenhouse and are interested in outdoor plants, let us send you our Chrysanthemum list. It's yours for the asking.

¶ We catalogue 500 varieties; 200 varieties suitable for outdoor planting, and sell more Chrysanthemums than any other house in the world.

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Madison, New Jersey



"Farr's Hardy Plant Specialties"

A book full of human interest, and entirely unlike any other American catalog. A beautifully illustrated and comprehensive list of all the essentials of the Hardy Garden.

An English writer says, "It surpasses any American catalog I have seen, and is equalled by but few in Europe, and as regards the Iris and Peony I consider it the standard authority."

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Besides the splendid collection of Irises and Peonies, there is described in this book an endless variety of those things specially adapted for

Spring planting—Hardy Asters, Chrysanthemums, Anemones, Pyrethrums, Tritomas, etc., and a superb collection of Hardy Phloxes, comprising all the latest novelties.



Japan Irises are best planted in early Spring and my collection of upwards of 75 varieties is unique in one important particular—every one is absolutely true to description which cannot be said of any collection imported direct from Japan—it has taken over ten years of persevering study to bring my collection to its present state.

I wish every reader of *Garden Magazine* who is interested in growing hardy plants might have this book, as it makes friends for me everywhere, and I would like to count you among them.

BERTRAND H. FARR

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THIS VALUABLE NOVELTY, OUR SPECIAL,

is a new strain among the species of Dahlias. Its early flowering and very dwarf habit (15 inches) make it one of the finest bedding plants ever introduced, producing in great profusion well-formed single flowers of medium size, and blooms from June until frost. Was awarded by the Flower Committee at Amsterdam 5 first class certificates and 5 awards of merit.

Price for strong field grown tubers, in colors of White, Pink, Yellow, Orange, Scarlet, Violet, 75c. each; \$3.50 for 6.

NEW DECORATIVE DAHLIA "PRINCESS JULIANA"

This Dahlia is of special merit, the best thing that we have yet introduced. Pure white, perfect flowers, long stems, and unsurpassable for decorative purposes.

Offered for the first time in this country at \$2.50 each.

We have lots of others that are mentioned in our Catalogue, which will be mailed to anyone that mentions this magazine.

These prices are all from the Philadelphia house.

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Would you like to have
OUR SPECIAL DAHLIA
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If so, order direct from
THIS NURSERY

Arthur Cowee's New Book-let "Uses of the Gladiolus"

The best flower is that which is both beautiful and useful. None has greater beauty than the modern Gladiolus; none can be used for so many purposes.

Gladiolus blooms are wonderfully durable. If cut when the first flower opens and kept in fresh water they will remain in good form for a week or more—until every bud has opened. There are many other points in which the Gladiolus excels.

My new book "The Uses of the Modern Gladiolus" describes a number of the most effective ways to make this superb flower useful. It also tells *how* to select bulbs, prepare the soil, plant cultivate, etc., etc. Send for a free copy *now*—planting time is almost here.

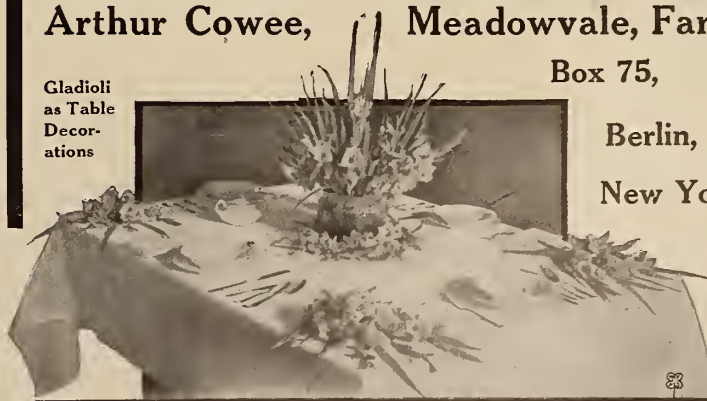
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Berlin,

New York

Gladioli
as Table
Decor-
ations



The largest growers of Bulbs, Plants, Dahlias, etc., in Holland. We offer you this opportunity of dealing direct with us.

When answering state whether you want our Bulb and Plant Catalogue mailed with the Dahlia Catalogue.



You should see our Portfolio of color schemes before you paint your house

It is always difficult to select pleasing color combinations from color cards. It is also difficult to select the paint, varnish or stain best suited to the surface it is to cover.

This Portfolio, "Color Schemes for Exterior House Painting," shows many harmonious color combinations on various styles of houses, and gives complete specifications for securing the results shown, naming the particular paint, varnish or stain which will make these pleasing results permanent.

Before you build, remodel or redecorate send for and study our Portfolio, "A Cottage Bungalow." It is a complete plan of interior decorations, each room being carefully worked out and shown in colors, with complete specifications. Even the rugs, draperies, hangings and furniture are included.



Send for these two Portfolios today. They are free. You will find them both wonderfully helpful in making your home attractive, and in bringing to your attention the kind of paint, stains and varnishes with which you can best carry out your ideas.

SHERWIN-WILLIAMS PAINTS & VARNISHES

Sold by dealers everywhere. Ask your local dealer for color cards and full information. For the Special Home Decoration Service write to The Sherwin-Williams Company, Decorative Dept., 657 Canal Road, N. W., Cleveland, Ohio.



"Your Home and its Decoration"

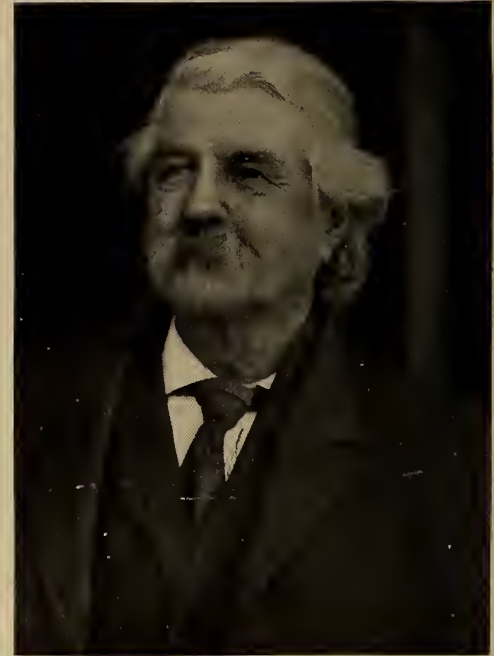
is an attractive 200 page book filled with practical hints on home decoration. Contains 12 beautiful color plates and 130 other illustrations. Everyone interested in correct home decoration should have a copy of this book. Price \$2.00. Postage 15c. extra.

Jackson T. Dawson, Second White Medalist

THE Massachusetts Horticultural Society has awarded the George Robert White Medal of Honor to Mr. Jackson Thornton Dawson of the Arnold Arboretum. The Director of the Arboretum thinks that no man in his time and probably no man in any time has raised so many plants belonging to so many different species of trees and shrubs as has Mr. Dawson.

The Arboretum is a sort of joint product of the planning of Professor Charles Sprague Sargent and the doing of Mr. Dawson, the one the director and the other the agent in the field. After twenty-five years of labor they are now looking ahead to the realization of their vision that the Arboretum shall contain all the trees and shrubs of all the countries of the world that will grow in the climate of eastern Massachusetts.

Mr. Dawson by intuition seems to know what are the affinities of a plant. Apparently he guesses what to graft a plant upon or how to propagate it, and he seems to guess right always. He was the first man to raise the so-called hybrid rambler roses



by crossing the garden rose with the Japanese *Rosa multiflora*. Two of the most beautiful hardy roses ever raised in America he produced—the William C. Egan rose and the Sargent rose. He has also developed many other roses, among which are Lady Duncan and Farquhar. Several medals have been bestowed upon him in the last twenty-five years in recognition of his achievements in this line.

When but eight years old Mr. Dawson began his career in the nurseries of his uncle at Andover, Massachusetts. His first medal came when he made known to the world the Scottish heather which had been growing wild in Massachusetts. When Professor Sargent became director of the Botanical Gardens of Cambridge, Mr. Dawson supplied him with plants in exchange, sometimes exchanging as many as 25,000 a year with different institutions.

Nearly all the trees and shrubs in the Arboretum were raised from seed by Mr. Dawson. In one year he collected 50,000 native shrubs. Seeds have been sent in quantities from Asia and from distant parts of the United States and from Europe, and he has handled the spoils of various expeditions which the Arboretum has sent into almost unknown parts of the world. He showed the Massachusetts nurserymen how to graft conifers; he was the first to grow rhododendrons from seed in an improved manner. Hard-wooded plants have also succumbed to his skill in grafting.

This is the second award of the medal, the first presentation having been made to Professor Sargent. Massachusetts. F. L. BULLARD.



Dahlias

From the largest collection in America you have the privilege of selecting when you have our 1911 Garden Manual before you. The Manual has this season been rewritten and new illustrations used to make it stand in the front as a place to find

The Newest in Flowers, the Newest in Vegetables, the Best in Spring Flowering Bulbs, Ornamental Shrubs and Fruit Trees, Perennial Plants and Sundries for the Lawn and Garden

This Garden Manual is an addition to any collection of reference books. Write us now and we will mail it free.

DAHLIAS We want you to know more about our collection and we make this offer to mail to any Post Office in the United States

TEN DAHLIAS FOR \$1.00

Your selection as to whether they shall be Cactus, Decorative, Paeony-Flowered, Show or Single. Our selection as to varieties, all with correct names, mailed to you for \$1.00.

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FANEUIL HALL SQUARE : : : : BOSTON

The New Berry Giant Himalaya

A briary vine like a blackberry, which grows forty feet a year unless trimmed. New growth starts from ends of last year's branches and tips. Berries are borne on old and new wood alike. A hundred thousand vines came through our severe Michigan winter without an inch of deadwood and without the slightest winter-killing. The berries are black, roundish, an inch long, as good as strawberries—flesh solid all the way through. They are so firm that they may be shipped and re-shipped. One man sold \$30.00 worth from two plants in their second year. We get ten tons an acre from three-year old plants, and sell them all quick at sixteen cents a quart. We are growers—and the original introducers in the East. Himalaya plants grow best when planted after the soil is warm. They can be successfully planted as late as July 15th.

A Berry For Every Purpose

Himalaya is a perennial just the same as an apple, bearing on the old fruit-spurs extremely juicy, luscious berries. They are delicious when served uncooked for dessert, and may be used for almost every purpose for which berries are adapted. Three times as much jam or jelly may be made from Himalaya than with ordinary blackberries. Last year we sent Giant Himalaya Berry plants to over fourteen hundred different people, and everyone was satisfied.

I have seen the Giant Himalaya Berry growing and fruiting at the Berrydale Experiment Gardens, and consider it the best cropping blackberry I know of. I noticed branches on which there were from fifty to a hundred berries. These were jet black, and the size of a Lawton berry. Its blossoms come late, and crops are sure. It will stand more frost than any berry we have ever had here. I shall plant two and a half acres of Himalaya next spring. C. KRAUS, Holland, Mich., Oct. 1910

The Himalaya berry plants received in the very best shape. C. B. BILLINGS, Montana. Eighteen months old plants that will fruit this summer. One dollar each, prepaid.

Get A Berrydale Berry Book
Berrydale Berry Book is an unusual catalogue. It goes out of beat on tracks, tells about several dozen good berries, and is sent free. A copy will help you to lower the high cost of living, and to have better health. Ask for one without fail.

Berrydale Experiment Gardens Garden Ave. Holland, Mich.

"VELVETLAWN"

Grass Seeders and Fertilizer Sowers

These Two Machines Make Beautiful Velvety Lawns

The "Velvetlawn" Grass Seeder puts the seed in the ground—NOT ON TOP. It saves seed. The wind or rain cannot carry the seed away, because it is all put in the ground where germination and growth takes place quickly, the cutting action of the discs opens narrow furrows in the sod, and the force feeds carry an equal amount of seed into every furrow. The discs do not tear the sod, but relieve it of its root-bound condition and let the AIR IN.

SAVE THE COST OF SOD
It is foolish to sod, because a BETTER LAWN can be had by drilling pure-bred Grass Seed at one-tenth the expense. "Velvetlawn" Seeders have proven their worth by the work they have done — by the beautiful lawns they have made.

"VELVETLAWN" FERTILIZER SOWERS
will sow any brand of Dry Pulverized Fertilizer in any quantity desired and scatter it evenly over the ground. It does not waste the Fertilizer because the cultivator teeth work the material in the soil. This is the only hand-power Sower in the world that will do the work accurately and evenly. Price complete, \$6, f.o.b., Springfield, O.

INDISPENSABLE TO GARDENERS
Just the machine to sow fertilizers between the rows of growing vegetables, strawberry plants, etc. These machines are absolutely and unreservedly warranted to do ALL we claim for them. Satisfaction or your money back. No fuss about it either. Send for Booklets.

"VELVETLAWN" SEEDER CO.
Box 555. Springfield, Ohio

Protect Your Trees— They Add Dollars to the Value of Your Land

For every tree lost your land drops from \$50 to \$100 in value.

If you let the elm tree beetle alone for two seasons it will ruin your trees; in three seasons it will kill them absolutely.

You can destroy this and other insect pests and save your trees and vegetables with the surest and safest insecticide —

ELECTRO Arsenate of Lead

(In Powdered Form)

It is 50% stronger than any other kind but is absolutely harmless to tender foliage. Dust it on or use it as a spray. It mixes instantly with water, sticks to foliage so rains cannot wash it off, and is effective months afterward.

It is the most economical arsenate of lead — 1 lb. equals 2 lbs. of any other kind and, being dry, you don't pay for water all pastes contain. Age does not impair its strength.

Send for valuable folders on Electro Arsenate of Lead. Electro Lime-Sulphur Solution is the surest means to rid your trees of San José scale and makes the best fungicide for summer use.

If your dealer hasn't Electro Brands, write for prices and name of nearest dealer who will supply you.

THE VREELAND CHEMICAL CO.
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"Your Lawn and Garden"

is the subject of our valuable booklet you should read before beginning outdoor work this spring. A copy mailed Free for the asking.

Have greener lawns, finer flowers, earlier and better vegetables. You can do it with

WIZARD
TRADE BRAND MARK

Pulverized Sheep Manure

Produces most wonderful results quickly. Contains just the natural elements necessary to enrich the soil and force rapid, healthy development in every growing thing. Economical and convenient to use. Has none of the faults of common manure. No weeds or foreign grasses. No adulteration or waste.

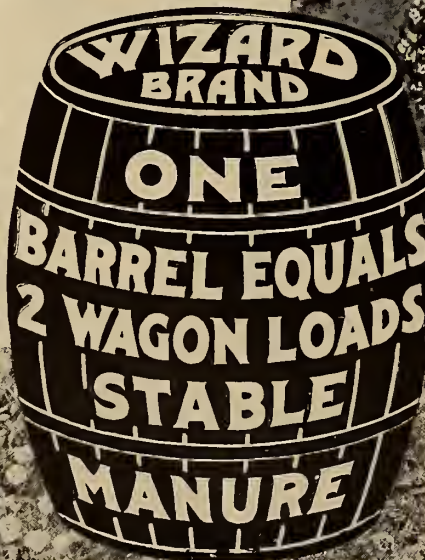
Just pure sheep manure—nature's best fertilizer. Unequaled for trees, shrubs, vines and fruit, meadows and grain fields.

\$4.00 Per Barrel, freight pre-paid east of Missouri river. Cash with order. Ask for special quantity prices.

Be sure to write for your copy of "Lawn and Garden."

The Pulverized Manure Company

19 Union Stock Yards, Chicago, Ill.
Wizard Brand is handled by first class seedmen



Cages to Protect Corn From Crows

HAVING no mind to present to the crows our few hills of extra early sweet corn, we invented cages to put over each hill till the plants were large enough to lose their "crow-attractiveness!" Each cage required five feet of one-foot chicken netting. They were made in the form of hollow cubes, with the side that rested on the ground left open. They were made of new wire and cost three cents each. They are equally satisfactory and cost less when made of wire that has been used before. These little cages were left on the corn day and night, as there was nothing to keep the sun and air from reaching the plants. It is an easy matter to anchor them down with small stakes or stones, if located where they are in danger of being knocked over. A cage set over



A cage for protecting corn from crows, which costs three cents to make

a newly transplanted plant as a support for bagging or other covering, is a protection, not only from the sun, but from chickens and from trampling until the plant has taken a firm hold of the soil.

These cages are not the easiest things to store away, but if turned upside down they may be used as wire baskets in which to pack the various garden odds and ends till the next season. They are also useful individual covers for choice flowering plants when frost threatens. Carpeting can be thrown over them at night without bruising the plants and they are lighter and easier to adjust than other sorts of frost coverings. The blooming season of many plants can be considerably extended with a little protection from the first early frosts.

New York.

I. W. ANGELL.

Nasturtiums in Mounds

ONE of the best nasturtium tricks that I have run across is the creation of a nasturtium mound effect. Brush is laid on the ground so as to form a loose pile that soon is completely covered with climbing nasturtiums, which remain in good condition until frost time. — B. G.

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TAKE YOUR CHOICE OF 40 STYLES AND SIZES-AND PRICES ALL ARE GUARANTEED

Every farmer, fruit grower and gardener has need for a spraying outfit and right here at headquarters is the sprayer for YOU — no matter what style or size you want. Brown's Auto-Sprays are famous wherever spraying is done. Whether you want a hand power, traction power or gasoline power outfit — here it is — the most efficient, most economical, most durable outfit of its kind made.

We are the largest spraying machine manufacturers in the world, and have over 300,000 satisfied customers. We will be glad to refer you to any number of our customers in your section. We want to send you our book so you can read all about Auto-Sprays and the letters from many prominent orchardists. You will be interested to read about the great reliability of Auto-Sprays — their simplicity, their durability — their capacity for doing the work as it should be done.

The Famous Auto-Spray No. 1

Auto-Spray No. 1 is the most powerful and most satisfactory of all small hand-power sprayers. Holds three gallons of solution and one gallon of compressed air. It is the only small sprayer equal to heavy work, and is just the thing for the man who wants to spray five acres of potatoes or a few trees. It is just the outfit for a small orchard, white-washing the poultry-house and handling kerosene or other fluid. It is the only small hand-power outfit good enough to be guaranteed to do the work **RIGHT** — in the shortest time — with the least expense. **AUTO-SPRAY No. 24** is a barrel sprayer with large capacity. Furnished with or without barrel and with orchard equipment and potato attachment, as desired. No valves concealed and all working parts exposed. If you want to do heavy work by hand, this is the outfit for you.



Auto-Spray No. 11

BROWN'S HAND AND POWER AUTO-SPRAYS

are also used and endorsed by practically every Government and State Experiment Station. Tell us your needs — let us know the work you have to do and we'll tell you the auto-spray you need and guarantee your success with it. For very large and heavy work we have the

Auto-Spray Traction and Gasoline Power Outfits

Auto-Spray Traction Power Outfits have long been leaders for every use in orchards, field and vineyards throughout the country.

The new Auto-Spray Gasoline Power outfits are equipped with an engine that beats them all. Non-heating, light in weight, compact, simple, economical and durable. Pump made of brass, does not rust or corrode. This Auto-Spray Gasoline Power outfit is supplied as shown here or mounted on skids with cypress tank of any capacity and provided with hood for covering engine and pump. We also furnish a complete outfit which includes a truck. Made in capacities from 50 to 250 gallons. Our

Non-Clog Atomic Nozzle

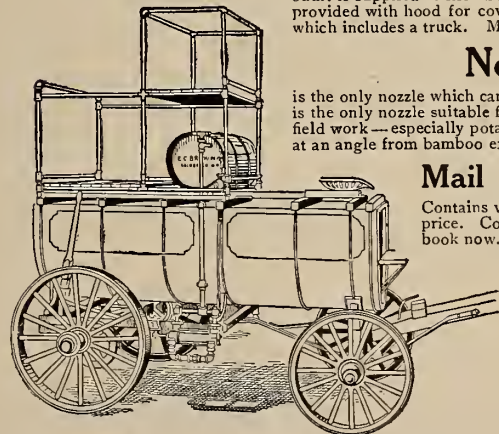
is the only nozzle which cannot clog. Instantly adjustable, from a misty spray to a powerful stream. It is the only nozzle suitable for all uses. Reaches centre of apple blossoms, for codling moth, best for all field work — especially potatoes. Made of cast bronze with removable discs, elbow enables you to spray at an angle from bamboo extension.

Mail Coupon For Book and Spraying Guide.

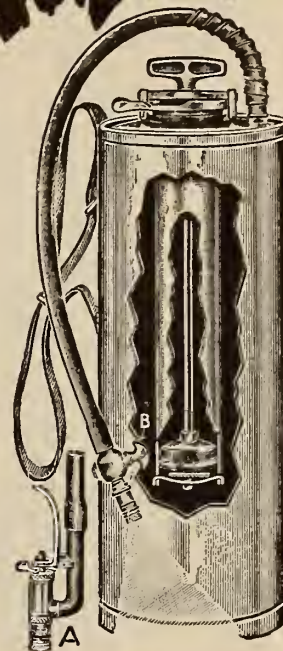
Contains valuable information and shows the right machine for your purpose at the right price. Contains a fully revised and carefully compiled spraying guide. Send for this book now.

THE E. C. BROWN CO. E. C. BROWN President
34 JAY STREET, - - ROCHESTER, N. Y.

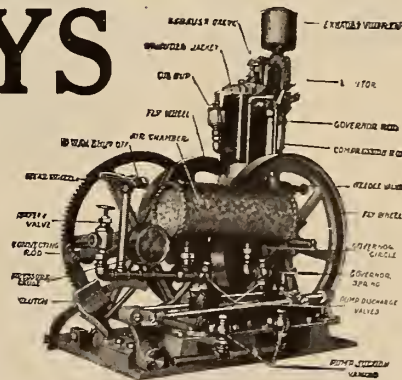
E. C. BROWN & CO., 34 Jay St., Rochester, N. Y.
Gentlemen: Please send me your Free Book of 40 styles, sizes and prices of Hand and Traction Power Auto-Sprays.
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Model A A
Six-cylinder
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Look for this
on the radiator
and on the hub.

FOR supreme satisfaction in touring: the Stevens-Duryea Six. With its "unit power plant" mounted on "three points," it has the maximum of power efficiency, the minimum of friction and strain, and a motor flexibility that is truly delightful.

Our booklet about "three-point support" is really interesting—and different. Mailed on request.

Stevens-Duryea Company

Chicopee Falls, Mass.



WM. M. CLARK
ARCHITECT, GRAND RAPIDS, MICH.

Stain Your Shingles with Dexter Brothers' English Shingle Stains Dip Them Before Laying

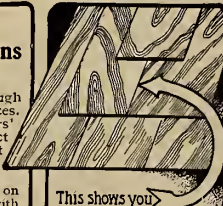
Dipping gives absolute protection—where rain gets through between and under shingles, as well as to the outer surfaces. Whether applied by brushing or dipping, Dexter Brothers' English Shingle Stains are better than paint. They protect the shingles with preservative, waterproofing oils, yet retain the natural texture and beauty of the wood. The pure English ground colors cannot fade.

Write for stained miniature shingles, so you can decide on the right color combination. Also descriptive booklet with letters from architects and owners.

Dexter Bros. Co., 110 Broad St., Boston, 1133 Bwy., N. Y.
Makers of PETRIFAX CEMENT COATING



AGENTS: H. M. Hooker Co., Chicago; John D. S. Potts, 228 Race St., Philadelphia; F. H. McDonald, Grand Rapids; F. T. Crowe & Co., Seattle, Spokane, Tacoma, Wash., and Portland, Ore.; M. D. Francis, Atlanta, Ga.; Carolina Portland Cement Co., Birmingham and Montgomery, Ala.; Jacksonville, Fla.; Charleston, S. C., and New Orleans, La.; F. S. Combs, Halifax, N. S., AND DEALERS.



This shows you

where water gets through to the under shingles and wet rots them. Dipping the shingles two-thirds their length prevents this.



A "High Standard"—protected house; Color Scheme Ivory Body and Trim; Roof Moss Green

When You Insure Your House

against fire you seek the company that is highest in reputation and integrity—not lowest in price. So when you paint, which is weather and decay insurance, you should seek the brand that wears best and longest—gives best results—

Low Brothers High Standard Liquid Paint

Experienced users who insist on quality will tell you that "High Standard" has reduced their paint bills. Its lower ultimate cost is due to greater spreading and hiding power, longer wear and the smooth condition in which it leaves a surface when properly applied, as proved by practical competitive tests.

Mellotone—flat finish for walls and plaster, offers quality, economy, wear-resistance and the sanitary advantage of being washable. Costs less than the kind of wall paper you would want; wears longer; is fadeless.

Linduro—on the woodwork is the ideal enamel for beauty and durability.

Portfolio of "Good Homes" showing interiors decorated with Mellotone and other Little Blue Flag products; also exteriors finished with "High Standard" sent for 25c.—less than actual cost. "Common Sense about Interiors" and "Harmony in Color," free.

The Low Brothers Company

MAKERS OF
Paint, Varnish, Stains, Enamels—all of "High Standard" Quality
455 E Third St., Dayton, Ohio
Boston New York Chicago Kansas City

Metal Rose Markers

Rustless Imperishable



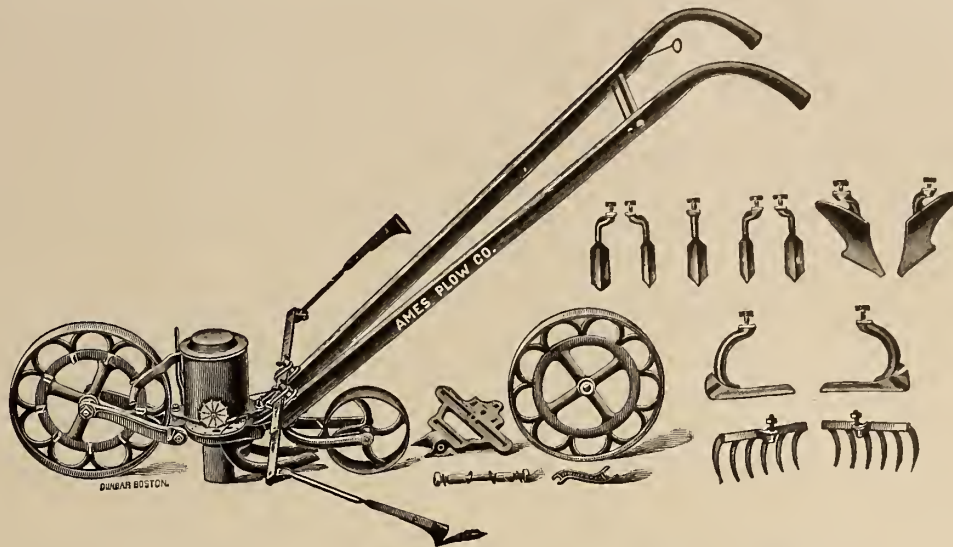
Paper and wooden markers soon become illegible.

Send for samples and prices.

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AMES

Cultivator and Seeder

Is a Perfect Implement for the Small Garden

It has every part necessary for all kinds of hill and drill seeding and for both straddle and between the row cultivating and may be used with one or two wheels. It makes gardening a pleasure for man, woman or child, saves arduous labor and gives the best results.

For the family which has a small home in the country or in the suburbs it is the ideal outfit. Its parts are easily adjusted and the construction is the strongest. Adjusting three bolts changes it from seeder to cultivator. A child can use it.

Ask your dealer to show you an Ames Cultivator and Seeder and look for our name on the handle. It can be used with equal facility in all kinds of soils in every part of the country.

The Ames Plow Company has been manufacturing small and large agricultural implements for almost a century and knows what is best for the garden. If your dealer does not carry it write us direct and we will send you a catalog. In writing kindly mention your dealer's name. Address Dept. 1.

AMES PLOW COMPANY, BOSTON, MASS.

BULBS THAT BLOOM

Cedar Acres Gladioli are as Beautiful as Orchids and as easy to Grow as Potatoes

DO YOU know that the Gladiolus has been developed and improved until now it is, without exception, the most useful and beautiful flower in the garden? Richness of coloring, delicacy of shading and profusion of bloom have been secured without sacrificing the sturdiness of the plant. At Cedar Acres we have contributed much to the work of making the modern Gladiolus the superb flower that has justly been called the "orchid of the garden." Some of the finest varieties have been originated at Cedar Acres, and for these and for our simple and effective methods of culture many awards have been made, as mentioned below.

As a Cut Flower

there is no plant in the garden that deserves comparison with the Gladiolus. If the spike is cut when the first flower begins to open, it gradually unfolds, flower after flower, and gives a succession of surprises for a week or ten days. And you can grow them easily—as easily indeed as potatoes. It is simply a matter of buying good, strong bulbs and following our instructions.

SPECIAL OFFERS

Dawn (Tracy's). The most beautiful shell pink Gladiolus ever offered. A long graceful spike of magnificently formed flowers, all open at one time. The keeping qualities of this variety surpass anything grown at Cedar Acres and its color and texture make it indispensable as a cut flower and for bedding. 25 cts. each, \$2.50 per doz.

Liberty. A bright red with strikingly marked white throat. Strong habit and a favorite. 25 cts. each, \$2.50 per doz.

Independence. A brilliant rose pink, with richly marked throat. A long, strong spike of wax-like flowers; one of the best. 10 cts. each, \$1.00 per doz.

Princess Sandersoni, Certificate. The finest white variety, slightly pencilled crimson. A beautiful variety for the home garden and for commercial use. Flowers very graceful and open. \$2.00 per doz.

America. Too much cannot be said of this beautiful dainty pink. The flowers are of immense size and of wax-like texture borne on a very strong spike. \$1.00 per doz.

Baron Hulot (Blue Jay). One of the finest blue Gladioli. A deep violet blue with finely shaped flowers. \$2.00 per doz.

Augusta. A very fine paper white, with lavender anthers. Strong spike, often having two or three branches. 50 cts. per doz.

Sunrise. The finest clear canary yellow variety, with no markings. Long spike of dainty flowers, making an excellent combination with America or Baron Hulot. Fine for table decoration. \$2.00 per doz.

One each of the twelve named varieties for \$1.50, two each for \$2.75, post-paid; six each for \$7.50, express collect.

WRITE FOR INFORMATION LET ME HELP YOU TO RAISE BETTER GLADIOLI THAN ANY YOU HAVE EVER SEEN

For years I have devoted all my time and thought to improving the Gladiolus and raising better bulbs. It is both my business and my pleasure. I will gladly answer any questions in regard to the "Orchid of the Garden," its culture, the best varieties, etc. There will be no charge. Send for beautiful illustrated booklet, describing many varieties and giving the real truth about each. The picture shows actual Cedar Acres Gladioli.



THE GIFT BOX

Just the thing to send to your suburban friend to stimulate the love of the beautiful.

Box of Bulbs in two sizes, 50c. and \$1.00
Express Prepaid

With each box is sent full cultural directions, and your card if so desired.

Mrs. Francis King (The Original). A most beautiful flame pink. Immense flowers on a spike growing 4 feet high with 18 to 20 flowers, 6 to 8 open at one time. A magnificent variety. \$1.00 per doz.

Klondike. Clear primrose yellow with crimson markings on the lower petals. Large open flowers. \$2.00 per doz.

Cedar Acres Gladioli

command in the cut flower market a price six times as high as the prevailing market rates, because the flowers are larger and finer. These flowers are raised in our fields from Cedar Acres bulbs, without stakes or watering, by the same cultural methods we give to our customers.

AWARDS

Bronze Medal, Massachusetts Horticultural Society, for superior culture, Gladiolus fields.
Silver Medal, Massachusetts Horticultural Society, for artistic display of Gladioli.
Silver Medal, Newport Horticultural Society, for best display of Gladioli.
Certificate of Merit, New London Horticultural Society, largest and best display of Seedling Gladioli.
Silver Medal, North Shore Horticultural Society, best display of Gladioli.
Silver Medal, Massachusetts Horticultural Society, display of Gladioli Seedlings.
Certificate of Merit, Melrose Horticultural Society, best display of Gladioli.
Silver Gilt Medal, North Shore Horticultural Society, largest and best display of Gladioli.
Certificate of Merit and First Prize, Massachusetts Horticultural Society, best display of 100 vases Gladioli.
Silver Medal, Vaughans, best vase Mrs. Francis King, Society of American Florists, Rochester, 1910.
Silver Medal, Rawsons, best basket of America, Society of American Florists, Rochester, 1910.

SPECIAL OFFERS

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Orchid Flowered Seedlings. Seedlings giving a wide range of color at a reasonable price. To see them blooming is the only way to give them adequate description. 50 for \$1.00, 125 for \$2.00, express prepaid.

The famous **Cedar Acres Mixture** gives a great variety of wide open flowers of exquisite colors and marking and should be planted in large quantities. 50 for \$1.00, 125 for \$2.00 prepaid. \$12.00 per thousand, express collect. 125 will plant a bed 4 feet square, giving a mass of color and bloom from July to frost.

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Sanguine. A brilliant bright red, with stippled throat. A tall grower with immense wide open flowers, from 5 to 8 being open at one time, splendid foliage, making it an unusually attractive variety. 50 cts. each, \$5.00 per doz.

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Dawn (Tracy's). See description opposite. 25 cts. each, \$2.50 per doz.

One each of these four named varieties, \$1.00 postpaid.

Jean Dieulafoy. A lovely cream color with carmine blotch. Superb for bouquets. \$2.00 per doz.

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Cedar Acres

B. HAMMOND TRACY

Box 195

Wenham, Mass.

MAY
1911

Vol. XIII No. 4

Flower Beds and Bedding Plants

Nuts — Dahlias for All — Strawberries

15c.

\$1.50 a Year

THE GARDEN MAGAZINE

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TUBS. We manufacture all shapes and sizes. Ask for special list.

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SPECIAL OFFERS OF MY SELECTION

For the benefit of those who are not familiar with the names, colors, and characteristics of the dahlia, and wish to have the selection made for them, I make the following *Special Priced Collections*.

- SPECIAL COLLECTION No. 1.** Fifteen extra fine, named varieties, several classes, my own personal selection, no two alike, and each one labelled **\$1.00**
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- SPECIAL COLLECTION No. 3.** For \$5 I will personally select not less than fifteen extra choice varieties of several classes, and assorted colors to the amount of \$7 and over. No two alike, and all labelled **\$5.00**
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The above Special Collections are made up of varieties of which I have grown a surplus, and are made at this great reduction in order to even up my stock. *I guarantee satisfaction to every customer.* Any of the above collections can be made up of all cactus dahlias if so desired instead of assorted classes.

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- 1 Dozen any 10c dahlias, alike or assorted, your selection **\$1.00**
- 1 Dozen any 15c dahlias, alike or assorted, your selection **\$1.50**
- 1 Dozen any 20c dahlias, alike or assorted, your selection **\$2.00**
- 1 Dozen any 25c dahlias, alike or assorted, your selection **\$2.50**
- 1 Dozen any 35c dahlias, alike or assorted, your selection **\$3.50**

REMEMBER, I send FIELD GROWN ROOTS (or bulbs) only. NO PLANTS (or slips) of any kind sent out.

CUT FLOWERS FOR SALE in their season, 25c to 50c per dozen, at the gardens.

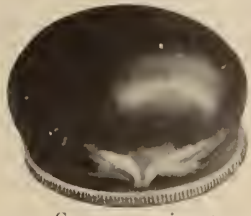
For the benefit of persons living at a distance from my gardens, and who would like to see samples of my dahlias, I will send a sample box containing 50 blossoms of different kinds, all labelled with their names, for \$1.00, to pay for labelling and packing.

SEND FOR FREE CATALOGUE

GEO. L. STILLMAN, Dahlia Specialist
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Grow Chestnuts Like This For Profit



Covers a 50c. piece

You can get bigger profits per acre from Sober Paragon Chestnuts than from any other crop.

Hardy, rapid, symmetrical growth; luxuriant foliage; spreading boughs; clean trunk; stateliness.

These qualities combined and developed by science to a degree that closely borders perfection, in the new

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Crop, Fall of 1910, brought \$48,000, orchard only 8 years old.

The only large sweet chestnut in the world. Bears the second year. The nuts average 1 to 2 inches in diameter—and 3 to 5 nuts in a bur.

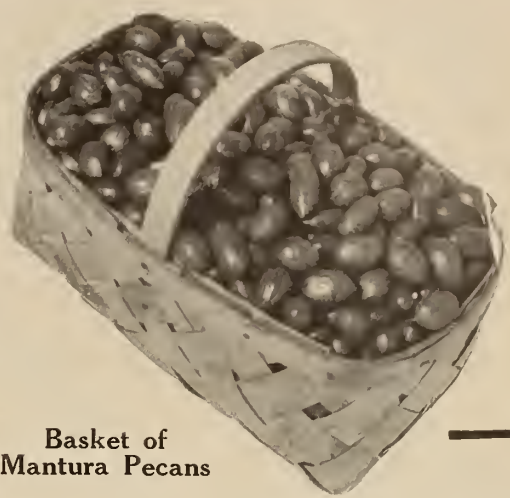
United States Pomologist, G. B. Brackett, says "The Sober Paragon comes the nearest in quality to the native chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance and excellent flavor."

Testimony from growers, commission merchants, Forestry Experts, etc., given in our free booklet, together with prices and particulars.



We own exclusive control of the Sober Paragon. This copyrighted metal seal is attached to every genuine tree when shipped.

Write today for the booklet.



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Hardy Acclimated Pecan Trees for Planting in Northern States

Here are Pecan Trees which will thrive in Northern States—producing as prolifically and as profitably as any Southern Pecans.

Thus, through a remarkable scientific achievement, an immensely profitable industry becomes available in the North—

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And a shade-tree of wondrous beauty, long the pride of the South, may now adorn any Northern landscape.

We have five varieties of hardy trees best suited for Northern planting. These have withstood temperature far below zero,—never been known to "winter-kill." Successful in almost any soil. Begin bearing in 5 to 7 years. Bear bountifully for generations and attain immense size. Valuable information on Pecan Culture in our catalog.

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The Raspberry for the Million and the Millionaire. "There's Millions In It."

You can now have wonderful raspberries from June to October by setting out the plants in April.

Never before has a plant been grown which would fruit the first season.

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And go to 't with delight."—*Antony and Cleopatra*

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Experience has shown us that a man or woman who really loves a garden has an enthusiasm which can be relied upon to communicate itself to others.

The readers of THE GARDEN MAGAZINE are in a position to do this periodical a great service and we are frank to ask you to do it. We have made a book *exclusively* for readers of THE GARDEN MAGAZINE, and it is *not sold separately*, entitled:

GARDEN PROFITS, BIG MONEY IN SMALL PLOTS.

It is an attractive cloth-bound, well illustrated volume of 250 pages which tells in a simple and practical way what a well planted garden will do toward making money or saving money for the home.

Here is a table of its contents — much abbreviated.

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Intensive vs. Extensive Culture
The Danger of Undercapitalization
The Consumer Coming Into His Own

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Modern Success — With Old-fashioned Methods
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The "Best" Potato and How to Obtain It.
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A Garden Planted After the Fourth of July Discovered! The Real Use for a Back Fence
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Making Tomato Plants Perennial
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The Entire Management of a Coldframe

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The Season of Planting: March to June
The Busy Growing Season: May to October
The Quiet Season: November

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It's just a matter of knowing how.

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profit and making a good income without interfering with their regular occupation, with this wonderful, easy, pleasant pastime. I hope soon that a mushroom bed will be as common as vegetable gardens.

I have written a little book which gives truthful, reliable, experienced information about mushroom culture, where mushrooms can be grown, how to have a mushroom bed in your cellar, etc. It also tells about spawn and how to secure really reliable spawn. I shall gladly send you this book free.

If you have never tried mushroom growing, or if you have tried and failed because of the causes of which I have spoken, write for my free book, in which I will show you beyond the shadow of a doubt that you can have a fine mushroom bed. *Address*

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Wm. R. Smith, *pink*; Kaiserin Augusta Victoria, *white*; Hermosa, *clear pink*; Etoile de Lyon, *yellow*; Gruss an Teplitz, *fiery red*; Etoile de France, *crimson*; Mlle. Gambier, *yellow*; Mrs. B. R. Cant, *rose red*; Souve. de Pierre Notting, *rich orange*; Magnafano, *scarlet*; Marie Van Houtte, *canary yellow*; Sombricuel, *creamy white*.

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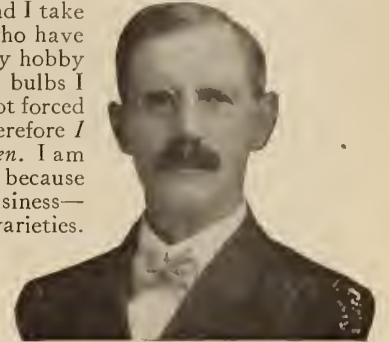
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J. K. ALEXANDER
The Eastern Dahlia King

Every garden owner should grow Dahlias. For late flowers nothing is so satisfactory or so beautiful. Beginning in August and lasting through the long autumn when other flowers are past their prime, the Dahlia is a continual source of pleasure. By following my simple directions you can grow them easily, and you will be surprised at the great development in Dahlias in recent years.

SPECIAL OFFERS—My own selections—18 superb, large-flowering, Show Dahlias, all different, \$3, postpaid
12 fine Pompon Dahlias, all different, \$1, postpaid
18 superb Decorative Dahlias, all different, \$3, postpaid
18 superb Cactus Dahlias, all different, \$3, postpaid

Don't fail to send for my illustrated Dahlia Book, containing cultural information gathered from years of experience, and full and truthful descriptions of hundreds of leading varieties of all kinds—Cactus, Decorative, Peony-flowered, Pompon, Single, Double, etc.

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against attacks of insects? The elm-tree beetle will soon

begin its destructive work. It must be controlled along with potato bugs, cabbage worms, and scores of insects which ruin your trees and vegetables. The surest way is to spray thoroughly with

ELECTRO Arsenate of Lead

(in Powdered Form)

Use it as a dust or spray. It mixes instantly with water and sticks to the foliage, remaining effective for months. Rains cannot wash it off.

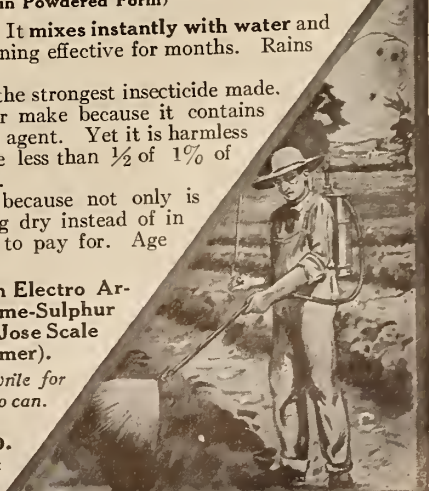
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Electro is most economical, because not only is less material needed, but being dry instead of in paste form, you have no water to pay for. Age will not weaken it.

Send for valuable folders on Electro Arsenate of Lead and Electro Lime-Sulphur Solution (certain death to San Jose Scale and the best fungicide for summer).

If your dealer cannot supply, write for prices and name of nearest dealer who can.

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Dept. C, 50 Church St., New York





IT would cost at least five hundred dollars to plant the grounds shown in the picture at the left with trees large enough to give the shade and beauty afforded by those seen in the engraving to the right—according to a leading “big tree” nurseryman of this country.

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Flowers
a Week
Later—
Every
Bud Open

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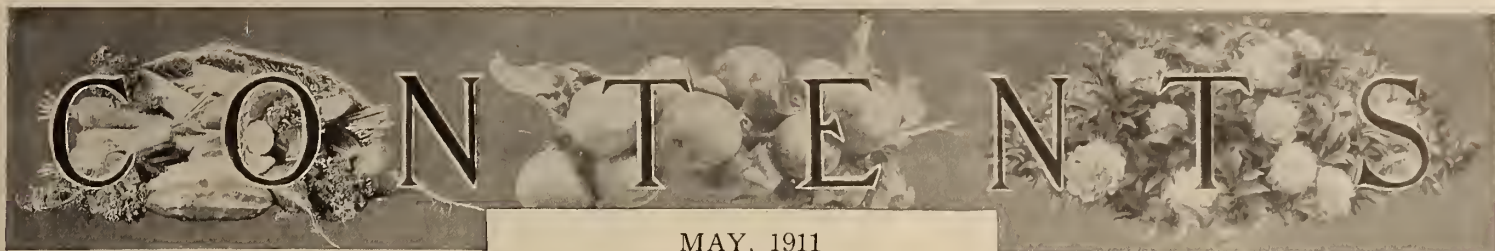
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ARTHUR COWEE, Meadowvale Farm, Box 76, BERLIN, N.Y.



MAY, 1911

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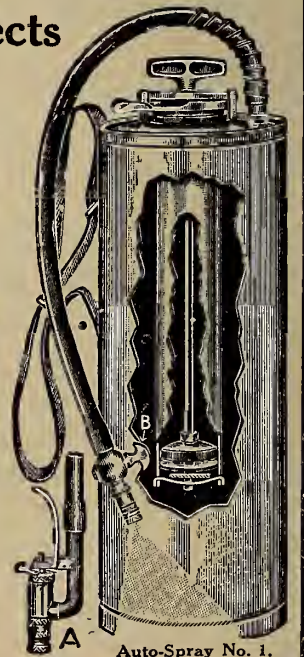
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The Garden Magazine

VOL. XIII—No. 4
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MAY, 1911

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[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

Now or Not at All

THE vital duties of May are planting and cultivation. Peas, lettuce, spinach and radishes should have been planted some time ago and the muskmelon hills prepared by the end of April. If not, do these things *at once*.

Were you planning to transplant any shrubs or trees this spring? This is the last call. Deciduous kinds cannot be moved safely after their leaves open, but the evergreens will move better in May—or just as growth begins. Hemlocks, spruce, cedar—all make splendid windbreaks, and a very attractive little shrub that you can move now is the holly-leaved barberry (*Berberis Mahonia*).

Begin cultivation as soon as you have anything in the ground—not deeply, but just a surface scratching to yank the newly sprouted weeds out of the soil. If you prevent the first crop of weeds from going to seed, you will eliminate the source of a great deal of future weed troubles. There is usually plenty of moisture at this season, but applications of nitrate of soda on the more advanced lettuce, peas and spinach will be rapidly assimilated and appreciated.

Begin sowing in earnest the first of the month. Plant carrots, turnips, kohlrabi, beets and onions every two weeks, beginning now. If you can, get in some string beans by the tenth, and sow still another row or two the end of the month.

It may not always be safe, but it is always wise, to sow a little corn the first week in May. If not nipped by the frost, it will have an especially fine flavor when it ripens ahead of all the rest. Then put in a more generous supply about the 15th and a third sowing around the 30th. Golden Bantam, Stowell's Evergreen, and

Country Gentleman can be recommended to anybody, while Black Mexican will surely satisfy if you overlook the blue-black color until you get a taste of the honey-like flavor.

Prepare some hills for cucumbers, squash, pumpkins, and watermelon by the middle of the month, and sow the seed a week or two later. Mix half a barrowful of manure in every hill, spaced from five to ten feet apart. If you are pressed for room, put these crops between the hills of earliest corn. They will fill the space after the latter is harvested.

Crops that Need Care Every Year

LOOK to the perennial vegetables. Rhubarb and asparagus should be supplying you bountifully. In return give the asparagus bed two dressings of salt, about twelve pounds to the square rod each time. In cutting don't jab right through the crown. If you like white asparagus, hill up the earth around the stems. This will also lessen the chances of cutting the roots. If the rhubarb develops seed-pods it is getting tired of its lodgings. Make a memorandum to dig up the bed next fall, manure it, and divide and replant the clumps.

Don't let newly set strawberry plants bear this year, nor the one-year-old currant and raspberry bushes either. Just nip off the buds before they begin to accumulate strength that should go elsewhere. You will be tempted to see how much fruit you can get from the young plants, but it

will not pay. They must get well established before they are permitted to fruit.

Around the Grounds

YOU can now tell what your lawn is going to look like this season. If you are not satisfied with it, now is the time to make it better. Scratch the bad places with a rake and sow a mixture of red top, timothy and white clover, then scratch it again or sift more soil on top. For a shady place add some orchard grass seed. In very bad cases plow up the whole lawn, drain it, level it again, and resow. By this means you can still get a velvety greensward by August, and one that will last.

Determine not to be without vines this year, and plant them by May 10th. Clematis, honeysuckle, *Aristolochia macrophylla*, *Akebia quinata* and *Hedera Helix* are among the best.

Practically every annual flower can be planted some time this month. Pansies, iris, lilacs, peonies, sweet peas, and all the bulbs are hardy and should be in the first week of May. The tender annuals, either grown in pots or right in the garden, should be in their places by the end of the month. Most of them can be started in the house or hotbed, but mignonette will not stand transplanting. There is quite a list of perennials, too, that you really ought to plant, especially since you can have them flower this summer. Of these, *Bupthalmum salicifolium*, *Campanula Carpatica*, *Centaurea montana*, and *Pentstemon campanulatus*, are very attractive.

If it is the most productive and the best managed plot during the season of 1911.

We want the actual records of a well-managed home garden—its plan, its operation, yield, successions, etc., because we believe that besides better living, there is actual money to be made or saved in making the garden work for you.

This award will be made for the best account of a well-managed garden of a half-acre or less in the year 1911, provided the account really tells how the greatest productivity may be achieved. This competition is open to all, whether present subscribers or not.

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OF

Half an Acre

OR LESS

The only conditions are:—

1. Notice of intention to compete to be given not later than May 20th, 1911.
2. A complete record of work to be submitted at the end of the season, with names of varieties grown, yields, etc., and an exact record, in detail, of all labor and expense, with bills and vouchers.
3. All entries must be accompanied by a plan of the garden and its succession plantings.
4. All contestants must submit their manuscripts not later than October 31, 1911.
5. The prize-winning manuscript, with photographs, etc., to become the property of THE GARDEN MAGAZINE. The right is reserved to purchase any other MSS. at our regular rates, or not to award the prize at all, if the MSS. submitted are not sufficiently worthy.

The Whole Subject of Dahlia Culture

A THOROUGH THRESHING OUT OF THE REASONS THAT MAKE FOR SUCCESS OR FAILURE IN THE GROWING OF ONE OF THE MOST POPULAR OF GARDEN FLOWERS—THE BEST VARIETIES TO PLANT

An Editorial Investigation

WHAT is the trouble with the dahlia? That question has been asked again and again by growers of this marvelously beautiful, and marvelously varied, flower. More especially has this been the case the last few years, when complaints of "too much foliage: too few blossoms" have come from many a garden.

Last September a representative of THE GARDEN MAGAZINE set out to get at the root of the matter. He visited the Dahlia Show in New York and also several gardens that, in the aggregate, offered a comprehensive study of the growing of this flower on both a large and a small scale. Everywhere he asked question after question. The result of his search for an answer to the query as to what is the trouble with the dahlia may be summed up in two absolutely contradictory replies of one word each. "Everything," said one contingent; "nothing," affirmed the other.

Paradoxical as it may seem, both answers are quite correct. Everything is the matter with dahlias and, with like truth, nothing is the matter with them. It all depends on whose dahlias they are. Thus the investigator saw some of the finest dahlias in all his experience on that little flower pilgrimage and also he saw some of the very poorest.

Where there was much trouble there was much running of the plant to leaf. Where there was no trouble care had been taken not to have the soil too rich, the tubers had been well separated, and there had been rigid pruning. In other words — for here is the net result of the investigation — there are three essentials of success with dahlias and they are all to be found in the preceding sentence.

These three great points cannot be too strongly emphasized. George L. Stillman, the dahlia specialist, who grows some 400 varieties of this flower at Westerly, R. I., laid stress on all of them when he was interviewed at the Dahlia Show. He seemed rather astonished to learn that there was any "trouble" with dahlias; he has none himself, he said. He suggests as a remedy for running to leaves the stripping off of not only some of the foliage but extra stalks; he would even sacrifice, if it was found to be necessary, a few of the flower buds, as there will be bloom enough anyway. Mr. Stillman is a late planter, but only as a matter of convenience, and for the same reason he does not separate the tubers until he is ready to put them in the ground. He plants June 1st, one "eye" to a hill, four to six inches deep and lays the tuber down flat. He uses some cow manure on his land and occasionally a little fertilizer in the hill, or row.

Another professional grower said that he had grown dahlias successfully on the same piece of ground for seven consecutive years without any manure at all. As he grows for roots, not flowers, however, his testimony is of less practical value to the home gardener. In any event the effect of manure on the dahlia must be settled largely by individual experiment, as garden soils vary quite as much as garden folk. An English observer of American dahlia conditions says that in England this flower is fed heavily; it even can be planted on a manure heap. His observation of the lovely cactus-dahlia here is that it gives good blossoms early, miserable ones



An ideal growth of dahlias, as seen in a Connecticut garden last year. The plants are seven feet high, vigorous, and laden with flowers

in summer and none at all in autumn. He thinks that one trouble is "too good soil" and has found that stripping off leaves and shoots helps but does not entirely remedy matters.

While that is the dahlia situation in a nut-shell, and is quite sufficient to set right the gardener who is all wrong in the growing of a deservedly popular flower, it was thought best to pursue the subject still further and endeavor to elicit more detailed information from some of the commercial growers of dahlias on a larger scale. For the purpose of comparison as to the matter of unanimity of opinion the several answers to each of the sixteen questions are grouped by themselves. The answers are from (1) Walter M. Gray, Maplewood, N. J.; (2) J. R. Alexander, East Bridgewater, Mass.; (3) W. D. Hathaway, New Bedford, Mass., and (4) E. S. Brown, East Moriches, N. Y.

Why do dahlias run to foliage?

1. Early planting and too much watering during hot spells.

2. Often caused by planting too many tubers in a hill and in many cases by over-fertilizing when tubers are first set out. I find that a large percentage of divided stock sold is over-forced before the amateur receives it and this in over half the instances is without doubt the trouble more than anything else.

3. Too much dressing at time of planting. Too early planting when the ground is cold makes woody growth; then the plants are all foliage and no flowers.

4. In my experience, covering many seasons, in different locations, with different soils and different conditions of atmosphere as to inland and near the coast, also with many and various ways of using fertilizers, I have come to the conclusion that there are two surely proven reasons — first that the soil can be too rich; and second, that the time of planting has been altogether too early in the spring.

Why do cactus dahlias give good early bloom and then peter out?

1. For want of thinning out and feeding.

2. Because they are planted too early. May 30th is early enough to plant in this section of Massachusetts.

3. Because not fed as season advances, and too little cultivation.

4. Too rich soil and too early planting give not only too profuse foliage, but a mass of early bloom, with such loss of vitality that the blossoms continually grow smaller, imperfect, and less in evidence. Again weather conditions are not always what one could wish.

What weather conditions make the most favorable dahlia season?

1. Damp weather and a little sunshine.

2. Medium. The principal trouble with amateurs is that they are very much afraid to use a hoe around their plants during the growth of them.

3. Cool, cloudy weather. They bloom best late in the fall.

4. For full development of flower and tuber, from planting to harvesting of tubers, a rather even temperature, with now and then a shower, but neither too wet nor too dry.

What soil is best for dahlias?

1. Any kind with rock or clay foundation.

2. Any soil is suitable. We have dahlias growing on all kinds of land. If grown on heavy soil, it is not wise to use much stable dressing. It is much better to use



Dahlias as annuals. Sow seed in April, and in September you can have plants like these



A "show" bloom, regularly quilled. A "fancy" is similar but with tips darker than base



The cactus type. The most modern varieties have narrower petals with the ends sharply incurved



Grand Duke Alexis. The "decorative" class includes flowers other than cactus, "show," etc.

a little ground bone meal or some good fish and potash fertilizer.

3. Very light, porous soil, with good drainage.
4. Sandy loam.

What condition of soil as to moisture?

1. Keep cultivating until beds are well formed and then scuffle.
3. Moist soil, but good drainage. When watered with hose, should be cultivated next day.
4. Not so wet as one would suppose. In fact, so long as not too dry would not water artificially at all.

What amount of fertilizer will they stand?

1. At rate of one-half pound bone-meal to each plant or one-half pail of cow manure.
2. Unwise to use too much when planting. A small handful after covering the tuber is enough. If stable dressing is used it is best to top-dress before the soil is turned over. Nothing else should be used until plants are a foot or two out of the ground. Then you can use as much as you like and nothing will prevent getting fine flowers.
3. Not much

when planted. Feed as they grow, a little every week or two.

4. After repeated experiments with special formulas and mixtures of chemicals, commercial brands of fertilizers and stable manures, I find nothing equals well-rotted stable compost, and that not to be used at any time during the season of growth. This I thoroughly incorporate in my fields every other season. I procure it by the carload in February, cart it on the land at once and let it lie until the frost comes out of the ground. In early spring, as soon as possible, I plow it under and use at the time of harrowing

a dressing of acid phosphate, which is thoroughly worked into the softened soil.

What general culture do you advise?

1. Dig soil deep four weeks before planting.
2. We cultivate about twice a week until the plants get so large we can not get through with a horse, and after that they flower without any trouble.
3. Cultivate at least once a week; twice if you can.
4. I mark off my fields with a drag corn harrow, allowing four feet between rows. I furrow deep, using a heavy 2-horse plow, going up and down the same furrow, and then use a narrow 1-horse cultivator, working the furrow flat at bottom. The tubers are dropped two feet apart in the furrow and as near a true line as possible, but to get the best garden blooms would extend the distance to three feet.



In this backyard garden, chock-full of plants, some of the finest prize blooms of last year were cut

What cultural distinctions, if any, should be made as to the several types of dahlias?

2. None. Use them all alike.
3. Same for all.
4. I make no distinctions.

What is the best time to plant, stating

whether latitude of Washington, Philadelphia, New York, or Boston?

1. Washington and Philadelphia, June and July; New York or Boston, May and June.
2. May 30th is plenty early. (Mass.)
3. In eastern and southeastern Massachusetts, the best time is from May 15th to July 1st, the latter part of this period for late blooms.
4. Here — fifty miles east of New York City — May 25th to June 25th. I would recommend that any one having enough tubers to do so should plant a part of each variety every week, leaving spaces in the rows, and then note which planting gives the best results. I think that those planted in June will be found the best.

How deep should tubers be planted?

1. Six inches.
2. Six inches, sure.
3. Six to eight inches.
4. I am a firm believer in deep planting, at least six inches, but not all at once. I drop a tuber into the furrow and cover as little as possible; simply enough to keep the sun from scalding the root. I then cover gradually, using a one-horse cultivator, eventually leveling down the furrows. In the garden, where I plant new and choice varieties more by hand, I do the same, covering so carefully as not to conceal the sprout, or eye, as this gives it a chance to harden.

Should more than one (that is one eye) be planted in a place?

1. No.
2. Only one. If two eyes come it does not materially check the plant so long as there is not too much bottom root in the first place.
3. No.
4. I never allow more than one eye. As soon

as the eye has two sets of leaves I pinch off the top. I then cultivate at least every ten days. Thus the entire surface is gradually leveled and surely kept clean and there is a practical guarantee against injury by drought. At the base of these two sets of leaves will develop branches which may be pinched out in turn when they have made two sets of leaves; thus insuring a stocky bush that will withstand wind better, furnish more beauty of form and be more convenient for gathering the bloom.

Is it best to lay the tuber down flat?

1. Yes.
2. Yes: do not plant it any other way.
3. Yes.
4. Usually I have never stopped to see whether the tubers were flat or upside down; so long as they lay so that when they grew they would have the stems all as near a line as possible. With special trials of new varieties I use a little more care, making sure that the eye is

2. Does not injure stock before planting, and often saves skipped hills.
3. Always have the tubers show a sprout before planting.
4. Yes, if I wish to get all the plants possible in a clump; also so that there will not be more than one stalk in a planting.

Do you separate tubers before planting?

1. Yes.
2. Always; but use a sharp knife.
3. I begin to cut up in February, having so many tubers. When planting in your own yard separate at time of planting.
4. Most positively, yes. I once had a large part of an order sent back because the tubers had only one eye. I planted them myself and was pleased to show that same person the following fall my success with what he had rejected.

Do you advise planting by themselves?

1. Yes.
2. Makes no difference where you plant them. If properly treated they will do well anywhere.
3. Not necessarily.
4. I prefer to keep classes and varieties by themselves.

Do you advise changing location every year?

1. No. Trench ground every four years to depth of eighteen inches or more, if soil is good and deep.
2. It is well. I find they do fully as well, and I think a lot better.
3. No. I plant on the same ground year after year with good results.
4. Before locating here my trial grounds for a series of years were on rich truck lands in New Jersey and dahlias were planted on the same lots season after season, with generally good results. Here for nine seasons we

have planted in the same lots with like results. It is generally claimed that the line of all crop success is a general changing and resting of the soil; but — with my plan I nevertheless get perfect dahlia bloom. I plow, furrow and plant alternately, that is north and south one season and east and west the next, thus in reality getting fresh soil every year. Yet I planted a 2-acre lot for three seasons without any special fertilization, because it was in sod and had been idle a long time. But I heartily recommend fertilization well in advance of



This kind of growth is possible for any amateur. These plants, eight feet high, were grown in a city backyard

in a good position to push upward at once. In the latter case I use a protector, made of cardboard or an old tin can, to guard against injury of the shoot by breaking or by cut worms. These destructive worms were very numerous with me last season, and by this means I saved many valuable new varieties.

Do you advise encouraging tubers to sprout before planting?

1. Yes.



Kaiserin Augusta Victoria dahlia, white "decorative," grown as a pot plant for indoor decoration

planting and also am convinced that plowing the fall before will be helpful.

A CONCRETE VIEW

The reply to the same queries from J. T. Lovett, Little Silver, N. J., came in the form of the following letter:

I think that the chief cause of dahlias not blooming is due to the fact that during recent years a number of varieties have been introduced that have very fine flowers but are naturally shy bloomers. Under the most favorable conditions these varieties would bloom but sparingly at best. I refer to such varieties as Master Carl, Pius X, etc.

In addition to this, we have learned that the dahlia, in order to flower freely, requires a porous soil, and if the soil is very fertile the plants will develop too much stalk and foliage and not bloom freely, behaving in this manner as rapidly growing young fruit trees. One firm known to all found that it could not grow flowers upon its dahlias at the home location, the soil being of a cold, clayey nature. It is now having its dahlias grown in another county, where the soil is porous and light. When going through the grounds last season there were pointed out to me a number of varieties that were blooming beautifully there, but which would not flower at all at the old place.

It has been ascertained definitely that upon clayey soil, where dahlias flower sparingly, much improvement is effected by a liberal addition of sand or coal ashes; in fact, anything to make the soil more

porous. I have learned from tests here at Little Silver that varieties which bloom sparingly upon very fertile soil will give very much better flowers and more of them upon soil that is only moderately fertile.

The Best Dahlias For The Average Home Garden

What with the varieties running up into the hundreds, the catalogues of the dahlia specialists are nothing short of

bewildering to the home gardener who must of necessity limit his enthusiasm to a comparatively few well-chosen sorts. The great dahlia shows likewise are bewildering; for how shall one choose between forms and color tones that are so nearly alike? One certainly has proved, by experience, to be better than another for the average home garden; and if the following four lists may not be accepted as final, they at least offer a very valuable line of suggestions to the pardonably perplexed.

THE BEST DAHLIAS OF ALL CLASSES FOR AN AVERAGE HOME GARDEN

(Selected in twelve colors of each class)

E. STANLEY BROWN'S LIST

COLORS	FANCY	SHOW	CACTUS	DECORATIVE
White	Souvenir	La Favorite	Schawn	Perle d'Or
Pale Pink	Olympia	A. D. Livoni	Vesta	Mme. Van den Dael
Rose	Progress	David Johnson	Mabel Tulloch	La France
Magenta	T. W. Girdlestone	Constant Varin	Flieder	Mme. Aymard
Crimson	Comedian	Dr. J. P. Kirtland	John Burns	Jumbo
Bright red	Dazzler	Merlin	Starfish	Auguste Nonin
Deep red	Dandy	Crimson King	Beacon	Lord Lyndhurst
Plum	Frank Smith	Victor	Libelle	Clarabel
Lilac	Geo. Barnes	Chieftain	Clara	Blue Oban
Light yellow	Gaiety	R. T. Rawlins	Sterne	C. W. Bruton
Amber	Matthew Campbell	Norma	Goliath	Old Gold
Deep yellow	Mrs. Saunders	Pluton	Master Carl	Mme. Mary Collett

COLOR	POMPON	SINGLE	PEONY FLOWERED
White	Snowclad	White Century	Queen Wilhelmina
Pale pink	Blush Gem	Pink Century	Glory of Baarn
Rose	L. P. Struthers	Twentieth Century	Dr. van Gorcom
Magenta	Portia	Deegens Reese	Wilhelm Petzold
Crimson	Crimson Queen	Cleopatra	Germania
Bright red	Scarlet Gem	Scarlet Century	Lady Saville
Deep red	Red Indian	Cardinal	Solfatare
Plum	Darkness	Paragon	Souvenir de Franz Liszt
Lilac	Tom Borrowdale	Imperialina	Mrs. Alistair Gilroy
Light yellow	Yellow Bird	Aurora	King Leopold
Amber	Klein Domata	Emily Barkway	Helen Baxter
Deep Yellow	Buttercup	Yellow Century	Geisha

W. D. HATHAWAY'S LIST

COLOR	SHOW	FANCY	CACTUS	DECORATIVE	POMPON
White	Mme. Henrietta Scalabre	Mr. Constant Varin	Snowstorm	Mont Blanc	Elaine
Pale pink	Mme. Marika Anagnostaki	Les Amour de Madame	Dorothy	Lucy Fevrier	Nerissa
Rose	Pink Dandy	Mme. Ed. Noel	Mme. Martin	La France	Pauline
Magenta	Thomas Hobbs	S. Mortimer	Libelle	Jacques Welker	Revenge
Crimson	Pleasance	Hugh Austin	Advance	Auguste Nonin	Palmira
Bright red	Lydia	Mrs. N. Hall	Ignea	Monsieur Henri Menier	Bacchus
Deep red	Surpasse Colosse		Memorial; Marguerite	Le Geant	Red Indian
Plum	Gloire de Paris	Queen Messenger	Purple Friar	Papa Viator	Hercules
Lilac	Acquisition	Prof Fawcett	Mr. Seagrave	Sylvia	Achilles
Light yellow	Imperial d'Austerlitz	Mandarin	Carodoc	Mme. Victor Vassier	Mary Kirk
Amber	Norma	General Grant	Crepuscule	Monsieur Burel	Amber Queen or Little Mabel
Deep yellow	Esmond	Miss Ruth	Glory of Wilts	Yellow Colosse	Orpheus

WALTER M. GRAY'S LIST

COLOR	SHOW	FANCY	CACTUS	DECORATIVE	POMPON
White	Dreers' White	Andra paque	Iceberg	Mont Blanc	Snowclad
Pale pink	A. D. Livoni	Jeanne Charmet	Aurora	Delice	Little Beauty
Rose	Mad. Moreau	Colonna	Kriemhilda	La France	Marguerite
Magenta	Solferino	Ruby Queen	Mars	Papa Charmet	Red Indian
Crimson	Crimson Bell	Sylvia	Beacon	Catherine Duer	Brunette
Bright red	Hussar	Mrs. N. Hall	Flamingo	Souv. de G. Douzon	Belle of Springfield
Deep red	J. L. Toole	Frank Smith	Floradora	Navajo	Darkest of All
Plum	Black Douglas	S. Sickman	Lustre	Invincible	Darkness
Lilac	Acquisition	Keystone	Etna	F. L. Fassett	Achilles
Light yellow	Yellow Duke	Lucy Faucett	T. G. Baker	Yellow Colosse	Catherine
Amber	Amazon	Penelope	Harbor Light	Source de Feu	Amber Queen
Deep Yellow	R. Y. Rawlings	Miss Browning	Prince of Yellow	C. W. Bruton	Buttercup

J. K. ALEXANDER'S LIST

COLOR	SHOW	FANCY	CACTUS	DECORATIVE	POMPON
White	Storm King	Puritan	White Swan	Perle de la Tete d'Or	Violet; SnowClad
Pale pink	Mme. Maureau	Progress	Ambassador	Jeanne Charmet	Star of the East
Rose	Fascination	Pink Lucy Faucett	Ella Kramer; Mrs. McMillan	Dolly or Sylvia	Shalii
Magenta	Thelma	Frank Smith	Mary Service	Wilhelm Miller	Fascination
Crimson	Emperor	Hercules	Libelle	Juno	Rosebud
Bright red	Merlin Meteor	Gold Medal	The King; Floradora	Souvenir de Gustave Douzon	May Clift
Deep red	Standard; James Vick	Dorothy	Standard Bearer; Fred Cobbold	Black Prince; Minos	Arthur West
Plum	Prince Bismark	George Barnes	J. H. Jackson; Mrs. Geo. Castleton	Miss Barry	Sunbeam
Lilac	W. P. Laird	La Siam	Brunhilda	Himmlische	Darkest of All; Raphael
Light Yellow	Queen Victoria	Sunset	Princess Jeannette; Volker	Mme. Victor Vassier	Bobby
Amber	Norma	Polly Sandall	Master Carl; Genesta	Prince of Orange	Pure Love
Deep yellow	Muriel	Lucy Faucett	Mrs. de Luca	Clifford W. Bruton	Ideal; Catherine

land is limited like mine you have to use space to the utmost. I plant only eight inches apart, allowing one stalk to each plant, and to let in air I cut off all the bottom leaves. Under such conditions I grew a Frank Smith (which is one of the most beautiful fancy), ten feet high, and I could have picked twelve blooms any time. The same thing with Suzanne: I picked fourteen blooms in one day.

Dahlias require a good deal of water, especially when they start to bloom. From my own experience, they never have too much water, especially in the flowering season.

Good results are obtained by topping young plants, as this will make the young plants grow stronger and bushy.

Great care should be taken when the bulb is taken out. I leave my bulbs in the ground until there is one inch of frost and then I put them in the cellar, stump down, and I have never lost one in my six years' experience.



How I Grow My Prize Dahlias in a Back Yard

By A. RICHENZI, Hartford, Conn.

MY BACKYARD is 50 by 150 and I manage to grow 105 different varieties of dahlias, and arrange to carry off a dozen or so prizes at the shows each year. I am not a gardener, having only my leisure time to devote to the plants, yet they get two hours a day of my time. Most people think that by taking a clump of dahlias in the fall and putting them in the cellar until spring, and putting them back again in the same place, they can grow dahlias to perfection. This is not the case.

In the spring when I plant my dahlias I select one bulb for each variety. I dig a hole twelve inches and loosen the ground around. Before I put the bulb in, I put in a handful of bone meal and wood ashes and cover the bulbs two inches. When the plant is above the ground, I put in a little sheep manure and level the ground over. Some dahlias require more fertilizers than others.

Most people say dahlias ought to be planted three feet apart, but when your

Single dahlias of the "Century" type. These are the largest flowered and most vigorous singles. Can be grown easily from seed and come in a variety of colors



1. The wrong place for flowers or color is the middle of the lawn, because it is distracting and isolated

2. The right place for flowers is at the sides, where hardy flowers will blend with shrubbery and trees

A Symposium on Flower Beds and Bedding Plants

GOOD AND BAD TASTE—THE LAWS OF COLOR HARMONY—LESSONS FROM AN INSTITUTION WHICH IS FIFTY YEARS AHEAD OF THE TIMES

I.—Good and Bad Taste in Bedding

By WILHELM MILLER

I DO not set myself up as an authority on matters of taste. I am simply a student. And even if I were an authority, I should never wish any one to do anything because I said so. My ideal in conduct is reason—not authority. Now the common opinion about bedding plants, and flowers, and even landscape design, is that such things are matters of taste and authority. On the contrary, I believe that 90 per cent. of all such questions are matters of law and reason. Therefore, to start a discussion, I shall try to state these laws and I shall try to set forth the

best and worst ideals. If I am mistaken, I wish you would correct me. These columns are open for a discussion.

THE LAW OF SIMPLICITY

Simplicity is better than great elaboration.—The reason for this is that every school of art has passed through three periods—simplicity, elaboration, decay. It will always be so, because it is human nature to pursue a good idea to the end. Excessive elaboration invariably brings on decadence, provokes a reaction, and a new school is born. Therefore, beds of simple shape are in better taste than beds of complicated shapes. Therefore, beds of few colors are in better taste than beds of many colors.

THE LAW OF SELF-RESTRAINT

Self-restraint is better than self-indulgence.—The reason for this is that gratification of unreasonable desire invariably brings disgust. The rich man can have everything he wants, except immunity from this law. He can put a line of scarlet sage 300 feet long in his front lawn, and near his house a mass of hydrangea forty feet across. But people will say he is vulgar, and some day he will know it. It is wrong to indulge the spirit of show; it is right to indicate self-mastery as the ideal in home life and gardening. Therefore, showy bedding plants should not be exposed to the public gaze, but put inside a high-walled garden.



3. The worst color is that of tender foliage plants, especially coleus and others with abnormal hues



4. The best color is that which comes from hardy flowers, set off by green foliage



5. The wrong shapes for beds are complicated, fancy, geometrical. Never use a circle for its own sake

6. The right shapes are simple, preferably rectangular. Make them fit the ground and environment as this one does

THE LAW OF COLOR HARMONY

Adjacent colors harmonize by similarity; opposite colors harmonize by contrast; intermediate colors are discordant.—The easiest way to prove this is to arrange a dozen of the main colors, progressively in a circle. You will then see that red harmonizes with orange, and orange with yellow, because these colors are closely related. You will also discover that you can make a thrilling contrast with yellow and blue. Now the spirit of yellow journalism in gardening is to give your friends a series of shocks. Therefore, it is bad taste to have too many color contrasts. It is better taste to get harmony by similarity, as a rule, than by contrast.

THE LAW OF ECONOMY

The garden that is relatively cheap to maintain for a century or more is better art than the garden that is costly to maintain.—The reason for this is that waste inevitably seems wrong. Fancy beds cost more than simple borders, and tender plants cost more to maintain than hardy ones. Therefore, no one ought to project

a garden on a scale which his children cannot keep up. The second generation will not love a place that was built for show, but it will consider as a sacred heritage a garden that is full of the personality of parents who stood for self-mastery as opposed to the gratification of every heart's desire.

RULES FOR THE SHAPES OF BEDS

There may be other fundamental laws of good taste, but I do not know them. Everything else seems to me only practical application. Now the briefest way of stating a practical application is a rule. A rule is never absolutely true, but it provokes discussion, and as I am eager to learn, I shall make a rough attempt to state the most important rules as I see them in the hope that you will show us better ones.

1. *Make beds of the simplest shapes — not complicated ones.*— Use rectangles; avoid stars, crescents, flags, lettering, carpets and all fancy patterns.

Make all beds fit the environment. Use rectangular beds unless some other shape is

absolutely necessary.— Never make a circle for its own sake; use circular beds only around circular features, e. g., a circular sundial, or water basin, in the centre of a garden.

RULE FOR POSITION OF BEDS

It is difficult to harmonize geometrical design with the flowering, irregular lines of nature. It is difficult to harmonize great masses of color or flowers with the restrained hues of trees and shrubs. It is difficult to harmonize tender plants with hardy ones. Therefore:

3. *Put flower beds where they will not interfere with the landscape.*— Never put a flower bed in the middle of the lawn. Instead of this, have hardy flowers in a side border. Put flower beds in a high-walled garden or sink the parterre below the level of the lawn.

RULE FOR MATERIAL

Tender plants can never harmonize with a Northern climate and vegetation as well as hardy plants, because they stand out in bold contrast, and the ideal is to



7. The worst economy is temporary beds for show. They cost more and do not harmonize with the climate

8. The best economy is to plant as permanently as possible. Hardy plants cost less and harmonize better

blend with native trees and shrubs. Therefore:

4. *Try nine times to find a hardy plant that will do the work, before using a tender one, even in the garden.*—This is easy if you will refer to the planting lists given in *The GARDEN MAGAZINE* for May, 1909, pages 218 to 220.

RULES FOR COLOR HARMONY

Simple color schemes are better than complicated ones. Complicated schemes may be successful in a long, hardy border, but they will not do in a garden. The simplest scheme I know, and the best for the greatest number, is:

5. *Keep magenta entirely out of your garden.*—Magenta and the colors near it cause nine-tenths of all color discord. Never buy flowers advertised as crimson, crimson-pink, mauve, purple, or maroon until you have seen them.

6. *Wherever you use strong colors, use "peacemakers" as fillers or ground covers.*—The only peacemakers are green and white. Green foliage is not enough. Use 30 to 50 per cent. white flowers, for they are the only ones that will harmonize with every other color.

Therefore, edge all beds of strong colors with white flowers, or else carpet the ground with gray-leaved plants, e. g., lavender cotton, woolly thyme, *Cerastium tomentosum*, etc.

7. *Use green foliage in preference to highly colored.*—Avoid abnormal and variegated leaves. Never use coleus, acalypha, achyranthes, perilla, or crotons, if you can avoid them.

8. *Use single-hued flowers — rarely flowers of many hues.*—Use self-colored pansies, verbenas, phlox, in preference to the variegated. Single colors are purer, stronger, quieter, richer than those that are mixed or variegated. They centre the interest; variegated plants distract. One class is restful, the other restless. Avoid nemesias, lantanas, Joseph's coat, etc. Use heliotropes, lobelias, scarlet sage, tufted pansies of yellow or violet, *Salvia patens*, white geranium.

9. *Have only one flower in a bed at one time, or two at most; not more.*—The wrong kind of boarding-house has too much variety at any one meal and not enough from week to week. The right kind has relatively little variety at any

one meal, but plenty during the week. So with your flower beds and garden.

RULE FOR ECONOMY

The wrong way to economize is to go without a garden and run up doctor's bills; to do without a designer, and have to rearrange the whole place; to beat down the nurseryman or buy of irresponsible concerns that do not maintain a national reputation by advertising. Therefore:

10. *Have the best of everything that is permanent, even though the first cost be greater, for it is cheaper in the end.*—Simple beds and hardy flowers are cheaper to maintain than fancy beds of tender plants, and the biggest item in gardening is labor. The ideal material to plant around your house is a bed of rhododendrons and mountain laurel — not a flower bed. For bedding, evergreens are preferable to shrubs, shrubs are preferable to perennials, perennials to annuals, and annuals to tender plants.

WHY "SHAW'S GARDEN" IS AHEAD

The highest ideals in flower bedding, so far as I know, are represented by the Missouri Botanical Garden, an institution in St. Louis, affectionately known to hundreds of thousands of people as "Shaw's Garden." I will not say it is the best garden, for the buildings shown in these pictures seem to me (and I know Doctor Trelease will pardon me for saying so) in doubtful taste. It may be right that the Botanical Garden should preserve those buildings, because they accurately present the taste of another period.

Pre-Raphaelite pictures are very bad art, but the galleries must have them, because they show the history of art. Everything that was characteristic of the Victorian age is abhorrent to the rising generation. But intolerance is bad. Let us destroy most of the bad old art that is perishable, but let us save the most important and permanent examples that are instructive to the human race.

The bad old kind of bedding is present, as well as the good, new kind. And I think Doctor Trelease does right to keep some of those old things that seem to him and to me almost excruciating. For in no other way can he be faithful to his trust. There is no question that Mr. Shaw liked

that sort of thing and those buildings. One proof is that this sunken garden is part of his old home. Another is that he made provision for the perpetuation of carpet bedding on a big scale. He wanted it for the people. They liked it then as they do now, and they always will. The more cultivated people become the more they rejoice in form, the more ignorant they are the more exclusively they are devoted to color.

Why, then, is Shaw's Garden fifty years ahead of the times? Because, as far as possible, it stands for simplicity, self-restraint, and color harmony. Whether it recognizes any such rules as I have given above, I don't know, but I drew up those rules from a study of that garden. I will not hold Doctor Trelease or his colleagues responsible for anything I say, or anything you find beneath the pictures, but the great practical lessons we all have to learn from Shaw's Garden, it seems to me, are three.

First, let us try to discover the laws of good taste and beauty and eagerly obey them, instead of trying to over-ride them or following instinct, heart's desire, or authority. And let us discuss these things openly and without heat or personalities, for progress is impossible without criticism.

Second, the "fun" of the bedding game is originality. The wrong way to exercise it is in making elaborate designs and big shows. The right way is to find new forms and colors in plants.

Third, the only sure way to success is to have a trial garden. You must test a new variety a year before you know whether you can trust it amid formal surroundings. Every plant has serious limitations and it takes a year to find them out. Your trial garden is in an out of the way place, enclosed by a high board fence, where a plant that gets shabby after blooming does not destroy a beautiful picture. There you may grow plants cheaply, because they are in straight rows. And there you may find and propagate an occasional good thing, unknown to parks and florists, which is new in color, form, or pictorial quality.

Let us have no more blind following of authority in matters of taste, but let us have a good, rousing discussion — preferably with pictures!

II.—Some Different Styles of Bedding—By William Trelease,

Director of the Missouri
Botanical Garden

THE conditions under which plants are grown in a botanical garden are entirely different from those that prevail in any other kind of establishment, though they are nearer those of a commercial seed-raising house than anything else. The real or fancied need of keeping anywhere from 5,000 to 25,000 distinct kinds of plants under cultivation is, perhaps, the pivotal point.

The typical old-time university garden

has long since solved the riddle economically and with a measure of success by the adoption of *small beds for the different kinds of plants, with paths intersecting at right angles* or otherwise between them, as in Fig. 9. The need of connecting label data with each of the many species and varieties, and of preventing these from intermingling, practically dictates a distinct bed or, as the seedsman does it, a row for each kind. Even then, it is rare to find

a gardener who knows anything like even a thousand species well enough to be sure of their names, though he may recognize the appearance in a familiar place of something different from what he has been accustomed to see there, and he may have a tenacious memory for some alias under which a plant has been introduced.

The large botanical gardens provide for a great part of their collections in this same way; but usually they also have a

more or less *park-like general treatment*, and they then combine with the condensed nursery or school garden a considerable area of woodland, shrubbery and flanking or interspersed herbaceous planting, giving a natural effect far more pleasing in some ways than can be had from condensed beds. Very frequently, too, strictly *decorative bedding* is resorted to in some part of the grounds, as a means of displaying florists' plants as such, or of carrying out architectural ideas connected with

the plant-houses and other buildings (see Fig. 10), or of appealing to popular expectation of pleasing effects in form and color design. Our experience in the Missouri Botanical Garden has led as far as possible to the *separation of these various kinds of gardening*—all of which have proved necessary. The park effect, with tree and shrubbery flanked by herbaceous planting, is sought in limiting masses, and has been secured in a twenty-acre section devoted to a representation of the North

American flora. See Fig. 11. Better than anything else it gives the restful effect of nature and avoids an inevitable result of bedding in any of its forms, bare ground in winter; though even here it is far from perfect, and when native plants are used exclusively, it is found hard to secure a satisfactory persistence of color through the season under our conditions of soil and climate.

Space is found for a very limited area given over to bedding proper—chiefly



9. A portion of the grass garden, showing small rectangular, raised beds, the most economical and satisfactory way of cultivating small numbers of a great variety of plants, especially if they are unsightly, and can be screened from general observation. It is easy to keep each bed free from weeds



10. A formal garden of straight lines seems necessary here in order to harmonize with Mr. Shaw's old plant houses. The central building is the sort of thing that was used in the Victorian era to shelter bay trees, hollies, and other nearly hardy plants that require little light and heat



11. The park-like portion of Mr. Shaw's garden, where trees and shrubs are arranged according to botanical relationship, but always with an eye to landscape beauty. Nine times out of ten what a beginner really ought to have is shrubbery, instead of bedding



12. Illustrating the value of seclusion. The people would not enjoy these flower beds half as much if they were visible from the street. That belt of trees is an invaluable enclosure. You rest your eyes by looking at the greenery, and when you look at the flowers again they are bright r by contrast



13. The sunken garden, which was Mr. Shaw's delight, and the pavilion, a curious survival of Victorian taste. The foreground illustrates the one-kind-in-a-bed treatment. In the background is a general view of the hedged-in beds, shown larger in the next picture.



14. This is one of the largest collections of hedges in the world. The hedging is part of the geometrical plan of the garden. The flowers are arranged by families for educational purposes, but look exceptionally well because every bed has a green background

in a *sunken garden* fronting the plant-houses, and the approaches from the entrance gate. See Fig. 12. Necessarily geometrical, this has been maintained always in its original design of formal beds edged with turf and separated by gravel walks. Nearly everything customary in bedding has been tried here, more or less satisfactorily; the beds being massed with tulips in early spring and given over to other flowers or bright foliage through the summer. Though the bulbs and such formal plants as pelargoniums have given most satisfaction when planted solidly, (Fig. 13) the most pleasing effects have come from the combination in each bed of a taller central type such as Phyllanthus, Acalypha, Salvia, Lantana, Croton, Vinca, Coleus, Talinum, Stevia, Plumbago, Nierembergia, or *Caladium marmoratum*, and a lower flanking form of finer texture such as Santolina, Alyssum, Cineraria, Ageratum, Achyranthes, Alternanthera, Peristrophe, etc. Patterns in simple lines are commonly used flanking the approaches from the gate — necessarily in the low growing compact foliage forms that bear clipping well, sometimes with relief here and there by the use of a single kind of Croton, Acalypha or the like taller type.

Very pretty effects are produced by the

two-species treatment of individual beds, the ideal in which is harmony through the entire garden and especially a lack of discord in form, texture or color in each bed. A few of the best combinations are: Acalypha and Alternanthera; Salvia, Plumbago and Cineraria; *Talinum patens* and Alternanthera. For the working out of a simple pattern to be viewed from a distance, I have never seen anything more delicately beautiful than Ageratum and Stevia. Aiming at presenting information as well as pleasing the eye, as an educational garden must, we have adopted the plan of labeling each component of such combinations, using a small unobtrusive zinc marker, exposed for reading, but scarcely evident except on close approach.

Though less justifiable technically, similar *masses of a single kind*, or of two supporting kinds, have been used rather extensively at intervals in a carpet of turf separating walks in certain parts of the garden; pansies, daisies or other early annuals precede them, as bulbs do the others. Nearly the entire gamut of flower and foliage has been rung on these — few more delightful plants having been found than the very dwarf varieties of pomegranate and crepe myrtle. It is needless to say

that a plant having been attractively introduced once is sought in vain elsewhere; the purpose here being to present as many kinds as possible. In a private garden even better effects in color would be secured by the far simpler use of a smaller number of these varieties at any one time, massed in abundance, and varied year by year.

One compromise between the *school garden* and the *bedding plan* of growing herbaceous plants, chiefly perennials, has been worked out in the presentation of some hundreds of attractive and instructive "botanical" forms in classified sequence between low hedges which form a part of the geometrical plan of the grounds. See Fig. 14. The species are singly clumped in ovals or circles cut in the turf. The idea involved is somewhat that which makes an art collection more instructive when distributed through a succession of rooms than gathered into a single hall; and the pleasure of wandering through and examining a sequence of interesting or beautiful objects is greater to some people than the once-and-for-all burst of beauty offered by a massed presentation in which individual attractiveness is lost in the collective impression.

III.—How to Grow Bedding Plants—By H. C. Irish and Otto Bogula

THE aim of bedding is to maintain an uninterrupted display from early spring until autumn frosts.

The ideal bedding plant is one of graceful habit, healthy foliage, showy and, if a flowering plant, with continuous and full bloom.

From a landscape standpoint flower beds do not serve any useful purpose. They may be valuable when separated from the landscape so as to be a special feature in themselves, e. g., in a sunken garden or one shut off from the lawn by high hedges.

As a rule it is better to have one variety in a bed, especially if the bed is small; otherwise the varieties may be combined.

It is often advantageous to make a bed flanking a group of shrubs, in which case such plants as cosmos and hollyhock could well form the background, intermingling with the shrubs and forming a pleasing connection between the shrubs and the larger mass of lower bedding plants in front. By an alternating mixture of hollyhock and cosmos in such a place a most satisfactory succession of bloom is produced.

SPRING BEDDING PLANTS

English daisies, sweet-william, pansies, and violas are grown from seed sown in shallow boxes in coldframes the latter part of August and transplanted to the coldframes as they become large enough to handle. During winter the frames are covered with hotbed sash and during the

coldest weather the sash are covered by boards. Every warm day a little ventilation is given and with the advent of spring the sash are gradually removed to harden the plants. Early in March when the ground is in workable condition the plants are placed in beds. Many of them will be in flower and a few warm days will bring out the others. As a rule the daisies and sweet-william begin to dwindle the latter part of May and must be removed early in June. Pansies and violas usually remain good a little longer if we persistently pick the older blossoms.

Stocks are grown by sowing seed in a plant-house early in February, transplanting to 3-in. pots, which are at first kept in the greenhouse and later moved to hotbeds until bedded out the latter part of March. These are most satisfactory against walls or buildings.

Tulips are planted in November, after the summer bedding plants have been removed, one variety in a bed. The bed is spaded and holes are made about five inches deep, into which a little sand is placed and the bulb dropped on the sand. The bed is raked over and a little later they are mulched with medium fine manure. Their blooming period varies a few days from season to season, according to the weather. Ordinarily the early ones are at their best early in April. These are closely followed by the Darwin type, and still later the mixed bed of Parrot tulips produce a brilliant display. After the tops ripen the bulbs are lifted, cleaned

and stored in a cellar. The same bulbs are used for many years. The early varieties are numerous, running into many colors. Among the best are Pottebakker White, Pottebakker Yellow, Cottage Maid, Vermilion Brilliant, and Keizerskroon.

Hyacinths are good bedding plants, but there is more risk, as the spikes are easily broken over by storms and the display ruined. The expense for bulbs is greater and they deteriorate in a very few years. They are not, therefore, popular as bedding plants with us.

There is a showy yellow violet which lasts longer than pansies. This is *Viola lutea*, var. *splendens*.

FLOWERS FOR SUMMER BEDDING

The varieties we use most are given below, trade names being given for the convenience of beginners.

- Ageratum: Blue Perfection, Stella Gurney
- Alyssum *maritimum*, Sweet alyssum
- Althaea rosea*, Hollyhock:
 - Various colors, separate.
- Antirrhinum majus*, Snapdragon:
 - Red and yellow varieties, distinct.
- Begonia semperflorens*, var. "Vernon"
- Canna: Austria, Express, Niagara, King Humbert.
- Celosia cristata*, Cockscomb:
 - Dwarf red varieties
- Celosia plumosa*, Feathered Cockscomb:
 - Thompsoni, magnifica
- Cosmos: Early and late in various colors.
- Cuphea platycentra*, Cigar plant
- Eschscholzia Californica*, California poppy:
 - Yellow varieties.
- Geranium: S. A. Nutt, dark red. Forest Park Beauty, pink. Heterauth, scarlet. La Favorite, double white.

Gomphrena globosa, Globe amaranth:

White, red and yellow varieties.

Lantana: Craigi, Ultima.

Nicotiana affinis, Flowering tobacco

Nicotiana Sanderae.

Nierembergia frutescens, Cup flower

Petunia hybrida: Single varieties

Phlox Drummondii: White, pink, and dark red varieties.

Portulaca grandiflora, Rose moss or Sunplant

Salvia splendens, Scarlet sage: Bonfire, Zurich.

Tagetes erecta, African marigold

Torenia Fournieri, Wishbone plant

Tropæolum minus, Dwarf nasturtium

Verbena hybrida, Various colors, separate

Verbena erinoides.

Vinca alba, and var. *rosea*

Zinnia elegans, Youth and old age: various colors, separate.

FOLIAGE PLANTS

Abutilon: Savitzi, Souv. de Bonn, Thompsoni

Acalypha tricolor

Achyranthes. See Iresine

Alternanthera paronychioides. Also vars. *aurea nana*, *rosea nana*, and *brilliantissima*

Amaranthus tricolor, Joseph's Coat

Caladium marmoratum

Centaurea gymnocarpa, Dusty Miller

Coleus: Golden Bedder, Verschäffelti

Colocasia antiquorum

(*Caladium esculentum*, Elephant's ear)

Croton: Many forms, bunched

Echeveria secunda, var. *glauca*

Eranthemum albo-marginatum, atropurpureum and tricolor

Iresine (Achyranthes) *Lindeni*, var. *brilliantissima*

Lindeni, *Emersoni*, *Borbonica*

Oxalis corniculata, var. *atropurpurea*

Peristrophe angustifolia, var. *aurea variegata*

Piqueria serrata, var. *variegata* (Stevia).

Santolina Chamæcyparissus, Lavender cotton

Sedum acre and *Kamtschaticum*, var. *variegatum*.

Stevia. See *Piqueria*

Talinum patens, var. *variegata*

ACCORDING TO HEIGHT

The plants used for carpet bedding, strictly speaking, are in the first group:

4 to 8 in.—Achyranthes, Alternanthera, Echeveria, Oxalis, Peristrophe, Santolina, Sedum.

8 to 12 in.—Ageratum, Alyssum, Begonia, Cuphea, Lantana, Nierembergia, Phlox, Torenia, Verbena.

1 to 2 ft.—Antirrhinum, *Celosia cristata*, Eschscholzia, Geranium, Gomphrena, Petunia, Salvia, Tagetes, Tropæolum, Vinca, Zinnia, *Abutilon Savitzi*, *Caladium marmoratum*, Coleus, Eranthemum, Iresine, Piqueria, Talinum.

2 to 5 ft.—For subtropical effects the following are used: Canna, Croton, *Caladium esculentum*, Musa and Pandanus.

SOW THESE OUTDOORS

Seeds of the following can be planted directly in the beds, and as the plants grow they should be thinned. If, however, they are wanted very early, or the beds are filled with spring flowers, they must be started indoors:

Amaranthus	Antirrhinum
Eschscholzia	Gomphrena
Phlox	Portulaca
	Tropæolum

START THESE UNDER GLASS

The following are invariably started under glass and handled once or twice to two or three inch pots before setting out:

Ageratum	Alyssum
Begonia	Celosia
Cosmos	Nierembergia
Nicotiana	Petunia
Salvia	Tagetes
Torenia	Verbena
Vinca	Zinnia

WHEN TO SOW

The season for sowing seeds of plants to be set out as early as the weather permits is about as follows at St. Louis:

Feb. 1 to 15.—Begonia.

Feb. 15 to 28.—Alyssum, Salvia, Ageratum, Eschscholzia, Verbena, Antirrhinum, Petunia, Phlox.

March 1 to 15.—Cosmos, Torenia, Vinca, Gomphrena, Tropæolum, Nierembergia.

March 15 to 31.—Celosia, Portulaca, Zinnia, Amaranthus, Tagetes, Nicotiana.

GROW THESE FROM CUTTINGS

These plants are grown from cuttings made from stock plants brought in the fall before:

Cuphæa, Alyssum (double), Geranium, Lantana and most of the foliage plants. Salvia is usually treated in this way. Verbena and Portulaca, to be sure of desired colors, are grown from cuttings of the seedlings.

STORE THESE BULBS

Cannas, *Caladium marmoratum* and Colocasias are stored under benches with some soil and in February and March are divided, potted and started into growth on greenhouse benches.

WHEN TO SET OUT PLANTS

Some of the collection can be set out in the beds very early even when all danger of frost is not past, others are very sensitive even to cold nights and must not be set out until summer weather prevails and the ground is warm, or about June 1.

Early.—Alyssum, Antirrhinum, Centaurea, Eschscholzia, Nierembergia, Oxalis, Petunia, Phlox, Santolina, Sedum, Verbena.

Second group.—Cuphæa, Nicotiana, Portulaca, Tagetes, Torenia, Tropæolum, Vinca, Zinnia.

Late.—Ageratum, Begonia, Canna, Celosia, Geranium, Gomphrena, Lantana, Salvia, and the foliage plants not mentioned before.

Why Not Grow Nuts? By Robert T. Morris, ^{Connecticut}

THE AWAKENING INTEREST IN A BIG POSSIBILITY—VALUABLE FOOD CROPS THAT CAN BE GROWN EASILY IN ALL PARTS OF THE COUNTRY—WHAT WE OUGHT TO DO TO GET PROPERLY STARTED

[EDITOR'S NOTE.—The author of this article, Dr. Robert T. Morris, devotes his leisure moments to the development of nut culture, and if an active factor in promoting the present-day interest. At his country home he has been collecting and growing various nuts for years past, and he writes with authority.]

WE IMPORT into the United States every year several million dollars' worth of nuts and nut products which could be furnished at home as well as not. We might raise in fact very large quantities of nuts for shipment abroad. North America is particularly well supplied with indigenous species and varieties of nut trees, and most of the species and varieties from all parts of the world may be grown on various soils in our climates, latitudes, and altitudes corresponding to those from which foreign trees are brought. In some parts of the world nuts of various kinds furnish the staple supply of food for the people, practically taking the place of the potato, but in North America as yet nuts are grouped rather among the luxuries.

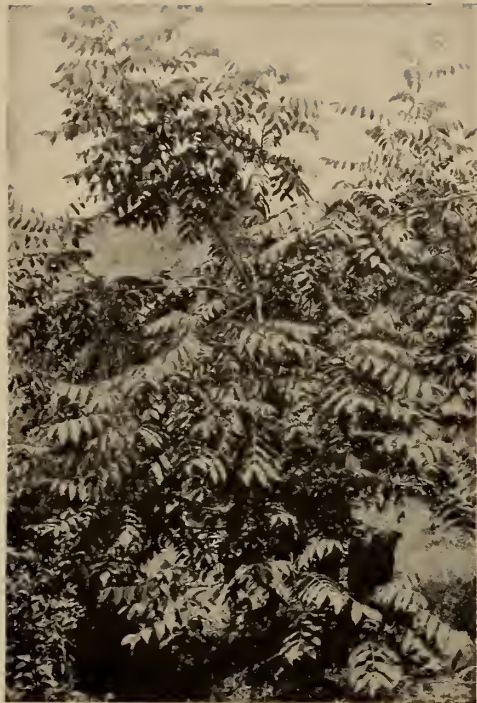
Within a comparatively short time large nut orchards have been developed in this country, chiefly in the Gulf States and on the Pacific Coast, where the pecan, the

walnut, and almond bring a very respectable revenue, which is increasing with rapidity, thousands of acres each year being set out to orchards of grafted nut trees of desirable kinds. Farther north, chestnut orchards have been established, and large annual incomes are derived from a few such orchards.

The work of nut culture is rapidly becoming organized, and several books and periodicals are devoted wholly or largely to the subject. The National Nut Growers' Association, with its annual meetings, bulletins, and committee work, takes charge of the subject as a whole, and the Northern Nut Growers' Association, recently established, has for its aim the development of nut growing as a profitable industry in the more northern parts of the country. Dr. F. C. Wilson, of Poulan, Ga., Secretary of the National Nut Growers' Association, and Dr. W. C.

Deming, of Westchester, New York City, Secretary of the Northern Nut Growers' Association, are engaged in disseminating information to all applicants who are interested in the subject.

The walnut (*Juglans regia*), which is hardy as far north as southern Ontario in Canada, and which thrives on properly selected grounds, is perhaps the most widely distributed of the nut trees now being grown in the world. Coming from Persia originally, this species of tree has been carried to practically all parts of the temperate world in both hemispheres, and through selection of types has been made to adapt itself in a very cosmopolitan way, although much work remains to be done in breeding the walnut for development of desirable types for cultivation in North America. We have several indigenous walnuts, the common black walnut, the butternut, the California black walnut,



Siebold's walnut is a really ornamental tree, but allied species are better for nuts. Seven years old. 25 ft. high

and its near cousin, the Arizona walnut, but none of our walnuts has as yet been developed for high-class market purposes. The common black walnut promises much through selection and breeding for thin shelled nuts of more delicate quality than those furnished by wild trees. One of the Japanese walnuts of excellent quality, the heartnut (*Juglans cordiformis*), will in all probability be grown largely in orchard form in this country, but unfortunately an inferior Japanese walnut, the Siebold, has become established first, because of the remarkable beauty and rapid growth of the tree, which is almost tropical in its luxuriance of foliage and beautiful blossoms, and under favorable circumstances grows four or even five feet in height per year. The heartnut is nearly as beautiful and rapid a grower, but has only recently been brought forward as a desirable orchard nut tree.

Among the hickories, the pecan is cultivated over the largest area in America, and while the tree is hardy as far north as Massachusetts, the great bulk of tender, highly flavored, delicate pecan nuts must come from the Gulf states. The shagbark hickory promises to take the place of the pecan in the northern and eastern parts of the country as soon as grafting methods and selection of desirable types are applied as well as they have been with the pecan. Closely allied to the shagbark hickory is the Carolina hickory. The shellbark hickory belongs to the Mississippi Valley and is at its best in the Middle West. It is a very much larger and coarser nut than the shagbark or Carolina hickories, but nevertheless is a delicious nut, and selection of thin-shelled types, or of hybrids with the shagbark, will furnish a large source of revenue

eventually without doubt. Three or four other species of hickory furnish edible nuts, but apparently we are to look to our dozen species of hickories as timber producers chiefly, with the exception of the species quoted.

We have four distinct species of chestnut indigenous to North America, the sweet chestnut, the chinquapin, and two species of *Castanopsis*. All of these have close relatives in other parts of the temperate world, which thrive with us when introduced, but these chestnuts for the most part, with the exception of some from northern China and Japan, are much larger and coarser than ours. These large coarse chestnuts, however, are very valuable for food purposes, and bearing early, sometimes at two or three years of age, furnish a quick source of income and food supply. Furthermore, the Asiatic chestnuts seem to be more or less immune to the blight, *Diaporthe parasitica*, which is now devastating our American chestnut forests and spreading with great rapidity. It is not improbable that this blight originally came from the Orient, where the chestnuts, through survival of the fittest for ages, have adapted themselves to conditions, and resist the blight.

We have a parallel demonstrated in the hazels. Our native hazels, two in number of species, resist a blight which attacks only weaker individuals, but which has a tendency to destroy at once all of the very fine filbert and cob nut plants brought to this country from abroad. By selection and breeding we shall undoubtedly develop native hazels of high quality and large size, and the author already has certain varieties under way which promise to be more valuable even than the European and Asiatic sorts of hazels which bring such good incomes to foreign orchardists.

Our beechnut, by selection of types, will in the end give individual trees of value for propagating purposes.

Some of the white oaks will furnish a large food supply of edible nuts in the future, but the oaks are not cultivated for acorns to any extent as yet, except in China and some parts of South America, we believe.

In the tropical parts of North America we can raise practically all of the tropical nuts of the world, and there are few tillable acres of the continent, from the rocky pastures of New England to the hot sands of the Florida peninsula, which will not yield at least one hundred dollars' worth of nuts per acre per year. Not only the acres of land above water will grow nuts, but acres of land beneath the surface of the water will raise such nuts as those of Lotus, and Calthrops, which are used largely for food in other parts of the world. Very few plants will give a larger return per acre, and with less trouble, than orchards of nut-bearing shrubs and trees, and the time is coming when the New England farmer, exhausted by his efforts at paying taxes on poor lands, can sit on the porch during the day with the leisure of the

Brazilian coffee planter, and see nature attend to his crop for the most part. He will not do this, however, until he is driven by desperation to wake up. This does not mean that nut orchards do not require attention. They will do better under neglect than most other orchards, but on the other hand they respond very promptly to the touch of the scientific or loving hand, and there is hardly any limitation to the amount of care which can be given with profit to nut orchards.

At Cornell University there is a permanent exhibition of the edible nuts of the world, and the first course in nut culture to be established in America is at that institution. Prizes are offered every year for indigenous nuts of remarkable character, in order that trees may be located, to be used for propagating purposes subsequently. Professor John Craig, who is in charge of the work, finds much enthusiasm among his students in this special field.

Aside from the usefulness and profit in nut culture, we have few more beautiful trees than the ones belonging to this group. The majestic pecan, growing sometimes to a height of one hundred and seventy feet, is one of the noblest of all trees. The wide-spreading chestnut, the sturdy shagbark hickory, the lofty black walnut, the beautiful royal walnut, are all a source of joy to lovers of the beautiful, and the time is perhaps coming when trees of these sorts will largely replace the useless though ornamental trees which now line our roadsides and fill our parks. It is quite as easy to set out a tree which will bear an average of five bushels of nuts per year, worth five dollars per bushel, as it is to set out a poplar or willow. There is one chief reason why it has not been done generally: People did not think about it.



The Japanese chestnut bears at a very early age. This three-year-old tree for example carries about one hundred burrs

Growing Strawberries for What's in Them—By H. E. Angell New York

THINGS THE HOME GARDENER OUGHT TO KNOW IF HE WANTS TO GET THE
UTMOST OUT OF THE BERRY PATCH—IT'S ALL VERY SIMPLY AND EASILY DONE

TWO hundred dollars a year is a fair annual profit to expect from each acre of strawberries, although \$500 clear profit has been reported in a few cases. There are two primary things to consider before going into the strawberry business: (1) The soil should be light and well drained, yet hold plenty of moisture. Sandy loam with a clay subsoil is the ideal. (2) The farm should lie close to a quick shipping point — one through which large quantities of berries are going is desirable — this insures prompt shipment. Two or three miles is considered a long enough distance to cart the berries; many, however, are carried successfully, twice as far.

PREPARATION OF THE SOIL

When the location has been settled and the land is ready for preparation the first thing to consider is the value of the soil itself. This should be carefully tested and any fault corrected just as in any other branch of gardening.

Before the plants are set, the ground must be thoroughly pulverized. On a large scale, first a two-horse plow should be used, then a disc harrow should be run over two or three times. This should be followed by a smoothing harrow, which should cover the ground twice at least. After that a "plank" should be run across diagonally, then the smoothing harrow again and finally the "plank" again, run across its former tracks. This series of operations should put the ground in splendid condition for planting. Frequent spading and turning will do the same thing on a small scale.

Flat cultivation has been proved to be the most satisfactory. Planting the vines along the top of a ridge has been tried, but as each year the vine sends out roots about an inch higher than the previous, it was found that after the first year the plants could not stand continued dry weather.

PLANTING AND CULTIVATION

Plants may be set out at any time of the year but best in spring. If ten acres or more are planted a planting machine is practically necessary; this requires intelligence and no little skill, but is a great time and labor saver. One can be bought for \$55. The plants should be set out twelve to fifteen inches apart in parallel rows thirty inches apart. A moist spell should be chosen in which to do this work. If planted by hand, shallow furrows may be turned out where the lines are required, the plants set in and the earth turned back again, tramping the soil firm.

Cultivation, with a small one-horse cultivator or harrow should begin almost at once. The ground must be kept loose and free from weeds. Here is one of the secrets of success — after having the proper fertility available.

Cultivate about once a week all through the season from picking time till frost. Some growers advise not cultivating at all in spring, before the fruiting season, arguing that the tender rootlets, which run as far as twelve inches from the plant, will be cut off and the supply of nourishment decreased, with a consequent loss in the size of the fruit. This sounds plausible and there seems to be no reason why their advice should not be followed. If you can give a mulch in spring, do so. It pays.

About two weeks after setting, the plants should be fertilized. A high-grade article is well worth the additional cost.

Some growers place fertilizer under the plants when they are set out, preferably bone meal. This is largely a matter of personal taste. There are no figures to prove that any one method is better than another —

follow the plan that is most convenient to you.

Early in the spring, before the plants begin to blossom, straw should be scattered plentifully along the rows, as a mulch. The plants will come up through it and the berries will be kept up out of the dirt, which makes them far better eating.

THE PICKING SEASON

This is the busiest time of the year for the strawberry grower, and preparation must be made well ahead of time. The necessary number of crates should be estimated and bought; better have too many than too few. Pickers must be engaged and packing sheds constructed. Five or six good pickers will be needed per acre. They are paid generally a cent for each quart picked and they will average 150 to 200 quarts a day.

If you are growing for market, honest packing goes for much; the baskets should be well filled, but not more than three-eighths of an inch above the top of the basket, or they will be mashed in the crates. There are thirty-two quarts to a crate, and from 125 to 150 crates will be picked from each acre.

Strawberry vines will bear profitably for two or three years, after which they should be plowed under and the land devoted to some other crop — cowpeas, for instance, in the South, which can be



cut in September. It is well to use the land a year or two for other crops before being put back to strawberries, and remember, strawberries should not follow pasture, because the white grub, which lurks in the grassy ground, is a serious pest of the strawberry. If plants wilt from its attacks pour a tablespoonful of carbon bisulphide over the crown. It will kill the grub surely.

After the berries are picked, a disc cultivator, with each pair of discs set to span a row of plants, should be run through the field every few weeks to cut the runners and destroy them. Those in the row, between the plants, should be cut by hand. It is important to keep the runners from taking vitality from the plant.

RAISING NEW PLANTS

If home-grown plants are preferred to bought ones, runners from the one-year old plants should be set out in spare ground

and cultivated just as ordinary plants. These should not be allowed to fruit, the blossoms being destroyed before they open. This will send all of the vitality into the runners and it is these runners that should be used for the new plants. In this way several dollars can be saved each year.

Taking one acre as a basis, these are the items of cost of production:

Setting	\$ 5.00	
Cultivation	12.00	
Fertilizer	14.00	
Straw and scattering	6.00	
Crates (150 at 25c)	37.50	
Picking (at 1c per quart)	48.00	
Packing and delivery to shippers	15.00	
	<hr/>	
	\$137.50	
150 crates at \$2.25		\$337.50
Cost		<hr/> 137.50
Profit		\$200.00

This does not count in the initial cost of new plants, taking it for granted that

home-grown plants are to be used. If they are bought then, the price in spring is quite low — one and a half cents each. Bought in August, pot-grown plants, which are the only ones to be used are worth several times this price, but they can be fruited the next year under high cultivation.

CHOOSING THE VARIETY

In every locality there is one variety that is the leader. In the Chadbourn belt of North Carolina, Lady Thompson is used almost entirely, for it is a heavy producer, excellent shipper and has a season of five to six weeks just when the demand is at its height. Lady Thompson plants cost \$1.50 a thousand and nine to ten thousand are required per acre. About the Irvington District of New Jersey, Marshall is a favorite. Always find out the local preference of the variety.

Extending the Strawberry Season — By H. S. Adams Connecticut

IT IS of very small interest to your true lover of the strawberry to know he can get hothouse berries in December, or Floridas in February. To him the strawberry will never be "in season" — excepting during those rare few weeks of the year when he may either gather them ripe from his own garden patch or secure them from a nearby point.

The only real strawberry problem, therefore, is to extend the local season. A distinct, new note has been sounded by the introduction of the so-called alpine strawberry, which has made its way across the ocean so quietly that few are aware of its presence.

It was within a week of the close of July last year when I came upon a large bed of these berries. I was on a flower quest that hot and sultry day, and I confess that the last thing I expected to be offered was strawberries. But I was offered some, right from the plants, and ate thereof with a satisfaction that was a satisfaction.

Then I began asking many questions; I ascertained, first of all, that these long rows of very flourishing strawberry plants, with a considerable amount of ripe and ripening fruit on them, were all seedlings. The seed had been picked in Switzerland by the grower, from plants of the "Quatre Saisons" type. This is the small strawberry that is so abundant in Paris, where it is no uncommon sight to see the little hand-carts of street vendors piled high with the much admired fruit. It is simply one of the alpine varieties bred up in size and general perfection.

I found also that from this patch of "Four Seasons" the family had been kept fully supplied with fruit all through July — the alpine coming in when the ordinary garden berries gave out. The fruit, which is a sort of glorified edition of the American

wild strawberry, has the same concentrated sweetness, but more of it. Being different from the ordinary cultivated strawberry, it has the advantage of coming to the table with a note of freshness — inaugurating a little season of its own rather than extending a season already, perhaps, beginning to pall on the appetite.

The plants, which run about eight inches high, began to bear last year on the twenty-third of June and were picked for the table every day for four weeks. So that, if they are not strawberries of "four seasons" literally, they have an unusually long fruiting period. They are very prolific, and very hardy. In short, they seem to have everything to recommend them to the average home garden, with nothing to be said adversely.

This strawberry is grown in somewhat lighter soil than the ordinary kind. Plenty of manure is used when the plants are first set out, and then no more until a new bed is made. The plants fruit the first year, but much better the second. They are good for three years. By setting out runners every year, after the first, a complete succession of prime bearing plants is insured.

While seed may be used to get a stock of plants started, runners are a better means of perpetuation after that. Sow seed in early spring! With the American winter as it is, very little is gained by autumn sowing and always there is danger of mice injuring the plants. In either case the seed should be sowed in a coldframe; but it may be sown outdoors in well pulverized soil in April or May. Sow in a greenhouse in January. There are some varieties of alpine strawberries that have no runners; these must be perpetuated by dividing the plants or by seed.

Of the "Quatre Saisons" type alone

there are several varieties. In the experience of the grower of the strawberries referred to these are the best of them at one time or another. They are the most reliable, and that is the main point.

One of the finest of the improved "Four Seasons" type is, he says, the Louis Gauthier — now popular in France. It is large, whitish and very sweet. There are some alpine very rich in flavor, actually white rather than merely whitish, and they are quite as easily grown.

After a trial in both the Berkshires and central Connecticut, the grower mentioned (Mr. J. F. Huss) has abandoned the variety known as St. Joseph. It has fine fruit but — for his use; others may do better with it — he says that it does not bear abundantly enough to warrant the time and space given to it. This early variety is between the alpine and garden types and is, I understand, synonymous with *Fragaria rubicunda*. It is practically "perpetual," fruiting from June to September when the conditions are ideal. An improvement on it is called St. Antoine de Padoue. It has a musky flavor and some do not care for it on that account. In England Belle de la Perrandière is very highly recommended by one of the best authorities. It is an alpine and there fruits in September.

The St. Joseph and the St. Antoine de Padoue are sold in this country, each with the claim that it bears fruit of fine flavor, color and size, and in abundance. Two other varieties offered are Leon XIII and La Constante. They cost more than the ordinary garden berry — one dollar a dozen. Seed of the ordinary "red alpine" strawberry is quoted at ten cents a package.

Alpine strawberries ordinarily ought to be sweet enough to eat without sugar. If anything is put on them, it would better be a little claret.

CHILDREN'S GARDENS EVERYWHERE



STEPS IN THE MAKING OF A CHILD'S GARDEN — COST OF TOOLS — COLOR SCHEMES FOR BOYS AND GIRLS TO TRY OUT — LISTS OF VINES AND SHRUBS FOR THE PLAYGROUND BEAUTIFUL



Conducted by
ELLEN EDDY SHAW
New York

Garden Operations

THERE are certain points in garden work to be gone over each season. Follow this summary and see if it helps. Cut out each section and paste in your garden diary. Leave spaces between and fill in from your own experiences.

TIME TO GARDEN—Do not begin too soon, for nothing is gained. If soil, when taken in the hand, sticks together this means it is not yet time to garden. If it falls apart then the soil is mellow enough for work to begin.

TOOLS—Have your tools all ready. Do not use play tools. You will need a spading fork, rake, hoe, trowel and weeder. The total cost is \$2.90, as follows:

Spading fork	\$1.75
Rake (10 teeth)50
Dutch hoe40
Transplanting trowel15
Weeder10

In a school or community garden plan for a trowel and weeder for each child, one rake and one hoe for each group of six children, and three or four spading forks for the entire garden.

GARDEN ACCESSORIES—Make a dibble to use in transplanting and cultivating. Cut off a twelve-inch piece from an old rake, hoe or spade handle. Point the end. Make plenty of small wooden labels. Whittle them out of any soft wood. Six inches is a good length.



The rake handle used as a measuring rod

Some large garden stakes will be needed. These may be twelve inches long and one inch thick. Point one end; make a notch near the other end for a cord to pass about. The foot length gives a foot measure for work. Two of these stakes with a cord between is the line for drill making.

Mark off foot lengths on the rake handle. One foot may be divided into inches. Use black paint or wax crayon for this work of marking. The rake handle now becomes the measuring stick for the garden.

Make a wooden garden reel. If this is made from hard wood it will last through numberless garden seasons.

THE PLAN—Main paths should be four feet wide. Make other paths either eighteen inches or two feet in width. Have a narrow path all around the garden.

Garden plots ought to be just wide enough to work over comfortably.

Run the garden rows north and south, although this is modified by the general lay-out of the entire garden. Plan to have the sunlight as evenly distributed as possible throughout the day.

Put tall plants in the background so as not to shade the other plants. Use the low-growing plants as border plants.

PREPARATION—Settle on the place for the garden. Stake it off. Clean up rubbish. Burn or cart away. Pick up stone, putting it in piles to carry off.

Spade the plot if it is small, plow it if it is large. Work in old, rotted manure. Rake over until the soil is quite fine. String off the garden beds and paths. Then sow from paths on to the beds; then roll the paths.

PLANTING SEED—Seeds are planted in one of three ways, broadcast, hill or drill planting. Very small seeds, like petunia, poppy, grass seed and parsley, may be sprinkled on the surface of the seed bed and lightly covered with soil. This is broadcasting. Large seeds, like corn, beans and squash, are planted in hills. A hill in this sense does not mean a heaped-up mound, but means planting in isolated spots as distinguished from a continuous row. The surface might be quite level. Several seeds, usually five, are planted in each hill. Medium-sized seeds, like radish, lettuce, beet and carrot, are sown in drills. If much soil is taken out and cast to one

side in this operation the resulting trench is called a furrow.

Make drills with the hoe and the line as a director or guide for straight courses. When the seed is planted, cover with soil



Firm the onion sets carefully in place, pointed ends up

and firm by means of the hoe blade or your hand. Put a marker at the ends of the drills.

OUTDOOR PLANTING TABLE

Seed	For 100 ft. Row	Furrow Distance in feet	Seed Distance in feet	Planting Depth (inches)	Time to Maturity in days
Beans (bush)	1 pt.	3	2	2	40-65
Beets	2 oz.	1	1/3	1	60-80
Carrot	1 oz.	1 1/2	1/2	1/2	75-110
Corn	1/4 pt.	3	3	1 1/2	60
Lettuce	1/2 oz.	1	1/2	1/2	60-90
Onion	1 oz.	1	1/2	1	130-150
" (set)	1 qt.	1	1/2	1-2	90-120
Parsley	1/4 oz.	1	1/2	1/8	90-120
Pepper	1/8 oz.	1 1/2	1 1/2	1/2	100-140
Pumpkin	1/2 oz.	8-12	8-12	1-2	100-140
Radish	1 oz.	1	1/2	1/2	20-40
Tomato	1/8 oz.	3	3	1/2	100-140
Turnips	1/2 oz.	1 1/2	1/2	1/2	60-80

CULTIVATION—Keep constantly stirring the soil, so that the top surface will always be a loose dust, called a mulch. Mulching is better than watering, as it keeps the moisture in the soil.

Thin out the seedlings until they stand at proper distances apart.

Reduce the hill-planted seedlings to two sturdy plants to each hill.

Transplant when the second pair of true leaves appear. Do this on a cloudy day.

Schemes for Small Gardens

IT IS rather interesting to have a one-color garden — that is to have a garden of several kinds of plants all of one color. One must consider two things in such a garden: height of plants and season of bloom.

Suppose one chooses a blue garden. It must bloom the first year. Let us choose for the border plant the blue star ageratum, which grows six inches high. Then a Victoria aster, which grows eighteen inches high, might come next. And last plant cornflower. It grows rather bushy and so forms a fine background plant, although it does not grow very tall.

A yellow garden is another choice. First put in dwarf snapdragon of six inches in height, next dwarf nasturtiums twelve inches high, beyond these African marigold twenty-four inches in height, and sunflowers or cosmos, both tall annuals, might form a background.

Here is a red garden: double scarlet rose moss, corn poppy, mammoth zinnia and giant snapdragon.

If you have a poor, rough piece of ground make a yellow garden of Tom Thumb nasturtiums, California poppy and calliopsis.

Another point to keep in mind when planning the flower garden is that of duration of bloom. In some cases it would be well to plan for a succession of bloom, in other cases for continuous bloom. When I look up sweet alyssum, for instance, I find that it blooms twenty weeks. Is there any other plant which can keep up such a steady bloom? Cornflower blooms until frost, dwarf lobelia blooms all summer, and so does Tom Thumb ageratum. Still further, I find that some flowers start blooming in May, some in June, some in July, and so on for the summer. This same cornflower begins its work in May, ageratum in June, alyssum in early July,



A home-made contrivance which insures straight even drills

and China asters in August. So here is another point to hold in mind.

BLOOM BY MONTH

NAME	MONTH
Calliopsis	May
Cornflower	"
Annual phlox	June
Petunia	"
Shirley poppy	"
Snapdragon	"
Sweet alyssum	July
Larkspur	"
Stock	"
Verbena	"
China aster	August
Everlasting	"
Cosmos	September

The Playground Beautiful

IT WOULD seem as if the public playground and the children's garden ought to be a good combination. It is a rare one. We seem to have lost sight of the good, old-fashioned balance of play and work. The idea seems to be a fixed one that it is quite impossible to beautify any place which children use as a playground. Could we combine these two it would be a financial saving as well as a real benefit to the child. A playground super-

visor or director should have a certain amount of training along the garden line.

What are the lines along which playground gardening should tend? Perhaps, first, along decorative lines. This sounds almost absurd when the picture of the usual dirt-packed, ugly playground comes to mind. But the picture may be changed; the fences may be covered with vines as the first step. What vines are best to plant? Scarlet runner beans, wild cucumber, morning glory, moon flower, climbing nasturtium and gourds are good annual ones. The hop, clematis, honeysuckle, Virginia creeper, and Dutchman's pipe are excellent perennial vines. The last named has big leaves and an interesting, if small, pipe-like blossom. Perhaps the Japan clematis is the most satisfactory of all perennial vines.

A few shrubs in one corner or at the entrance to the garden add considerable to the general effect. The best for the purpose are deutzia, Van Houtte's spirea, mock orange, Anthony Waterer spirea, sweet pepperbush, althea, rose of Sharon, and hardy hydrangea, all of which bloom from June to September. If one wishes beauty in winter add to these barberry and dogwood. Poplars are quick-growing trees to be used for the playground. Privet or box keep in mind for hedge purposes.

The garden proper is the other side to consider. This may be decorative, too. Where shall this garden be placed so that it may be most sheltered from harm? One corner may be fenced off. Cover the fence with vines and make an attractive gateway as an entrance to a formal treatment. Or lay off into beds, or as one long border, a strip of land all about the playground, or on three sides of it. This is the plan: First, a vine-covered fence about the playground area; then a strip of ground partly devoted to vegetables and partly to flowers. The playground in the centre may also have a vine-covered chicken-wire fence around it.

A third arrangement is this: Cut one-third right off the playground; between the playground and garden have a four-foot path. Set cedar posts on both sides of it and make a long vine-covered pathway.



Begin work by clearing the garden of all rubbish and stones, placing them first of all in the path, to remove later



THE HOUSEKEEPER

Vinca for Outdoors and In

By L. J. DOOGUE, Mass.

YOU are undoubtedly planning now for this season's veranda and window boxes. Remember that the prettier boxes — ones in which the flowering plants appear to the best advantage — are those having plenty of trailing vines hanging gracefully over the sides. For this purpose there is nothing better than the vinca, but it is usually so poorly grown that it detracts rather than adds to the beauty of the whole. When planted in the box each root should have quantities of long streamers, each streamer being thickly leaved.

Vinca is very easy to grow and the best way to get a stock is to start with some old plants, and grow them indoors through the winter. These can be divided so that each one will easily make from six to ten small plants. To do the dividing just break the plant apart, leaving some roots on each piece. Put each one into a small pot and when the weather is warm enough plunge them into the ground to be left all summer. By fall these will have made surprising growth and, if you want to have them as house plants during the winter, just take them up and pot them. Otherwise they should be packed away in boxes and stored until the spring.

Before storing, cut off most of the long



When putting vinca in veranda boxes use only plants having a number of streamers, each thickly leaved

streamers, pack the plants in boxes of earth, and store them in some damp-proof place where it will not be too cold. Early in the spring take these out and start them into growth by potting and placing in the sunlight. They like warmth and moisture; the length of the streamers that they make will of course depend on the place where they are kept. Even if they do not make very much growth while in the house they will be fitting themselves for a mighty effort when put out of doors. After the boxes have served



An old plant is "divided" by being simply broken apart, each piece being well supplied with roots

their purpose this summer, take some of the old plants and pot them after cutting off the long growth within a foot of the pot. Put them in the sunlight and new growth will soon start. The shortening of the ends will force a branching growth, while from the centre of the plant new stems will push up.

There is one thing to be remembered when using vinca in this way. After it is repotted the soil must not be allowed to dry out until the plant has thoroughly established itself. It wants moisture, unlike most house plants, and warmth to do its best. A careful watch must also be kept for green fly, which if neglected multiplies surprisingly. Spraying every two weeks with tobacco water will hold this pest in check.

A Handy Repairer

TO REPAIR old handles, broken umbrella handles, canes, dishes that are not to be placed too often in water, and broken rubber shoes or rubber boots, there is nothing that works to



Adhesive plaster is a pretty good household repairer

greater advantage than the inch-wide surgeon's or adhesive plaster. It comes on a metal roll, costs but little, and lasts months without deteriorating. A rubber shoe that leaks can be easily patched with this plaster.

Do not mistake this plaster for the ordinary electric tape. This is uncleanly and soon loses its usefulness and should never be used where the surgeon's plaster can be had.

Massachusetts. PERCIVAL MOORE.

Housekeeping Discoveries

THE next time you have potato salad add some sliced cucumbers. I recently used them as a substitute for celery when the latter was not to be had, and the salad was greatly improved. Crisp, young radishes are also an addition. —C. M. A.

If the ice cream freezer springs a leak in seam and there is no time to send it away to be mended, put some lard over the hole on the outside. If you put your cream in when it has cooled off, you can freeze it with safety and have no fear that the cream will leak out or that the salt will leak in. —G. P.

Always wash brushes in cold water to keep the bristles stiff. If you use warm water for your hands, rinse your nailbrush in cold water and it will last much longer. —M. C.



A Wild Flower With Many Merits

IT WOULD be hard indeed to find a perennial giving a more effective May-flowering display than the wild sweet-william (*Phlox divaricata*).

After a four years' test in my hardy garden, I unhesitatingly give the place of honor, among the May-flowering class, to this native of the woods. And deservedly so, for I find this plant to be unusually rich in the characteristics that are most valued in plants of the garden or border.

Outranking all other merits of *Phlox divaricata* is its perfect reliability in producing flowers each year. Far too often the snow-white arabis, candy-tuft, gay-colored primroses, and other spring-flowering perennials greet one with but a half-hearted smile because of a belated frost. Frost and cold apparently hold no terror for the blossoms of the wild sweet-william. Again and again, while in full bloom, my plants have been weighted to the ground with snow, and have become stiff with frost, with no evident harm or check in growth.

The blossoms are soft and velvety in texture, star-like in form, and appear generously in large spreading clusters. The color is exquisite—a deep lilac-blue, yet a shade so delicate in tone that it is readily brought into perfect harmony with the various other colors in the garden!

The blossoms begin to unfold during the last week of April here in Illinois, and from this time until the first of June the plant presents a glorious display. Surely, four weeks of uninterrupted spring bloom is to be coveted for any garden!

All these excellent points, however, are not the only ones recommending the wild sweet-william

for general culture. It has yet another qualification—unusual adaptability for different planting purposes in the yard or garden. This versatility of use is due largely to the fact that it succeeds perfectly in either sun or shade. In massed planting in the open garden or border its exquisite loveliness is hard to surpass. The plant interferes in no way with later-blooming perennials, as its roots remain very near the surface and, after the flowering season is past, the low-spreading foliage is soon covered by plants of taller and stockier growth.

Group planting of *Phlox divaricata* is always pleasingly attractive. I know of no lovelier color combination than that created by the mingled blossoms of the delicate lavender phlox with those of the dainty white arabis and pale pink shooting star. As an edging for walks and borders wild phlox gives excellent results, the foliage remaining evergreen and attractive throughout the season. I have also found this plant to be the most satisfactory perennial for planting under a shady pergola, as well as the best carpeting variety for shrubby beds and borders.

Illinois.

ADELINE THAYER THOMSON.

Growing Roses in Pails

ALTHOUGH located in the north middle part of Wisconsin, I determined to have tea roses for their continuous flowering, range of color, and exquisite fragrance, so two years ago I purchased a quantity of hybrid perpetual and tea roses. Previous to the date of arrival of the bushes I bought empty candy pails for each of the teas from the local grocer at about sixty cents a dozen. In these I planted the bushes and sunk them in the ground with the hardy roses. They grew splendidly, bloomed continuously, and at the first touch of frost I had them lifted, pail and all, and placed in a cool cellar.

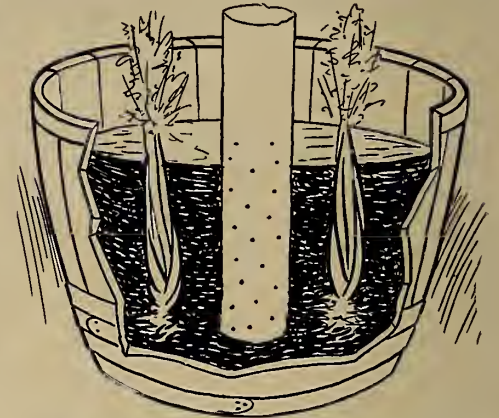
This operation I have repeated now for two years. The bushes not only furnish beautiful and fragrant flowers, but bloom without any cessation all summer long and much more profusely than the other varieties do in June. This spring I am ordering one plant each of all the teas listed by one of the largest rose dealers.

This little stunt is worth doing by all who have cool vegetable-cellar accommodation for their roses during the winter. The only change I shall make in my programme this spring is to substitute 12- or 14-in. pots, which, although forty to eighty cents apiece, are more permanent than the candy pails. Wisconsin. A. C. GILBERT.

A New Celery Culture

GROWING celery indoors is not such a "stunt" as it may seem. Get your groceryman to bring you a good sound barrel with plenty of hoops, saw it across the middle, and in the bottom of the lower half bore several holes for drainage. Take an old stove pipe which has a number of holes in it, place it in the centre of the tub and sprinkle a layer of rich dirt a foot or so deep at the bottom and around the pipe. Of course it is presumed that you started your celery indoors in a box.

When transplanting select the strongest plants and set them in the bottom of the half-barrel midway between the pipe and the outer edge,



A novel scheme in celery growing on a small scale in a back yard

and about six inches apart, also a double row if the barrel is large enough. The purpose of the pipe is to moisten the soil evenly when water is poured into it from the top. As the plants grow add more rich soil until they are "banked" sufficiently high.

The number of stalks you have will, of course, be gauged by the size of your barrel. The spectacle can be moved from place to place or set in some out-of-the-way corner where the plants will receive sufficient sun and air.

Tennessee.

J. W. BIGGERS.

A Blue and Yellow Combination

FROM March until May the Virginian cowslip or blue bell (*Mertensia Virginica*) is in its glory. I have it in my garden planted under a group of *Forsythia Fortunei*, its blue bells contrasting pleasantly with the golden bells of the overhanging Forsythia. As the foliage of the *Mertensia* fades soon after the blooming period is over, it cannot be used in masses where vacant ground during the summer months is undesirable. In the situation above mentioned I have overcome this objection; by the time the foliage of the *Mertensia* has turned brown and the plants need no more sunlight, the drooping branches of the *Forsythia* hide them from sight. The *Mertensia* may, however, be grown in semi-shady beds in masses, if vacant spaces—say a foot in diameter—are left two feet or more apart, in which strong-growing plants like the tobaccos, spider plant, or the late-branching garden asters may be placed or seed sown. But in this case one must be willing to put up with the sight of brown and dying foliage for a time, for the plants need the ripening off for their future development. They are hardy perennials, and in favorable positions not only spread at the roots, but young plants come up quite freely. They should be planted in August or September, as they are dormant then. There is a white variety, not as pleasing as the type, whose unopened buds are a lively pink and the open petals a robin's egg blue. As the flower stalk carries buds and matured blooms at the same time, the effect is charming. My group is near the edge of a ravine and, by self-sown seedlings, the colony is creeping slowly down the bank. It must contain now about two hundred plants.

Illinois.

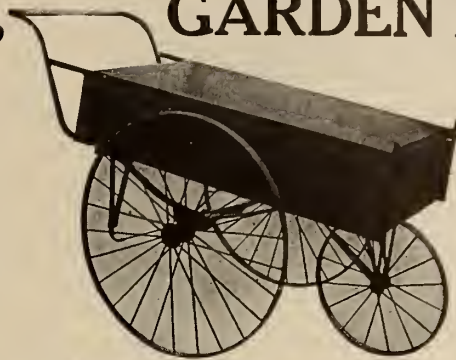
W. C. EGAN.



The wild sweet-william (*Phlox divaricata*), in its flowering season from April until June, is a mass of delicate color

FOR THE LAWN, GARDEN AND ORCHARD

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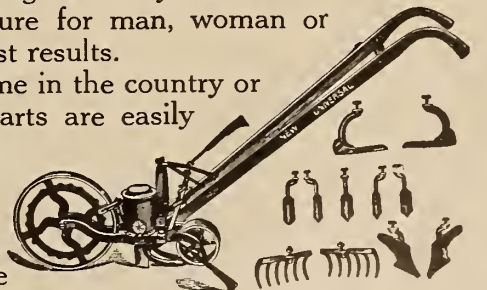
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If hose of such extremely high resistance is not required, we will send **KENMORE** (guaranteed 650 pounds) at **\$10.50**, or **CYGNET** (500 pounds) at **\$8.00**, for 50-foot lengths. Shipped same day order is received.

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Discoveries of a Southern Amateur

I SUPPOSE there is no trade that fosters such a generous fellowship as gardening. Fish stories and hunting yarns surely inspire no better feeling among the tellers about the camp fire at night than passes, with the interchange of plans and methods, over the back fence between gardeners. My garden 60 x 70 ft. was surprisingly successful last year and a list of the things grown, with quality and quantity indicated, would endanger my standing as a sober gardener and range me almost with the fishermen. And these are some of my "stunts":

In tomato culture the following method will insure large fruit in abundance, and long life to the plant even in drought. A study of the plant shows that the main root system forms a mat, very near the surface of the soil. In the South, especially, this shallow growth often results, during August, in the death of the plant from heat and drought. The plant would shield its roots with its suckers, but these cost the plant too much and must be pruned to conserve the strength for the main stalk and for fruit.

In watching some Italian gardeners I noticed that they had developed a system of deep planting. The soil is well dug and deep trenches, or furrows, run three or four feet apart. In these furrows near, but not at, the bottom the young plants are set. Gradually, as the growth allows, the earth is drawn to the plants so that when the hilling is done the rows are slightly raised. The roots now rest eight or ten inches below the surface and new roots form as the earth is drawn to the stalk. A little nitrate of soda applied gradually in this process will work wonders in the plant. So treated the bearing season runs until frost.

For generations the tradition in asparagus culture has been for a bed. By far the better method is to plant it in a long double row. In the old system the bed was made wide and short, and the crowns matted close together. The rich, deep soil was too good for grass to miss, and the roots of this struck down and became so intertwined with the asparagus roots that it was practically impossible to get them out. Besides this it was necessary to walk on the bed whenever the stalks were cut.

In the new method the crowns are placed in a double row that can be easily worked with a wheel-hoe. There is no treading on the soft earth in cutting the sprouts. My row extends clear across one end of the garden. It is three feet from the fence so as to allow a row of sweet peas to climb the fence by way of ornament. Such an arrangement has the asparagus safely out of the way in plowing time.

In preparing this long bed all the care of the old method is used. The first layer of surface soil is thrown out, and the subsoil is deeply dug and well mixed with quantities of stable manure, gravel, and commercial fertilizer. A little soil is then thrown back. It will never do to set a plant in contact with the hot fertilizers. The crowns are then placed evenly, about four inches down, and eighteen inches each way in a double row. The rest of the surface soil is then carefully thrown in and a top dressing of well rotted manure spread over the bed.

On a bed eight feet wide and twenty feet long I raised over two hundred fine eggplants. Nothing I grew the whole year did quite so well. I used



Sprayed with Swift's Arsenate of Lead



Corresponding period of Growth without Spraying

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EACH PLANT
PRODUCES
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Send \$1.00 and get 12 Carnation or Chrysanthemum Plants.

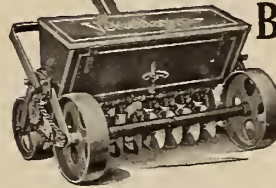
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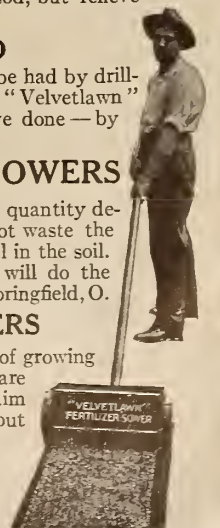
will sow any brand of Dry Pulverized Fertilizer in any quantity desired and scatter it evenly over the ground. It does not waste the Fertilizer because the cultivator teeth work the material in the soil. This is the only hand-power Sower in the world that will do the work accurately and evenly. Price complete, \$6, f.o.b., Springfield, O.

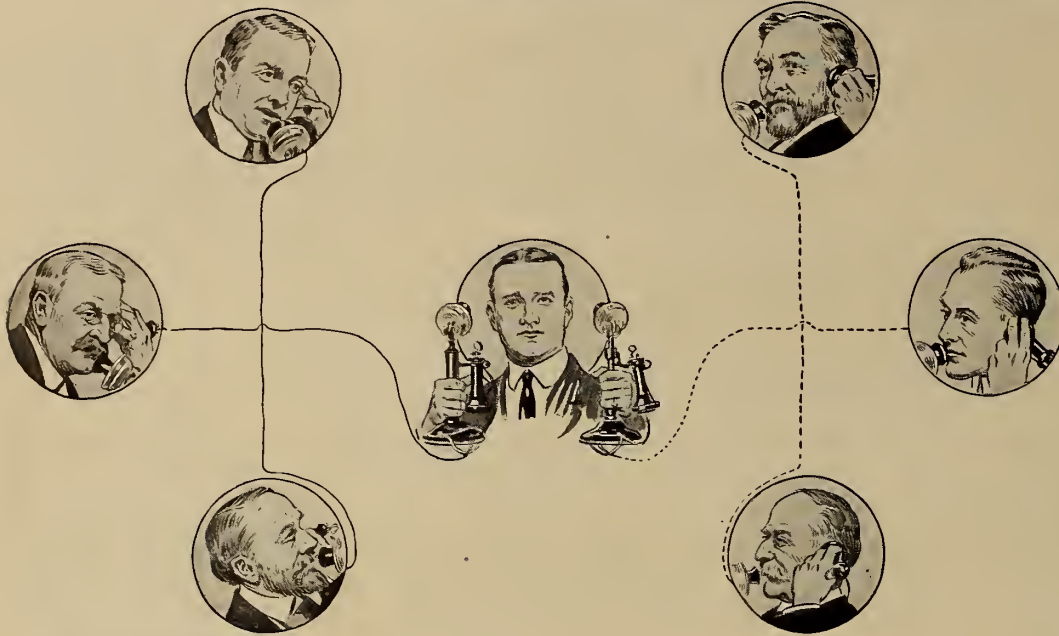
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TWO telephone systems in one town mean a divided community or a forced duplication of apparatus and expense.

Some of the people are connected with one system, some are connected with the other system; and each group receives partial service.

Only those receive full service who subscribe for the telephones of both systems.

Neither system can fully meet the needs of the public, any more than a single system could meet the needs of the public if cut in two and half the telephones discontinued.

What is true of a single community is true of the country at large.

The Bell System is established on the principle of one system and one policy, to meet the demands for universal service, a whole service for all the people.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY AND ASSOCIATED COMPANIES

a modified form of the culture suggested above for the tomatoes. I did not attempt to get the roots nearly so deep but made the bed much richer and fed the plants a little high grade fertilizer each time they were worked. They came into bearing the middle of August, and were bearing in fine order when frost came in November. Enough were then brought in to last for two weeks longer.

Salsify requires such a long time to mature that I cannot afford, in my small garden, to let it use its space alone. I grew four hundred splendid roots in four rows, fifty feet long, between the corn. The corn was planted first and was worked thoroughly until its tassels began to show. Then the soil was deeply spaded between the rows and the salsify sown. When the corn had finished bearing the stalks were taken out, root and all, and covered in the compost heap. The salsify had prospered in the partial shade and now grew apace. But the corn rows were spaded thoroughly, without disturbing the salsify, and a late crop of potatoes put in. The salsify supplies fresh stuff from the garden even in winter.

North Carolina. CHARLES E. RAYNAL.

The Southern Summer Begins

SOW cabbage seed during the month for use in the late summer and fall. Drumhead and Flat Dutch are excellent varieties. Better sow also some seed of the red sort for making cole-slaw and salads. Be careful to keep the cabbage bed watered during dry weather. Seed of collards may also be sown now, but cabbage is much better and just as easy to grow. The southern gardeners can, and should, have headed cabbage in their garden every month in the year.

Yard beans and lima beans should be staked now. Oak poles, with a little brush left on, will last through the season. Have them about one and a

half or two inches in diameter at the bottom and nine or ten feet long. Lima beans make heavy foliage and require strong support.

Set out tomato plants during this month. Keep careful watch over the white potato patch for the striped potato bug. Spray with Paris green when it appears just before sundown, as there is then no danger of the sun scalding the plants.

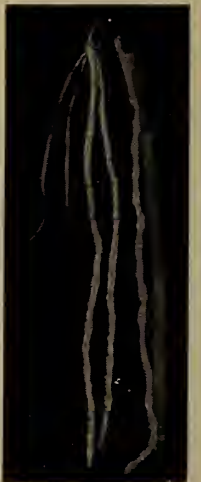
Be sure to sow at least a few sunflower seeds. They require no attention, give pretty flowers, good shade for poultry and the seed makes excellent poultry food.

If the madonna lilies are not already in flower, give a liquid manure and have blossoms. The same applies to dahlia plants which should commence to flower this month. Stake them in order to prevent the stalks from breaking during high winds. Keep all old flowers cut off—sweet Williams, pansies and sweet peas—so as to prolong the flowering season.

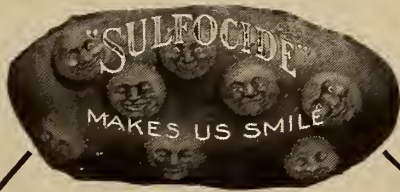
It is important to keep both the flower and vegetable garden well cultivated during May and June. If the grass gets a start now, it will be hard to control.

Plant pumpkins and winter squashes now. They are excellent in pies during the winter and should be more generally planted in the South. Thin out late fruits now if they are crowded.

Continue to set out sweet potato plants. A friable red clay soil makes sweeter potatoes than a sandy soil, and they keep better. I got twenty-five bushels of yam potatoes from about five hundred feet of rows. The plants were set out in June after oats were harvested; on another patch three times as large, but with a sandy soil, planted in April, I had only thirty-five bushels. Therefore, it seems that a soft, red clay soil is the best generally for sweet potatoes. I expect to plant



Yard-long beans are good eating



A SUBSTITUTE For Bordeaux Mixture

10 gal. keg making 2,000 to 5,000 gals. spray, delivered at any R. R. Station in the United States, for \$12.50. Prompt shipments. Every grower of fruits and vegetables should have our Report of wonderful results 1910.

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Nature's Best Fertilizer is Sheep Manure

Sheep's Head Brand furnishes the valuable organic matter and humus necessary to grow crops. It improves the mechanical conditions of the soil.

Makes compact clay more open and porous, makes light, sandy soils more retentive of moisture, keeps soluble plant foods within reach of rootlets of growing vegetation. Farmers, orchardists, florists, truck and market gardeners should send for our book "Fertile Facts" to learn how properly to fertilize the soil.



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We have constantly strengthened and hettered every point. Today we use 21-ounce (to the sq. yd.) whereas most hammocks use 12-ounce or even 8-ounce duck. We use an extra heavy sewing thread, which can be worked only by large, low-speed sewing machines. The long canvas bed is in two strips, sewn together, and this long, double seam prevents stretching of the canvas. The sewing of this long seam requires skilled sailmakers, but it results in a durability which doubly and trebly justifies the slight extra cost. We guarantee our *Khaki* absolutely permanent and not to soil the most delicate gown.

Not one penny is expended for useless show in the Rowe Hammock. It is made right, and is as inexpensive as a rightly made hammock can be. When you see a cheaper priced hammock, you can always find the explanation in the omission of some quality that is vital to its durability—usually it is lighter canvas, or some important bracing or sewing that is skimped. You probably will not notice the difference until you have used the hammock a month or so, but time will surely tell. If you want a lasting, always-satisfactory hammock, your only course is to buy the Rowe.

Don't buy a hammock without first writing us. A very few first-class stores are licensed to sell our hammocks. If they are not conveniently situated, you should buy direct from us. We prepay delivery charges and ship, carefully packed, ready for hanging.

Write for descriptive booklet and prices of different styles and sizes. Small silk name-label on every Rowe Hammock

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IMPROVED BLUE SPRUCE

Picea Pungens Kosteriana compacta

This variety is a great improvement on the well known Kosteriana, being more symmetrical and compact of growth, with foliage of a rich silvery blue.

The Blue Spruce is one of the most beautiful and distinctive of trees and, owing to its extreme hardiness, will thrive in the most exposed situation.

The illustration shows a block of these trees in our Nursery. We offer 2½ to 3 feet specimens at \$5.00 each.

Place your orders now and shipment will be made to suit your convenience during April and May.

COTTAGE GARDENS CO. INC. NURSERIES
QUEENS, NEW YORK



Moon's Perennials Bloom This Year

There's still time to plant perennials. This Summer you'll get all the joyous beauty of an uninterrupted season of brilliant bloom.

We're prepared to ship orders promptly on any variety in our extensive collection.

May is the Best Time to Plant Moon's Evergreens

Roots are so carefully bagged and kept fresh by moist material, they scarcely know they have been moved and start growing at once.

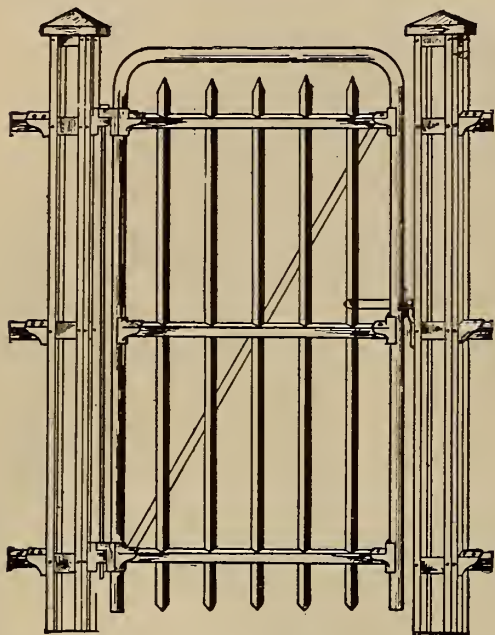
All of Moon's evergreens are sturdy, symmetrical, vigorous specimens.

Hardy Plants for Every Place and Purpose is the title of our Catalogue that will tell you how Moon's Trees will beautify your grounds. Send for it.

THE WILLIAM H. MOON COMPANY,

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Protect and Beautify Your Grounds

Only one moderate-priced fence has adequate strength for protective purposes and a beauty of outline that harmonizes perfectly with its surroundings—

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Barcalo Sensible Steel Fence is almost as much superior to iron fence as iron is to wood fence—a truly modern fence.

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Strength of Steel—Price of Wood



Barcalo Steel Fence is extremely light, but possesses marvelous resisting powers.

The Barcalo V-Joint is the greatest improvement made in this type of fence in years. It gives the entire fence a present and permanent unity. The price is practically what a wood fence would cost. Very easy to erect.

Let us tell you about the unduplicated points of superiority in The Barcalo Fence. Information and prices mailed free on request.

We need aggressive representatives. If you appreciate an attractive offer on an easily sold fence, send for our agents' proposition.

Barcalo Mfg. Co.
Dept. E-41, Buffalo, N. Y.

some on both kinds of soil again this season, to see if the red clay is really better for them.

Continue to sow peanuts, sorghum cane and chufas, or earth almonds. Keep runners cut from the strawberry bed and the plants will grow larger and stronger.

House plants should be taken outdoors where they can get fresh air and sunshine, but not too much sunshine, especially the tender ones. Don't allow them to flower during the summer, if you want the best flowers next winter in the house.

Sow seed of okra at once if you have not already done so. The young pods give a pleasant flavor to soups and can be used either green or dry. Okra plants do not require any special attention—give the same cultivation as to beans. White Velvet, Perkin's Mammoth and Kleckley Favorite are among the best varieties.

Georgia.

THOMAS J. STEED

Raising Corn with Dynamite

BY BREAKING his land to a depth of four feet with 150 pounds of dynamite, a farmer in Fairforest, S. C., last year raised 200 bushels of corn on land that had heretofore produced from 20 to 30 bushels. The land was prepared in March. Into holes two feet deep, at intervals of five feet each way, a half stick of dynamite was dropped, which was exploded almost simultaneously. Actual test showed that the ground was thoroughly pulverized to a depth of four feet. After this, his mode of culture differed but little from the ordinary way, except that the hoe was not used. (For directions as to how to use dynamite in planting, see THE GARDEN MAGAZINE for April, 1911, page 176).

"Dynamite farming," as this method is popularly called, has two advantages—the clay is thoroughly pulverized and the phosphates made available; and the pulverized clay is exceedingly porous and will hold surprising quantities of water.

As proof of the second, the corn on the land that had been prepared with dynamite was as green and luxuriant all year as if it had been grown on a river bottom, while at times that but a few hundred feet away and otherwise grown under the same conditions was suffering from lack of moisture. Even in the driest times the clay two feet below the surface of the ground was saturated with water.

Preparation of the land cost just \$35 per acre. \$30 for dynamite and \$5 for labor. A manufacturer of dynamite has stated that he will put on the market a quality prepared especially for agricultural purposes and so the same results can be obtained at a cost of not more than \$10 per acre, exclusive of labor. When land is once broken in this manner, it is never necessary to repeat the operation.

South Carolina.

ARCHIE RICHARDSON.

Jelly Glass Gardening

I HAVE no coldframe—ignominious confession—so when a number of small rose plants were delivered—at my own request—too early to be set out unprotected, I had to evolve some scheme to save them. The frost was out of the ground all right, so I planted the bushes in their permanent places, and covered each with a quart Mason preserve jar. They all grew nicely although we had some pretty hard freezes later. Last year I saved in the same way several roses that had nearly succumbed in the spring to too heavy mulching with too fresh manure.

Then I tried what could be done for seeds. I planted tomato, pepper and eggplant seeds in the open ground long before it was safe to do so—the last week in April, to be exact—covered them with glasses borrowed from the preserve closet, and had very nice plants ready to transplant when the weather settled.

Lettuce can be hurried along by the same method, and is extremely tender. A pint jar is the right size for a head of lettuce.

Of course, slips of all kinds can be started under jelly glasses, and the glasses and jars are easily cleaned and returned to their legitimate uses when the gardening season is over. Besides, cracked ones will do just as well in the garden.

New Jersey.

A. C. BROWN.

RUSTIC HICKORY CHAIR



Style No. 22

Hand Made

Beautiful and strong for porch, lawn, or den, made of the toughest young hickory and hickory bark. Frame, whole saplings with bark on, just as it comes from the woods, sand-papered smooth, no paint or varnish to hide natural beauty of wood. Put together by craftsmen of the old school, will outlast anyone living today, no matter how used or abused. Comfortable, restful, graceful. Fits into the scenery anywhere. You feel the spirit of the hickory—its rugged strength, honesty and simple beauty whenever you sit in a Rustic Hickory Chair.

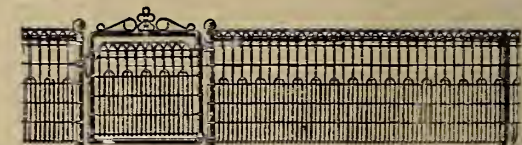
But little hickory remains in American forests. Hickory Furniture will cost more each succeeding year. This chair handed down to next generation will be worth many times its cost now.

Shipped to any point east of Rocky Mountains prepaid for **\$4.00** With rockers 75 cents extra.

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MEN AND WOMEN can raise them in large quantities in cellars, stables, boxes, sheds, etc. Crop sells for 50c to \$1.50 a lb. Visitors welcome at our farm. Start now. Big booklet telling how to do it, free.

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DO YOU WANT TO BE A BETTER SHOT?

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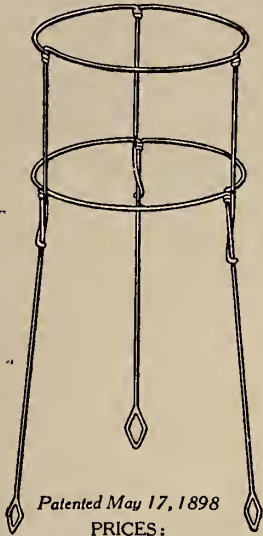
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A SINGLE
SEASON



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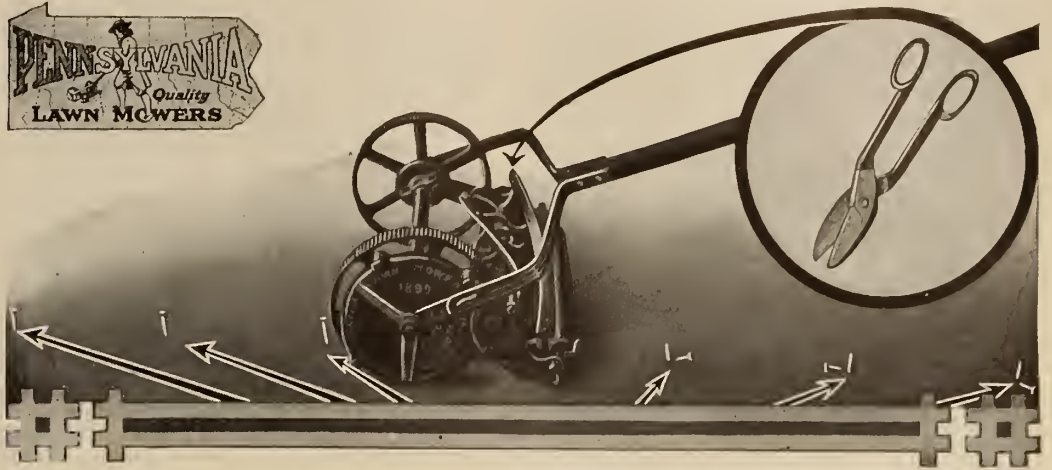
Per dozen, \$1.75; per 50, \$7.50; per 100, \$12.50

A Lighter Support is also made for Carnations

50 Complete Supports, \$2.25; 100 Complete Supports, \$3.50
Flower Bed Guards, Trellis, Lawn Guards.

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A prominent authority has written especially for us a valuable booklet, "The Lawn—Its Making and Care," which is most helpful to all interested in lawns. We will gladly mail a copy on request.

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The "Pennsylvania" is the only mower that can do this without injury to its cutting knives, because it is the only mower in which all the blades are of crucible tool steel, hardened and tempered in oil—the same kind of steel that is used for tools requiring the keenest cutting edges.

This is the reason why

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A floral water of absolute purity and enduring fragrance, in use for nearly a century. Most refreshing and delightful for all toilet purposes; matchless for the bath; grateful: it is in a word, by far the most satisfactory toilet perfume for general use.



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Brenlin, the *new* window shade material, always hangs straight and smooth.

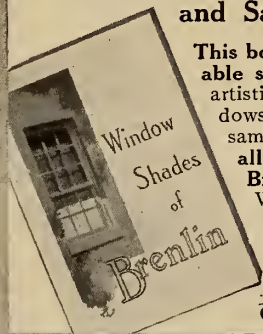
BRENLIN

Window Shades Won't Crack Won't Fade

Unlike ordinary window shades, Brenlin is made without chalk or clay "filling" of any kind. It is the "filling" in ordinary shades that cracks and falls out, leaving *unsightly* streaks and pin holes. Brenlin will not crack, wrinkle or fade and yet really shades.

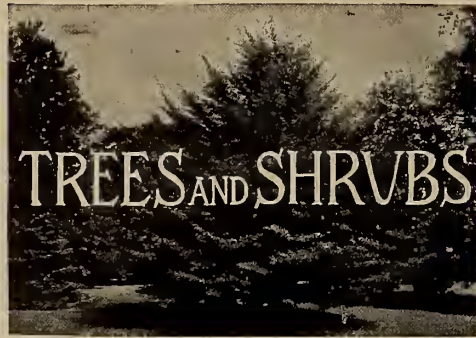
The wearing qualities of Brenlin make it the *most economical shade for you to buy.*

Write today for this book and Samples



This book contains valuable suggestions on the artistic treatment of windows—and shows actual samples of Brenlin in all colors and in Brenlin Duplex. Write for it today.

CHAS. W. BRENNEMAN & CO.
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Reading Road,
Cincinnati, Ohio



How to Move Big Evergreens

THERE seems to be two periods in the year when evergreens will stand more abuse in transplanting than at other times—the first half of May and the first half of September. The exceptions to this are when we have a very early spring and when the first part of September is very hot and dry. In this section of north-eastern Connecticut we have even successfully planted evergreen trees in late October. In fact, we find there is really no time in the year when an evergreen cannot be moved successfully, excepting when the young growths are new and soft. At that time the sudden interruption of an ample supply of sap from the roots will cause the new growths to flag or droop, and in this condition the sun will burn them. My experience has been in favor of the springtime, however, for the purchase of evergreens, but rhododendrons succeed better by being shipped and planted in the fall.

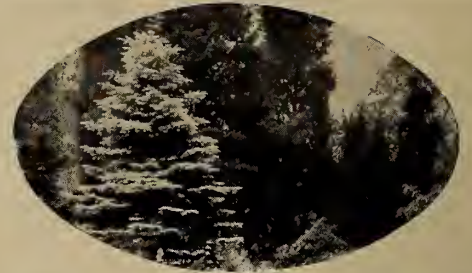
The two essential conditions to be observed in transplanting evergreens are that the roots must neither be badly broken nor allowed to become dry. If you can attend to these two things, the trees will receive no check and will grow the following spring as if nothing had happened. It is only occasionally



These trees were moved from a distance of half a mile and suffered no check

however, that we can be so successful, owing either to stony ground or a tap-root that it is impossible to get out whole.

When there are only a few trees to be moved, it is best to wait for cloudy weather and no wind, but when a large number must be handled, one cannot wait for ideal weather conditions. We moved the trees shown in the illustration from a



Your Trees Will Thrive

and add the greatest artistic value to your place if your selection is made from the numerous specimens of Hardy Evergreens, Trees and Shrubs at the

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A half century's experience in tree planting enables us to make a recommendation based on the particular soil and climatic conditions of your place—insuring you lasting satisfaction and most beautiful effects.

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Is full of valuable information for any one interested in tree growing for pleasure or profit. It is beautifully illustrated in color and contains many offerings of exceptional value. Free to readers of Garden Magazine.

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FLORICULTURE

Complete Home Study Course in practical Floriculture under Prof. Craig and Prof. Beal, of Cornell University.

Course includes Greenhouse Construction and Management and the growing of Small Fruits and Vegetables, as well as Flowers Under Glass.

Personal Instruction. Expert Advice.
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the best high-grade spawn in the market, together with large illustrated book on Mushroom Culture, containing simple and practical methods of raising, preserving and cooking mushrooms. Not more than one sample brick will be sent to the same party. Further orders must come through your dealer.
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TAKES THE PLACE OF SICKLE AND SHEARS—NO STOOPING DOWN
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Cuts where lawn mower will not, up in corners, along stone-walls, fences, shrubbery, tomb-stones, etc.

It is simple in construction and made to endure. Makes a cut 7 inches wide.

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EVERGREENS.

Largest and Most Complete Assortment in America. From Seedlings to Fifteen Feet.



ALSO SHRUBS,
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DREER'S Everblooming Hardy Hybrid Tea ROSES

Strong, vigorous two-year old plants that will give a full crop of flowers this season.

We catalogue over one hundred of the very finest varieties of the above type, the most desirable of all Roses and offer:

- Twelve 2 year old plants in 12 varieties, our selection, for \$5.00
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In addition we catalogue the best of all other types, including Tea-scented, Hybrid Perpetual, Damask, Rambler, etc., etc., all of which are illustrated and fully described in

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the biggest and best catalogue of Seeds, Plants and Bulbs, and the most complete Garden Guide ever published. 288 pages, largely taken up with just the kind of clear cultural notes that every amateur wants.

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are famous for their wonderful perfection and durability. Such lawns may be produced in this country if

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is used. The result of centuries of selection. No weed seeds or coarse grasses. Hardy and beautiful in color and texture. Send for directions—How to Seed and Keep a Beautiful Lawn. Free.

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SLUG-SHOT

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SOLD BY SEED DEALERS OF AMERICA

Saves Currants, Potatoes, Cabbage, Melons, Flowers, Trees and Shrubs from Insects. Put up in popular packages at popular prices. Write for free pamphlet on Bugs and Blights, etc., to

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Not for Future Generations

Start with the largest stock that can be secured! It takes over twenty years to grow such Trees and Shrubs as we offer.

We do the long waiting—thus enabling you to secure Trees and Shrubs that give an immediate effect. **Spring Price List Now Ready.**

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Mineral or smooth surface. Fully guaranteed.

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Trinidad Lake Asphalt
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Trinidad Lake Asphalt
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USED THROUGHOUT THE WORLD
Price Lists of the best Flower and Vegetable Seeds Mailed Free
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SUTTON & SONS, READING, ENGLAND

A Genuine Panama for \$1.00



An Introductory Bargain
This is just as good a Panama Hat as one costing \$10, except it is coarser weave. Warranted genuine, hand-woven, direct importation from South America. Weigh 2 oz.; durable, flexible, easily shaped. Worn by everyone, man or woman. Looks like a woman's expensive Panama when trimmed. Our Bargain Price to introduce only \$1.00. 2 for \$1.88. We prepay all charges.
\$1.00 Mexican 50c Palm Hat



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Over 75,000 sold to pleased customers. Warranted genuine hand-woven in Mexico from strong palm fibre; colored design woven in brim. Light, cool, comfortable—*not* hurt by rain. Retail at \$1.00; our Introductory Price only 50c. Three for \$1.25. Both hats here offered sent prepaid for \$1.30. Money back if not pleased. Write today for Free Catalog of Mexican and Panama Hats, it will save you 30 per cent. on your summer hat cost.
FRANCIS E. LESTER CO. Dept. J 5 H MESILLA PARK, NEW MEX.

distance of about half a mile. We thoroughly soaked the roots by running a 1 1/4-inch hose from a water cart on the trees the day before the digging commenced.

A trench was first made in front of each tree, at a suitable distance from it, continuing downward until clearly below the lowest of the roots. The outside bank was then cut down to a slope, making a rise of about one foot in three from the bottom of the trench to the surface. We then cut a tunnel about three and a half feet wide and eight or nine inches deep underneath the tree below the roots. Progress was rather slow because only two men could work at one time, but the tunnel eventually reached under the tree to its centre.

A stone drag or float, made of oak planks, was driven as far under the tree as it would go, two stout planks were placed side by side underneath it, some short pieces of 1 1/2-inch iron pipe being put between the drag and the planks for rollers. A large circular trench to surround the tree was then immediately begun, as many of the men working at it as could do so conveniently, in order not to lose any more time than was absolutely necessary before getting the tree to its new location. The loose soil on the inside of the trench next the tree was carefully removed with forks, so as not to damage the fibrous roots, until the tree was left in the centre of an immense hole, the roots in a compact solid ball resting halfway on the drag.

Wet burlap was then wound around the ball several times and bound to it securely with strong ropes. Another rope was passed loosely around, and between it and the ball of earth we inserted a quantity of birch brush cut to about eighteen inches in length. This second rope was also tied tight enough to hold the brush in place.

A long lug chain was passed around the whole, the hook being put at the side. Then a pair of horses was hitched to the end of the chain, which, being passed over the hook at the side, slowly whirled the tree forward until it stood in the centre of the drag. Next the chain was slipped off and the horses hitched to the drag. The horses pulled very slowly and steadily, while the men kept the rollers between the drag and the planks underneath it, and the tree, though weighing possibly 3,000 pounds, was brought out of the hole with comparatively little effort.

The drag with the tree was then loaded in the same way, by rolling on planks, on to a specially constructed low-wheeled truck, not more than a foot high and having very wide-banded wheels to prevent its cutting into the ground. The hole which was to receive the tree had been prepared with two sloping sides, opposite each other, so that the drag might be drawn right through the bottom and rest on the up-slope, thus giving it a strong tilt. The horses were then unhitched from the drag which, of course, had been rolled from the truck before being drawn into the hole, and the log chain passed around the ball as before, the hook being at the side. Adjusting the chain in this way gives the tree a whirling motion, and not only makes the draft much easier but also causes the chain to exert an even pressure all around the ball instead of at the rear only, as would be the case if a straight pull was attempted.

After the tree was in place the ropes were taken off and the burlap unwound. The roots were carefully separated and the soil worked in between them, the hole being filled in gradually and the soil made thoroughly firm. When the roots were all covered and the hole filled to within three or four inches of the top, the soil was given a final thorough treading and tamping, and the hole was filled to the top with water. A heavy mulching of half-decayed leaves was put on just before winter and left on until late in the spring.

I have moved trees year after year in this way, and have generally been successful.
Connecticut. RICHARD BARTON.

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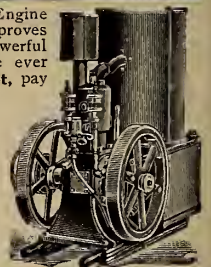
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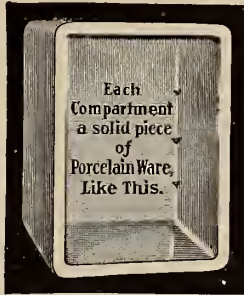
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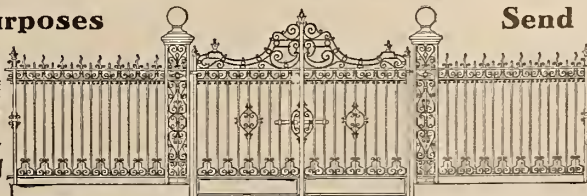
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The air-tight Leader tank in the basement or buried underground, stores the water under air-pressure—it is kept clean, cool and pure—you can operate by hand, windmill, gasoline engine or any other power. There's a size and style to suit just you.

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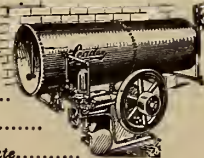
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Single Chrysanthemums Treated as Annuals

A GOOD many years ago when I was a small boy, I coveted the big chrysanthemums I saw in October in the florists' windows, and one spring, with the hope and ignorance of youth, I tried to raise these same from a packet of seed labelled: "Double chrysanthemums, Chrysanthemum coronarium fl. pl." It has taken twenty years to obliterate the disappointment I felt when the little yellow and white button blossoms appeared. But it is all gone now, for I am happy in having raised chrysanthemums which will satisfy my soul, raised them in a single summer from seed and had them bloom in my garden as I had planned those others should so many years ago.

These, however, are not the great fluffy balls, one to a plant, in cold climates raised chiefly by florists under glass, but a race of single daisy-like flowers recently developed from the big Japanese chrysanthemums and blooming outdoors in September and October with dozens of flowers on plants never over three feet high. These had been grown for a year or two in England where they had been introduced by their raiser, W. Wells of Merstham, but it was not until last spring that I saw the seed listed in American catalogues and decided to try chrysanthemums from seed again. Sown in nice, fine, open soil in a seed flat, the last day of April, they quickly germinated, grew apace and a month later were put about eighteen inches apart in the garden, where they have since needed no care other than the occasional weeding, watering, and cultivation which all annuals must have to get good results. Briefly what they ask is the treatment given to asters and you will get loads of flowers, coming just as the asters pass out and lasting well into October. Moreover, they seem to be very healthy and resistant, having given flowers in New Jersey after 10 degrees of frost had visited the garden. This lateness is probably their greatest claim to notice, for our fall gardens sadly need their bright reds and pinks at a time of the year when the blue Michaelmas daisies and yellow perennial sunflowers furnish most of the color.

Let me describe some of their characteristics. In growth they vary very considerably, some being dwarf and compact, not over a foot high, almost balls of bloom; others taller and more free and graceful, a few almost three feet high and what might be called rangy in habit, and one or two so weedy I pulled them up. I might add here that as they early show their habit of growth, the taller ones can be put where they will look best and the dwarfs used as edging. In form, too, the flowers vary from those having a single row of petals to those having half a dozen rows, the former being the more graceful, the latter lasting better in the hot sun. Here there should and undoubtedly will be considerable improvement in the shape and finish of the individual flowers and in the reduction of the size of the yellow centre. Average flowers are about an inch and a half to three inches in diameter, but let them not be despised for their size, for on an undisbudded plant it is easy to count a hundred open flowers at once besides many buds to come. The color range is remarkable—from pure white through pale lilac and rose pinks to crimson, and from pale yellow through orange and bronze to terracotta, besides many delightful combinations of yellow and pink and yellow and red, and some quite like cinerarias in that the rose-petalled flowers have an aureole of white

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Any houseowner who wants to do a little figuring should get from his local dealer prices on the following ingredients:



100 lbs. "Dutch Boy Painter" white lead	-	-	-	\$.....
4 gallons pure linseed oil	-	-	-
1 gallon turpentine	-	-	-
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This makes 8 gallons genuine old-fashioned paint				



He should then compare this with the price of any other paint he would think of using, and all the while keep in mind the superior spreading power of old-fashioned lead and oil paint.

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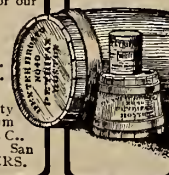
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it's an easy matter to obtain just the right tone to harmonize with the rest of the color scheme and the natural surroundings. Made in white and several artistic shades. Petrifax also gives uniformity of color which is impossible to secure in ordinary cement or plaster work. Petrifax fills the pores, waterproofing the surface it covers, yet preserving its texture. The mineral base is carried into the cement by a volatile liquid, which evaporates readily, leaving a hard but elastic surface that will not chip, crack or peel. Rain and dampness cannot penetrate it, climatic changes cannot affect it. Let us tell you more about this waterproof coating. Ask for our interesting booklet.

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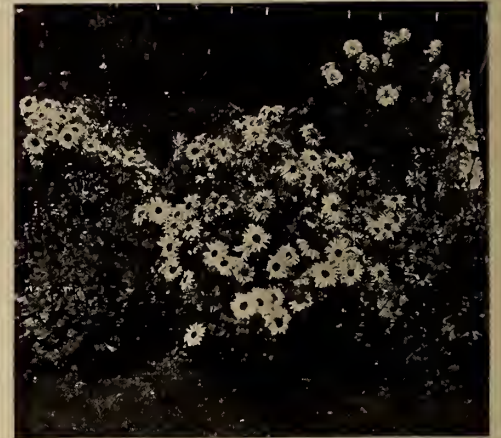


Be sure the word

Petrifax and our signature are on every barrel, keg and can

surrounding the yellow disk. My fifty plants bordered a path, and I can truthfully say that the interest of watching them come into bloom exceeded even that of the first flowering of a fine strain of seedling larkspurs or long spurred columbines.

As these chrysanthemums cannot be obtained true to color or habit from seed and there is about a month between the first flowers of some of them, they cannot be used for pattern beds on lawns; but, planted in masses, I have, in addition to the witness of my own eyes, the trained judgment of an artist neighbor in stating that the colors harmonize beautifully. Should a magenta pink appear and offend, it is quite possible to lift the plant with a good ball of earth and put it among white ones where its color will cause no distress. The fact that under the favorable conditions of a dull day and care they may be moved even when coming into bloom, makes them especially useful for filling in spaces in the hardy border, or as succession plants where early tulips or annuals gone by have left bare beds in the fall garden. Indeed, if space in the flower garden is valuable, I see no



Have single chrysanthemums follow asters and you will have loads of flowers through October

reason why the plants should not be grown in an out-of-the-way place and, when they show color, be transplanted to where they will be most effective.

As cut flowers they last very well and their dainty sprays are as becoming for corsage wear as they are charming in the decoration of the dinner table or the house. In some places they are more appropriate and more decorative than the large doubles, and such a range of color is available that many uses for them will be found.

Of course, being perennials, it is quite possible to propagate any fine variety by taking cuttings in early spring, but except in the South or on the Pacific coast, the plants would not live through the winter outdoors and the old roots would have to be kept under the benches of a greenhouse or possibly heeled in in sand in a cellar. But the man who has what our English friends call "a bit of glass" is not being considered here, for this pæan is in praise of the single chrysanthemum treated as an annual to make our smallest gardens everywhere last longer and our duller houses more cheerful in autumn.

California.

SYDNEY B. MITCHELL.

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THE common hardy white candytuft (*Iberis sempervirens*) is one of the very best edgings for garden walks where durability, cheapness and ease of keeping within bounds are prime considerations. Being an early bloomer, it provides flowers when they are not overabundant and then, if the seed stalks are cut off, makes a compact evergreen border, varied by a sparse fall bloom. One such border is as good as ever after nine years. This is also a most desirable plant for carpeting, giving fine results the second year from seed. The other hardy candytuft (*I. Gibraltaria*) is less reliable as to hardness.— B. G.

20,000 REASONS

WHY YOU SHOULD BUY AN E-M-F "30" — \$1,000

Twenty thousand of them, a composite, living, overwhelming argument. Each reason — reason enough, convincing and satisfying, yet, were it possible for you to investigate, question, prove each separate reason, you would probably find some new point of interest to rivet your attention and create in *your* mind a like desire to own the car that could stir up such enthusiasm and scatter broadcast such satisfaction.

It is easy to write upon paper mere statements, to waste the public's time and abuse its patience by wearisome reiteration of platitudes that have been dished up in rhetorical display over and over again, talking the merits of this and that car, with the same old jaded adjectives. But, in the name of the great Automobile Industry, let us get down to the tangible, living thing that has the red blood of sincerity in it, the personal gripping interest that shines in the eyes of men as they talk face to face about the great thing they have put their hearts and faith in.

Reasons clothed in flesh and blood. And there is no argument like unto this argument — produce any man, no matter what his birth or breeding, whether he moves in high society or not, so long as he be honest in his opinions, strong in his convictions, has stood the test of experience and found out that it is infinitely better to "know" than to "believe:" **that man** has a right to stand upon his feet and have his say, and what's more to the point, the world will surely listen.

Proudly and confidently we introduce you to twenty thousand such men. In a moment, as it were, we can usher you into the charmed circle of a great living friendship that with twenty thousand tongues will affirm one concrete absolute fact, in twenty thousand different methods and words of expression, each and every one enthusiastically endorsing the same truth — a unity of "reason why" such as the commercial world has never before seen.

Twenty thousand E-M-F "30" owners. They are our reasons. Each one a thinking, separate personality — each one with likes and dislikes that differentiated him from all the others, for no two out of all that immense number approached the question of "shall I buy" or "I will buy" an E-M-F "30" from quite the same reasoning point. One, had to weigh carefully the question of first cost; another, the "after buying cost" of upkeep. One, never considered price, but was attracted by quality; another, having a bent toward mechanics, saw quickly the perfect chassis. One, considered the financial stability of the Company behind the product; another that same Company's good faith and so on — ad infinitum.

But they all reached the same conclusion. There was some unanswerable argument presented, some fact of mechanical supremacy that could not be denied, some record of enduring quality that appealed, some enthusiastic owner that "boosted," which compelled each and every one of these 20,000 men to buy an E-M-F "30." Through the maze of all other rival cars for sale they found their way to the *one car* that expressed to them in terms of power, speed, reliability, comfort and serviceability the "ideal" each and every one possessed. That in buying an E-M-F "30" they proved their judgment to be correct, is now a **matter of record.**

These men are representative of all that is best and constructive in our great commonwealth. E-M-F "30" owners form a democracy of varied interests, among them being **Bankers** who know the value of money and its purchasing power—**Lawyers** who are skilled in discovering the weak points in any argument—**Tradesmen** who know how to buy for profit—**Farmers** who, as a class, are the most careful purchasers of automobiles—**Business men** in the great populous centres, who had every opportunity to draw comparisons and weigh the merits of rival cars — **Doctors** who demand the kind of car that must be always ready — at a moment's notice — to go anywhere over any kind of a road — every trade and profession — millionaires and men who live upon modest incomes are all represented in the great army of E-M-F "30" owners.

But there is one reason why *you* should buy an E-M-F "30" that is greater and more convincing than any one of those 20,000 reasons that made men choose an E-M-F "30" rather than any other car at any other price. And this, what we call "**the unanswerable reason**" has been getting stronger and bigger every day, from the time the first E-M-F "30" passed into the hands of the first owner, until this very moment; in fact, now, it is like some irresistible power, moving all over the land and sweeping everything before it: we call this invincible "reason" by a simple name everybody knows.

"Satisfaction." That's it. **Each and every man who owns an E-M-F "30" is satisfied.** They are all subscribers, as it were, to the enthusiasm and interest about that proved, enduring quality and record-breaking price, which have made the E-M-F "30" the most talked of automobile in America, perhaps, in the world, because, and we say this without fear of contradiction, there is no car made upon which so many men absolutely agree. These 20,000 satisfied owners will tell you one story, simple and convincing, that they own a car they are proud to drive, to "boost," to endorse, a car, that not only backed their judgment, but above all, taught them the lesson — that it isn't necessary to decorate a check book with a lot of fancy figures and rob a bank balance to buy an automobile whose quality is in the chassis, where it belongs.

The history of this universal satisfaction which, by the by, will sell another 20,000 E-M-F "30" cars this year, is the history of the E-M-F Company, an organization that revolutionized the automobile industry, not alone in values, but in methods of manufacture; that gave the buying public a car which has literally defied competition and sold itself. The E-M-F Company has always been a year or two in advance of the times. We make practically every part of our car, cast our own cylinders, forge, stamp and heat-treat our own steel and make our own bodies. Mr. Flanders' forecast, published in March, 1908, that "we can manufacture more automobiles of a better quality at a lower cost than any other concern now in existence," was a prophecy that has been magnificently fulfilled.

Why? Why was Flanders' prophecy fulfilled? Ask any one of the twenty thousand owners of an E-M-F "30." He will show you his car and say, "There is the reason." So you look at it, examine it, ride in it, listen to the owner re-

counting its prowess, its mileage, its speed, what it has done and the magnificent way it has stood the "gaff." Because an E-M-F "30" is such a glutton for service, it sort of lures a man on to give it hard usage. Automobiles have their particular kind of personalities. You get to "know" a car. What may be expected of it under certain conditions; and an element of pride and friendship is established. So when Mr. Flanders' determination "to make a better quality car at a lower cost" than any other concern made or sold, took shape in an E-M-F "30," then also was created the "reason" of the enormous sales and colossal growth of the E-M-F Co. **The car fulfilled the prophecy.** That's why you can't purchase a second hand E-M-F "30." Men don't sell "automobile satisfaction" when they "know" they own it.

We will visualize it for you. There it stands! A five-passenger touring car, graceful in body lines, with that "straight away look" which is a symbol of strength, elegance and comfort. Not a fad or furbelow to cumber it with useless appendage. Under the hood, a 30 horse power noiseless motor that has won distinction upon race track and road. A motor so perfectly adjusted in power, weight and balance to the rest of the chassis that it creates an absolute unit of mechanical efficiency. To the expert engineer the chassis of an E-M-F "30" suggests the limit of scientific construction. Every owner it has proved it — proved it by enduring service, **for no E-M-F "30" has ever been worn out.** The ninth car built, shipped by us a little over two years ago has travelled some 73,000 miles, which means nearly 15 years of actual life crowded into the thirty months of its existence, and it is mechanically ready for 73,000 miles more. The life story of "Bullet," this famous car, can be had for the asking. When you buy an E-M-F "30," the confidence you put into your purchase is returned to you a hundred-fold.

The investment of \$1000, in an E-M-F "30" will be the wisest expenditure you ever made, whether you own an automobile or not. The most you can get for your money would be 6 to 8% interest. But here is **the car at the price** any man can afford. And to own a car is the ambition of every man. The automobile is a tremendous factor in our everyday life. Aside from its utility there is the pleasure it freely gives, the sense of freedom it imparts. It brings the country to the city, and makes every dwelling place a country home. At a moment's notice it is ready to whirl you and your family upon the sunlit, open road into the world of green fields — the country's life-giving "out of doors." It means **health** to the wife and children, and binds the family in closer ties. It is a tonic, nerve builder, it trebles the value of time; it means recreation, the banishment of the doctor and capacity for the duties of the day — in short, it is a necessity. An E-M-F "30" will meet this necessity and excel any expectation you may now possess in the purchase of a car.

The other day, we read in an advertisement that "you can buy a real automobile now for as low a price as \$1500." We can take \$500 off that price and say the same thing, for you can buy an E-M-F "30" five passenger Touring Car, standard equipment, which means **Magneto included**, for \$1000 and that's the "realist" automobile value you can buy anywhere.

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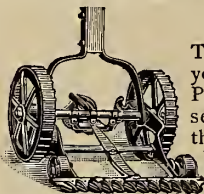
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Gladiolus will grow in any good garden soil. Cow manure spread liberally on the soil in the fall and spaded under in the spring is the ideal fertilizer. If you do not use that, apply pulverized sheep manure and bone meal in the spring.

As soon as the ground can be worked, spade it deep and plant your first bulbs. For a succession plant every two or three weeks until the first or middle of June. Large bulbs should be planted deep not less than six inches, though I like eight inches



Be sure to have gladiolus in your garden this year. The flowers endure well

better. Our soil is a sandy loam and is just right for this deep planting. This gives a much stronger stalk and does away with staking. Put smaller bulbs three to four inches deep, planting either in rows or in masses. If in rows, three inches apart is the proper distance, making the rows twelve to eighteen inches apart. If in masses, put the bulbs four to six inches apart each way. Keep the soil well loosened and free from weeds.

If the season is dry, you can have larger flowers by watering as soon as the flower buds show. Give the water at night after sundown.

No other flower that I grow lasts so long as a cut flower. Cut the stalk as soon as the first two or three blossoms are fully open and all the rest of the buds will expand in the house in water. If the old blossoms are picked off and fresh water kept on them, they will last well for at least a week.

As to varieties, buy only from a reliable dealer, and get the named sorts. Try growing a few new ones each year. Some standard named sorts can be bought for five cents each in nearly all colors, and if properly treated will increase rapidly by cornels.

In the fall after the first frost, take up the bulbs and remove the tops. You will find the corm you planted with a new one — or sometimes two or three of them — on top of it, and according to the variety, more or less smaller ones. The new bulb (or corm) after drying, should be removed and stored in a cellar that is perfectly frostproof. If you save and plant the bulbets you will have after a year or so a nice lot of young blooming bulbs. Young bulbs give the most perfect blossoms.

Michigan. GRACE RE SHORE.



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Although it is not always necessary, melons seem to grow better on hillsides (the southern slope is best) and if they are much exposed to the wind a few rows of corn planted closely as a windbreak, on the north and west sides of the patch, will give good results in earliness. The hills should be made six or eight feet apart. Take out six or seven spadefuls of earth, so as to make the hill about two feet wide, and leave a little loose earth in the hole; put in three shovelfuls of very rich manure—say two of hen manure and one of well-rotted barnyard manure and mix this very thoroughly, using the spade-fork. Tramp it down and cover with one or two inches of earth. Good results will also be had if only barnyard manure is used.

The hill is now ready. Plant ten or fifteen seeds, cover with one to two inches of earth and pack down with the feet or hoe if the earth is not too damp.

When the plants are up they should be dusted with dry wood ashes while the leaves are slightly damp, to ward off the striped beetle. Bordeaux mixture will also often prevent the beetle and also certain blights from attacking the vines. The earth should always be kept loose and free from weeds until the vines begin to run, when they should be thinned out to three or four plants in a hill, and afterward disturbed as little as possible. The horse cultivator will be found very useful if it is possible to use it.

It is often difficult to tell when watermelons are ripe; the little curl which sticks out at the beginning of the stem of each melon, will usually indicate by completely withering whether the melon is ripe or not. Muskmelons will drop from the vine into the hand when ripe.

Fordhook Early, Halbert Honey, and Kleckley Sweet surpass most other watermelons in flavor, for this part of the country, the first especially rivals the small Coles Early for earliness.

The salmon-fleshed Emerald Gem muskmelon is about as sweet as can be found; also the Yellow Meated Japan, which will sometimes grow as heavy as eight or ten pounds.

Connecticut. HENRI WICKENDEN.

Instead of Labels

THE confusion arising from the loss of labels so well described in the article on trial gardens by Mrs. Francis King, in the December, 1910, GARDEN MAGAZINE, is easily obviated by making a plan or map of your planting. This may be made on ordinary wrapping paper with no tools other than a pencil or pen and a foot rule, or it can be as elaborate as your skill permits. A scale of one-fourth inch to the foot is a good one, permitting the writing of the name directly on the space corresponding to its position in the case of any number of the same kind being planted together, but where only one of a kind is planted a good way is to mark the plan with a circle inside of which is placed a number. These numbers and the names for which they stand may be listed at one side of the plan or in a notebook kept for the purpose.

For use outdoors I find it handy to tack plans to a thin board of similar size. Then they are not damaged by being folded or blown away by the wind.

Such a plan will not only act as an exact record of all plantings but will help in arranging harmonious groups. If a notebook is kept in connection with the plan it may also be used to record dates of blooming and other information regarding the individual plants. When sowing seed I save the envelopes and mark the same number on the empty envelope and on a label to be put with the seed.

Massachusetts. H. D. P.

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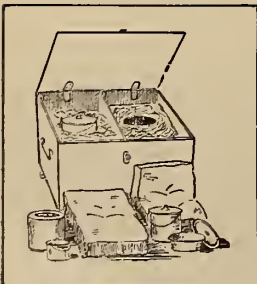
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Early Summer Reminders

AS MID-APRIL often brings with it the last useful rains of the season, the California gardener has henceforth the additional task of keeping his soil fairly moist and loose. If, combined with tillage, coal ashes and vegetable refuse of all kinds have been incorporated in his adobe to loosen it up and manure added to his sandy soils to make them more retentive, his task will be lighter, but in any case from now on every watering or irrigating should be followed by a good surface hoeing so that the ground may be stayed from losing its valuable moisture by the tremendous evaporation of our warm sunny days and may be properly aerated. A dust or other mulch may often take the place of many waterings.

Recently sown annuals should now be thinned out to several inches apart and seeds of poppies, cornflowers, gypsophila and other transitory varieties be put in for later flowers. Plant out now in their permanent places the pentstemons, snapdragons, gaillardias and other plants raised in boxes or frames, and when choice is possible avoid very bright and windy days as they make the move more hazardous. Tuberous begonias may now go in cool north borders.

Chrysanthemums can still be propagated, the later started plants generally being considerably dwarfer. Cannas, where they have grown into matted clumps, had better be taken up now and separated before replanting. True, they will grow with absolutely no attention, yet they enjoy it just as well as the rest of us.

Dahlias enjoy so well the cool, foggy summer weather of the Pacific Coast that they deserve special notice. If the divided roots are planted in May about six inches deep and a place marked for the stake which is later to support the plants, nothing more than an occasional drenching is needed until the sprouts appear. If these are numerous they should be reduced to one or two and those left have their tops pinched out to induce branching. Staking and watering is all they ask after that, with a mulch of manure and disbudbing if you want fine individual flowers.

Where it is desired to increase the stock of any variety, cover the old tubers with a layer of earth, and when the shoots are produced take these off, remove the lower leaves and put the resultant cuttings into a nice sandy soil where they will soon root if given some shade and water. In due time they may be moved to their blooming place in the garden. The flowers, if wanted for house decoration, should always be cut early in the morning or after sundown.

In the vegetable garden the last things, corn and melons, may now go in and, where water is available and the summers are not too hot, succession crops of other vegetables, such as lettuce, radishes and peas can also be sown.

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A. C. A.

OUT MAY 15TH



The Little House Number

Edited by JOHN M. CARRÈRE



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The late John M. Carrère was consulting editor of this special number of *Country Life in America*. Mr. Carrère, who was fatally injured in a taxicab accident on February 12th, was unquestionably one of the greatest architects in this country, and his good taste in matters of house design was second to none. Fortunately, Mr. Carrère had completed his work as consulting editor before his accident, and the first article is from his pen, and is illustrated with the work of his firm.

Country Life in America

This issue will include the following illustrated features:

"Better Taste in Small Houses," by John M. Carrère.

"The Essentials of Small-House Planning." By Harrie T. Lindeberg.

"A Small House Giving a Large Effect," by Phil M. Riley.

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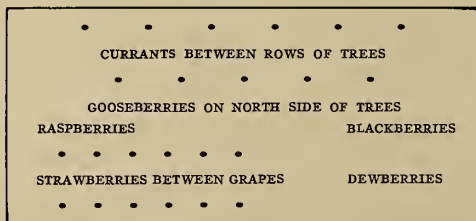


Planting Fruit to Advantage

AN ALMOST incredible amount of fruit can be grown on a small city block. Suppose your plot is 40 x 100 ft.; dwarf cherry, plum, or pears, as well as a few peach trees, might be set along the side fence or boundary, and in the shade of these, currants and gooseberries. Strawberries do well when grown between grape rows, as do currants and raspberries, for the vines will make little shade early in the season. There may be walks which it is desirable to shade, and it would be as well to plan to have a canopy of grapes there. A dwarf tree will grow and produce a quantity of fruit if planted against a wall where it can expand in only one way. Plum and cherry trees do even better on hard ground than on cultivated land.

In planting a place of this size to the best advantage, select four apple trees of the standard size to range from early to fall or winter varieties, or have six or eight of the dwarf apples, planted ten feet apart. From two to four each of cherry, peach, and plum trees would complete the selection of trees unless it was in a latitude where apricots or quinces were better adapted than grapes and berries. For the middle or southern latitudes, blackberries, dewberries and raspberries should occupy considerable space. Have the fruit trees in two full rows the length of the lot, all except the apples, standing 15 to 20 feet apart. Plant currants and gooseberries between the rows. For several years, while the trees are getting their growth, strawberries may be grown in the tree rows, and after that between the rows of grapes. Two rows of grapes half way the length of the lot and dewberries to finish out will take the space on the other side. Any of the brambles, as blackberries, will grow in the shade though not so well as currants and gooseberries.

A backyard of this size will be ample for 11 trees, 50 vines each of blackberry, gooseberry, currant, dewberry and raspberry, 12 grapevines and 200 strawberry plants, if arranged as shown:



Missouri.

H. F. GRINSTEAD.

Pruning Blackberries

ALWAYS bear in mind that pruning blackberries is one of the most hazardous of garden occupations. When bent away from the pruner and carelessly released, the heavy canes are liable to give him a cut across the face or hand and bury one or more thorns in his flesh. The greatest danger is to the eyes. Even if the pupil providentially is missed, a thorn driven through the skin just above the cheek bone will bring about a good case of black eye. And, somehow, as I know from experience, it is only a waste of words trying to explain in town that the disfigurement came from a blackberry bush in the country.

T. B. E.



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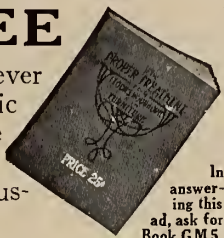
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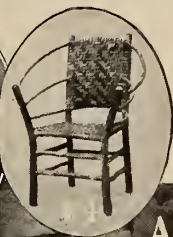
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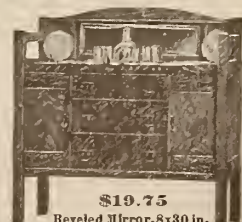
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Taking Care of Your Tools

IT IS hard and often impossible to do gardening with poor tools. The tools may have been good when they were bought, but if they are rusty they are now poor instruments with which to work, and are liable to break.

The first move is to get off the rust. The usual method is to soak the rusty parts in kerosene. There is nothing known that is better to loosen up rust than common kerosene oil. Afterwards clean the rust off with an old brick. You will have to rub hard and long if the rust has eaten in deeply. A better method is to put the kerosene-soaked tool on the grindstone, if you have one, but best of all is a carborundum wheel. It will do more and better work than a whole wagon-load of bricks. One man I know of has a 6-foot grindstone to sharpen his tools. It takes two men to turn the grindstone and another to grind the tools. You can buy a carborundum wheel with a bicycle attachment for seven dollars, and with it one man does the whole job. The machine is fitted with two wheels, one medium and one fine. The man sits and pedals, holding the tool against the wheel at the same time. For less money one can buy the carborundum wheel without the bicycle attachment; they only cost from three to five dollars depending upon the size selected. It takes two men to work it.

When the rust is all off take some of the cotton waste (which you should always have around) or an old cloth and clean the tools from all dust and grime. Then oil the tool. Don't use a volatile oil, such as kerosene. Common machine or lubricating oil is just the thing. If you have an engine or steam pump, the waste oil that runs out from the engine will do very well. With tools that are to be used at once or in a few days a light application of oil will be sufficient. If, however, they are to be put away for the season or for the winter, oil them thoroughly, being particular to cover every vulnerable spot of metal. If you are going to put them away in a damp cellar or if it is an especially damp or tropical climate, dip the tools in melted tallow and the rust just can't get at them. The tallow may be melted on the stove in an old kettle kept for the purpose and the tools dipped in the tallow while it is still hot. This is only necessary in extreme cases. Usually a good oiling with lubricating oil on a clean tool will keep off rust almost indefinitely.

After the tools are once thoroughly cleaned, insist that they be kept so. Keep old cloths or cotton waste conveniently in the tool room so that every tool may be carefully cleaned before it is put away after each using. It pays on a large scale; it will also pay in our home gardens to keep tools clean.

Where several men are employed interest can often be stimulated in clean tools by giving each man a hoe, shovel, spade, and trowel for his own use. The men will usually take pride in keeping their own tools clean and bright.

The best place to keep tools is one which is dry and at the same time convenient. Don't use a damp cellar if you can help it. If you can locate your tool room or tool closet close to a boiler or furnace, do so, as it may save you lots of time in cleaning off rust. Have your tool room one which can be locked. Young and irresponsible members of the family form habits of borrowing valuable tools, and borrowers are usually slow to return.

If the place is a large one and the tools many, so that hoes, rakes, shovels, and so on that are used by the dozen or half-dozen, have racks built along the walls wherein the whole bundle of one type of tool can be placed and so that each type can have a rack to itself. Put all the different kinds of hoes in neighboring racks and all kinds of forks or spades close together, so that you don't have to look all about your tool room to pick out the tools you need.

If the place is small and the tools few, an excellent plan is to arrange them so that they can be hung up vertically on nails, and to have a separate place for each and every implement. The problem then is how to show just where each tool belongs, what nails to hang it on, so that it can always be found in the same place.

Probably the simplest plan is to take a flat pencil and mark out the outline of each tool as it



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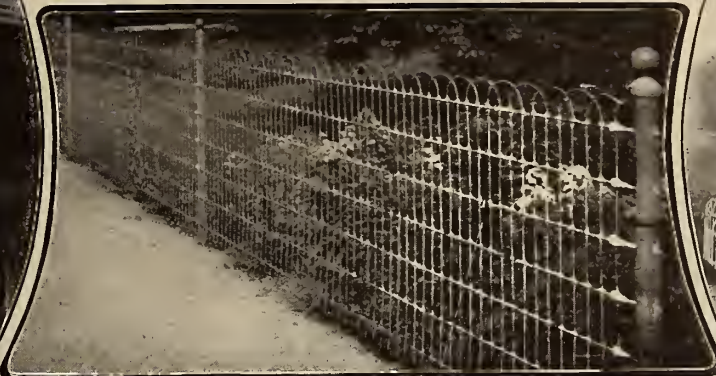
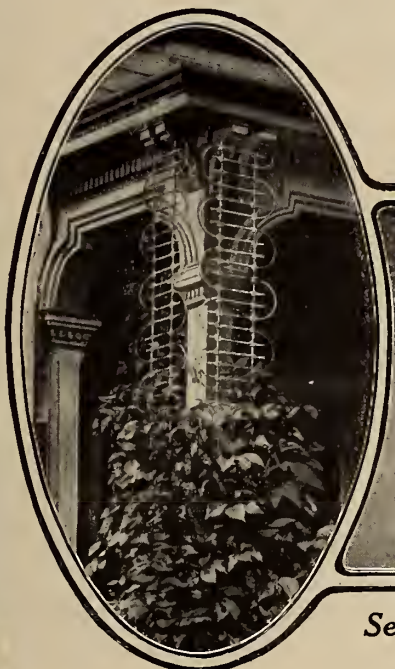
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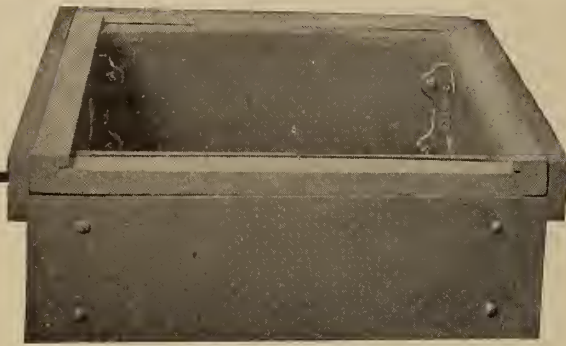
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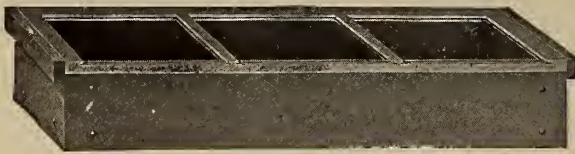


Plant Frame, 11½ x 13 inches

Garden Frames at a Bargain

5 Melon Frames for . . .	\$3.50
or 10 for . . .	\$6.75
10 Plant Frames for . . .	\$5.00
5 Single Row Frames for . . .	\$5.00
or 10 for . . .	\$9.50

YOU couldn't buy the material alone for that price, to say nothing of the labor of putting them together, and glazing and painting them.



Single Row Frame. 3 feet long, 11½ inches wide.

Every one is made of cypress, bolted together by strong cast iron corner braces. Bolted mind you, *not* nailed. The Melon and Single Row Frames have movable sash; the Plant Frames sliding glass.

The Melon Frames are big enough to start two hills of melons, a clump of rhubarb, some asparagus, or use them as regular little cold frames.

The Plant Frames are also a handy size for starting melons, cucumbers, cauliflower, lima beans and such, or for coaxing along early single plants of any kind. They will help you in a dozen different ways. 10 for \$5.00. Think of it.

The Single Row Frames are just the finest things for setting over the rows of vegetables or flowers planted right out in your regular garden

plot. It is the simplest, easiest way yet to get things early without having a greenhouse.

Beans a month sooner are just one of the things they make possible.

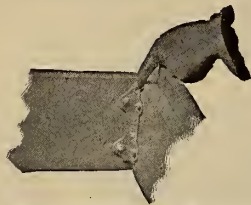
How can we afford to make these frames at such ridiculously low prices? Answer: They are made from short lengths of cypress such as we have always burned, until this happy thought came into our heads.

All we now ask you to pay is the bare cost of the labor of making them, to which is added the price of the cast iron corner braces, and a meagre five per cent profit.

We are making the plant frames at the rate of 500 a day, and selling them in "bunches."

If you want prompt deliveries, you can readily see the necessity of ordering at once. State whether we shall ship them by freight or express.

P. S. No less than 10 of the Plant Frames sold in one order—it wouldn't pay us to pack any less.



Cast iron corner brace that bolts the frames together, not a nail used

Lord & Burnham Company

New York
St. James Bldg.

Boston
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Chicago
The Rookery

hangs on the nail. The outline may then be filled in with paint and will quite clearly show just where each one belongs. This method is the one which shows missing articles the plainest and which works best when the men employed are ignorant and careless—and that is the kind of men on most places. Any one can see where a tool goes when a life-sized silhouette of it in its place is painted on the wall.

But some persons do not like the appearance of the painted ghosts on their tool house walls. They regard them as ugly and decidedly unesthetic. For them there are other but more difficult methods. These consist in different systems of numbering the tools. They all call for a catalogue or list of the tools giving the name and number of each, so that, if any are lost, they can be looked up and new ones supplied from the description on the list. That is rather simple; the difficulty arises in trying to put numbers on the many different tools.

HOW TO NUMBER TOOLS

The numbers may be of paper and pasted on. If you decide on this, don't laboriously cut numbers out of old calendars but spend ten to twenty-five cents and buy at any large stationer's a complete set of paper cut-out numerals. They come either in black or white and in several sizes, all with gummed backs so that they can be easily pasted on. The trouble with paper numbers is that they usually rub off the first time the tool is used. This may be prevented to some degree by being careful that the number is pasted where the least handling is given and also by shellacking or varnishing over the numbers.

A second method is to stamp a number into the tool. Steel stamps can be bought for twenty cents a numeral, and they can be used on either wood or metal by the simple method of hitting them with a hammer. A full set of ten costs two dollars, and with them any combination of numbers can be made. The difficulty with this kind of marking is that the numbers are small and not readily seen, so that mistakes in hanging them up are very frequent.

Probably the best way of labeling tools is to put the number on with paint by means of a stencil. A circular stencil giving all numbers and letters can be bought for a dollar. The circular stencil makes easy work of getting the numbers straight; the painted numerals are easily seen and the paint stays on much longer than paper. If you are careful to put the numbers where there is the least wear, they will last a year or so before they will need to be freshened up with another coat.

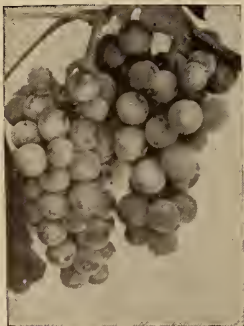
All your tools should be identified by your own mark on them. One way to do this is to have a burning brand with which all wooden-handled tools can be marked. This is an iron, one end of which is made to form your initials or your name. It is heated red hot and pressed into the wood, making a permanent brand. A brand of five letters or less can be made for one dollar and a half; extra letters cost twenty-five cents each.

Perhaps a better way and certainly a cheaper way is to decide on a color or kind of mark for your own. With this color all articles should be painted. For instance, if your color is red, put a red circle around the handles of all tools. This can be seen from any point, is easily put on, and is a good identification. We know of a community in Massachusetts where all the farmers do this, each farm having its own mark for tools and implements of all kinds. It even extends to harnesses and wagon parts. It is easier for a man to hold on to the things that belong to him if they are all well marked in this way.

Where a large number of men are working, it is sometimes worth while to number the men and supply each man with several brass checks bearing his own number. Whenever a man takes a tool from the tool house he hangs a check on the nail where the tool came from, so that if it isn't returned there is a check in its place showing who is responsible. This method has been very successful where work is being done on a large scale, but will hardly be found worth while when only a few men are employed.

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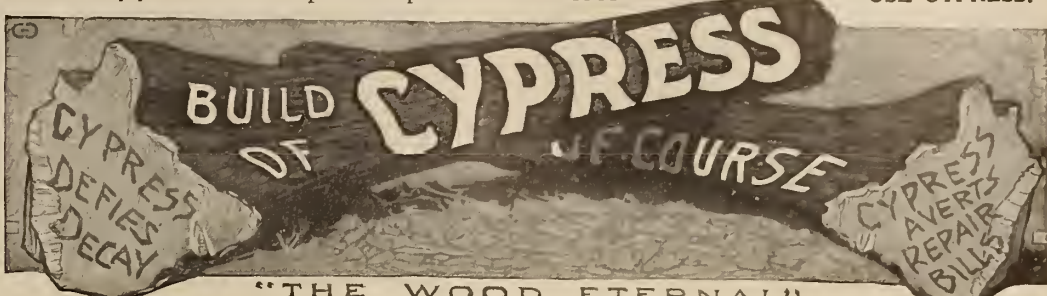
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How to Make Beds and Borders

SINCE beds and borders are intended solely for the purpose of accommodating living plants, they should be made so that they will furnish everything that a plant demands of the soil. Not only should the soil be of such a nature as to supply abundant food for the roots, but it should also be of sufficient depth and of proper consistency, and free from undesirable constituents.

You are breaking virgin ground, say a piece of old pasture. The main lines of the garden plan are staked out and you are about to make the beds and borders. The soil consists of a top-spit of brown loam overlying a clayey subsoil. If the latter is a stiff clay, and insufficient surface soil overlies it, you face the necessity of importing additional material. But if the consistency of the subsoil is not so hopeless, the proper procedure is to bring soil and subsoil into intimate admixture, so that one may temper the other, and to do so to such a depth as the ordinary requirements of gardening demand. In most circumstances this may be taken as two feet or thereabouts. This is best done by the operation known as "trenching," a term applied strictly to spade work, which has for its object deep tillage, as distinguished from "digging," by which the surface layer of the soil only is turned over.

Trenching is best done in early spring or late fall when the weather is open. It is conducted in various ways according to the results required and to the previous condition of the ground. In "full-trenching" the process has the effect of reversing the relative positions of the upper and lower layers of soil.

This complete reversal is admirable treatment for ground which has long been in tillage, and therefore already broken up to the trenching depth, but it is inadvisable in the case of new ground, the subsoil of which has not seen the light perhaps for centuries. On such ground the subsoil is compacted and unsuited to plant growth.

In such a case you can only "half-trench." This consists in removing the surface soil in sections, then breaking up the subsoil with a fork,

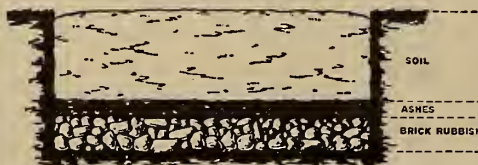


Trenching affords a good opportunity for properly enriching the soil

and subsequently replacing the surface soil. A better method is to more or less completely mix the soil and subsoil to the desired depth. The operation is conducted as follows:

The ground is opened up to the full depth by a trench cut across the border as shown by the heavy line in the illustration, which represents the trench in cross-section. The soil removed is carried to a position near the far end of the border. Then proceed to fill up the trench at A with soil taken alternately from B and C, D and E, and so on until you reach the end of the border, when the space left is filled in with the soil that has been taken there for the purpose. If the land is old pasture, take care to bury the turves, so that they will rot.

The primary object of trenching is to produce a workable soil of sufficient depth, but it incidentally assists drainage and aeration, and gives opportunity to properly incorporate manure. When making beds and borders in a new garden this should not be neglected. As the work pro-



Draining; for heavy clay soils have the lowest layer of brick rubbish

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will run for ten years and then be a good, serviceable machine for many more years.

A standard size of Tubular separator costs \$75.00, or \$7.50 per year for 10 years, and you will still have a good separator left. You can buy a (so called) cheap separator for \$50, the average of life of which is one year.

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THIRD: Is intended to supply a safe and sanitary method for not polluting the water supply, and prevents the danger from the house or typhoid fly around the camp or farm, disseminating poison to its owners.

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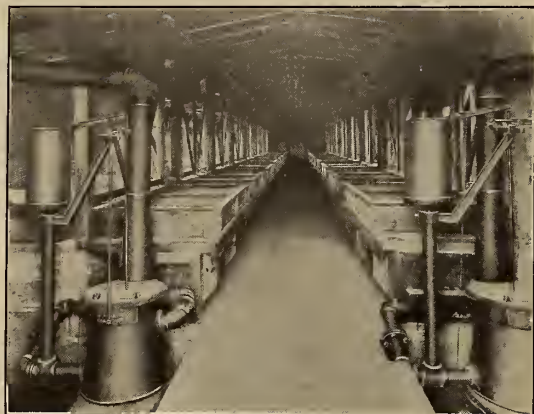
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of pure bred poultry, for 1911, over 200 pages, 57 large colored pictures of fowls. Calendar for each month. Illustrations, descriptions, photos, incubators, brooders, information and all details concerning the business, where and how to buy fine poultry, eggs for hatching, supplies, etc., at the lowest cost, in fact, the greatest poultry catalog ever published. Send 15c. for this handsome book. Write to-day.
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that new hen-house or fix up the old one but get our large 100 pp. catalog and circulars (over 120 illustrations) showing POTTER PORTABLE SANITARY POULTRY HOUSES, Roosting and Nesting Outfits, Perfection Feed Hoppers, Trap Nests, Feeds, and supplies of all kinds. Potter Fixtures have been on the market nearly to years. They are made in 3 styles and 12 sizes, and are complete, convenient and sanitary. Our Portable (K. D. made in sections) Hen-houses, Brood Coops, Pigeon Lofts, are made in 20 styles and sizes, from a coop 2 ft. square to a complete house 8 x 30 feet, or longer, at lowest prices. House shown is 8 x 10 feet, complete with 8 ft. Potter Outfit for 20 hens, for \$40. A fine house at a low price. If you need a house or coop of any kind do not fail to find out about the Potter line before buying or building.

DON'T KILL

or sell your laying hens, use the POTTER SYSTEM and pick out the layers from the loafers and diseased hens. Keep only healthy laying hens. The POTTER SYSTEM is a secret and the greatest discovery of the century in the poultry world on the subject of Egg Producing Hens. Used by over 30,000 satisfied poultry keepers who are saving dollars every year. Our New 100 pp. Potter System book, "Don't Kill the Laying Hen," contains the secret and knowledge about laying and non-laying hens. It's a revelation to poultry keepers and you will learn how you can use the Potter System on your flock; keep less hens, get more eggs and make more money using it. Write today sending 2 RED STAMPS to cover postage on our large catalog and circulars telling all about Potter Poultry Products made for Particular Poultry People. If you are particular and want to make more money on your flock you will write us today.
T. F. POTTER & CO., Box 22, Downers Grove, Illinois, U. S. A.

A \$40 HOUSE



ceeds add manure to the soil at a regular rate, until the whole border has been treated. This must be done so that the manure will be well distributed in depth, and not merely added to the new surface layer.

Once made in this way, the border will not need trenching again for some years. The annual digging and manuring will serve to keep it in efficient condition.

With beds and groups of beds of compact shape trenching as just described is hardly practicable. The better method is first to remove the top-spit over the whole surface of the bed, heaping it close at hand; then to do the same with the lower layer, making a separate heap of it; after which the bottom is forked over and the soil thrown back, mixing well together that from the two separate heaps, and adding manure as in ordinary trenching. With very light or very heavy soils some tempering material must be added.

On heavy clay soils use sand, fine gravel, ashes, and vegetable matter. Or you may even make the lowest layer of brick rubbish with ashes overlying. This ensures good drainage. Of course, at least two feet of soil must be put above the drainage layer. The cost and trouble may be more but the results will repay.

Borders prepared in this way do not suffer from waterlogging, even during wet winters. In hot summer weather they neither bake nor become dry for any great distance down.

On light soils, which usually owe their lightness to an undue amount of sand, or may consist almost entirely of sand, we may add stiff loam and clay to give it greater body and a more retentive character. As such soils are usually deficient in humus, vegetable matter also may be added with advantage.

Whether the treatment is designed to render a heavy soil lighter or a light one heavier, the aim of the garden-maker should be to secure a well-drained bed or border, the soil of which, to a depth of at least two feet, is of a workable consistency and not likely to suffer from extremes of weather, either in the direction of drought or continued wet.

In soils of the heaviest kind it may be necessary to introduce subsoil drainage by means of agricultural tile, or rubble drains laid at regular intervals over the whole of the ground—not merely beneath the borders.

On stony land the operation of trenching affords opportunity for removing excess of stones. Screening is not good unless a very coarse screen is employed, because a certain proportion of stones is actually an advantage to the soil, helping to keep it loose and workable.
W. S. ROGERS.

Peas, Sparrows and a Hoodoo

THE English sparrow being a gypsy rogue, is superstitious. Some time ago an old negro gardener taught me this, and how to use the fact in saving my early peas. Uncle Ben says it will work every time, and I have tested it to my own entire satisfaction.

The garden peas and sweet peas are among the very first things to come up in the garden in spring, and the sparrows think their tender green sprouts are delicious! After having had three successive plantings eaten off clean to the ground, I was ready to give up in despair. I had breathed out threatenings and spread poison, but the sparrows, day after day, poised themselves daintily on my brush trellises and nipped off the peas.

Then old Uncle Ben took charge. "Jest give 'em white strings to run on," he said, "and de sparrows won't light near 'em." He fixed stout poles, four feet high and ten feet apart, in the rows of newly sown peas, stretched a wire top and bottom, and with a ball of white wrapping twine in his hand, wound the twine up and down over the wires, crossing it to make a lattice work. The sparrows never went near that trellis.

In the South negroes stretch white twine about a watermelon patch to ward off birds. The crow is especially wary of a white string so placed. I suppose the sparrows regarded Uncle Ben's pea trellis as some sort of snare, but Ben said it is a hoodoo and he may be right!

North Carolina. CHARLES E. RAYNAL.



Baby Chicks of Quality Sent by express direct to you

Why bother with eggs? You lose three weeks, you don't know how many will hatch. I can supply you with healthy young chicks at once and guarantee them to reach you in good condition. All grades—finest exhibition matings or utility stock of Fishel Strain White Plymouth Rocks, Single Comb White Leghorns, Barred Plymouth Rocks, Single Comb Rhode Island Reds. My prices are reasonable.

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Don't blame your poor hatches to the parent stock, or the eggs, because lack of moisture, irregular heat, and cheap incubators are responsible for the death of millions of chicks in the shell every year.

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is absolutely automatic in every function, unvariable temperature, positive moisture from the moment of starting the hatch until necessary to properly dry the newly hatched unit of future profit, so thoroughly safe-guarding its entrance into poultrydom as to guarantee its livability.

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The Sturtevant does its work in its own way—quietly, swiftly, searchingly. Yet it is the machine that found the way to avoid the slightest injury to the most delicate fabric.

A house cleaned by the Sturtevant is unmistakable. There is a freshness and brightness, because the hidden, interior dirt is removed. The air itself is purified, because there is no dust.

In using the Sturtevant the machine is almost forgotten—one is conscious only of the results. There are no adjustments, no "getting started." This almost automatic ease of operation is not the least point for the woman user to consider.

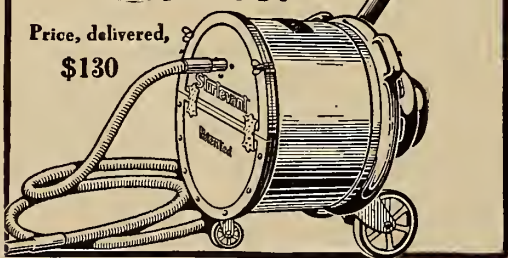
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Dandelion Greens for Spring

MANY cultivated plants become weeds when they are "out of place," and some common weeds assume the importance of culinary plants when cultivated. No garden green that I grow or buy is more acceptable in the spring than the young leaves of the dandelion.

In 1909 I bought a packet of seed from a Toronto seedsman and sowed them on May 29th. Earlier planting would have been better, but circumstances did not permit. The seeds were sown in two continuous rows ten inches apart on one side of the garden, and in eight weeks the leaves were ready for use. The photograph was taken on July 31st; it shows that part of one row has been harvested; the remaining leaves have passed the best stage for cutting.

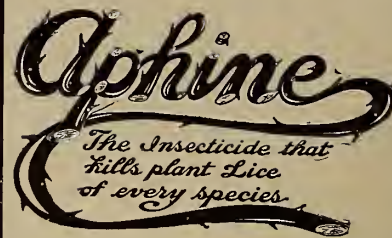
To have quick growth and leaves as tender as possible, sow the seed in deep rich soil, and, after the plants appear, hoe frequently. The leaves may be blanched by tying them together or by banking them with boards. Locate the patch



Cultivated dandelion plants photographed on July 31st. These leaves have passed the cutting stage

where the plants will not be disturbed if it is desired to grow them for more than one season. For commercial purposes seed should be sown every year, but in the home garden there is no reason why the same dandelion plants cannot be made to give satisfactory results for a number of seasons, provided the plants are not allowed to go to seed and thereby scatter and become a nuisance.

Late in the season the plants were attacked by a mildew (*Erysiphe cichoreacearum*). I cut off all the leaves close to the ground but above the crowns. Little or no growth was made during the rest of the season, but the plants wintered well and commenced growth the following spring as soon as the frost was out of the ground. The first cutting of leaves was made on April 25th. Later harvestings were taken during four weeks, as often as required—two crops being taken off the same plants last season. When the mid-ribs of the leaves became "woody" the plants were allowed to grow at will. All blossoms were removed as soon as formed to prevent spreading. Although usually it is best to treat this crop as an annual, my plants will again be carried over winter in order to see what they will do through their third season. Canada. A. B. CUTTING.



Can be used in House and Garden

When insects infest your plants learn first what species they belong to—then buy an insecticide which is intended for their destruction. Aphine is effective against all plant sucking insects. You can depend on it for positive results without fear of failure or dissatisfaction.

An amateur relying on home prepared remedies will in nearly every case injure his plants but not kill the insects. Aphine will kill the insects and invigorates plant life.

Aphine is a concentrated liquid spraying material easily diluted with water. It can be applied to flower, fruit or vegetable.

"We know of no insecticide which has more quickly demonstrated its efficacy than the recently introduced Aphine, which, in the course of a comparatively short time, has become a talisman among horticulturists of unimpeachable veracity and unquestioned skill."—"Horticulture", Boston, Mass., Nov. 6th, 1909.

"Our outdoor roses were badly infested with aphids. With the first application of Aphine the pest was entirely destroyed."—John McLaren, Superintendent Golden Gate Park, San Francisco.

"I have given Aphine a very thorough trial on plants infested with aphids and find it works very successfully; in fact, have found nothing that compares with it."—E. B. Southwick, Entomologist, Dept. of Parks, New York City.

"I have used Aphine on orchard trees and ornamental plants infested with scale, green and white fly, thrip, mealy bug, etc., and found, in every case, that it completely destroyed the pests in question, with not the slightest harm to the subjects treated. It is without doubt the finest insecticide I have ever used."—William Munro, Supt. to C. T. Crocker, San Mateo, Cal.

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Gallon \$2.50 — Quart \$1.00 — Pint 65c — Half Pint 40c

If you cannot obtain Aphine in your community we will send you, express prepaid, on receipt of remittance a half pint for 50c, pint 75c, quart \$1.25. Try your dealer first, but do not accept anything "just as good."

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fit into sockets driven level with the ground, leaving it free for lawn mower. Posts are held rigidly but can be removed in a moment.

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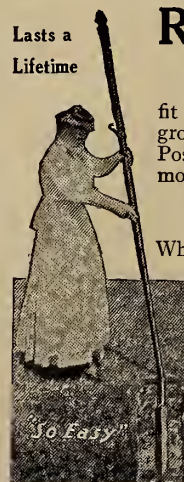
Why spoil your lawn with ugly wooden posts that will rot in a few years?

Our posts are cheaper, last a lifetime, cannot be destroyed, do not obstruct the lawn (being removable). The Adjustable Hook makes clothes hanging easy.

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Now you can keep your blankets—your automobile robes and carriage robes free from moths and other insects—and clean as well—if you put them away in a Wayne wardrobe—air tight.

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Also Inside Venetians, Porch Venetians, Rolling Partitions, Rolling Steel Shutters, Barglar and Fireproof Steel Curtains, Wood Block Floors.

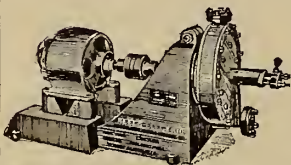
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Water anywhere in your neighborhood can be brought to your house, stable, or farm, in such quantity and at such pressure as you like. Reeco Pumps never "fuss," nor raise a row, nor call for more attention than the baby, nor teach the use of bad language.

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Our expert landscape gardeners plan your place for you and your stock is guaranteed by its choice from the oldest and finest collection of garden plants, trees and shrubbery in America. Write for Catalogue A and suggestions.

(Etab. 1848) THE STEPHEN HOYT'S SONS COMPANY, NEW CANAAN, CONN. (Inc. 1903)



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You Must MILK it Pure

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A first large edition (twice last year's) was prepared of

The Garden and Farm Almanac

1911

and we proposed to print no more

2nd Edition

We had to go to press and work 5000 extra in March. Gone in 3 weeks.

There are a few on the news-stands
for 25c a copy.

DOUBLEDAY, PAGE & CO.

Garden City, L. I., N. Y.

Nasturtiums as a Screen

ONCE heard a man say that his wife wanted a lot of nasturtiums right against the front of their house where it was sunny, but that he was unable to gratify her wish because of the fact that there was not enough loam there to hold any seeds. I suggested that he use boxes to hold the loam but he disapproved. Shortly afterward I visited his home. There was a lattice in the front of the house that rose from the granolithic pavement to the flooring of the veranda. This would be an ideal place for the vines but there was no loam. Then came the happy thought: Why not plant the seeds underneath the veranda and lead the tendrils through the lattice to be strung on chicken



These nasturtiums, by the end of summer, had completely covered this lattice

netting in front of the lattice? Success was still doubtful, for the space under the veranda was found piled high with boards and when these were removed the loam looked anything but healthy. But we dug it over and were delighted to find enough good loam there to answer our purpose. Manure was applied before the seeds were sown in wooden boxes. When they were about three or four inches high they were transplanted to just behind the lattice under the veranda and left to themselves. The plants grew rapidly; the protected spot where they were put served as a sort of hotbed as it had a southerly exposure. The vines pushed through the lattice and quickly attached themselves to the wires.

Before the end of the summer the front of that porch was a mass of green.

Massachusetts.

LUKE J. DOOGUE.

Anemones — A Note From England

AFTER reading Mr. Wilhelm Miller's article on anemones in the January, 1911, GARDEN MAGAZINE, Mr. William Robinson of London, England, the author of "The English Flower Garden" writes us as follows:

"There seems to me no reason in stating that the blue wood anemone is an American variety. I first saw it at the base of a wall in the Oxford Botanic Gardens many years ago. The curator gave me some roots of it and told me that he had gotten it from a friend in Ireland. It has now spread to almost everywhere that hardy flowers are thought of. I have noticed that in Irish woods, with gritty and free soil, the wood anemone varies a good deal and one may see several forms of it in one piece of woodland. This form, I think, arose in the same way. Hereabouts in our wealden soil the wood anemone keeps to one pale form. There are various forms of blue and purple wood anemone in our country, but none of the clear color of Robinsoniana."

Your Last Chance Order at once if you would have this wonderful

Climbing American Beauty

IN YOUR GARDEN THIS SUMMER

OUR Climbing American Beauty Rose is a hardy plant that will thrive and bloom and grow out in the open. It comes out a mass of gorgeous, fragrant blossoms in June and continues blooming occasionally during the growing season. Each flower is a perfect American Beauty Rose, three to four inches in diameter and rich in perfume.

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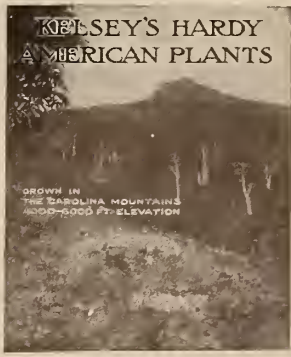
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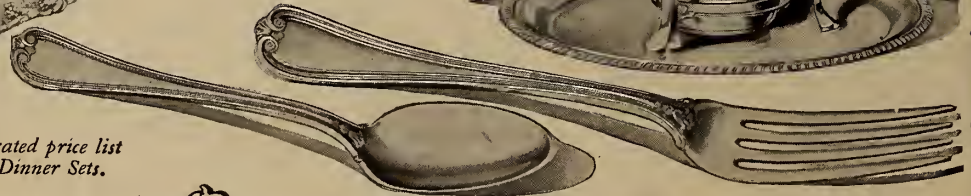
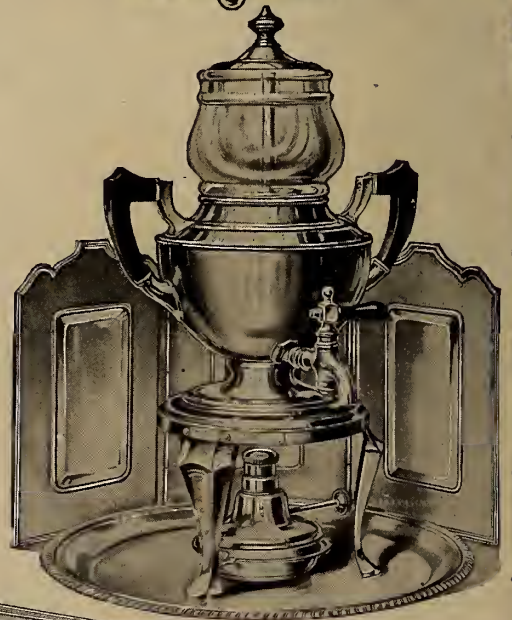
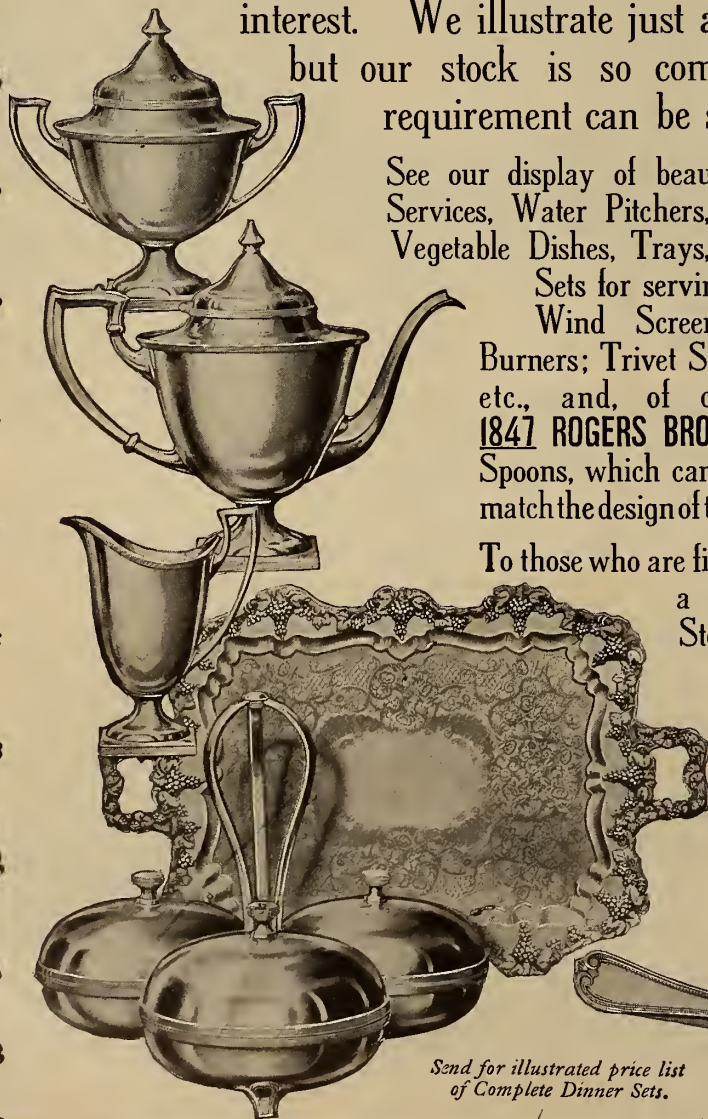
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JUNE

1911

Vol. XIII. No. 5

Wild Flowers in the Garden

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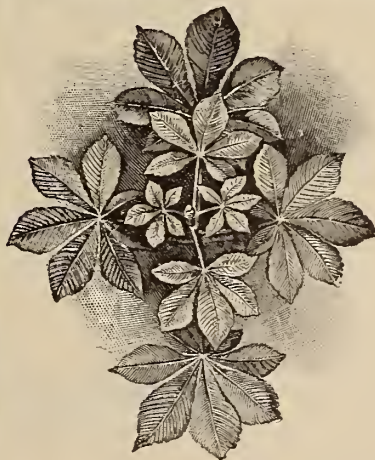
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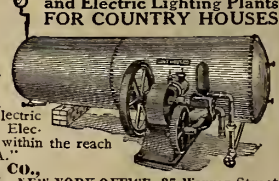


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Michael K. Boyer, Associate Editor American Poultry Advocate, has had exceptional opportunities and the closest friendship with poultrymen all over the country. They have freely told him many of their most jealously treasured secrets, many others we have bought, and this scattered material, together with several of Mr. Boyer's own valued methods, has now been collected in book form. It must be clearly understood that every secret printed has been obtained in an honorable way.

"POULTRY SECRETS"

First published in 1908, this collection of the carefully guarded secrets of famous poultrymen created a sensation in poultry circles. It has run through thirteen editions, and is still selling at a lively rate.

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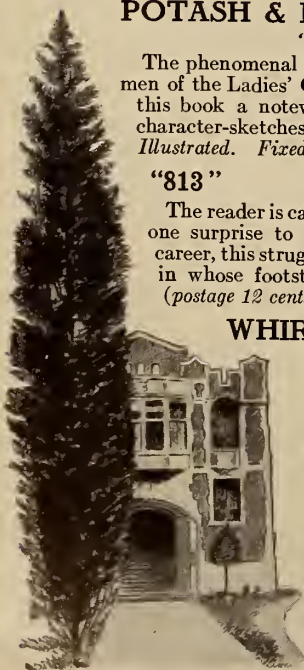
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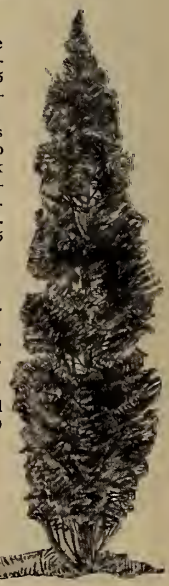
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An early fall and a late spring have held up much of the planting out of doors, but much of the work was done in April, after five months of outdoor inactivity, and by the time these lines get into print we hope everything will be green and attractive.

At all events, such as the place is, our friends and neighbors will be made welcome.

Please note that the telegraph station in our building is the Western Union. *Do not use the Postal Telegraph to Garden City*—it means delay.

The Garden and Farm Almanac has been entirely sold out and no copies can be supplied until the 1912 Almanac is ready next December.

The Sweet Pea Society has an exhibition on our grounds in June—150 varieties of bloom.

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April saw more than 8,000 trees, shrubs, and flowers planted on our grounds.

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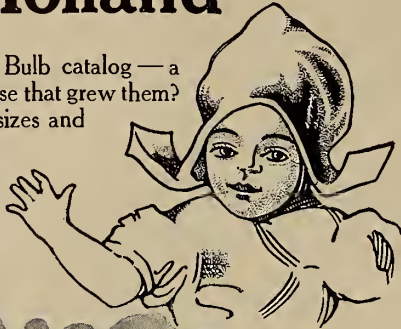
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JUNE, 1911

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PITTSBURGH

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FIFTEEN CENTS A COPY



[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

How to Make the Reminder Really Remind

THE reminder will just about double in usefulness if you resolve to read it once every week and check off the items that you have already attended to.

Bare ground in the vegetable garden in June is a disgrace to a real gardener. Make every inch of soil contribute to the improvement of some crop.

Every vegetable that can be planted should go in some time this month. It is warm enough for beans, squash, corn and melons, and cool enough for lettuce, peas and spinach. Sow all these once a week until June 30th.

Take away all shelter and frames from melons, cucumbers, etc., that have already been transplanted. Spread out the vines and gently peg down the main stems.

Bring tomatoes, eggplants, peppers and okra out of the frames or hotbeds.

Don't let the frames remain idle after being emptied unless they are the collapsible kind and can be stored away. Lettuce, radishes, beets, onions and all the quick growers will do finely in the frames all summer if watered and shaded.

Maybe some of the earliest cauliflowers can have their leaves tied up over their heads pretty soon now. Be sure the heart is dry and clean when this is done.

Train tomatoes to one or two strong stems. Support these well on stakes or trellises. Then pinch off all other shoots as they appear.

Transplant the late cabbage, cauliflower, broccoli and Brussels sprouts plants to their permanent locations.

There should be plenty of ripe vegetables for everybody by this time. Gather them all while they are young and tender.

By the way, let up on the asparagus bed about June 5th, and by the 15th, stop cutting entirely.

Beet thinnings are fine in place of, or mixed with, spinach or dandelion greens. Mixed? Why not? We mix divers things in the delectable Irish stew. Why not these closely similar delicacies together?

There will be lots of other thinning to do — carrots, parsnips, oyster plant, turnip — in fact, any plant that is too close to its neighbor for comfort must come out. Many of them can be transplanted; others devoured.

As soon as the earliest pea vines have borne throw them on the compost heap, and get something else growing where they came from.

Scatter nitrate of soda, dry, or pour a solution along the rows of New Zealand spinach, lettuce and all crops that are to stand all season.

The bringing up of the fruit trees and bushes determines their crop. This is their period of adolescence. Care for them in their impressionable youth.

Begin summer pruning — that is, rubbing off suckers, pinching back random shoots, thinning fruit that has set, and cutting out crowded growth. There's more about this elsewhere in this number.

Dwarf varieties on trellises need lots of care and training this month.

All fruit should be sprayed. Use Bordeaux mixture with arsenate of lead *before* the blossoms open and *after* they fall.

Dig up strawberry beds that have borne for two years or more. Manure, dig over, and level the land and use for late crops of vegetables.

Cherries and strawberries will be the more plentiful and the less pecked if covered with mosquito netting.

Every flower that will thrive in your garden can be planted in May or June — if not before. How many have *you* planted?

Take up all spring-flowering bulbs from the borders, dry them in the shade, and store them away in a dry place. This does not include crocus, snowdrops, etc., scattered about the lawn.

Fill any empty beds that result with annuals from the frames or indoors. Perennials are better yet and will save much work next season.

Sow perennial seed everywhere outdoors. The plants will not bloom this summer but they will next season.

Stake all tall-growing plants that are likely to be broken by the wind, e. g., gladioli, dahlias, cosmos, and lilies.

Loosen the soil in every foot of every bed often. The seedlings will come up more easily, and the moisture and plant food go down more easily to their roots.

Give hardy perpetual roses a gallon of liquid manure per plant once a week after May 25th.

Move indoor, potted plants out into the sunny or shady border, depending upon their natures. Cut flowers are the true house decoration in summer.

Every shrub that has flowered by this time should be trimmed lightly now — and now only. This is all the pruning they need.

You can still do great things to an unsatisfactory lawn. Renovate bad spots with a little soil and good seed. Use this same mixture for replacing all the prominent dandelions, mulleins, docks and plantains that you can remove. Mow the lawn once at least, before any smaller weeds can go to seed.

If you want a real "quality" lawn, top-dress with nitrate of soda (a quarter of a pound per 100 square feet), or bone-meal and wood ashes (five pounds to the same area). Apply either just before a rain storm if possible.

Put a burlap band around every tree on the place as soon as caterpillars begin to roam. Examine them every other day, eliminating all forms of worm life discovered.

Not Later Than May 20th

Contestants in our Prize Gardening Competition must have their entries filed with us by May 20th. There is just time if you act at once.

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Acre Home Garden**

Full particulars in the previous issues of this year.

The "Fun" of Collecting Anemones, II.—By Wilhelm Miller, ^{New York}

THE "GARDEN WINDFLOWERS," WHICH GLORIFY THE FORTNIGHT BETWEEN SPRING AND SUMMER AND ARE PARTICULARLY FAMOUS FOR THEIR GORGEOUS REDS AND BLUES

(EDITOR'S NOTE — The "Fun of Collecting" series is designed especially for beginners who would like to become experts. It explains the pleasures and methods of collecting, instead of airing botanical pedantry.)

FOR the love of Heaven," writes a Chicago enthusiast, "tell us how to grow garden anemones! Ever since I saw them growing wild by the million in the Riviera I have bought the tubers every fall, but they are the meanest roots I ever saw. I can never tell which side is right side up. But surely no one can possibly get them *all* upside down! Why, then, do I *never* get a flower?"

This is one of the most fascinating problems that any lover of gardening can take up, for the garden anemones are probably the most gorgeous flowers that come between the tulips and the poppies, and although they are very much admired in England they are practically unknown in America. Indeed, I must confess that I have never seen a good bed of them in the United States. They grow about a foot high, and have saucer-shaped or starry flowers, about two inches across, in every important color save yellow. The flowers are set off by delicately cut foliage, and they are particularly beautiful when stirred by the wind. No tulip or poppy has a purer or more vivid scarlet. No larkspur or aster has a richer blue. And, to cap the interest, they are probably the originals of the "rose of Sharon."

Thousands of Americans who have taken the winter cruise to the Mediterranean have been enchanted with these flaming wild flowers in the Holy Land, where they completely carpet the Plain of Sharon. The prevailing color there is a deep red, and there is another famous flower so much like it that tourists do not distinguish it, and it is doubtful whether the Bible does. This other flower is the Asiatic buttercup (*Ranunculus Asiaticus*), which has given rise to the Persian and turban ranunculuses, equally celebrated in European gardens and unknown in America. In the gardens they are different enough because the Anemone never has a good yellow and the Ranunculus never has a good blue. But if you go to Palestine next March you will find the wild originals nearly the same shade of red, and you can distinguish them by the involucre which is present in Ranunculus but absent in Anemone. The best account of these wild flowers that I know of was written to the *Gardeners' Chronicle* for April 28, 1906, by Mr. Arthur W. Sutton, who says that "the apparently endless variety of flowers present a spectacle which I suppose cannot be surpassed elsewhere in the world." He also states that on Mt. Carmel the anemones are often four inches across.

The mystery of countless failures in

America with these two famous flowers is easily explained by climate. In the Holy Land they bloom in March and April after a dry winter. It is the spring rains and spring heat that make the desert blossom like the rose. Then comes the hot summer sun and the flowers vanish. Under such conditions flowers are generally bulbous. But in America we have rain both in winter and summer, which is very distracting to a poor bulb or tuber that has settled itself for a long winter's nap.

In California and the Southwest the anemones ought to do well, but east of that they are betrayed by November rains, or winter warm spells, into making a premature growth, which is infallibly nipped by the next hard freeze. And in the summer, when they ought to be ripening their tubers, this all-important process is delayed or partially thwarted by summer rains. It is too bad the climates do not gibe, for these anemones can never become universal favorites here, as they are in Europe. And, as luck will have it, the great buttercup family reaches its climax, from the garden point of view, in these highly bred descendants of the rose of Sharon.

But what discourages the beginner is a joyous challenge to the lover of gardening who has had some experience. The problem is essentially the same as with the cushion and bearded irises from the Holy Land. Millions of words have been written on it, but it all boils down to this — how to keep the roots dry in summer and winter, but let them grow in spring. No ideal solution has been invented. The standard way out of the difficulty is to grow them in coldframes, and after blooming time lift the bulbs, dry them in a shady place, and replant them in the autumn.

Unfortunately, flowers in coldframes look like prisoners, and those who have the finest taste in pictorial effects put portable frames over their beds of cushion irises so that they may bloom right in the garden when the time comes. This trick is highly successful with irises, and I should like to see it tried with a bed of scarlet or blue anemones. Any one who wants to have something unique in America, and set all the garden lovers in this country to wagging their tongues, ought to try this, and if he succeeds he ought to have a color photograph made as permanent record of his success.

The best directions for cultivating these flowers are given in "The English Flower

Garden." Plant the tubers in October or November, setting them two or three inches deep and six or eight inches apart. The soil must be light, rich, warm, and well drained, as the roots perish over winter in heavy clay or in any soil where water is stagnant. Select a spot that is protected from cutting winds, as the foliage is easily ruined in early spring. Cover with a mound of ashes to shed the rain, and over the ashes put enough long manure or litter to keep out frost. Manage the covering so as to get a late and hardy growth. During the growing season never let the plants get dry or they will not flower that year. Shade them during the hottest part of the day. After blooming, lift the tubers, ripen them thoroughly, and store in dry sand until fall.

The most artistic way to use anemones is to have a rectangular bed of blue, another of scarlet, another of white, etc. In England they can be grown in hardy borders, either singly or in clumps, but I dare not recommend this practice here. Another pretty scheme is to use them for edgings, especially of rose beds. In rock gardens they are said to look well, and there, if anywhere, the tubers might be left in the ground permanently. For spring bedding they are as unsuitable as the English irises, because they bloom so late as to interfere with summer bedding. Mr. Sydenham thinks that the colors are "infinitely better mixed," but the general opinion is that a bed should be only one color, and the common practice is to put each color in a bed by itself. Gardeners take a good deal of pains to select and keep true only the best forms, largest flowers, and brightest colors.

But it is as a cut flower that the anemone is most famous. Before the winter blooming carnation came, the anemone and ranunculus were florists' flowers of high standing. To appreciate this the student should see dozens of colored plates published in *The Florist* (London, 1840 to 1884) during the first two decades of which the standards of perfection in such flowers were the most exacting the world has ever known. Anemones were then in demand practically the year round. To this day they are occasionally forced for March bloom, and the English people can have these flowers outdoors from spring to fall without a break. The winters are so mild that they can usually plant the tubers every month from September to April. By spring, however, the vitality of the tubers is considerably reduced. Experts declare they can raise anemones from seed as easily as annuals,

and many treat them as such, but this is not practical for beginners.

THE POPPY ANEMONE

The poppy anemone (*Anemone coronaria*) doubtless takes its name from the poppy-like brilliancy of its scarlet varieties, but it can be had in maroon, mauve, rose, lavender, flesh, white, pink, scarlet, blood, and crimson; single or double; and striped, zoned, or variegated. Moreover, there are two types of doubling, one produced by the stamens turning into petals, and one produced by pistils turning into petals. In either case they are beautifully set off by what the old florists called a set of "guard petals." The largest flower of which I have heard measured five inches. There are two places in the world where these flowers are grown to perfection—St. Brigid, in Ireland, and Caen, in Normandy. The trade is not agreed as to which place produces the better strain.

THE SCARLET WINDFLOWER

The scarlet windflower (*A. fulgens*) is celebrated for the vivid scarlet of its starry blossoms. It differs from the poppy anemone in having black stamens instead of blue, and in having what the beginner would call narrower "petals." The botanists, however, declare that there are no true petals in the genus anemone, and that the parts which look like petals are really sepals. The dazzling effect of this wild flower in the Pyrenees suggests the ideal way to use it—viz., to naturalize it in woodlands, on banks, and in grass orchards.

Barr declares that this can be done in England, and that if the roots are planted in August, flowers may be had from Christmas onward. He recommends a southwest exposure and shelter from ground winds. The plants should be shaded from the hottest summer sunshine, or else the roots will ripen too soon, and start to grow in the fall. The roots must never be planted while the ground is wet. The single variety is more attractive in form, but the double makes a more massive effect in the garden and lasts longer. The true double is hard to get, as Chapeau de Cardinal, a variety of the poppy anemone, is often substituted for it. The most striking form is the variety *annulata grandiflora*, which has scarlet petals, with a yellow base, and jet black stamens.

THE PEACOCK ANEMONE

The peacock anemone (*A. hortensis* or *stellata*) is difficult to explain. *Hortensis*, of course, means "of the gardens," and some writers use this to include all the varieties descended from *coronaria* and *fulgens*. I prefer, however, to follow Davis, who treats it as a native to southern Europe distinguished from *coronaria* by its narrow petals, and from *fulgens* by its brownish violet stamens, the flowers being about an inch and a half across. Barr calls the peacock anemone "the starry windflower of the Riviera" as distinguished

from "the starry windflower of the Pyrenees," which is *fulgens*. This is the famous wild flower that fills the vineyards and hedgerows at Nice, in spots where it is not blown to pieces by the winds. The color range is given by Davis as red, rosy-purple, or whitish. There is no standard nomenclature in the trade, and the name *hortensis* has almost disappeared from bulb catalogues.

THE CAROLINA ANEMONE

Since the garden anemones are unrivaled during the latter half of May, the great question arises, "Can they be adapted in any way to American conditions—e. g., by hybridizing them with some American species?" The most closely related anemone we have is the Carolina anemone (*A. Caroliniana*). Doubtless this species is

much inferior to the garden anemones, and whether it could inject any great amount of hardiness is dubious. Britton describes it as a purple flower, varying to white, attaining an inch and a half in width, and with a tuber only a third of an inch in diameter. It blooms in April or May, and grows four to ten inches high. No one offers it for sale, unless *A. decapetala* of European catalogues should chance to be the same thing. It grows wild from Illinois to Nebraska, and south to Georgia and Texas.

ANY ONE CAN GROW SYLVESTRIS

We now come to an exquisite flower that any one can grow, the snowdrop anemone (*A. sylvestris*). This is a pure white, fragrant, nodding flower an inch and a half across. Everybody who knows



The snowdrop anemone (*A. sylvestris*), a fragrant, waxy flower on a long, wiry stem

it loves it for its waxy, saucer-shaped flowers, long, wiry stems good for cutting, ability to grow in sun or shade, the jolly big clumps it makes without spreading too much, and the long season of bloom, for it sometimes gives scattering flowers from spring to frost. It is thoroughly satisfactory as far north as Ottawa, where it blooms about May 19th and June 10th.

Here we have clearly the first suggestion of the summer type of windflower — the white blossoms that make the dogdays cooler in the garden and lend enchantment to the woods, but from these sylvestris differs in having only one flower on a stem, sometimes two, while the Pennsylvania or Canadian windflower has several. It differs from the garden anemones in color and in having a creeping rootstock instead of a tuber. The most gardenesque variety of it is Eliza Fellman, a double form, which is said to produce fewer but longer lasting flowers.

The snowdrop anemone in the garden produces so many offsets in garden cultivation that these must be removed occasionally, or the flower will deteriorate. The loveliest way to use this flower is to

colonize it along woodland walks where it will get plenty of diffused light. There is no prettier idea to be gotten from a study of European woods during its season. The roots can be bought in

from American and European bulb dealers in the fall. The chrysanthemum-flowered strain is interesting as having the petals regularly overlapping, as in an aster or chrysanthemum.



The poppy anemone (*A. coronaria*) may be had in many colors either single or double

the fall from the leading American bulb dealers, and cost about \$3.50 per hundred.

ANEMONES FOR COLLECTORS

On the Pacific Coast there are two representatives of this group, *A. Grayi* (or *Oregana*) with blue or purplish flowers, and *A. deltoidea* with white flowers. Neither is catalogued, and I do not know their season of bloom.

A. Baicalensis has been tested at Ottawa and is considered a variety of *sylvestris*.

The cyclamen-leaved anemone (*A. palmata*) sounds interesting because it is the only yellow anemone of May and June. Whether it looks too much like a buttercup I cannot say, but Mr. Robinson calls it a "charming plant," and Mr. Perry says it has flowers as big as half a dollar. Though native to Northern Africa, it is hardy in England and is said to increase rapidly.

About twenty-five named varieties of the garden anemones can be bought

A Rank Heresy That Pays—By H. J. Wilder, Washington, D. C.

UNUSUAL CROP MANAGEMENT THAT IS MORE PROFITABLE THAN THE ORTHODOX PRACTICE — A ROTATION FOR NEW ENGLAND FARMERS WHO CANNOT COMPETE WITH THE GRAIN PRODUCERS OF THE WHEAT BELT

THE principal method of crop rotation in the northeastern part of the United States is the time-honored one of corn, followed by oats, then wheat, then grass. This system may still yield a profit, under good management, on farms with medium to heavy soils; that is, heavy loams, silt loams, and clay loams.

In the North Central States, also in

Iowa and in parts of the states which adjoin her in the mid-Mississippi basin, where the great majority of soil areas are of the class mentioned, this standard rotation has paid, and where the valuation of land is not too high this plan of soil management brings fairly good financial returns at the present time. In fact the returns there are so good that farmers in

New England, New York, New Jersey, and Pennsylvania — states containing a much higher percentage of lighter soils and others that give poor yields of cereals — find it impossible to compete in the production of oats and wheat with the Middle Western States, where soil and other conditions are better adapted to the production of these cereals.

While looking over thousands of farms in the Northeastern States in the course of a soil examination for the United States Department of Agriculture, I have asked hundreds and hundreds of farmers what plan of crop rotation they follow. The standard answer is the usual rotation, but some omit the oats and sow "corn-stalk" wheat, while others sow grass seed with the oats because wheat "does not pay." A minority vary the rotation by introducing some money crop such as potatoes.

In nearly all cases corn and hay are said to pay, but outside some special soil districts, such as the limestone valleys of Pennsylvania, the farmers are few who will say that any money is made in growing either wheat or oats. Then in reply to the direct questions as to why he grows them the average farmer almost unflinchingly answers, "Why I have to in order to get my land back into grass," or "I have got to grow something." There is, to his mind, no other practical way to get corn ground back into sod.

I grew up on a farm where neither oats nor wheat paid, and none has been grown there for at least forty years. I now own another farm on which conditions are the same. So when I meet a farmer whose only reason for growing oats or wheat is to use them as the easiest stepping-stone to get land back into sod, it is not unnatural to ask such a man why he does not sow grass seed in the corn at the last working. The time that was required to convince him of the practicability of the plan finally led me to suggest it only in rare instances, but here it is:

In cultivating corn level culture must be practised, because hilling leaves the ground too uneven to run a mower over smoothly. This, however, is the best practice in all events, as it conserves the moisture to the best advantage. For this purpose any of the cultivators of the Planet Jr. or Iron Age type, either riding or walking, are very satisfactory. The cultivations should be sufficiently frequent to keep the corn, at least, fairly clean. It is desirable to have the field free enough from weeds so that it may be worked the last time when the corn is only waist high and a hand-seeder worked over the

tops of the corn. For those of the older generation who have the skill to sow the seed evenly by hand the corn should be just so high that the hand can be swung back and forth comfortably above it. In actual farm practice, however, work is sometimes so pressing that the cultivation is delayed until the corn has grown above this height. Even then the seed can be sown uniformly by hand if only one inter-row space is covered on each side of that in which the sower is walking.

Two objections to this method of seeding are commonly made by those who have not tried it. The first is that some seed is wasted by falling in the roll of the corn leaves, and the second that the seed can not be uniformly sown. After the seed is sown the field should be gone over again in check rows with a spike-toothed cultivator. This shakes practically all the seed off the corn plants, levels the ground, and covers the seed to the right depth.

The type of harrow used for working the seed in is shown in the accompanying illustration to the left, costing about \$5 at retail. An implement just as effective is shown in the other illustration, and can be made in odd hours by a handy farmer for about fifty cents paid the blacksmith. If the farmer has a small forge so that he can do the iron work himself, the cost is practically nothing. A set of teeth from a "worn-out" spike tooth harrow set in three pieces of planed 2½ x 4 in. scantling; a cross-piece of similar dimensions in which several holes have been drilled that the spread of the implement for rows different distances apart may be adjusted from the back; a shorter piece of strap iron to serve as a clamp and allow for the spread at the front; a straight green hickory pole about one inch in diameter and bent to a U-shape and ends sawed off so as to give the right height of bow for easy holding, and fitted into two holes in the cross piece at the rear and tightly wedged; a short piece of strap iron for bolting the front ends together; a piece of iron bent into a whiffletree hook with two bolts for attaching the trees; one long bolt to hold the three pieces of wood in the form of a letter A; and the implement is complete. Worn-down teeth are better than new ones, because being not so long they cover the seed to a more desirable depth.

The next bugbear objection is that the cornstalk stubs will interfere with the cutterbar of the mower the following year. But by spring the stubs are so decayed that a light roller will break them down so low that the cutterbar will pass over them for the most part and the knives escape being clogged or dulled. This rolling should be done just as soon as the ground is settled in the spring. If done at that time the hoof prints work no injury.

There is nothing new or original about this method of cropping. It has been practised for nearly a half century on the expensive lands of the Connecticut Valley in the states of Connecticut and



An effective home-made harrow which costs a mere nothing to make

Massachusetts, and the reason for presenting it here is simply to suggest an alternative to the large number of farmers who think it necessary to grow small grains merely as crops to seed with, even though they do not find such crops profitable.

A very desirable feature of this method is the insurance of a good stand of grass in a dry year. The occurrence of a severe dry spell just after the wheat or oats is gathered leaves the tender grass plants exposed to the hot sun of midsummer, with roots insufficiently developed to reach any moist earth, and the stand is much injured or even completely lost.

The same year the moisture in a corn field, if it has been conserved as it should have been by frequent cultivation and the maintenance of a dust mulch, is sufficient to sprout the seed and maintain its growth. This is aided, of course, to some extent by the partial shade which the corn crop affords throughout the season.

With so many factors in its favor, and supported, as it is, by the results of long experience on high-priced land, it seems passing strange that this plan is seldom practised in all that part of the Northeastern United States where oats and wheat do not yield a direct profit.

Prepare for Pests

THE rose bug. Spray, about June 7th, roses, grapes, asters, and all plants with large, juicy buds or blossoms, with arsenate of lead, one pound in ten gallons of water (or Bordeaux mixture). Repeat about June 14th. Meanwhile pick off every bug you see.

Potato beetle. Don't look, at first, for a hard shelled bug, but for a soft, repulsive, red and black worm. Spray arsenate of lead on potatoes, eggplant, and tomatoes as soon as he appears.

Aphis, thrips, and leaf-hoppers will bother the flowers, roses especially. Use whale oil soap or kerosene emulsion, May 21st and June 20th.

Mildew and all other fungi: Bordeaux mixture every two weeks will prevent, and should cure. Potassium sulphide will do on roses, and copper sulphate may be substituted for vines, etc., where there is danger of staining.



Type of harrow used for working the seed. Costs about five dollars

Bringing Wild Flowers Into the Garden—By Elsie McFate, ^{Pennsylvania}

SOW SEEDS OF THE NATIVES AND GIVE THEM THE SAME TREATMENT AS THE EXOTICS AND YOU WILL HAVE STRONG, ENDURING PLANTS—KINDS THAT GIVE GOOD RESULTS

THE wish to add the wild flowers of the wood and field to the hardy border inside the garden is common to many of us, but the realization would appear to be beset with difficulties if we are to judge from the failures seen. These are all due to starting on a wrong tack, and I have proved that the wild flowers can be successfully introduced and that they will grow as vigorously as anything else. The wrong method is by going into the wild and digging up entire plants whenever they are seen. The right way is by going back to first principles and starting your plants from seed. Moreover, it is easy to obtain quantities in this way and the native haunts are not desecrated or vandalized.

I owe no apology to my friend the botanist. Together we climb the Pennsylvania mountains very pleasantly until he shuts between the leaves of his herbarium the

lovely, breathing flowers about him. My specimens — a lack — are “introduced into cultivation.”

Public favor is fast reclaiming many beautiful flowers, hitherto known only as flowers “common in waste places of the United States of America.” Many wild flowers are most beautiful under cultivation; but there are conditions which govern their common use. They must be propagated from seed, layers or division, grown under cultivation, given a sturdy constitution and finally moved in good clumps to their permanent places in the border. My experience is that a hotbed is unsuitable for the germination of wild-flower seed.

I prefer to sow the seed in flats in February or March, placing the boxes in well protected coldframes that have been kept well covered at night and during very cold days with straw mats. I use an ordinary,

light, open seed bed soil just as is commonly employed for celery, tomatoes, etc. A slight frost in the frame will not kill the seedlings if they are properly hardened. Seeds sown in this manner produce plants of the most vigorous constitution.

During “open” weather the seedlings are “pricked out” into the frames from the boxes and by the beginning or middle of April are in fit condition to be placed in open ground. In this manner I have grown wild flowers from seed for many years and although propagation by division offers an easier method of increasing stock, I always find more vigorous plants are obtained from seed.

It is not wise to buy plants of this character in pots. This is the most unnatural and disastrous way a wild flower can be handled. I quote from Miss Jekyll: “I have a great dislike to growing hardy flowers in pots. The roots become pain-



Into such an informal border as this, our native plants can be introduced as fancy may dictate. Here they will develop without hampering restraint and will take on a beauty and vigor unknown in the field

fully cramped and distorted and require the most careful manipulation."

There are many flowers so common along every woodland byway that it is not worth while to shelter them. Notably in this class grows *Geranium maculatum*, whose soft clouds of lavender are fine for mass planting. This is of great value planted in connection with iris, as it blooms at the same time and may be used most effectually to relieve the solid mass of iris flower and foliage which is so conspicuously ugly along herbaceous borders in the gardens of most of our city outskirts.

The sweet Cicely (*Myrrhis odorata*) which came to our woods from over seas is a fine plant where fern-like foliage is desired. Its flowers are valuable for cutting, belonging in the decorative line of gypsophila. It holds its graceful leaves all summer if occasionally cut back. Although the stems and roots possess a sweet aromatic flavor, it is not safe to taste them unless you are quite sure, as their counterpart is the deadly poison hemlock. For this reason alone the sweet Cicely should never be collected, but grown from nursery stock or seed.

I grow *Phlox divaricata* in nursery rows, as by regular hoeing a heavy root can be obtained from a small offset in a single season. In a sunny border it shows forth in great beauty, but to me it seems best to catch and hold the light in deep shade. Its keeping qualities, when it is cut, are excellent, and its fragrance commends it for house decoration. In my rock garden I grow it in combination with snow-in-summer (*Cerastium tomentosum*), as I like the soft, gray foliage and white flowers with pale lavender. Its growth is somewhat stunted among dry rocks unless the soil receives deep preparation.

For dry, poor soils in sunny borders nothing equals the butterfly weed (*Asclepias tuberosa*). I use it in connection with tritoma, meadow lily (*Lilium Canadense*), scarlet bee balm (*Monarda didyma*), with full green background of eulalia. This gives the most brilliant combination imaginable, the butterfly weed outrivaling all other flowers in gorgeous coloring.

Herein lies a suggestion to color lovers who buy, plant, dig, store, and annually lose hundreds of cannas. Butterfly weed, meadow lily, and scarlet bee balm gain in beauty for at least fifteen years and in occasional instances outlive a generation.

A border of asters is easy to arrange. The roadside gives the keynote. Among asters introduce boltonia, Joe Pye weed, bouncing Bet, iron weed, and *Eupatorium ageratoides*. Make this bed a well spaced, carefully staked collection of choice American, late-flowering perennials.

Among tall native flowers in general, free use should be made of grasses, among the best of which are found spike grass (*Uniola latifolia*) and *Dactylis glomerata*, var. *aurea elegantissima*, which, however incomprehensible its name, is really a very pretty border grass.

FOR EARLY SPRING BORDER AMONG BULBS

COMMON NAME	STANDARD NAME	COLOR	PROPAGATION	REMARKS
Celandine	<i>Chelidonium majus</i>	Yellow	Seed or division	Valued for early foliage
Dutchman's breeches	<i>Dicentra Cucullaria</i>	White	Div. of bulbs in spring or fall	Foliage dies in summer. Supplement with hardy ferns
Bloodroot	<i>Sanguinaria Canadensis</i>	White	Div. in spring or fall	Foliage dies in summer
Wild sweet william	<i>Phlox divaricata</i>	Lavender	Div. in spring	Evergreen, creeping foliage. Fragrant flowers
Bluebells	<i>Mertensia Virginica</i>	Lavender, shading to pink	Div. in spring or fall	Foliage dies in summer. Do not transplant often
Liverwort	<i>Hepatica triloba</i>	Lavender, white	Div. in spring	Evergreen foliage. Handsome border for early bulbs

FROM MAY UNTIL JULY—COLOR SCHEME: LAVENDER, WHITE, PURPLE, AND YELLOW

COMMON NAME	STANDARD NAME	COLOR	PROPAGATION	REMARKS
Crane's bill	<i>Geranium maculatum</i>	Pale purple	Div. in spring	Most useful in iris border
Double buttercup	<i>Ranunculus acris</i> , var. <i>fl. pl.</i>	Yellow	Div. in spring or fall	Escaped from Europe. Spreads rapidly. Good for cutting
Early meadow rue	<i>Thalictrum dioicum</i>	Purplish	Division only	Excellent for mixed hardy border
Common blue flag	<i>Iris versicolor</i>	Purple	Div. in spring or fall	Grows freely in common soil
Great Solomon's seal	<i>Polygonatum giganteum</i>	Greenish white	Division or seed	Handsome drooping flowers. Showy foliage
Canada violet	<i>Viola Canadense</i>	White, pale purple	Div. in spring	Makes good edging. Best for common soils

JULY AND AUGUST—A GLORIOUS COMBINATION

COMMON NAME	STANDARD NAME	COLOR	PROPAGATION	REMARKS
Butterfly weed	<i>Asclepias tuberosa</i>	Orange-red	Seed	Flowers keep two weeks in water. Plant in dry soil
Bee balm	<i>Monarda didyma</i>	Cardinal-red	Div. in spring; never in fall	Fine for massing. Will grow in any location
Cardinal flower	<i>Lobelia cardinalis</i>	Scarlet	Divide shoots every year. Old plant biennial	Will grow in good garden soil
Tickseed	<i>Coreopsis lanceolata</i>	Yellow	Seed or division	One of the best flowers for cutting. Blooms continuously
Meadow lily	<i>Lilium Canadense</i>	Red-Yellow	Bulbs in fall	Best lily for common border
Tiger lily	<i>Lilium tigrinum</i>	Orange	Bulbs in fall	Var., <i>splendens</i> best

AT THE CLOSE OF THE SEASON

COMMON NAME	STANDARD NAME	COLOR	PROPAGATION	REMARKS
Star wort	<i>Aster spss.</i>	Lilac, purple, white	Div. in spring or fall	Feed heavily. Stake care fully
False dragon's head	<i>Phyostegia Virginiana</i>	Rose, purple	Div. in spring. Seed	Handsome tall spikes of flowers. Plant in background
Joe Pye weed	<i>Eupatorium purpureum</i>	Pale purple, shading to rose	Div. in spring. Seed	Four to ten feet high. Keeps well for large decoration
Iron weed	<i>Vernonia noveboracensis</i>	Showy purple	Div. in spring or fall	Effective in large clumps
White snake-root	<i>Eupatorium ageratoides</i>	White	Div. or seed	Desirable for cutting. Keeps long in water
Pearly everlasting	<i>Antennaria Margaritacea</i>	Pearly white	Division or seed	Can be kept all winter if cut early and dried



Of all permanent flowering vines, the Chinese wistaria (*W. Chinensis*) is the best. It flourishes in most situations, but early spring, injury to the buds or poorly ripened wood causes its failure. Best to prune not at all

The Showiest Permanent Flowering Vine—By Susan J. Homans, ^{New York}

A MATURE plant of wistaria, grown as a tree or standard, is when in full bloom, one of the handsomest sights imaginable. Such a tree as illustrated above is well worth travelling many miles to see.

The plant does not grow very tall in the standard form — that is, in comparison to other trees. With careful pruning it will attain the height of twenty feet and have a trunk six inches in diameter.

To grow the wistaria as a tree one must begin when the plant is young, and before it has developed too decided a vine habit. I have a tree which I raised from seed, but that is too tedious an undertaking to be very generally attempted, particularly when it is so easy to procure a plant from any nurseryman, either small enough to do all the training one's self or as a small tree already started.

I had tried for several years to obtain a plant from the old wistaria vine which had grown for so many years against our old house in the country. Nothing in the way of layerings or cuttings would succeed. The layerings were unsuccessful owing to winter depredations by small boys than which there are few things more destructive.

One spring I found coming up in the grass several small seedlings of wistaria. It had never occurred to me to sow the seed, but when I found it had been done for me so successfully, I was much delighted and cleared away the grass from around the little plants and helped them all I could to make their way in the world. When we later moved to the country, where we could stay all the year round, the little wistaria plants came with me.

Some of them have grown into vines,

and it is curious to see how many feet will be added to the length in one short season. One I planted in the corner of the lawn and kept the trailing branches well cut back and trimmed the shoots away from the trunk. Nine years after its first appearance as a seedling, I was rewarded by one cluster of flowers and was as proud of it as though it were something I had accomplished myself.

The next year when it was ten years old it had grown to be about five feet high and was a beautiful sight, covered with the delicately shaded lavender blossoms.

In beginning to train a wistaria plant into a tree, it is better to give it some slight support to keep the slender stem straight until it becomes strong enough to maintain its own uprightness. It can be trained in whichever way one elects, though it is better to let it have only one main trunk.

An effective way is not to let the tree branch at all except directly at the top, when the branches will spread out in the shape of an umbrella. I let mine branch further down, but it is none the less beautiful when in bloom.

When it has been decided what shape it is to assume, it requires constant pruning and trimming to keep the young trailing shoots well cut back to the woody branch, as it never loses its tendency to become a vine. Sometimes after only a few weeks of unretarded growth, you will see the pretty bronze leaves of a baby branch trailing off, several feet long. The little branch is trying to find some support to help it to climb, twining back and twisting about itself if no other help is near. They look so pretty with the tender greens and

bronze of the young leaves that one almost hates to cut short their aspirations, but it pays and the end more than justifies the means. Cut it back ruthlessly to within two or three eyes of the branch from which it grew.

After the plant has flowered and the blossoms have fallen, cut the flower stem off to within about two inches of the branch. If it is left on it tends to make the flowers poorer next year. You will see if you look close that at the base of the flower stem, half a dozen or more of the eyes or spurs are beginning to put out little leaves. The flowers of next year will grow here. They always grow on this year's wood.

The Japanese prune back their wistarias very severely and in consequence have clusters of flowers two or three feet long. The wistaria which the Japanese make the most point of growing is *W. multijuga*. It must be their climate or because the Japanese are such natural gardeners, for we never seem to attain just the same perfection in this country.

The wistaria most generally grown in America is the *Chinensis*. For many years after its introduction it was grown as a greenhouse plant until by accident it was found to be hardy. The white variety, var. *albiflora*, was introduced some years later. With one exception the wistarias are all native to China and Japan. We have in this country a native wistaria, *W. speciosa*, which, is common from Virginia to Illinois and southward. It has small bluish purple flowers. There is also a white variety of the same. All the wistarias are easily propagated either from seed or by layering.

Practical and Impractical Ideas from England—By W. Miller, ^{New York}

IF YOU HAVE TO BUILD A LOW RETAINING WALL, USE NO MORTAR BUT PUT A LITTLE EARTH BETWEEN THE STONES AND LET ALPINE FLOWERS COVER THE WALL



Impractical. This wall is covered with large double roses; above are Canterbury bells, edged with hardy pinks. Our summers are so hot that large double roses should not be trained directly against a wall which is exposed to full sunshine



Practical. Instead of a costly formal wall why not use a rough, dry wall wherever it is strong enough and fill the chinks with hardy pinks, stoncropps, silver-leaved chickweed, rock cress, houseleeks, etc. Let them root in the bank

How a City Man Revolutionized the Selling of Farm Products

By G. F. Brown, Jr., ^{New York}

BUSINESS PRINCIPLES AND MODERN SELLING METHODS ON A SUMMER FARM

WHEN we as cityites settled on Pleasant View Farm in the Adirondacks to begin the business of truck gardening, it was our purpose to establish the business with as little delay as possible; for, having resorted thither to recuperate after too strenuous work in the city, our stay was to be limited to the time required to enable us to get such a hold on good health as would warrant our returning to the city.

In keeping with this purpose it was necessary to introduce such methods as would commend our products to prospective buyers and reduce to a minimum the competition of our neighbors. For competition there is, among farmers as well as among merchants and manufacturers. As the patronage we sought was that of the summer visitors in the numerous cottages in that locality, perhaps it was our good fortune to cater to a class of people who are used to, and have a just appreciation of, progressive business methods.

Farming is a business, and if one is to be successful as a farmer he must conduct his business on strictly business lines. The great quest in the commercial world is to "find the buyer," and having found him to retain him as a permanent customer by furnishing reliable goods, by fair treatment, and by enterprising methods. Yearly tens of millions are spent to make known the merits of what is produced in the manifold industries that support the race. An army of trained men, keen, foresighted, aggressive, yet suave and diplomatic, is engaged in introducing to the public the products of mills and factories and mines and every conceivable sort of business that engages the effort of mankind. Examine into the workings of any long established and successful business enterprise, and it will be found that the utmost pains is taken to attract people, even to cater to their whims, and to win confidence in the various wares for sale. That concern in any business line honestly using the greatest ingenuity to draw trade will, other things being equal, forge to the front.

Now, of course, no farmer or truck gardener would even dream of ever spending money on such a scale as the merchant or manufacturer to build up his business. But of the principle here involved, getting trade and retaining it, he must have an understanding if he would make steady progress. That is, he must strive to have the most reliable produce, to prepare it most attractively for market, to win trade by just treatment and a courteous and persuasive manner, to employ such methods of taking orders, delivering goods, and keeping accounts as shall best serve the convenience of customers and enable them to know at all times what they owe, and to be prompt and dependable in meeting all engagements.

For us as newcomers to succeed in securing a large volume of trade in a short time, it was necessary to adhere closely to the principle enlarged upon above.

Plans were made during the winter, long before the opening of the season. It was necessary first to make up a trade list, that we might be assured of patronage from the start. To do this, inquiries were made of the postmaster, at the village stores, and in casual conversation, for the names of all persons who might be desirable customers, with the out-of-town addresses of all who were non-residents. These names were arranged alphabetically. To each of the prospective customers was then sent an announcement, stating the nature of the business to be carried on and soliciting his patronage. This announcement was of the following form:

Pleasant View Farm,
Jonestown, N. Y.
March 10, 19—

MR. JOHN DOE,
Boston, Mass.

Dear Sir:

From Pleasant View Farm during the coming season will be furnished vegetables, small fruits, berries, poultry, cream, and specialties for the table.

There will be regular deliveries, and the service will be prompt and efficient.

Your patronage is respectfully solicited.

An acknowledgment in the stamped, addressed envelope enclosed will be appreciated.

Yours very truly,
RICHARD ROE.

As replies were received the names were checked on the list, a tentative customers' list thus being made ready for future use.

Knowing now that there positively would be a demand for the products of Pleasant View Farm, time and energy could be expended in planning and working with the encouraging assurance of favorable results for all our efforts. Seed boxes and hotbed were of course assiduously attended to, and timely preparations made for a successful start with the garden. The next step in the selling campaign was the issuing of weekly bulletins. This was begun as soon as the earliest vege-

tables were ready, and was continued throughout the season. The bulletin would be issued every Saturday afternoon, and on it would be listed everything that was to be ready for delivery the following week, and any special announcement was included. The bulletins were mailed at such time that they would be in the hands of customers early Monday morning. Here is an illustration of part of one sent out after the season was well advanced and there was a long list from which to choose.

PLEASANT VIEW FARM

During the week of September 6th we shall be prepared to deliver the following:

VEGETABLES

Tomatoes	45c pk.	Celery	5c bh.
New cabbage	10c ea.	Young green peas	65c pk.
Summer squash	5c "	Green peppers	3c ea.
Stringless green beans	6c qt.	Sweet corn	20c dz.
Yellow wax beans	6c "	Beet greens	30c pk.
New beets	5c bh.	Lettuce	10c hd.
Young carrots	5c "	Cucumbers	3c ea.
Turnips	5c "	" (pickling)	35c pk.
Spinach	30c pk.	Parsley	5c bh.

Special prices on tomatoes for canning.

Other offerings include poultry, jellies, and canned fruits, flowers, etc., a total of 31 items.

Deliveries will be made in the afternoons of Tuesday, Thursday, Saturday. Orders for poultry can be accepted as late as 9 A. M. of the day desired, but it will be much more convenient to receive them the day before.

Local Phone.

RICHARD ROE.

These bulletins were a great convenience to our customers. In many cases the last bulletin was tacked up in the kitchen for ready reference. The housekeeper or cook could plan ahead for a whole week, knowing what was to be had, and telephone or mail the orders before the first delivery day. With not only the family to provide for, but a house full of guests as well, this meant no small item in the household economy. The bulletins were quickly and cheaply made with a duplicating apparatus. One-cent stamped envelopes were ordered in quantities from the post-office with the card printed in the corner, and



The farm nestled in a valley of the Adirondacks, with summer residents nearby



System was introduced into all the operations of the farm and the fancies of customers respected

with each bulletin would be sent a postal card addressed to Pleasant View Farm to facilitate the mailing of orders.

When, after several weeks, by sending out these bulletins, we had succeeded to a certain extent in directing trade our way, then a public announcement was inserted in the local newspaper, in a conspicuous place in the column devoted to Local Items, worded somewhat as follows:

Pleasant View Farm.—During the coming season we shall be prepared to furnish vegetables poultry, small fruits, berries, and cream. Prompt attention to inquiries and orders, and best of service.

Local telephone.

It was intended by this newspaper "ad" to reach all those who had not received the bulletins. In addition to this advertising, wherever it was possible, personal interviews would be had with persons who would be desirable customers.

Now we were confident the field had been pretty well canvassed. Much valuable time and effort which otherwise would have been expended in peddling and personally soliciting orders could be devoted to the garden. Orders would come in by telephone and mail, and the delivery clerk could receive them on his rounds, for he was provided with a bulletin.

In preparation for getting out orders as expeditiously and attractively as possible, the sugar house was converted into a work room, and an old kitchen stove was there set up. Rough tables were made of boards, for sorting the vegetables and dressing the poultry. A supply of paraffine paper and good quality of wrapping paper was ordered. To avoid any waste of produce or of time and effort in gathering it, a Distribution Sheet was devised for listing the orders and classifying the various items they contained. As soon as received the names would be entered on this sheet and the items distributed by quantities in the different columns arranged to show the total required of each kind of vegetable, poultry, and other articles. On the morning of a delivery day, after entering items from early orders, received in the first mail or by telephone, the columns were footed up. Thus it was known just what quantities to gather of each kind of vegetable, and the number of chickens to be killed and dressed. (For most of the poultry ordered was broilers, and these would be killed the day of de-

livery, to be used by the customer the following day). By this use of the Distribution Sheet, the work of gathering the produce was intelligently directed, no more was gathered than orders called for, and consequently there was no surplus of dried-up and useless vegetables to be thrown away at night as we learned had been the case where a wagon load of truck was sent out by a predecessor to be peddled off. Moreover, the sales would have been no greater by sending out a peddler's wagon, for all whom we desired to sell were notified well in advance of everything we had to offer, so that every one had abundant opportunity to order what was required by telephone, by mail, or through the delivery clerk. As it might be necessary to change the delivery route frequently, because of some "rush" orders, the route for each day was indicated on the Distribution Sheet. (See below).

The next care was the work of actually getting out the orders. Early in the morning on a delivery day, the fire had been started in the stove in the sugar house, and three or four pails of water were put on to boil. A hose from a tap in the garden kept several pails full of cold water for washing the vegetables. As the latter were brought in fresh from the garden they would be thoroughly cleaned in water and set aside on a general supply table. Then the chickens, killed by cutting off the heads, were deposited in a basket near the stove. Two men, sometimes more, would work together on the poultry. As each fowl was taken from the basket it was dipped into a pail of boiling water, to render plucking easier. After immersion, the fowls were plucked clean, and then turned over to another man to be dressed. The latter would deposit the dressed fowls in a tub of clean water, to be washed later and have all pin feathers removed.

The vegetables all cleaned and the fowls washed, the stock was ready from which to fill orders. With the Distribution Sheet posted up above the general supply table little time was consumed in preparing the produce for delivery. The vegetables on each order were carefully wrapped in white manilla paper and tied, each kind in a separate package, and the package marked with name and set over on the delivery shelves. After decorating each fowl with a piece of parsley, it was wrapped first in paraffine paper, then

in manilla wrapping paper, and set on the delivery shelves. When all the orders were complete and had been checked off on the sheet, the wagon, standing outside in readiness, was loaded in accordance with the delivery route for the day, as indicated on the Distribution Sheet. The packages were arranged in the order of the calls, those to be delivered first being in the rear, where easily accessible.

From the Distribution Sheet charges were made in the Sales Book, for with few exceptions all produce sold was charged, both for our own convenience and that of our customers. Our trade was select, and it would have been an annoyance to collect for each order. During spare time the Sales Book was posted, and bills detailing every purchase for the month and showing total amount due were ready to be mailed the evening of the last day of the month. Before the tenth of the following month settlements of most open accounts had been received. Our books, of course, were kept by double entry, and monthly trial balances assured us of the correctness of our work and enabled us to keep track of the general run of business.

The entire procedure of handling the trade and preparing the orders has been described in detail, because it was owing to the methods employed that we were able to work up the trade in a short time and give perfect satisfaction. Everything reasonable was done for the convenience of customers. The neat, even attractive way of doing up the orders appealed at once to cooks and housekeepers. Of this we had a striking illustration when a horrified housekeeper described how six broilers had been delivered on a "hurry" order by one of our competitors, wrapped all together in a newspaper, contrasting this with the attractively dressed fowls received from Pleasant View Farm.

The methods in use at Pleasant View Farm became an object lesson to neighbors when they found that cityites had stepped in and secured the cream of the trade in one season. Yet nothing underhanded was done. Simple business methods were employed and the constant effort was to please the buyer. Under conditions existing, competition was overcome, not by intimidation, deception, or combination, but by producing a first-class article and gaining the good-will of customers by fair treatment and enterprise.

DISTRIBUTION SHEET

Sept. 6, 19—

CH'K	NAME	VEGETABLES							POULTRY			JELLIES, ETC.			MISCELLANEOUS		
		TOMA-TOES	CELERY	BEETS	CAB-BAGE	PEPPERS	CORN	LETTUCE	BROILERS	ST. CHKNS.	TURKEY POULTS	BLACKB.	RED RASP.	ST. PRES.	CREAM	EGGS	APPLES
✓	Chidwick, W. B. 9-7. Tel.	1 pk.	2 b.			6	2 doz.		2 small								
✓	Smith, K. 9-8. Mail			2 b.	1			2 h.		1					1 pt.	1 doz.	
✓	Jones, L. 9-9. Tel.							3 doz.	4 large						1 qt.		2 pks.
✓	Allwind, S. 9-7. Mail		3 b.						4 large			4				2 doz.	
✓	Cotwick, M. 9-9. Mail			3 b.	2	12	1 doz.	3 h.					2				
✓	Bulyon, J. 9-8. Tel.	2 pks.				6		4 h.		1			2	2			
✓	Candelo, W. 9-9. Tel.		1 b.				1 doz.		4 small					4	1 qt.	1 doz.	
✓	Jelletoe, T. 9-7. Mail					3	2 doz.	3 h.		1							1 pk.
✓	Barnwold, A. 9-7. Tel.		2 b.		4				2 small		2		2	3	1 qt.		

Route: Pine Cottage Colony, "The Oaks," "Briarwild." Wolf Pond Rd., Main St., Postoffice, Home.

This Distribution Sheet was the keynote of the system. Only such quantities being gathered as were actually called for in advance. This meant economy of both labor and material



"Open lawn on one side only, where the outlook is across the harbor, the three remaining sides are designed in a perennial border which gives a succession of flowers through the summer months"

One Woman's Summer Garden—By Mary H. Northend, Massachusetts

A SUGGESTION FOR A VACATION GARDEN THAT IS PERMANENT AND GROWS A SUCCESSION OF FLOWERS DURING JUNE, JULY AND AUGUST—HARDY PLANTS THAT ANYONE CAN GROW ANYWHERE

PERHAPS the accompanying sketches and photographs which show what has been accomplished by one woman will be an inspiration and a help to others. The garden to which you are introduced is on the shores of New England, and has attained its present growth in a matter of three years. Open lawn on one side only, where the outlook is across the harbor, the three remaining sides are designed in a perennial border which gives a succession of flowers through the summer months. Early spring effect is not sought for. It is essentially a summer and a vacation garden, and perennials are used because of their permanency and of the big results they will give with little after care.

Quite apart from gardener, as is ure and improved from the enforced exercise that comes from tending the garden. As a rule, the work in the garden is done in the early hours of the morning and in the evening—that is from four to seven A. M. and after the hottest hours of the day are past.

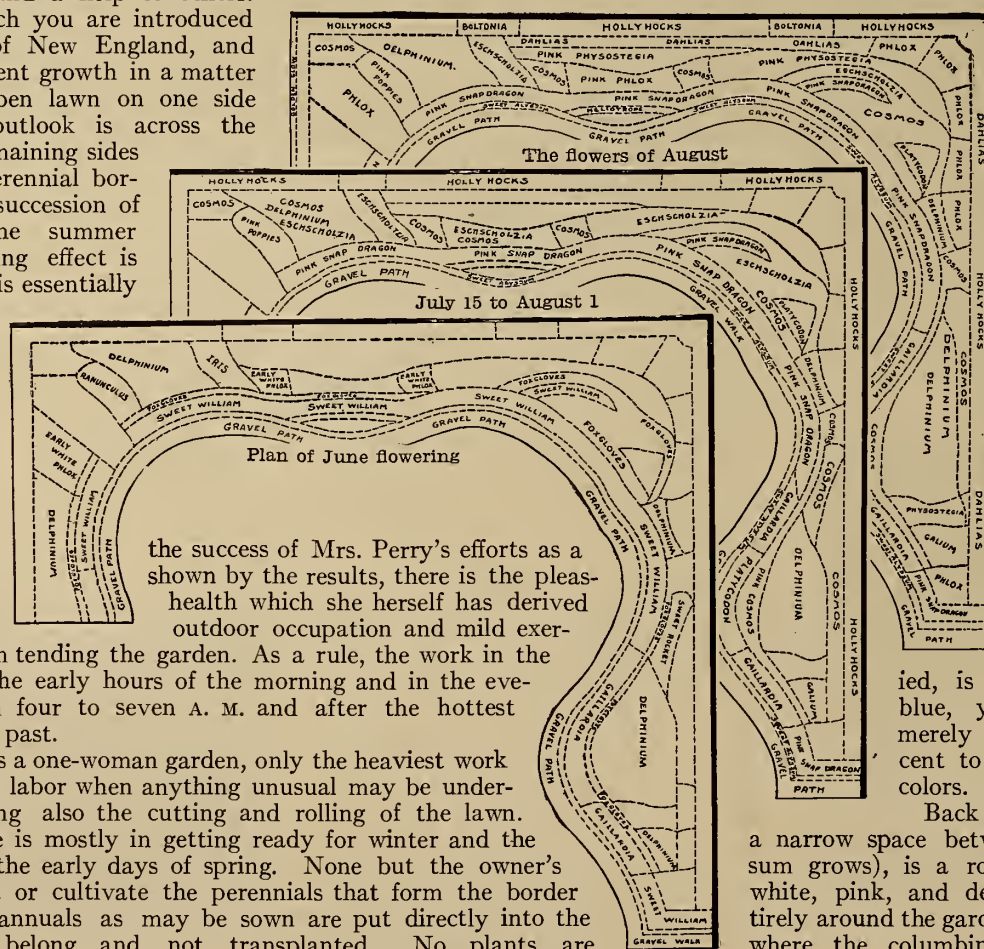
The garden itself is a one-woman garden, only the heaviest work being done by hired labor when anything unusual may be undertaken, and excepting also the cutting and rolling of the lawn. The extra assistance is mostly in getting ready for winter and the uncovering during the early days of spring. None but the owner's own hands set out or cultivate the perennials that form the border proper. Such few annuals as may be sown are put directly into the place where they belong and not transplanted. No plants are

bought, and even the perennials are raised from seed sown in boxes and transplanted when of sufficient size.

Without any previous knowledge of the affinities of the different plants for special situations the ultimate right location has been found by a series of experiments, moving the plants from one place to another until it was discovered where they did best and looked their brightest.

The earliest bloom is of the primroses and columbines, an effect which continues in this section until well into June, when the real flowering season begins. The color scheme, a matter which has been carefully studied, is mainly pink, white and blue, yellow being introduced merely in the light of an accent to emphasize the dominant colors.

Back of the gravel path, with a narrow space between (where sweet alysum grows), is a row of sweet William in white, pink, and deep red. This runs entirely around the garden, except near the barn, where the columbines last longer, and two



the success of Mrs. Perry's efforts as a shown by the results, there is the pleash health which she herself has derived outdoor occupation and mild exercise

clumps of gaillardia bloom until frost. These and a clump of ranunculus near the corner by the barn are the only yellow flowers seen in the garden in June.

The touches of blue seen throughout the garden are given by clumps of delphinium behind the foxgloves. Sweet rocket and early white phlox are also found and there also the shrubs, snowberries, and a spirea take their part in the harmony.

About July 15th the sweet alyssum begins blooming, and just behind it pink

the delphinium and all through the garden wherever the effect of its flowers is needed. The feathery, soft pink blooms of the cosmos and a clump of pink poppies, with the hollyhocks in the background, are the chief attraction in the garden at this season. The yellow California poppy is scattered throughout the garden wherever there is space left and flowers are done blooming. Blue platycodon is seen in two groups near the house, and behind the sweet alyssum near the back fence is another touch of blue in a line of heliotrope.

dragon, merging with the blue of the heliotrope, forms a charming bit in the garden.

The only additional bloom in September is *Clematis paniculata*, which transforms the end of the rear fence into a mass of feathery white. On this same fence is a bitter-sweet, and on the side fence there is planted each year some annual vine. White is, of course, the general harmonizer and the white Richard Wallace phlox is a prime favorite for the purpose.

And here is a cultural point. Water



A hardy border which blooms constantly for three months, delphinium, foxglove, phlox, snapdragon, and Canterbury bells furnishing a wealth of blossoms

snapdragon takes the place of the line of sweet William. Where in June the Canterbury bells bloomed, there are now tuberous begonias in white and pink and red. The delphinium blossoms three times during the season and is cut down after each blooming. The second and third times it does not attain such height as at first, and to provide for the loss of the tall growth, pink cosmos is sown around and among

Nearly all the July flowers continue to bloom through August. The hollyhocks remain well into the month, and sometimes even until September. Then dahlias take their place as a background; there are also tall sunflowers and golden glow. Masses of phlox and of physostegia and two clumps of the white boltonia continue the general pink and white color scheme. During this month the delicate coloring of the pink phlox and pink snap-

is not largely used, reliance being placed on the dry mulch given early in the season—that is, a thorough raking, and keeping at it continually when the weeds are beginning to grow. Can it be? Well look at the growth shown by the photographs. When winter approaches a layer of well-rotted manure is put over the top and over that a thin layer of leaves. Later on this is all covered with a thick layer of leaves which makes all snug.

The Multiple Uses of the Guava—By John Gifford, ^{Flori-}ida

THE FIFTH IN A SERIES OF ARTICLES ON THE TROPICAL FRUITS THAT ARE ADAPTED TO THE WARMEST SECTIONS OF OUR COUNTRY. THE SERIES BEGAN IN AUGUST, 1910

IF THE goat is the poor man's animal, the guava is his fruit. It has been called the "apple of Florida." When frozen to the ground or burnt by fire spreading from the forest to grass-grown clearings, it springs Phoenix-like from its root, soon yielding again an abundant supply of its welcome fruit. I believe the guava could be dried and cheaply shipped to all parts of the world. If so, it would be the cheapest dried fruit on the market. Guavas fit for jelly are usually worth one cent a pound.

The smell of the ripe fruit disgusts newcomers. Sometime ago some Northern people claimed that there was a dead rat under their floor. The smell grew worse from day to day because it was all due to a guava tree by the dining-room window ripening a heavy crop of fruit. Now the whole family is eating the fruit.

Many are the stories told which hinge upon the smell of the plebeian but useful guava. A man once shipped a crate of this fruit to a friend in the North and labelled it "Guavas." When it reached its destination the agent sent a card saying "Come get your guavas. I think he's dead."

We have a bad smelling fungus here which some people call "buzzard fooler." A friend has suggested that this would be an appropriate name for the guava. Strange, indeed, how soon one can become accustomed to smells which are at first nauseating. I have heard it said that the Arab and one or two other races can't stand the smell of even a clean white man.

The odor of the guava and a few other tropical fruits, such as the ti-es and genipap, is mild in comparison with some cheeses. I have heard that the mangosteen, claimed by some to be the prince of all fruits, has at first a repelling odor which is soon counteracted by the lusciousness of the pulp.

The nose and the palate soon adjust themselves to strange smells and flavors. The first time I ever tried sour-sop-ade it tasted like cotton wool soaked in cider vinegar. Now it belongs in the same category with limeade and crushed pineapple.

The guava, although completely distributed throughout the tropics in both a wild and cultivated state, is undoubtedly an American fruit. It has a fine name of Indian origin, guajava in Spanish, agreeably shortened to guava in English. In Porto Rico the guava tree is always called guajava while the term "guava" is applied to a large leguminous tree much used for shading coffee.

The home of the guava is probably Mexico and Central America, but birds and other animals carry the seeds long

distances and, since it will grow almost anywhere in a warm climate, its distribution is wide. It is plentiful everywhere and countless varieties exist. It comes up quickly in abandoned clearings, which exist, strange to say, even in new countries, and when there is neither native nor jelly factory near, it furnishes food to many wild animals. I think it is generally considered the greatest of all jelly fruits, and guajava dulce holds a high place among Spanish-American peoples. The



Cattley guavas somewhat resemble rose apples and are about the size of ordinary plums

sale of this jelly brings many dollars to Florida, and I have seen cases of it on the platforms of backwoods stations consigned to almost every state in the Union and even to Canada and Europe.

They say when a Northern man gets stranded in Florida he does usually one of three things: he opens a law office, a real estate office, or a jelly factory, and I know of one man who combined these three industries in the same shop!

In addition to the common guava there are several other species of the genus *Psidium* which yield fruits of more or less value. In addition there are fifty or more species of fruits in South America belonging to the order Myrtaceae closely related to the guava which are still awaiting the skill of the horticulturist. We are now trying *Feijoa Sellowiana*, a guava-like fruit from Uruguay. The fruits are

greenish, containing a rich pulp, and "so highly perfumed that baskets having held them will retain their perfume for weeks." The flowers are showy white and crimson and the petals are edible. I have heard it said that the flowers are fertilized by a bird. I believe it has fruited in California. My plants have flowered but have formed no fruit.

The genus *Eugenia* alone, although it gives us the delicious Cayenne or Surinam cherry (*Eugenia pitanga*) and the rose apple (*Eugenia Jambos*), has twenty or more fruit-yielding species. Closely related to the guava is the rose apple, the fruits of which have such a sweet rosy aroma that they are sickening to some people, as is the odor of the tuberose and of certain flower odors in the tropics, which seem to overburden the atmosphere on moist, still nights. Enter a narrow tropical valley in a thicket of rose apple, with rose apples on the ground and rose apples in abundance on the trees, and it will smell the way I suppose an attar of rose factory smells. *Caryophyllus Malaccensis*, the large rose apple or Malay apple, with long, dark green leaves, white, purple or red flowers, and apple-odored, fine-flavored fruit, or the Malacca apple or the Java plum, I have not seen in Florida, but the rose apple is at home and is growing wild along water courses in the West Indies. In fact the rose apple (*Eugenia Jambos*), called pomarosa in Spanish-American countries, has been planted for fuel in the neighborhood of sugar estates. For this purpose it is as good as eucalyptus, grows equally as fast, looks like an eucalypt in general appearance but yields a fruit besides and seeds big enough to see and feel. The seeds of some eucalypts and melaleucos are so small that the slightest breath of wind will waft them away. Ants love to carry off these little seeds so that one must have legs on the seed boxes and have each leg resting in a can of kerosene. Otherwise you do nothing but feed the ants, some of which are so smart that a friend of mine declares that when they find the legs of a table in cans of kerosene they will climb up the walls to the ceiling and then drop down upon the table.

The rose apple and the guava have a great future before them, although both are high smelling fruits, one highly sweet and rosy the other foetid. We know the names of these tropical fruits and forest trees, though even this knowledge is imperfect; but as yet know practically nothing as to their characters, idiosyncracies, likes and dislikes. A banker or merchant in a town would soon be bankrupt if he knew nothing more of his customers than the names they are known by.



The house completed. It stood on the ground with a strange appearance of not having a proper right there

But four years later, when the shrubs around it had become established, it had all the appearance of a cosy home

What Planting About a House Can Do—By S. H. Bullock Pennsylvania

WHEN I look back and make a mental comparison between things as they were and things as they are to-day, I am filled with wonder that more people do not attempt a little something in improving the surroundings of their new homes. The nurserymen make it so easy for us, too, offering assortments of desirable shrubs which one can plant to fit any special place or you can by the aid of their catalogues make your own special selections from among those things that catch the fancy. The accompanying pictures show a striking comparison of results in our own place. How bare and uninviting is the plain masonry!

When we moved to the country four years ago we bought a house on an acre of ground in one of the suburbs of Philadelphia. The house was not finished when we got possession and the ground was simply part of a field.

It was especially interesting as we could only do a little at a time and each thing we planted we felt the need of before we put it in the ground, so notwithstanding the fact that we lost the usual percentage of trees and shrubs, I do not think we made any mistakes as far as locating them went.

The first thing we did after planting a hedge around three sides of the place and a row of sugar maples across the front, was to tie down the house, as the saying goes. This I cannot sufficiently emphasize; it was the suggestion of a friend who had preceded us in the pilgrimage countryward about four years. At her suggestion I bought ten dollars' worth of shrubs of different varieties and planted

them one cold November day in beds around the house, leaving just a foot of sod between the stone wall and the bed to prevent the mud splashing on the stone in heavy rains. Now the house nestles in shrubbery from April to November with a succession of bloom on the various kinds.

I feel as if I should not speak as one having authority, as, after all, how little one can learn in four years, but in my opinion there are just a few ways of planting. I am now referring to a small place. First tie down the house by planting around it and secondly plant around the boundaries and screen everything unsightly. Avoid beds in the middle of your lawn. The only thing needed to break the sweep is an occasional evergreen or specimen tree. The character of the border planting can be according to your individual taste—perennials with the hedge as a background, or a shrub border with perennials in front. After developing your place to the utmost, a hardy garden can be started in the rear, if the garden mania still continues; but first of all, plant around the house.

In planting around the base of our house,

we used white althea, white, pink and variegated weigelas, *Forsythia Fortunei*, and a couple of large *Rhus Cotinus*, which grows to such enormous proportions that it is wise to plant it at the ends or corners where it will have ample room to spread. In front of these taller shrubs we planted *Spiræa Van Houttei*, and an occasional *Hydrangea paniculata*, var., *grandiflora*, with *Berberis Thunbergi* and a few dwarf *Deutzia gracilis* on the front, making the whole graduate to the edge of the bed, along which we planted nasturtiums.

The same idea was carried out all the way along the side of the house to the kitchen window, a mock orange, Japanese snowball and *Rosa rugosa* being added at intervals so that there would be a continuation of bloom all summer.

Ten dollars covered the cost of those used in front and at the sides of the porch, and now it keeps us busy cutting them back so they will not look rank and untidy. This should be done immediately after the blooming period of each shrub.

On each side of our place we have an irregular border about a foot and a half away from the hedge. On the back line of this bed are a few shrubs for a background, and in front of these are peonies, Japanese and German iris, sweet William, and various bulbs (such as *Narcissus poeticus* and daffodils), with an occasional clump of forget-me-not and primroses.

At first our borders had larkspur, phlox, coreopsis, hollyhocks, and rudbeckias in addition to those already mentioned, but as the plants grew I moved these last out of the border into the hardy garden in the rear of my house.



The front piazza was set off by the free use of flowering vines



(EDITORS' NOTE.—We want to know how successful workers do things in order to put actual experiences before our thousands of readers in all parts of the country. Every reader is invited to contribute a short note on some interesting experience. Just state the facts about some ingenious idea that you have actually worked out yourself or have seen.)

Peas in wide trench

After planting peas in double rows six inches apart for years, I tried THE GARDEN MAGAZINE plan of planting in furrows the width of a spade and four inches deep. The crop was a third greater than that which the double rows produced, and the weeds were fewer.—M. O. N., Illinois.

Growing kohlrabi

Most people transplant kohlrabi just as they do their cabbages. I plant them in a seed bed, thin them out to three inches apart, and let it go at that. The "bulbs," or whatever the edible portion is called, become, for me at least, as large and tender as those transplanted.—F. H., Illinois.

Keeping cut flowers

I notice on page 26 of the February GARDEN MAGAZINE, in a paragraph on "Keeping Cut Flowers," the statement that the suction area of a stem is increased by cutting the stem diagonally. I cannot see that this affects the suction area a particle; only so much water can enter the sap vessels whether they are cut square across or on the diagonal. Here is a point, however, that may not be generally known: If the stem is cut *under water* the flower will keep better because there is no chance for air bubbles to enter the sap vessels and stop the passage of the water.—W. R. W., California.

Peas for succession

The accepted rule, "Plant peas two weeks apart for a succession," does not work in Glenview, Ill. Once in a while it will, but generally, owing to a cold wet spell or a hot, dry one, two or more plantings ripen at the same time, making us eat more peas than we would like to, in order to "save them." Last year a successful woman gardener, whose pea crop always is continuous, told me to wait for the second planting until the first was up two inches, and make the third planting when the second was two inches tall. I did this, got five plantings, and had a perfect succession. Others who have tried it report the same results.—W. H. J., Illinois.

Planting limas

Here is a little kink about lima beans: When planting push the seed into the hill or drill, as the case may be, with the eye downward, so that when the root emerges, it goes downward and forces the cotyledons straight up, instead of in a circle, as will be the case if planted on the flat side or other edge upward.—I. T. C., New York.

Where to plant altheas

After losing altheas for several winters, while they were hardy far to the north of my Chicago suburb, I learned that they were not harmed when planted in light, well-drained soil. Therefore I mixed coal ashes with my black earth, put cobblestones a foot deep two feet below the roots, and have had no further trouble.—R. J.

Watermelons without water

I live out on the prairies where the farmers depend entirely upon what the soil will produce. This past year there was a severe drought, but a friend of mine had the best crop of watermelons and marrows he had ever raised. When asked how much water he gave them, he replied, "None, but I gave that ground a heavy dressing of manure last year and the year before, and kept it in good cultivation."—C. B., Nebraska.

Try some endive

I raised endive last summer for the first time and it was a great success. Caution must be used in warm weather not to tie the leaves too tightly when blanching, or it will rot, but as the weather grows colder in the fall it can be tied up closely or even covered with boxes or burlap, which will blanch it nicely. By protecting it this winter we had endive until January 15th.—K. L. R., New York.

Sod edging for beds

I wanted to carry out a certain plan for a formal garden, and for an edging to the flower beds had to have something that would hold them in shape for the curved ones. I was unable to get boards that would stand the strain of bending, and a grass edging would necessitate more time than I could spare to keep it in order. So the beds were first made the desired shape and raised about five inches. Then I had strips of sod placed grass side down against the sloping sides of the beds, pressing them firmly and filling the spaces or cracks between the sods with earth. The sod was thick and firm and held the earth in place as effectually as boards could have done. This edging has withstood the heaviest rains without washing and the garden looks well cared for with but little attention. The first year I had some trouble with top edges of the sod which would insist on bobbing up serenely in little tufts here and there, but by cutting as close to the roots as possible without destroying the sods, I soon overcame this slight difficulty.—I. M. C., Minnesota.

Seedling shrubs

Under a Japanese barberry planted years ago I found last year a hundred or more seedlings three or four inches high. These were growing in several inches of leaf mold, and a slight pull lifted them for transplanting. They thrived wonderfully in the dry summer of 1909, and were a foot high by fall. In 1910 they reached three feet, and frequent pruning had made them stocky and well branched. Nice seedlings also were found under a wayfaring tree (*Viburnum lantana*) and under an alder buckthorn (*Rhamnus frangula*). A shrub grown from a seedling interests me more than one I purchase.—J. M., Illinois.

Sweet brier for fragrance

In reading through THE GARDEN MAGAZINE I came upon a paragraph entitled "Fragrant Foliage." In it the writer says, "We can think of only three shrubs that have it—candleberry, aromatic sumac, and sweet fern." Has this writer never known sweet brier? I think not, or he would be sure that there is nothing—in New England, at least—that holds so exquisite a fragrance. It is not the small, pale blossom of a rose, but the tender, newly opened leaves that give it its right to be classed among fragrant shrubs. The sweet brier will bear transplanting and will live and thrive contentedly in the same border for years. The perfume is elusive, yet lingering. If worn in the corsage, the faint fragrance stays for days after the faded leaves have been thrown away.—H. W. R., Massachusetts.

Training tomatoes

My way of training tomato plants on barrel hoops and sticks may interest other amateur gardeners. Last year we trained



them in this manner—have little foliage, and very fine, large fruit. Some of the tomatoes weighed twenty-two ounces.—B. B. A., Indiana.

CHILDREN'S GARDENS EVERYWHERE



PLANS FOR MAKING A ROOF GARDEN
A REAL SUCCESS—SEEDS BEST TO
PLANT—HOW TO TRANSPLANT WITH
LITTLE SHOCK TO SEEDLINGS—A
GIRL'S TRITOMA BED AND WHAT SHE
MADE FROM IT—THE SCHOOL GAR-
DEN CONTEST FOR BOYS AND GIRLS

Conducted by
ELLEN EDDY SHAW
New York



Roof Gardens

GARDENING in crowded cities and even in less congested sections often must take the form of a roof garden or a box garden. The roof garden is usually a collection of boxes placed upon the roof. These boxes may be just soap boxes or cracker boxes. But a box the size of the ordinary window box is a better kind to use. Such boxes placed along the edges, and through the central portion of a small roof give the effect of a real garden. The paths or passage ways between the rows of boxes may be sanded or covered with pebbles. This adds to the reality of it.

It is necessary to have good rich soil and good drainage in the boxes. Put into the bottom of a box about an inch of broken pot, charcoal or even stone, if no better material than this latter is obtainable. This gives a good drainage area. Over this layer the soil should go. Make the soil rich with rotted manure. If this is not available buy sheep manure. The plants will grow better if they are watered once a week with liquid manure. Of course do not do this until the plants are of some size. I knew one man who soaked up the refuse of fish and watered his roof garden with this solution. He was a fish man and so had the wherewithal to make this fishy drink for his plants.

In such an outdoor box garden one may

plant almost anything if sunlight is plentiful. Trailing nasturtiums make good vines to drop over the edges of the boxes. Petunias, zinnia, candytufts, asters, marigold and cornflower will do well in this sort of garden. Even dahlias and rambler roses will flourish.

The roof garden is not a dream if one is willing to spend some thought, time and money upon it. It is a possible garden for many schools where ground space is limited and sky space is the only available place. If the box is to go in a shady place try pansy, fuchsia, geranium, begonia, godetia, phlox and English ivy. Some might like to plant a few boxes of vegetables. Radishes, parsley, lettuce and beans may be tried. The boys in this picture showing a roof garden tried corn. This planting of corn did not yield a satisfactory crop but the boxes of green corn were a delight in one crowded district of New York City.

Transplanting

TRANSPLANTING is a sort of an operation which gives a shock to a little seedling. A seedling is growing nicely when suddenly some one takes it from its quarters and places it in entirely new ones. Because of this shock one should transplant with as little fuss and disturbance as possible.

Those little wooden seed labels which were made in the manual training shop are good instruments to use in transplanting. Lift carefully several seedlings at once from the earth. If the soil is watered a little some time before, quite a bit of soil will adhere to the roots of the plants. With a label make a hole in the new planting spot. Water this hole. Lower into it three or four seedlings. Firm the soil carefully about them.

These groups of plants, if shaded a bit from the strong sunlight, should thrive. If one or two die some are still left in each group. After several days weed out all but one seedling from each group. Of course you will chose to leave the sturdiest of the plants.

Transplanting is not so critical if done by this group plan. Remember to transplant when the second pair of true leaves appears.

School Correspondence

FIVE years ago my father bought three tritoma roots, paying fifty cents for them. One plant father gave to a friend. The remaining two he planted about the first of May. The plant he gave to his friend died, so he gave him another. This left one plant in our garden.

The next spring, about the last of April or as soon as the eyes began to sprout,



A simple and effective decoration. This yard took first prize in the Washington People's Garden Exhibit



A roof garden on one of New York City's school roofs. The only garden these boys could have



Seedlings as they are thinned out may be transplanted elsewhere in the garden

the plant was lifted and broken into eight parts or eight plants which bloomed finely all the next summer and fall.

The third spring I went through the same process of lifting and dividing them and planted a bed of forty. This I take great pride in calling my tritoma bed. It is 7 x 8 ft. From this bed I sold twenty-three plants at ten cents each. The fourth spring I sold six dozen at one dollar a dozen and exchanged some for peonies, rose bushes, and lily bulbs. The fifth summer, which was 1910, I disposed of seven and one-half dozen at one dollar a dozen and sold one dollar and twenty cents worth of bloom at two and one-half cents each. I displayed about three dozen cut flowers at the Cleveland Garden Festival which won for me the first premium.

Why shouldn't my tritoma bed be the pride of my garden, as it is the most attractive, most showy, and the best money-maker there? Tritomas require but little care. No worms or bugs seem to bother them. The plant is a hardy perennial and has most attractive flowers.

In my little bed of forty plants I had one hundred and twenty blooms and buds at one time. They commenced blooming August 1st, and I cut my last flower November 1st, giving about three months continuous bloom. Now is there any way by which a person can have more pleasure and get better results from a fifty-cent investment?

Cleveland, O. MABLE JANE MUSSER.

This makes my third year with a garden and I am much interested in it. My first year I had but a small place about 20 x 10 ft. Last year my father enlarged it for me. I now have a garden which is 36 ft. square and of which I am very proud. I will do my very best to win a prize and hope I shall be successful. This is my first year taking THE GARDEN MAGAZINE and I like it very much.

Last year in my garden I had twenty-one tomato plants from which I picked enough for eating purposes for our family

of five, besides giving some to my neighbors. Finally my mother put up twenty-seven quarts of them. Besides this we had seven rows of corn in my garden. I planted Stowell's Evergreen for a late corn and without exaggeration the majority of the ears were from ten to twelve inches long with beautiful large kernels. You may enter me in Class I. of the contest.

Detroit, Mich. ROBERT L. PLUES.

These are the dimensions of our garden summer house shown in the picture. It is 10 feet long, 8 feet wide and 8 feet high. It has a cottage roof which is 4 feet high from the plates to the centre of the ridge. Scantlings 2 inches by 4 inches and lattice work 1½ inches wide, placed the same distance apart, were used. For roofing we used siding which we lapped 1½ inches. The door is 6 x 3 ft. There are two windows in front and two at the side. We have the roof painted green and the sides white.

Ontario, Canada. H. M. GAYMAN.

Garden Hints

HERE are a few suggestions for your small gardens. These may help some.

1. An inch of mulch or earth stirring is quite sufficient. Do not neglect to do this. It is a sort of watering scheme. The mulch cuts off the escape of moisture from the lower part of the ground. It also gathers and holds the evening dews.

2. Do not forget to label the rows of plants and vegetables. This helps you to know your seedlings from weedlings and is also a guide to the garden.

3. When this magazine reaches you it is not too late to start garden work. Put in some radish seed, lettuce, beets and onion sets. Before school closes you will have radishes, lettuce, beet tops for greens, and small but very tender young onions.

4. Study the special weeds which spring up in your garden. Do more than this, root them up.

5. Send to the Department of Agriculture at Washington, D. C., for a pamphlet called "Garden Operations."



This summer house in a Canadian school garden was used as a resting place and tool house

6. You can keep right on sowing seeds in the coldframe to use for transplanting purposes.

7. Plant sunflowers. The seeds are good food for squirrels.

8. Here is another garden plan. Plant alternate rows of vegetables and flowers. As the school children take out the vegetables, the flower rows are left. So at no time is the garden or any section of it completely despoiled. This is a good plan for schools, especially where it seems to be desirable to plan for only early summer and late fall crops. The vegetables may be early, for example, radishes and lettuce. The flowers may be for fall effect, say asters, zinnias, marigolds and corn flower. Sweet alyssum and mignonette fit into this arrangement.

9. This is a good time to plant cannas.

10. After the young plants are up four inches begin to thin out. Thin so that they stand at the proper distances apart. Be sure to keep the sturdiest.

11. Note the following distances for thinning some of the most common garden flowers: Alyssum, 6 to 12 inches; aster, 1 foot; canna, 2 to 6 feet; marigold (African variety), 15 inches; French marigold, 10 inches; and dwarf, 6 inches; zinnia, 2 feet; poppy, 9 to 18 inches.

12. It would be well this year to slip a few perennials into your gardens along with the annuals. Hollyhock, perennial phlox, larkspur, foxglove, and harebells are worth having for fixtures in the garden.

If you start certain perennials very early they will bloom the first year. It is too late for that now but write this list in your diaries and start a few anyway: Sweet William, snapdragon, perennial coreopsis, larkspur, Iceland poppy and forget-me-not.

13. Consider, therefore, as you work out the flower garden color, the time and duration of bloom. Add these facts to your garden diaries. Note what effect the season has on both. One may often make a second sowing of annuals and so keep the garden constantly blossoming.

14. A garden bench or a garden seat, a summer house and tool house covered with vines, add to beauty and fill a need in the garden.

CONTEST BULLETIN — Do not delay entering the children's garden contest. If you have not received a contest poster send directly to us for one. This poster tells all about the classes of entry and the prizes too. These latter are sets of books, single books and free subscriptions to THE GARDEN MAGAZINE. The books are garden and nature books, which will help you garden better and more intelligently. You will understand the outdoor world better too.

This contest is not only for individual boys and girls but it is for schools as well. Your entire school may enter. The prizes are sets of books for such good team work, as schools do in their big gardens. Community gardens are not left out of this either, for these may enter on the same footing as the school gardens. Make your entry at once.



THE HOUSEKEEPER

Vegetables for Next Winter

By M. ROBERTS CONOVER, New Jersey

CANNING vegetables is not a difficult process — in fact, it is exceedingly simple. Perfect cleanliness and long cooking are the two secrets of success. And to ensure their keeping until winter, have a cool dark store room.

It is a safe rule never to use for canning any vegetable that has passed its perfection. Peas that have begun to harden, tough asparagus, beets that are stringy or beans past the tender brittle state will hardly repay one. Asparagus should be canned early in June as there is frequently a tendency to grow bitter later in the season. Follow with peas, tender young onions, string beans, beets, tomatoes, corn, lima beans, etc.

For vegetable canning use glass jars and thick rubbers. The older Mason and Lightning types are satisfactory for peas, beans, and small vegetables; but with asparagus and whole tomatoes, the newer, wide-mouthed, straight-sided jars are more convenient.

Wash and rinse the jars, immediately before filling, in scalding water. Incline the cans so that the water runs into them as soon as the outside surface comes in contact with it, and roll them over quickly.

With a few exceptions the raw vegetables are placed in the jars; cold water enough to fill them is poured in; the covers are laid or screwed on loosely and the jars then set in a tank of cold water which should boil for three hours. The water in the tank need not be higher than three fourths of the height of the jars, but the sides of the tank should be at least four inches above the tops of the jars. The

tank should be covered during the boiling. Cloths laid around and under the cans will prevent their breaking.

When the cooking is within half an hour of completion, pull the tank to the back of the stove, remove the covers, and refill the jars with boiling water. The rubbers are placed in position and the jars sealed and allowed to continue cooking to the end of the required time. When the jars are cold, give the screw tops an extra twist.

Asparagus. Wash the asparagus thoroughly. Cut the spears to a length to stand upright in the jars. Add a little salt to each jar and fill to the rim with water. Cover, set in a tank of water and cook as described. Or, cook the asparagus for ten minutes in salt water. Drain off the water. Arrange the asparagus in jars as described and cook. This method is best if the asparagus is bitter.

Peas. Gather them before they become the least overgrown — a day too long on the vines will spoil them. Shell and place immediately in jars. Add salt, fill the jars with water and cook the same as asparagus.

Wax and green beans are delicious if taken in the tender, brittle state before the young grains have grown. Remove the strings, wash and cut in half inch pieces. Put into jars, pressing down tightly. Fill with water and add a half-teaspoonful of salt to each jar. Boil as usual.

Young onions. Remove the tops and the outside skins. Wash them and fill the jars. Let them cook about two hours. Add two tablespoonfuls of boiling vinegar and a little salt to each jar before sealing.

Beets. Young beets are delicious if pulled when less than an inch and a half across. Wash them and cook until tender in boiling water. Skin and slice rather

thin into jars. Lay the covers over them and set at the back of the range in a pan of boiling water. Pour over the beets a boiling hot liquor made from one quarter part vinegar and three quarters water agreeably salted. Seal the jars and set them aside to cool.

Tomatoes. These should be thoroughly ripe. If green near the stem, they develop a disagreeable acidity in cooking. Be careful what kind of utensil you use for cooking tomatoes. Aluminum vessels are preferable; do not use tin and cheap grades of enameled ware. Pour boiling water over the fruit and draw off the loosened skin. Cut the tomatoes in half. Put them over the fire in a stewing kettle with water enough to float them and cook until tender. Have the jars in readiness. Dip in scalding water. Set on a warm, damp cloth, adjust the rubber at the top and fill with the cooked vegetable. Dip the covers in boiling water. Adjust them and seal. When cool, tighten the covers of all screw tops. Tomatoes will not keep if exposed to the light.

Tomatoes canned whole are especially nice. Use wide-mouthed jars which admit the fruit without crushing. Have the jars scalded. Fill with tomatoes. Pour boiling water into the jars and seal. Let them stand in a covered kettle of boiling water for fifteen minutes. Cool and store.

Corn. Use well-developed corn that has not begun to harden. Cut it from the cob with a sharp knife and pack it into jars, pressing it down tightly until the milk overflows the jars. Add no water. Adjust the covers, fasten them, and cook as is usual with the other vegetables.

Lima beans. Cook tender, place in jars, seal, and cook thus half an hour longer.



The kettle for cooking should be at least four inches higher than the jars

When canning tomatoes, keep the kettle of cooked vegetables at the boiling point



Something About Corn

SEVERAL years ago, I was not able to get a portion of my garden plot ready for planting until late in June owing to unfavorable weather and soil conditions. This land had a thick growth of scarlet clover, standing two feet high, which was plowed under, disked and planted, neither manure nor fertilizer being added. On June 25th I planted seven varieties of sweet corn—one row of Peep o' Day, two rows of Golden Bantam, two rows of Seymour Sweet Orange, two rows of Howling Mob, four rows of Crosby's Early Twelve Rowed, four rows of Burpee's White Evergreen and four rows of Country Gentleman.

Exactly two months from date of planting the seed, on August 25th, I picked seven ears of the Peep o' Day, and used this every day for a week before the Golden Bantam was ready. I also contrived to gather ears from this first row for about ten days after the first ears were ready. These rows were about 175 feet long, one stalk in a place and a foot apart in the row. This planting alone supplied three families with all the ears they could use, with donations to neighbors after the later four rows came on until the latter part of October when I had a large basket of good ears which we were eating every day in the shape of corn puddings, etc. These were gathered from the stalks of the White Evergreen and Country Gentleman before the stalks were cut off and removed that the land might be seeded with a cover crop of winter rye on the 25th of October.

Plantings of the Burpee Improved and the Fordhook Bush Lima were also made on June 25th which gave us a large supply of fine beans, beginning about the second week in September; and late seedling plants of the Chalk's Early Jewel tomato set the same day, gave us a great many bushels of fine fruits during September and October, being still loaded with fine fruits when cut down by frost. A quantity of fruit was taken from these tomato plants, when frost seemed likely to destroy them. They were placed under sash in an empty coldframe and from these I had an abundant supply until Thanksgiving Day.

Owing to my absence from home during the greater part of September I was unable to get exact dates regarding the time when the different varieties of sweet corn were ready for use with the exception of the Peep o' Day.

Pennsylvania.

E. D. D.

The Oyster Plant

TWO years ago, while walking through a New England lane, late in summer, I was attracted by an unfamiliar plant that had gone to seed just inside of the fence. So I picked three of the long brown seeds, carried them home and the following spring planted them in one of my hardy borders. They all came up and last year, at the end of May, these plants began to blossom. Imagine my astonishment then to find, through a random inquiry of one with more botanical knowledge than I possess, that I was actually harboring the oyster plant, or salsify, in my flower garden. But *Tragopogon porrifolius* is right welcome there, for I am quite taken with its graceful whitish green foliage and its large composite flowers of dull purple, each borne high on a single stem and closing by noon. The vegetable is a biennial that, it appears, has been naturalized in not a few places.

H. S. A.

A Novel Trap for Insects' Eggs

A SIMPLE and effective way to destroy the eggs of the elm-leaf beetle, the gypsy moth, and other injurious insects, is to spread at the base of the tree where they have appeared a mat or blanket of soft hay or grass-cuttings laid on in a rather thick mass about a foot wide. Do this in June when the mature beetles come down to deposit their eggs, and allow to remain on undisturbed until into July. The beetles will nest beneath this grass-mat, and lay their eggs therein, believing it to be a safe place.

In July, upon lifting the mass carefully, the eggs will be found through and beneath it, just as ants' eggs will be noticed distributed in an ant-hill. It needs only a match to settle the pests, and a little extra rubbish to make the flames sharper will make the extermination more certain.

This method will apply to trees too large and high to be sprayed easily, or without incurring considerable expense. Last year the base of a huge elm and its trunk, this last as high as could be reached, were scrubbed with strong soapsuds and kerosene mixed, applied with a broom, with good results. This year, without labor, this simple grass-mat and a few matches, as described, made a neat extermination of eggs by the thousands which would otherwise have developed.

Connecticut.

VIRGINIA HULL.

How to Make a Space-Saving Bean Trellis

LAST summer we were so disgusted with unsteady and unsightly bean poles that had been in our garden that we concocted a firm and simple trellis from four poles set in a straight line and about a foot apart. The tops of the two inner ones were made to touch and the two outer ones were set at a greater angle, so that all four could be firmly tied together at the top. This fanlike trellis was a great improvement on the old single pole method, for more vegetables were raised on a given space and cultivating and picking are easy. We used to set one pole every four feet; now we place four poles in a 3-foot space.

Pole beans were not the only vegetables raised on this sort of trellis. Four tomato plants were so grown in the space usually given to one. The plants were well pruned and neatly tied as far as the top where they were cut, making a compact, attractive looking trellis, especially as the tomatoes were of different fancy varieties. Another advantage that this sort of trellis has is that the poles are tied and sawed off at a height that is easily reached by the picker, which does away with the vegetables ripening out of reach and thereby shortening the season. Straight poles were selected to give a trim appearance and the whole row is made even in height. Make a trellis like this for your beans this summer and see how much neater the garden will look.

New York.

I. M. ANGELL.



A four-pole bean trellis which saves space in the vegetable garden

A Vigorous Anemone

I USED to think that the beautiful Japanese 'anemone (*A. Japonica*) was in the "hard to grow" class. Now it seems to me that it would not be easy to kill it. All it asks, I find, is moderate moisture and many years between moving days. The most vigorous Japanese anemones that I have ever seen have not been disturbed for a decade, for which reason also they bloom earlier. Although these are growing with a full exposure to the sun, my experience is that, for the ordinary



Japanese anemones like these demand a fairly moist soil and years of undisturbed growth

home garden, partial shade is better. It is not only less difficult to keep the ground moist, but if, as in my case, the shade is from overhanging tree branches it is unnecessary to watch out for Jack Frost. For winter protection I use only a moderate amount of leaves. Queen Charlotte, single pale rose; Whirlwind, semi-double white; and Alba, single white, are, in my opinion, the sure winners. I have been very successful with planting offshoots in summer, but spring is the safest time, by all odds.

Connecticut.

T. B. E.

Color Near the House

THE following arrangement for continuous and harmonious bloom in front of the house has proved quite effective with us. Close against the house *Spiraea Van Houttei*, a white cloud of small blossoms early in the spring, forms an effective background of green for the rest of the season.

Planted rather thickly in front of the spiraea are *Tulipa Gesneriana*, var., major, edged with *Arabis albidia*, followed by many plants of rich crimson, ever-blooming sweet William (*Dianthus latifolius*, var. *atrococcineus*), which lasts until hard frost. *Lilium speciosum*, var. *rubrum* grows among the spiraea and blends beautifully with the crimson flower of the sweet William.

Gladiolus—America, and other varieties in delicate pink with crimson blotches—are planted at the back of this bed for late bloom, and the edge of the bed is bordered with sweet alyssum Little Gem.

This summer I expect to try some plants of *Nicotiana Alaka*, so that we may enjoy its perfume in the evening, while we are sitting on the porch.

Minnesota.

MRS. S. A. GILL.



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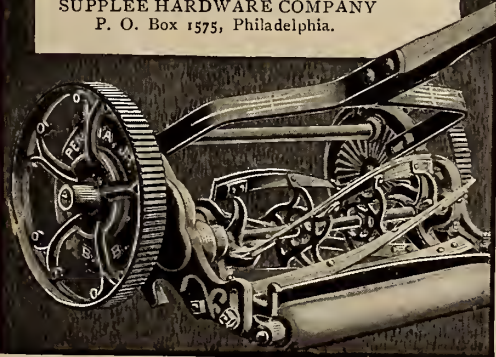
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Do You Smoke Advertising? or Cigaretts? Read This

The usual way of putting a new cigaret on the market is simply to put the same old cigaret into a new box, and *whoop 'er up!* A big selling organization and big advertising are brought to bear and *big sales are the result.* When the novelty of the *new label* wears off and the public is ready for a change, *the process is*

repeated—and the patient public goes on *smoking advertising*—not cigaretts.

For fifteen years the public has been *stampeded* from one cigaret to another in just this way, and about the only change it ever gets is from a red box to a blue one and back again—with an occasional dash of brown. In short, the average cigaret is not a *smoking* proposition, but a *selling* proposition.

The Makaroff business is different. I started the manufacture of

MAKAROFF RUSSIAN CIGARETS

because that was the only way I could be sure of getting *the kind* of cigarets I wanted. It has grown because there are a lot of other folks who want *that kind* of a cigaret. And the number grows just as fast as people find out *what kind* of a cigaret Makaroff is.

Just let this fact sink into your consciousness and stay there—*this business is* and *always will be* operated to make a *certain kind* of cigarets—not merely to do a *certain amount* of business. I always have believed that if we produced the quality, the public would produce the sales. And that faith has been justified. Makaroffs are really different from other cigarets—and the difference is all in your favor.

You will find that you can smoke as many Makaroffs as you want without any of the nervousness, depression or "craving" that follows the use of ordinary cigarets.

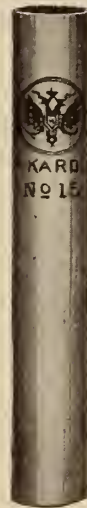
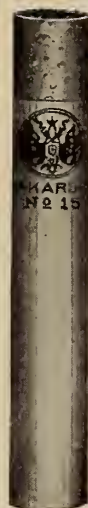
Makaroffs are absolutely pure, clean, sweet, mild *tobacco, untouched by anything whatever* to give them artificial flavor, sweetness, or to make them burn.

Pure tobacco won't hurt you. You may not be used to it, and you may not like the first Makaroff, but you'll like the second one better, and you'll stick to Makaroffs forever if you once give them a fair chance. We have built this business on quality in the goods and intelligence in the smoker—a combination that simply can't lose.

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THIS company is one of the largest rubber hose manufacturers in the world. We make many kinds of hose, for all purposes. We ought to know what process makes the hose that is really cheapest.

We have carefully tested the rapid processes of making hose, and deliberately decided to stick to our **old, slow process**.

Why? First, because the new rapid-process hose will not stand the tremendous pressure which Hamilton-Made hose must stand in testing. It is not strong enough.

Then time has proved that the stiff, springy, hard-to-kink hose produced by our slow process is in the long run the *cheapest* hose that can be made, because it *takes so long to wear out*.

The *lasting* quality of hose cannot be told by examination when it is new. You would probably think our 15-cent hose as good as our 25-cent hose; but after six or eight years' use you would find that the 25-cent hose was actually cheaper than any lower-priced hose.

Buy hose that has the **maker's name** on it. It's your best safeguard. If it is good hose, don't you think the maker will want everybody to *know* that he made it?

There's a HAMILTON-MADE HOSE for every different use, each grade made **BETTER THAN IS NECESSARY** to meet the requirements for that use, and **GUARANTEED** to stand a **SPECIFIED PRESSURE**. Whatever kind of hose you need, ask the dealer for **HAMILTON-MADE**, and you will be certain of getting the **BEST HOSE OF THAT GRADE** that is made.

Here are some of the leading grades of Hamilton-Made Garden Hose. Note that every label bears the words **HAMILTON-MADE**



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SOME dealers do not sell the highest-grade garden hose. They argue that everybody wants low-priced hose. We know better, for we know that our stiff, strong, tough "HAMILTON" brand hose is really the **CHEAPEST OF ALL**, and that many wise buyers will be glad to get it. We therefore make this offer to all who cannot buy it of a dealer:

If your dealer does not keep it, we will deliver to you anywhere in the United States, **PREPAID**, 50-foot lengths of **HAMILTON** brand, our highest grade garden hose, complete with standard brass couplings, for the regular price, **\$12.50 EACH LENGTH**.

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Trenton, New Jersey



What Has to Be Done Now

MANY vegetables are ready for harvesting during this month, among them being onions and white potatoes. Peas are usually through bearing, and something should be planted in their places. Plant late corn and melons now; also sow seed of cucumber for pickles. They are easily grown on almost any soil.

The yard long beans should be ready for use now. If the pods are gathered young (that is, when about half a yard in length) and cooked like snap beans they are good, but when they are much longer than that they are fit only for cow peas. If you are growing these beans, save the seed from the most prolific plants, and in a few years you will have a fine strain of beans. Keep the pods picked off the other plants, not allowing any to make seed, and they will bear until frost.

After harvesting oats, sow cow peas and sorghum cane for hay, or plant Early Prolific corn. Use a peck of sorghum and three pecks to a bushel of cow peas per acre. Clay cow peas are best, as they make the most foliage.

Continue to sow collards, which are excellent after being touched by frost. They are also an excellent food for chickens in winter.

Sweet peas are usually through flowering by this time. But try sowing a few seed during the month for flowers in the fall and early winter. Nasturtiums can be planted any time up to the last of July.

If there is not a canning factory in your section where you can dispose of your superfluous fruit and vegetables, get a small canning outfit and can them, rather than let them go to waste.

Don't allow cannas to make seed. They cannot do two things at the same time—make seed and produce fine flowers.

Plant some more strong gladiolus bulbs in rich soil during this month. Strip the sage plants of their longest leaves, dry in shade, and when well dried put up in tin cans.

Sow seed of tomatoes at once for late crops. The old plants will usually continue fruiting, but the tomatoes will not be as good as those from young plants.

Seed of late varieties of garden peas may be sown during the month in moist places. Cutting from sweet potatoes and tomato plants may be set out during the month when the weather is favorable. Do not cut the vines of sweet potato plants too close. Sow rutabagas from the first of June to the first of August, but only when there is *plenty* of moisture in the ground.

Watch for potato bugs on the eggplants. They destroy them in a very short time.

Don't allow over-ripe fruit to remain on the trees. Take it out of the orchard; it is just as important to keep the orchard and the fruit trees clean, as it is your poultry yard and poultry. It is also important to keep the orchard free from weeds and grass.

Georgia.

THOMAS J. STEED.

Flowers for the Fall

AN excellent hardy flower for September and October cutting is *Catananche carulea*, which looks like a blue-flowered oyster-plant on onion-like stems, rising from a dense rosette of needle-like leaves. It is hardly strong enough for a mass effect in the garden, but cut flowers during the last week in October are not to be despised by people who have no greenhouse.

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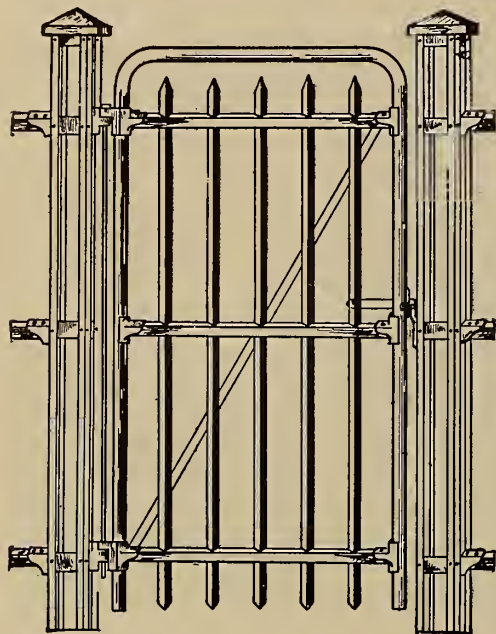
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How to Make a Dibble

A MOST serviceable dibble, and one which will not bend or break no matter how much hard usage is given it, is one made of a piece of an old buggy spring, the older the better.

Take the top spring and get a blacksmith to cut it off about eighteen inches in length. In nine cases out of ten a hole will be found about four or five inches from the big end of the spring, at exactly the proper place for a screw. Use a piece of old sound broom handle about seven or eight inches long for the handle, make a nick in one end with your pocket knife, slip the piece of spring into it until it fits nicely, and then insert a screw. Screw it up tightly. A small strand of wire wrapped tightly as shown in the illustration will suffice to hold the parts securely for all time.

The buggy spring tapers to a sharp end, which gives the proper shape to the dibble. Tennessee.



A dibble made from part of an old carriage spring and a broom handle

J. W. BIGGERS.



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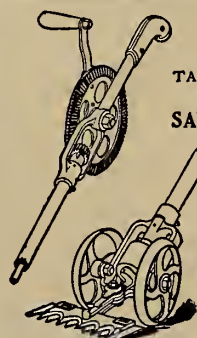
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GARDEN PROFITS, BIG MONEY IN SMALL PLOTS.

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During June and July one of the prettiest and most effective of the native wild flowers that adorns the rocks and flourished there is the wild pentstemon (*Pentstemon pubescens*). It grows on the drier ledges and does not seem to care particularly whether it has any copious moisture at its roots or not. Growing on the prairies it is a rather straggling plant, the racemes being often two feet tall. On the rocks, the inflorescence is compact and rarely ever a foot in height.

This hoary pentstemon, together with columbines and the harebell (*Campanula rotundifolia*), furnish the showiest of the rock plants of late May



A typical Nature-planted rock garden along the Illinois River

and June along the Illinois rivers. Later come the asters, and there is seldom a little ledge or crevice that has not been preempted by some sort of an aster. Occasionally a fringed gentian appears in a shaded, moist nook, but, like the harebell, they are usually found on a ledge below an outward bulge of the rock and are inaccessible for photographs.

The accompanying photographs show bits of the natural rock gardens along the Illinois River. Illinois. SHERMAN R. DUFFY.

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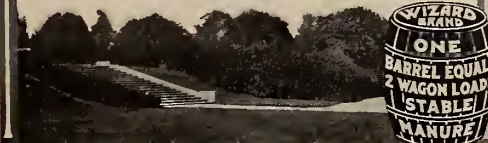
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Summer pruning is accomplished by rubbing off buds, shoots and superfluous fruits with the thumb and finger. This does not bruise or mutilate the surrounding bark, and the juices of the plant are not wasted but at once begin their work of healing. In some instances where shoots have been removed, the process may have to be repeated to remove growth arising from supernumerary buds. Only the tender shoots can be removed in this way, however, as wood that has hardened is too rigid and too closely connected with the sap flow of the tree to be removed until after the growing season.

Summer pruning ought to begin with early growth in May and continue until late in the summer as occasion requires. The nature of the plant's growth must be considered in each instance. Blackberries, whose rampant growth produces long canes, are made to give a better fruit yield by simply pinching the tip of each cane at the desired height and also the tips of the upper branches. In the case of the quince, however, which fruits from the terminal buds, this treatment would diminish the crop of fruit. Apples, pears, plums, and peaches bear fruit laterally.

The summer pruning of the grapes consists in removing buds below the arms and superfluous buds along the arms supporting the fruiting canes. In the case of young vines, all fruit clusters are removed from one-year old vines, one cluster is allowed to remain on each cane of the two-year old vines, and two on each cane of the three-year old vines. Prune by pinching out the tiny cluster,



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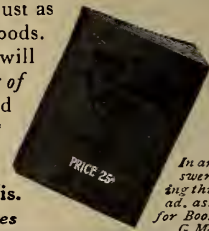
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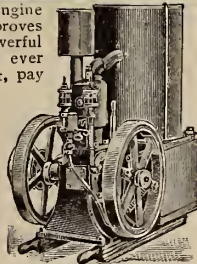
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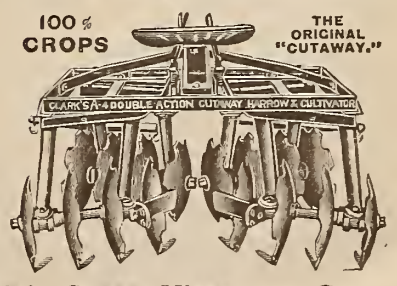
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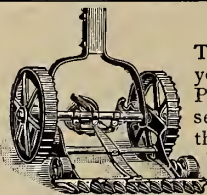
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leaving the surrounding leaves. In the case of the one-year old vines these may be removed while yet in the blossom, but in older vines they are allowed to develop to well-defined berries before pinching.

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of the blossoms, their neighbors of corresponding blooming time would better be either white or yellow. Though this is, perhaps, the showiest, there are other desirable species of gay feather—called also blazing star and bitter snakeroot. Of these *L. elegans* and *L. spicata* are especially good. I find that the gay feather does well in ordinary garden soil, but with me it has a tendency to rot at the roots.

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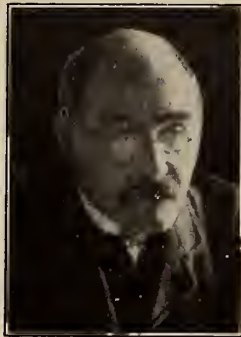
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Plum Trees In the Poultry Yard

IN NEW YORK STATE it is a fact that European and Japan plums are, with the same culture ordinarily given apples, sour cherries, pears, and other hardy tree fruits, a much more uncertain crop. I have planted European and Japan plums in Southeastern New York in the same orchard with other hardy fruits, and many of the plum trees in the last ten years have died, or become diseased and are not productive. The European plums are still our main dependence for dessert plums of high quality, but they are not at home in the climate and soil of New York. They generally bear well for a few years, then show signs of weakness and decay, and become infested by the black knot and curculio.

The only place where one can grow an abundance of European and Japan plums without the "eternal vigilance" required for orchard culture, is in the poultry yard. In order to keep a plum tree vigorous and bearing, it needs good feeding, frequent cultivation, and the total destruction of the curculio and black knot. There is no place where all these can be done so easily as in the poultry yards.

When feeding the poultry, shake the trees so that the curculio will fall off and be eaten by the fowls. At the same time, if black knot is starting on the trees, cut it off immediately. Keep the soil in the poultry yard loose by spading or plowing. Then scatter some grain in the soil around the trees, cover it with soil, and the fowls will, by scratching, keep the surface constantly stirred. The droppings of the poultry, supplemented with wood ashes or potash in some form, are a better fertilizer than one can buy.

There is a right way to plant plum trees in the poultry yard to get best results. Order two or three-year-old, No. 1 trees from the nearest reputable nursery, and plant them early in the spring. When the soil is sufficiently dry, plow it. After



Plant plum trees in the poultry yard and have healthy trees free from curculio

plow and plant the trees in straight rows, at least fifteen feet apart. The plow will open up a deep furrow. Root prune the trees by cutting off broken roots, and shortening others to about one-third the length, with a clean slanting cut. Place the tree in position, so that it will stand a little deeper than in the nursery, and scatter fine rich surface soil over the roots. Press it around them with the feet; then draw in more soil, and press down again until the roots are covered a little above where the tree was budded, or grafted. Place small stones around the tree, to prevent the hens from scratching away the soil, and prune it to balance the roots, but do not head the tree quite so low as for orchard culture. Three or four feet is about right. As the trees grow prune them

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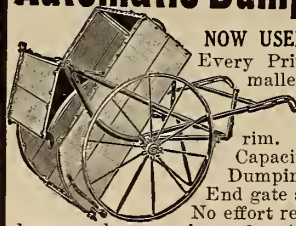
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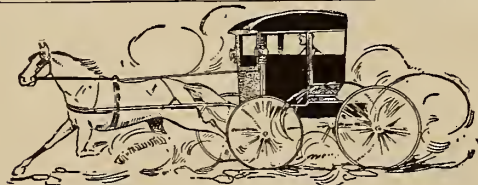


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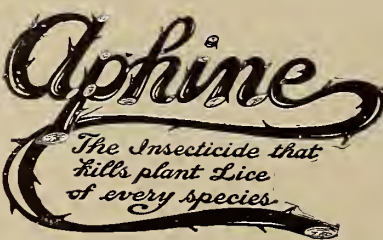
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to the upright vase form, watch for black knot, and spray with Bordeaux mixture to prevent leaf blight. A frequent plowing or spading of the yard will help to keep the trees growing, and, as everyone knows, a vigorous, thrifty tree best resists disease.

When selecting varieties of plums for planting, one must be governed by location. In Southeastern New York, the best European varieties which will thrive under the conditions I have described, are Reine Claude, Damson, the prune varieties, Bradshaw, etc. Lombard is the easiest to succeed with, but the fruit is not first quality. A few Japan



Shropshire Damson, a little larger than the common Damson and the most popular of its type

plums are desirable for canning, as they produce large crops, Burbank, Abundance, and Red June being among the best. The native American varieties of the Wild Goose type will live longer than any mentioned, but they are so hardy they can be grown successfully under the same conditions as the apple or pear.

The principles of plum culture are the same whether the trees are grown in poultry yards or in an orchard. My points are that it is easier to succeed with them in a small way if the trees are planted in the poultry yards; that maximum crops of the best dessert plums can be grown with a minimum of labor or attention; and that people who would otherwise neglect the trees will take care of them if they are planted in places where they can be seen daily.

New York.

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Since my sixth year when I "planted" a cake of chocolate because an older boy told me chocolate grew, I had always tried to garden but had for the most time dwelt in city blocks where the most general ideal of a back garden was a small



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space well paved. About the time I finished college a friend offered me the use of a vacant lot next his suburban home, an offer I quickly accepted, for though it could never be a real garden I could grow things on it, in particular a collection of the German iris of which I was very fond.

No one but the collector can know the joy I got out of carefully selecting the first three dozen varieties, or the virtue I felt in cutting out those I couldn't afford. Finally they came from their respective nurseries and were planted by moonlight, not for luck but because I was very busy and that suburban lot was far from home. After that was done I made a card for each variety giving its name, description, source, and plenty of room to indicate its worth and its likeness to other kinds. Then I waited for spring and, in spite of the oldest inhabitant, I will always believe that was the longest winter we ever had, but at last it came and by June most of those irises were in bloom and receiving as much attention as the prettiest girl in that community. In August I added a few new ones and then something happened—a man who called himself my friend gave me a catalogue with over a hundred varieties of iris I had seen and could never pay for without stealing. That I remained honest is largely due to the first plants I bought, for by their increase I paid for all additions to my collection from that time. They were now fine large clumps, and the fine show they made growing on that vacant lot and as cut flowers in the homes of my friends brought me so many inquiries as to where they might be obtained that some other advertising I had planned proved unnecessary. I now learned for the first time that many flower-lovers, mostly women, never look at a nursery catalogue but will readily give orders from flowering specimens, especially if directions for planting and future care are promised.

I soon found the most satisfactory way was to accept no order for less than a dozen plants (price two dollars), varieties to be of my choosing, but to include any specially asked for. In late August I took up the clumps, separated them into single roots, labelled the varieties, made up my orders and delivered them myself in a suit case. This often enabled me to suggest the most suitable place for planting, but in every case I enclosed with each lot the following typewritten instructions: "Plant these irises at least eighteen inches apart to allow room for growth, and do not bury the thick, fleshy rhizome, but only cover it with sufficient soil to nearly hide it. Preference should be given to a light soil, but any fair garden loam will do. Richness is not necessary, but if manure is used, let it be well below the roots as with bulbs, never in contact with the rhizomes. Unlike the Japanese iris these are not water-loving plants but prefer rather dry, raised beds in a sunny position; they even enjoy a good roasting in mid-summer. Transplant only when crowded or to increase your stock, and this is best done about the middle of August as the new growth beginning at that time will enable them to get established by winter. Leaves are the best winter covering. If your iris are ever attacked by the bacterial disease which causes the stems to rot off, remember that a few days of sunshine will stop this, but if badly damaged the best thing to do is to take off the young outer growths and start a new bed."

I append a list of the dozen varieties most often selected, and I cannot recommend a better lot for the beginner as all are quite distinct kinds, good growers, free bloomers, and together they cover a wide range of color. This list does not include the glorious pale blue Pallida Dalmatica, the royal purple Asiatica or the dainty blue and white Victorine as these increase rather more slowly. Germanica, blue and purple, early and vigorous; atropurpurea (Kochii), dark reddish purple, early; Florentina, almost white, early; Flavescens, pale, creamy yellow; Celeste, a sky-blue pallida variety; Queen of May, beautiful lilac pink; Jacquinianna, Queen of the Gypsies or Dr. Bernice, similar varieties in copper and maroon; Madame Chereau, white, frilled with blue; Gracchus, yellow with purple, white-veined falls; Darius, pale yellow with lilac falls; Mrs. H. Darwin, dwarf white slightly veined violet; Hannibal, lavender with purple falls.

Canada.

S. B. M.

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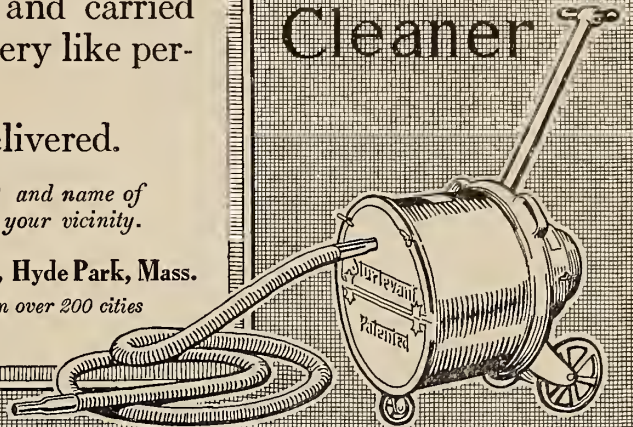
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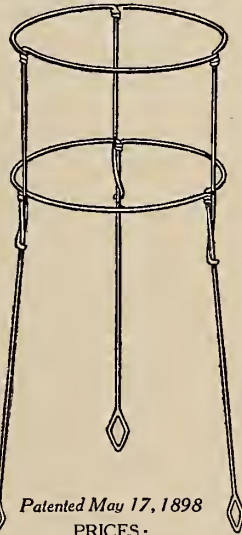
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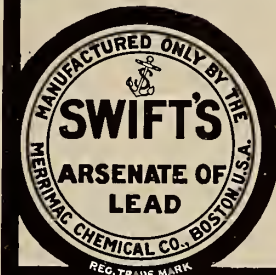
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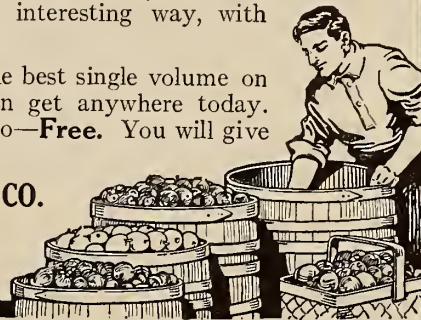
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CLOVER SEED

How much clover seed can be raised to the acre? **Arkansas.** **W. W. D.**
—An average yield of clover seed is one to two bushels per acre, although five to six bushels are sometimes obtained. The second crop of clover is the one that is used for seed, because the first-crop heads are seldom well filled out. For seed purposes the clover should be cut when the heads or blossoms are well browned or ripened.

HARDY BULBS

Why is it necessary to lift hardy bulbs every year and store them over winter? **Wisconsin.** **J. H. F.**
—The reason for taking up hardy bulbs every year is that the standard of quality may be kept up by sorting out the flowering size each year for replanting. They may, of course, be left in the ground if one wishes to do so, but they are apt to get too thick and the size of the blossoms consequently decreases and new, or offset, bulbs may not flower at all!

RENOVATING NEGLECTED APPLE TREES

I have on my farm a few seedling apple trees which have been neglected and are full of suckers. Would it pay to trim, fertilize and graft them? **Vermont.** **F. M. B.**
—It certainly would be profitable to treat the trees in the way suggested. The method of doing this depends on the size of the trees. If they are small, top work the whole tree. All the nursery stock of named apples is formed from common seed stock grafted over with the named varieties. By all means, try the experiment. Read "The American Apple Orchard," by F. A. Waugh.

COAL ASHES

When coal ashes are suggested for lightening the soil, should hard or soft coal ashes be used? **Iowa.** **H. L. A. F.**
—It does not really matter whether the ashes are from hard or soft coal. There is more or less sulphur in any ash, but in well-burned ash, most of the volatile matter has been driven off. The amount of phosphoric acid and potash in coal ashes is very small, and therefore they have little value as a fertilizer. Soft-coal ashes contain more potash than those from hard coal, but it is held in such a firm combination as to be of but little value to the soil.

APPLES FOR ALL YEAR

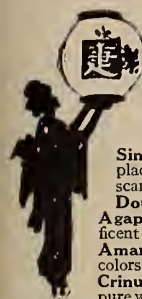
I want to plant an apple orchard in Connecticut; what varieties shall I use? **Connecticut.** **G. H. L.**
—For early apples, plant Benoni, Bough, Chenango, Early Harvest, Early Joe, Garden Royal, Golden Sweet, Jefferies, Maiden Blush, Porter, Red Astrachan, Williams, Yellow Transparent. Mid-season varieties: Dyer, Fall Pippin, Fameuse, Gravenstein, Mother, Oldenburg, Rambo, Tompkins King, Wealthy. Late: Rhode Island Greening, Bailey, Baldwin, Esopus, Grimes, Hubbardson, Jacob Sweet, Jonathan, McIntosh, Northern Spy, Tolman, Wagner, Yellow Bellflower, Sutton.

BULBS NOT BLOOMING

Narcissus and jonquils planted a year ago last fall bloomed freely and satisfactorily last spring; but this spring, although they came up thriftily, there were only two or three blooms. What was the cause of this and how can I prevent its repetition? **Kansas.** **J. A. E.**
—The reason that your bulbs did not bloom freely this spring is that you planted fully developed "mother" bulbs which, after flowering, broke up into smaller bulbs. These will have to be grown on for a few years before they again attain flowering size. If bulbs are planted very thickly—that is, so that they crowd each other—they are inclined to split up and in this case, also, the flower is lost. Bulbs planted too deeply will not flower either. The best way is to plant them from two to four inches deep, according to the size of the bulb, putting a little sand in the bottom of the hole for the bulb to sit on.

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Gloxinias, all colors.....	.60	4.00
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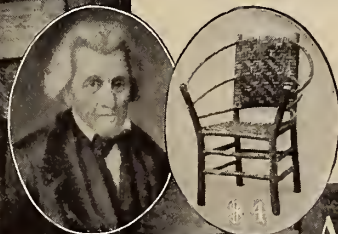
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You really ought to know the prodigious fertilizing qualities of Pulverized Sheep Manure—Sheep's Head Brand. How quickly it sprouts and blooms plants and flowers. How it enhances the rich tinty green of lawns, parks, etc. What fine flavor and succulence it imparts to fruits and vegetables.

For Plants, Flowers, Orchards, Lawns

Pulverized Sheep Manure—the Sheep's Head Kind, has no odor—is not unpleasant to handle—rots vegetable and animal matter in soil quickly—thus increasing the humus which gives food growth and vitality to all seed. In one pound (10c) and five pound (25c) packages. Let us send you pamphlet and quote you extra low price on 100 pounds—just to convince you. Write today.

NATURAL GUANO CO., Dept. 15, Aurora, Ill.



It's Rose Month Every Month If You Have a Greenhouse

Roses by the armful *every day*.
Roses, pink, white, and yellow.
Roses with the blush of the morning in their buds.
Roses with the sunset glow in their petals.
Roses with the delicate fleeting perfume of May.
Roses with the fragrance and vigor of June.

Surely there is nothing so satisfying, so ever welcome as the rose.

All the winter long you can revel in roses from your own rose garden, if you have one of our greenhouses. Not simply roses that anyone can buy in the shops — but roses that are personal acquaintances of yours — roses that you have, from day to day, watched and "fussed with a bit" — roses that mean concentrated sunshine, peace and joy to you.

That kind of roses — the kind that can only be grown in your own glass enclosed rose garden, — one of our greenhouses.

Our catalog illustrates and fully describes this particular rose garden. You may be interested to know that it is owned by a woman, and that 10,000 roses were cut from it last year. Send for catalog.

Build your rose garden now and get it planted so you can be cutting blooms early in September.

Lord & Burnham Co., *Factories:* Irvington, New York and Des Plaines, Ill.

NEW YORK: St. James Bldg. BOSTON: Tremont Bldg. PHILADELPHIA: Heed Bldg. CHICAGO: The Rookery

A Gardening "Costume" for Women

AFTER several seasons of experiment with all sorts of outdoor working dress, I have finally come to the conclusion that any sort of a skirt is an abomination. No matter what one does one should wear a fit and comfortable costume at least it should not hamper one's efforts, whether planting, weeding or hoeing. The inevitable feminine skirt gets in one's way. Perhaps that is an argument against woman's working in the soil, but if a woman's health and happiness lie in such occupation the outer woman at least may be allowed a privilege as to wherewithal she shall be clothed.

I, for one, have doffed petticoat and skirt in favor of a long coat; it sounds stylish and up-to-date to call it a "Russian" coat. Under this coat I wear riding breeches, varying in weight according to the weather. They are to be had in brown linen at the department stores for a trifle under three dollars. Those made of khaki cost a little more, but are most comfortable in early spring. The only sensible footwear is riding boots. I have the stiffening left out of the tops of mine; they are comfortable, walking or kneeling on the ground where one naturally spends considerable time. They protect the leg as no shoe could possibly do, and as they come well up over the riding breeches, which button around the calf, they complete a perfectly modest get-up.



Five yards of brown holland linen is sufficient to make the coat. Measure the length from the top of the shoulder to the length desired. I cut mine to reach two inches below the top of my boots. Cut three lengths, one for each front and one for the back. For the fronts lay a pleat on each shoulder about one and a half inches wide. Slope the shoulder seams to fit, and cut out a round neck. Lap the right front well over the left. Place the other width across the back, cut out as you did the front, omitting the pleats on shoulders. Now pin the back to the fronts in a perfectly straight seam under the arms; the strips that cut off under the arms will make the sleeves. Close the seams under the arms to within ten inches of the bottom. This gives freedom to the skirt of the coat. Cut the sleeves coat fashion, rather full, and finish with a cuff or band that buttons. I prefer the latter, as I can roll them up if occasion demands. I also finish the neck with a simple collar band and wear soft high stocks, or turn-over linen collars when the days are warm. When very hot, I discard collars and turn in a V neck. I also sew flat on the front widths two large pockets, which are indispensable for convenience.

Another advantage of this costume is its absolute comfort, no tugging belt lines to bother one. If the days are cool, a soft shirt can easily be worn under the coat, and heavier underwear under the breeches. Although made of heavy holland linen, the coat is at all times cool and protects my neck and arms from the burning sun, hence no freckles or other sun-made hieroglyphics. A large drooping straw hat completes a simple outdoor dress that insures comfort and protection. The coat is easily laundered and I advise shrinking the material before cutting.

It may not be amiss to suggest, for working gloves, those sold at the department stores called house-maid's gloves. They are made of cotton flannel and cost ten cents a pair with or without gauntlets. They wash easily and wear better than rubber or leather.

New York. ELIZABETH TYREE METCALFE.

WAGNER'S BEAUTIFUL BOX TREES

DIGNIFY the entrance of your place with these famous evergreens. Use them on your porches. Vigorous. Symmetrical. In artistic mission boxes.

Bush Box 18" high, \$1.75 ea; pair, \$3.00

Bush Box 24" high, 2.50 ea; pair, 4.50

Above are fine, broad, oval-shape trees.

Pyramidal Box 24" high, \$3.00 ea; pair, \$5.50

Pyramidal Box 30" high, \$3.50 ea; pair, \$6.50

West of Rockies shipped not planted to reduce expense.

Let us send you our Catalogue "PLANTS AND PLANS FOR BEAUTIFUL SURROUNDINGS."

WAGNER PARK NURSERIES

Florists Nurserymen Landscape Gardeners
Box 618, Sidney, Ohio



OLD ENGLISH GARDEN SEATS RUSTIC AND VERANDAH FURNITURE

Send for new Catalogue of many designs

North Shore Ferneries Co., Beverly, Mass.

AMES Cultivator and Seeder

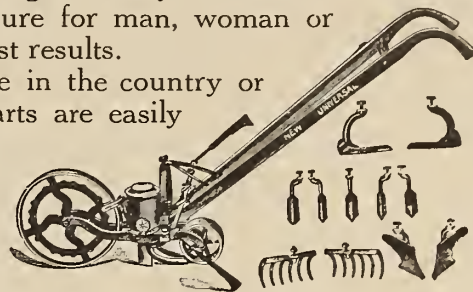
Is a Perfect Implement for the Small Garden

It has every part necessary for all kinds of hill and drill seeding and for both straddle and between the row cultivating and may be used with one or two wheels. It makes gardening a pleasure for man, woman or child, saves arduous labor and gives the best results.

For the family which has a small home in the country or in the suburbs it is the ideal outfit. Its parts are easily adjusted and the construction is the strongest. Adjusting three bolts changes it from seeder to cultivator. A child can use it.

Ask your dealer to show you an Ames Cultivator and Seeder and look for our name on the handle. It can be used with equal facility in all kinds of soils in every part of the country.

The Ames Plow Company has been manufacturing small and large agricultural implements for almost a century and knows what is best for the garden. If your dealer does not carry it write us direct and we will send you a catalog. In writing kindly mention your dealer's name. Address Dept. 1.



Ames Plow Company, Boston, Mass.



Little Garden



or BIG Garden—it doesn't matter. The one great authority for you is

The American Flower Garden

By Neltje Blanchan

Author of "Bird Neighbors," "Birds That Hunt and Are Hunted," etc.

This book reveals those little subtleties which bring delight to the home garden. The author has drawn from a vast knowledge of beautiful foreign and American gardens, and she points out the great principles of all good gardening. The present book covers adequately the needs of the amateur whose garden is either extensive or the reverse; and every fact among the thousands is made quickly available by a fourteen-page index. There are four plates in full color, and eighty plates of sufficient size adequately to treat the subjects presented.

WITH PLANTING LISTS BY LEONARD BARRON

Regular Edition, net price, \$5.00 (postage 35 cents)

Doubleday, Page & Company

Garden City, New York



TRADE MARK TRIUMPH LAWN CARTS

for Gardeners, Fruit Growers, Dairymen, Country Estates, and all outdoors. Made for those who want a good serviceable, always-ready cart that saves the lawn and the gardener's time.

We manufacture Hand Carts for every purpose. Delivery Carts, open and weather proof.

Booklet illustrating our full line on request.

From reliable dealers or direct from factory. We allow freight to all points east of the Mississippi and north of the

Ohio and Potomac Rivers. Write for free catalog. Special proposition to dealers. You should write.



No. 9 Lawn Cart. For every man or woman who has a lawn or garden. Box 20 x 37 x 5 inches. 26-inch side wheels. 1 3/4-inch rims. 3/16-inch spokes. Capacity 250 lbs. Price \$15.00. Light, strong, useful. Other styles and prices.

Swartwout
Mfg. Co.

201 Meadow Street
Clinton, N. Y.

No Leaky Rubber Ring.
No Glass Top to
Leak in Air.
No Poisonous Zinc
Cap

The only Absolute Air-tight, Sanitary Fruit Jar the

Economy JAR



Because it has no poisonous zinc cap—because it has no uneven and leaky glass top—because it has no leaky rubber ring to decay and admit air—but instead the ECONOMY JAR is made of clear white glass—wide mouth—with patent sanitary gold enameled cap with perfect air tight and tasteless composition attached to the cap which seals the jar AIR-TIGHT as no other jar has ever been sealed before.

White Crystal Glass
Wide Mouth

The ECONOMY JAR is made of clear white glass. Fruit and vegetables canned in ECONOMY JARS look handsomer and keep perfectly and without bleaching. Will not bleach or fade even in the sun, as there is no rubber ring used which in time leaks in air. *Leaking of air into a jar through rocky, uneven glass top or uneven screw top and leaky rubber rings is the cause of bleaching, moulding and spoiling of fruit.*

To advertise the air-tight Economy Jar we will give

FREE! TO BUYERS OF ECONOMY JARS

Holmes & Edwards Famous Sectional Plate Silver Tea Spoons.

THREE SPOONS with every case of Economy Jars.
ONE SPOON with every dozen extra Economy Caps.

Cut out "Hand-in-Jar Trade Mark" like this, shown on either end of each case of one dozen Economy Jars and mail it with 14c in U. S. stamps to cover cost of packing and postage, etc., and we will present to you one full size sectional plate Silver Tea Spoon made by the Holmes & Edwards Co., makers of the best silver plated ware in America. This is no "premium" spoon. On the contrary there is no finer silver plated ware made, warranted many years. Regular value \$4.00 the dozen or 35c each. Every case of jars has the trade mark on each end and also on carton of caps in each case.

If two or three spoons are desired cut out that many trade marks and mail with 14c additional for each spoon wanted. This gives you three spoons for 42c with each dozen of Economy Jars. Value of 3 spoons \$1.00.

Users of Economy Jars buying extra caps (price 20c per doz.) may cut out trade-mark on carton of caps and send it to us with 14c in U. S. stamps and receive one of these 35c silver tea spoons free.

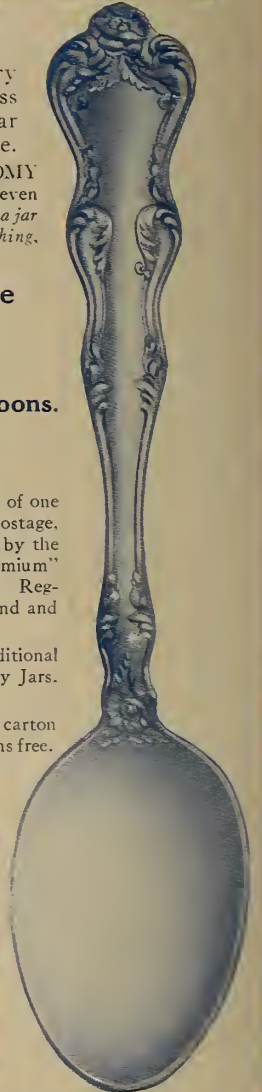
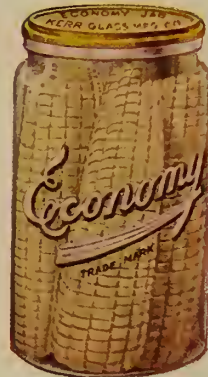
By using ECONOMY JARS you can have on your table in the summer time, with their rich, fresh, natural flavor, roast turkey, sausage, venison, trout, etc., canned in the winter months. Read this letter.

KERR GLASS MFG. CO., Rickreal, Ore., Jan. 4, 1909
Gentlemen:

I have used the jars for the past three years, and have found them very satisfactory in keeping fruits, salmon, chicken, mutton, beef, China pheasants, pork ribs and vegetables, and though living a distance from the markets, I am very seldom without fresh canned meat. Mrs. Cass Gibson

Put up asparagus, peas, corn-on-cob, tomatoes, rhubarb, in fact, all vegetables and fruits right from your own garden. After you have used the ECONOMY JAR once, you will say "I can keep them all in the Economy air-tight jar. No other jar like it. I will tell my neighbors."

To prove the superior points of the Economy Jar — to those who have never used it we give one jar FREE!



Free Tea Spoon

Cut out this coupon, go to your dealer today, get an Economy Jar FREE. Buy 1 doz. and get Free Spoons

FREE ECONOMY JAR COUPON — G. M.

This coupon MUST be filled out and presented to your dealer BEFORE July 1, 1911, to get free jar. See that the cap is stamped plainly "Economy Jar."

I certify I have received today free, one Quart Economy Jar complete (cap and clamp). This is the only coupon presented by any member of my family. I have never used Economy Jars. I will give the jar a careful trial at home canning.

Name.....

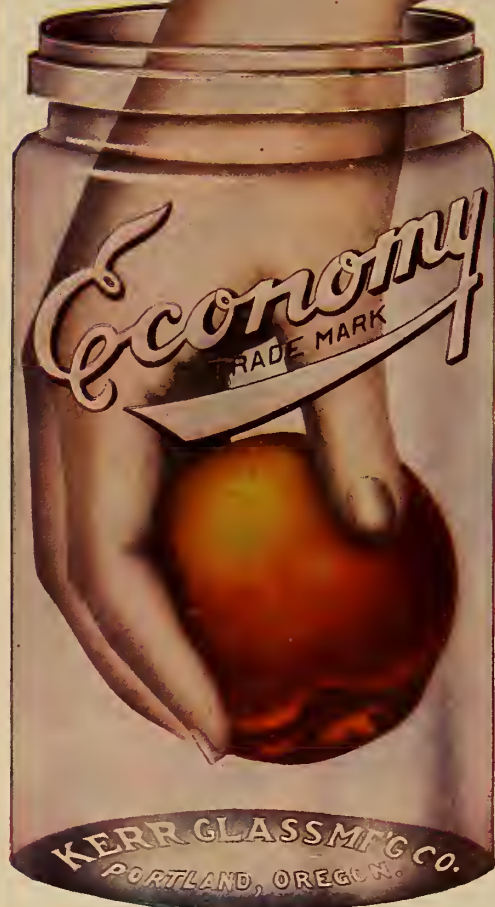
Address.....

To the Dealer: Coupons will be redeemed by your jobber at full retail prices when signed by you if returned before August 1, 1911. Void after that date.

This is to Certify that I gave away one Economy Jar complete, to the above signed person.

Dealer's Name.....

Address.....



Hand-in-Jar Trade Mark
READ THIS LETTER

KERR GLASS MFG. Co. Newtown, Pa., Oct 21, 1910
Gentlemen:

I think I was the first person to use the "Economy Jar" in this community and that was some six or seven years ago. We have used them every season since and have never had a failure. By their use we have fresh vegetables from our own garden all through the winter months, asparagus, beets, lima beans, sweet corn, wax beans, tomatoes, etc., etc. To my mind there is no other jar or method of preserving by which vegetables come to the table tasting just as fresh and sweet as though they had been freshly picked out of the garden. Respectfully yours,

T. J. Elms, Pastor, Presbyterian Church

Directions for Canning Meats, Fish, Vegetables, Fruits, etc.

Fruits may be cooked in a kettle poured into the jar boiling hot. Put the cap on and clamp instantly. Set jar aside to cool. When cool take clamp off. Try the cap to see that the jar is sealed.

Fish, meats, game and vegetables must be cooked in the jar, never in the kettle. Place raw food in the jar. Cap and clamp. Place in ordinary wash boiler — water to neck of jar. Boil time stated in book of recipes. Take out jar and work is done. In general, fruit requires boiling about thirty minutes. Peas, corn, string beans, about three to four hours. Fish, meats and game, four hours. When cool remove the clamp.

Be Sure to write us at once for Free Booklet of complete recipes and other valuable suggestions.

Kerr Glass Manufacturing Co.

Home Office
Portland, Oregon

Branch Offices
In principal cities
throughout the U.S.

JULY
1911

Vol. XIII. No. 6

Summer-Flowering Hardy Vines

Victorias Outdoors
Anemones

July Vegetables
Evergreens

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\$2.00 a Year

THE GARDEN MAGAZINE



FARMING

COUNTRY LIFE
IN AMERICA

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GARDEN CITY AND NEW YORK



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WORK

BOBBINK & ATKINS

World's Choicest Nursery and Greenhouse Products
VISIT OUR NURSERY NOW

The proper way to buy is to see the material growing. We shall gladly give our time and attention to all intending purchasers visiting our Nursery, and invite everybody interested in improving their grounds to visit us. Our Nursery consists of 250 acres of highly cultivated land, and is planted with a choice selection of Ornamental Nursery Products, placing us in a position to complete plantings and fill orders of any size.

BOXWOOD. We grow thousands of plants in many shapes and sizes. Everybody loves the aroma of old fashioned Boxwood.

ROSES IN POTS. It is important to leave the selection of varieties to us, while we have many thousands, we are frequently sold out of many varieties, causing disappointment.

BAY TREES. Our display of these fascinating Trees is larger this season than ever. We are growing many hundreds of perfect specimens.

DECORATIVE PLANTS. We have 250,000 square feet of greenhouses in which we grow Palms for conservatories, house and exterior decorations.

ENGLISH IVY. We are growing many thousands of specimens of English Ivies from 6-8 ft. tall in pots. These can be used for all kinds of decorative purposes.

OUR FORMAL ROSE GARDEN. This formal rose garden is now a permanent feature of our nurseries. We claim it to be the only commercial rose garden in the country laid out on so comprehensive a plan and established as a fixture for exhibition purposes. It contains over 500 varieties set out 7 or 9 to each variety. These will be in full bloom early in August and give you a most wonderful opportunity to choose your next year's order by seeing just the Roses you need to enliven or tone the color scheme of your garden.

EVERGREENS AND CONIFERS. More than 75 acres of our Nursery are planted with handsome specimens. Our plants are worth traveling any distance to see.

JAPANESE WISTARIA IN POTS AND TUBS. We have a splendid lot of Japanese Wistaria in pots and tubs, which can be planted now or any time during the summer.

TUBEROUS ROOTED BEGONIAS IN POTS. We have several thousand strong plants in all colors; white, red, yellow and pink; separate colors \$2.00 per dozen, \$15.00 per hundred.

HARDY TRAILING AND CLIMBING VINES. We grow in pots quantities for all kinds of planting during the summer.

TUBS. We manufacture all shapes and sizes. Ask for special lists.



OUR NEW ILLUSTRATED GENERAL CATALOGUE NO. 25 will tell you about the above and all our other products for lawns and gardens.

Ask for Autumn Bulb Catalogue

We Plan and Plant Grounds and Gardens Everywhere

WE CAN MAKE OLD GARDENS NEW AND NEW GARDENS OLD WITH OUR "WORLD'S CHOICEST NURSERY PRODUCTS"

VISITORS, take Erie R. R. to Carlton Hill, second stop on Main Line; 3 minutes' walk to Nursery.

BOBBINK & ATKINS

Nurserymen, Florists and Planters

RUTHERFORD, N. J.

TRADE MARK TRIUMPH LAWN CARTS

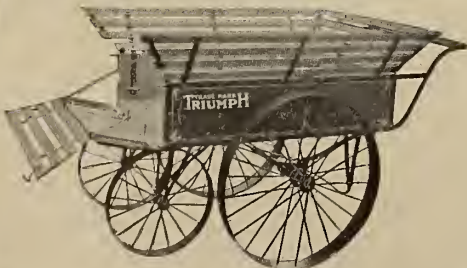
The growing grass season is at hand and the lawn mowers are working. Grass should not be left to die, but should immediately be taken away.

The Triumph Lawn Cart with its wide tires to protect the lawn is an indispensable aid at this time and saves the lawn, as well as the gardener's or your own time.

Send today for our illustrated literature. It's free,

Triumph Carts are made in a variety of styles and sizes for every purpose.

Reliable dealers handle the "Triumph"—or from us direct. We prepay freight East of the Mississippi River.



No. 8—Lawn Carts

Removable rack of hardwood strips, 38 x 53 x 8 inches, Box 27 x 42 x 10 1/2 inches. Side wheels 30 in., 1/4-in. spokes, 3-in. rims.

Built for lawn and garden use. Capacity: 1/4 ton. Shipping weight, 150 pounds.

PRICE, \$25.00

This is by far the finest cart of its kind for the suburban estate. Note the wide tired wheels. Rack can be removed in thirty seconds. Large estates buy these carts in quantities.

Swartwout Mfg. Co. 201 Meadow St., CLINTON, N. Y.

Triumph Carts are finished in Dark Green Body with Orange Stripping, Red Gears, Hardwood Rack and Handles, natural finish.

I Want You to Share My Superb Collection of Oriental Poppies

Acres of glorious Oriental Poppies now in bloom at Wyomissing Nurseries inspire me, more than ever, with the earnest desire to share their beauty with you—that you may know and love them, too. The Oriental Poppies that I grow here are distinct in their splendor—huge cup-shaped flowers sometimes eight or nine inches across: silvery white, salmon pink, crimson, scarlet, orange and maroon-black. A single flower is a wondrously beautiful thing; a mass of them forms a riotous color-picture that one cannot forget.

Oriental Poppies remain dormant for just a few weeks during August, and if planted then they are sure to grow and bloom freely the next spring. If you plan to increase your plantings, therefore, you should take the first step now by writing for particulars. I want you to have some of them next year.

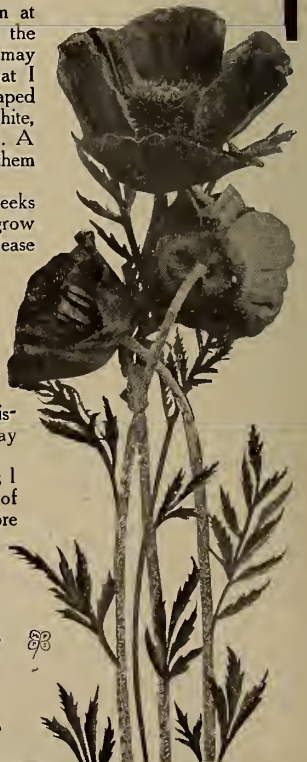
Tell me your experiences with your hardy garden. This is a subject of mutual interest; I'll be glad, in return, to tell you about the plants which are my hobby and delight, and which, from a collection gathered for my own pleasure, have expanded into Wyomissing Nurseries, the products of which have found their way into every part of the civilized world.

My new book on *Bulbs for Fall Planting* is ready; I will be glad to mail you a copy. A special discount of 10% will be given on all Bulb orders received before July 15th.

FARR'S NEW BOOK OF HARDY PLANT SPECIALTIES

will be ready to mail by September first. I plan to make this book, describing my great collection of Poppies, Irises, Peonies, Delphiniums, Phloxes, etc., more complete than ever, and as previous editions have brought me a great circle of warm friends it is my sincere wish that this one may serve to still further add to my comradeship with those who love growing things as I do.

BERTRAND H. FARR, WYOMISSING NURSERIES
643D PENN STREET, READING, PA.



OUR SPECIAL JULY CLOSING OUT SALE

is of

1. **BEDDING PLANTS**, all in bud and bloom; ready for your beds and parterres; **GERANIUMS**, red, pink, white, strong, \$6 per 100. **COLEUS**, red, yellow, black, all mixtures, strong, \$3.50 per 100. **PHLOX**, in full bud and bloom—all shades, \$6 per 100. **LOBELIAS EMP. WIL.** and **CRYSTAL PALACE**, in bloom, \$6 per 100. **SALVIAS**, out of 4 inch pots in bloom big plants, \$6 per 100. **ENGLISH DAISIES**, pink and white, \$4 per hundred clumps. **HELIOTROPES**, strong, \$6 per 100. **WAX** or **ICE PINKS**, in bloom, \$5 per 100.

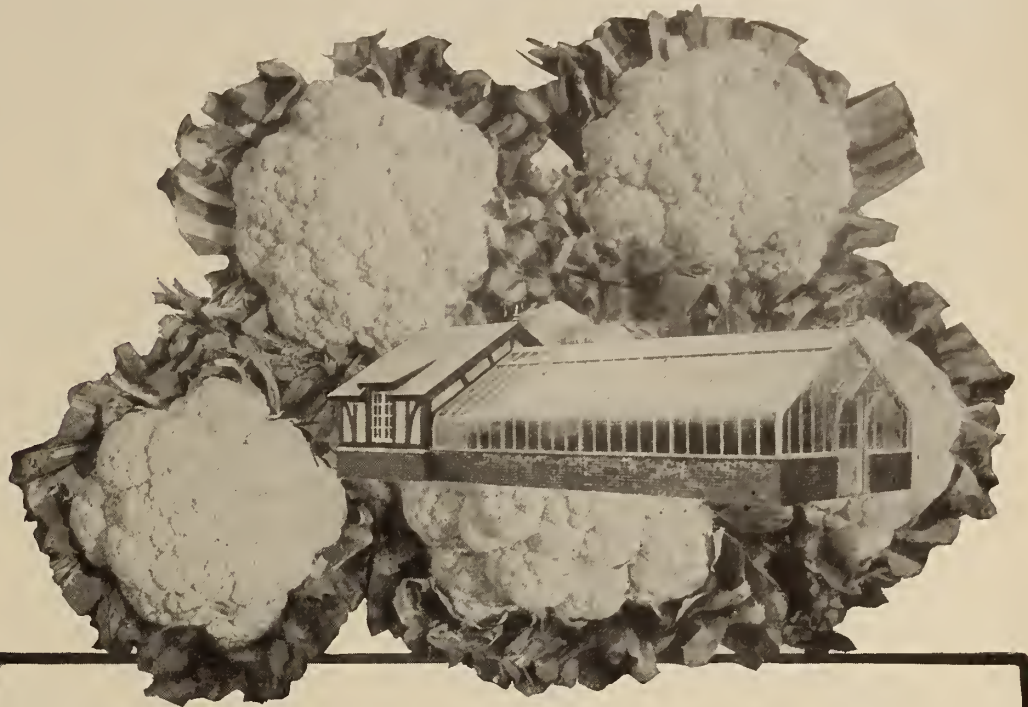
2. **CHRYSANTHEMUMS**, for fall blooming; plant now our strong pot plants—all colors, \$7 per 100—fine.

3. **FIELD CARNATION PLANTS**—ready now to plant into your greenhouses for winter blooming; **JULY** or **JUNE** benching gives best results; we offer **ENCHANTRESS**, **ROSE ENCHANTRESS**, **WHITE ENCHANTRESS**, **WINSOR**, **BEACON**, **WHITE PERFECTION**, all at \$8 per 100, large field clumps, **NOVELTIES**, **ALMA WARD**, **MRS. C. W. WARD**, **DOROTHY GORDON**, all at \$12 per 100.

50 of any above plants at 100 rate.

I. M. RAYNER

BOX 148 GREENPORT, L. I., N. Y.



JOHNSON'S KLEEN FLOOR FREE

Send postal for sample to prove that it takes out floor stains without injuring the finish and that you can restore original beauty to any hardwood floor, stairs, etc. Send postal now for Booklet Edition G. M. 7.

S. C. JOHNSON & SON, Racine, Wis.

STEVENS-DURYEA

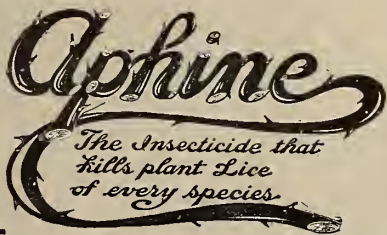
The ideal motor-car of three-point support
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STEVENS-DURYEA CO., CHICOPEE FALLS, MASS.

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is prepared to give impartial advice regarding the different suburban real estate operations now being carried on in New York City and vicinity

MANAGER
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Every living thing has its enemy. This fact is brought home to those of us who watch our own gardens. Hardly a plant sends out a green shoot but some insect comes along to destroy it. Aphine destroys these insects, and protects plants. Aphine is a concentrated liquid spray which dilutes readily with water and is easily applied. Aphine is endorsed by gardeners, nurserymen and country home owners all over the country.

FOR SALE BY SEEDSMEN

\$2.50 per gallon. \$1.00 per quart.
65c. per pint. 40c. per half pint.

APHINE MANUFACTURING COMPANY
MADISON, NEW YORK

All the Seasons Are Cauliflower Season If You Have One of Our Greenhouses

Fine, milk white, tender cauliflower any day in the year. The kind of cauliflower that is free from that strong "cabbagey" taste.

The kind you can always depend on having that creamy deliciousness which you happen to strike only once in a while in a season.

And it's just the same with all vegetables grown in our greenhouses—you can depend on them. Depend on their being uniformly good, because they can be grown in uniformly favorable conditions, year in and year out.

Ever have a longing for some out-of-season vegetable and when you tasted it, found it flat and disappointing? Discouraging isn't it? Still in the face of it all, in a short time you make another try only to be disappointed again.

Wouldn't it be great to have a treat of Golden Wax

butter beans twice a week all winter; or meaty, uniformly ripened tomatoes with the real tomato flavor; or juicy melons with that inimitable truly melony taste?

Simple enough if you have a greenhouse—one of our kind. But one thing is certain if you want all these good indoor garden things to be ready when the outdoors' garden ends; now is none too soon to start the house. Fact is, we will both have to step a little lively. Shall we send you a catalog—come and see you—you come and see us—or what?

Lord & Burnham Co., Factories: Irvington, New York and Des Plaines, Ill.

NEW YORK: St. James Bldg. BOSTON: Tremont Bldg. PHILADELPHIA: Heed Bldg. CHICAGO: Rookery Bldg.



Grow Mushrooms For Big and Quick Profits

I can give practical instructions worth many dollars to you. No matter what your occupation is or where located, get a thorough knowledge of this paying business. Particulars free.

JACKSON MUSHROOM FARM
6199 N. Western Ave. Chicago

CORN HARVESTER with Binder Attachment, cuts and throws in piles on harvester or winrow. Man and horse cuts and shocks equal with a corn Binder. Sold in every state. Price \$20 with Binder Attachment.

S. C. MONTGOMERY, of Texaline, Tex., writes:—"The harvester has proven all you claim for it. With the assistance of one man cut and bound over 100 acres of corn, Kaffir Corn and Maize last year." Testimonials and catalog free, showing pictures of harvester. New Process Mfg. Co., Salina, Kan.

IRISH ROSES

Fruit and Ornamental Trees

EVERGREENS

Extra Sizes for Immediate Effect

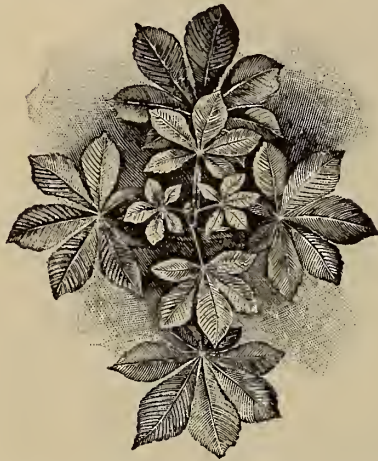
Liberal Discounts on Large Orders

Our Catalogue is a cyclopedia of information to the planter

LANDSCAPE DEPT.
63 Hamilton Place

ROSEDALE NURSERIES

S. G. HARRIS
Tarrytown, N. Y.



NEW BOOK JUST ISSUED
Weeds of the Farm and Garden

By **L. H. PAMMEL, B.Agr., M.S., Ph.D.**

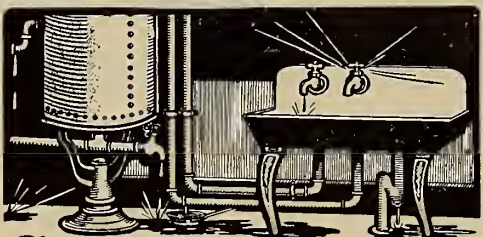
Prof. of Botany, Iowa State College, and Botanist, Iowa Agricultural Experiment Station

The loss caused by weeds amounts annually to hundreds of millions of dollars. The weed question, therefore, is both important and vital to every tiller of the soil. Until the appearance of this book has been available no modern, up-to-date, authoritative work on the subject. In bringing together the latest knowledge about weed eradication Professor Pammel has performed a task that will be useful for all time to come. It is peculiarly fitting that this book come from this author: He is the master weed man of the country; and his book is the result of study, investigation and observation for nearly a life time. The important weed problems are

discussed from a broad view point. The text matter has been arranged in pedagogical order, making the book useful for both high school and colleges. It is a book for every teacher of weeds, flowers and practical botany. Then too, there are the practical suggestions for the treatment of weeds. In this respect alone the book is worth while. Moreover, it is a book for the practical man. If a weed trouble is present, turn to this book and get the suggestion for its correction. In a hundred ways the farmer, landowner, gardener and park superintendent will find the book helpful and authoritative.

Profusely illustrated, 5 by 7 inches, 300 pages, Cloth, Net, \$1.50

ORANGE JUDD COMPANY
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A path overgrown with weeds, before burning

the path, permit it to lay there for a few days so that the weeds underneath may be partially suffocated and the litter will have an opportunity to thoroughly dry out. I then set fire to the pile or windrow, and often use the ashes as fertilizer. The accompanying pictures were taken within an hour of each other. The hay which was only six inches deep, and very loosely piled, did not have time to smother the weeds. The longer and the more intense the fire the harder the ground will be baked, and the more difficult it will be for weed seeds to germinate. Place the rubbish and watch it carefully while it is burning so that the grass bordering the paths and drives will not be injured, or at worst the injury



The same path after burning. No weeds in sight here

will be so slight that the grass will quickly recuperate. Each subsequent burning adds to the time in which the ground is proof against the future germination of weed seeds.

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has moved from our old building, 133-137 East 16th Street, to our new quarters, a floor in the Tobey Furniture Company's building, 11-13 West 32d Street.

Here our friends will find the Advertising Department, representatives of the Wholesale Book Department, and the Syndicate Department, and through them may be able to make direct connections with Garden City. This office is only about five minutes' walk east from the Pennsylvania Station, and the Pennsylvania Station is only forty minutes away from our own station here at Garden City.

IN CHICAGO

we have moved into the new People's Gas Building, 150 Michigan Avenue, where our Advertising Department is located. The office is in charge of Mr. Edgar G. Criswell. The other departments do no business through the Chicago office.

IN BOSTON

we have a fixed abode in the Tremont Building, under the charge of Mr. William J. Neal. Here, also, only the Advertising Department is represented.

Meanwhile, things at Garden City look better and better; our magazine output exceeds 15,000 a day; and we print and bind more than 5,000 books a day. We have had a wonderful housewarming on May 23d with nearly 1,000 friends to wish us luck. Several thousand friends have visited us at other times, the latchstring is still out, and we hope to have many thousand more before the summer ends.

THE GARDEN MAGAZINE AND YOUR NEWS-DEALER

We have constant complaints that people cannot find THE GARDEN MAGAZINE on the news-stands. The American News Company have now put into operation a new plan by

which dealers all over the country will serve THE GARDEN MAGAZINE to any customer, delivering the house as they do a daily paper. If you prefer you may order it in advance and have it at the news-stand ready for you when publication day arrives. People who do not for any reason wish to subscribe are urged to interview a good news-dealer in their town, call his attention to this notice, and the magazine will be regularly delivered.

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The Post Office Department at Washington has notified us that after July 1st a certain portion of the semi-monthly and monthly magazines will be handled by post freight instead of the post mail service and that this may result in a delay of from three to six days.

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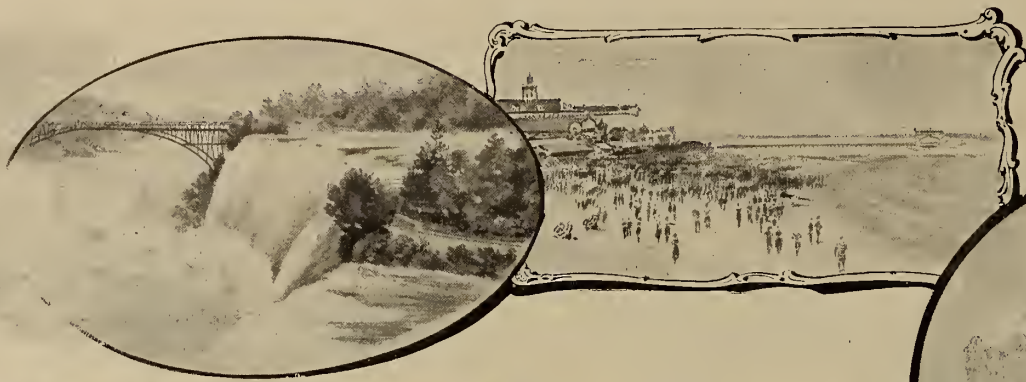
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The Garden Magazine

VOL. XIII—No. 6
PUBLISHED MONTHLY

JULY, 1911

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[For the purpose of reckoning dates, New York is generally taken as a standard. Allow six days' difference for every hundred miles of latitude.]

The Gardener's Golden Rule

YOU must have known what it is to be out in the full sunshine of a scorching July day; and with what an exquisite sensation of gratitude and content you found yourself in a comfortable chair, on a shady veranda, with a glass of cool, ice-tinkling moisture at your elbow—or your lips. If so, you know what the plants feel whenever you give them a thorough soaking. Duplicate the comfortable chair by keeping the soil of the beds loose, airy and congenial.

And the plants will appreciate some shade on the hottest days—especially lettuce, large-flowered chrysanthemums, and the house plants plunged in the border.

Shade beds with cheap cloth screens, light lattices, or, in some cases, newspapers.

Whenever you cut your lawn decide where the grass cuttings will do the most good. They may be (a) left where they fall, as a light mulch, (b) spread thickly on rose and other perennial beds, around shrubs or the small fruits, or (c) added to the compost heaps, where, too, should go all old pea vines, useless beet, carrot, and turnip tops and any kind of decayable animal or vegetable waste. Perhaps it will pay to rotate, applying the cuttings to each use every third time.

Vines need comparatively little water, while in flower. But it is absolutely essential while they are growing. This means, for the spring-flowering sorts, now and all summer; for the late flowering species, all the time until their buds open; for evergreens, whenever they seem to call for a freshening up.

Remove flower spikes the moment the blossoms wilt. Do this on roses, lilacs, and all plants from which you don't take the blossoms sooner for cut flowers.

Clip your privet hedge this month.

Keep the pansies and sweet peas picked clean.

Study the Fruit to Improve It

THE more healthy the fruit trees the more fruit they will set and the more thinning they will need. Peaches, plums, pears, and early apples need this.

Pinch or clip back canes of the grapes, blackberries, and raspberries.

Substitute hellebore for arsenate of lead when spraying ripening crops. Ammoniacal copper carbonate is the fungicide to use under such circumstances.

Kerosene emulsion will conquer oyster-shell scale, aphid—black, green, brown, or wooly, and various tree- and leaf-hoppers.

Every female gypsy or brown-tail moth killed before she lays her eggs means a reduction, by several hundreds, of the pests next year. Loose bark, crevices in stone walls, old shingles thrown about, tin cans, rough tree trunks, and decay cavities—all these are her favorite nests.

On all unused land and around all fruit trees and bushes sow a cover crop about July 15th. The best crops are crimson clover, cowpeas, vetch, peas and oats, barley, rye, and buckwheat. The last is the best for poor soils where nothing else will do well.

Vegetables That Are Growing

KEEP these cultivated all the time. Water them as often as you can. Apply nitrate of soda now and then.

Corn, tomatoes, eggplant, beans, squash, and melons need especially the cultivating and watering.

You must not cultivate beans while they are wet. Anthracnose will land on the thoughtless gardener who does.

Lime on cabbages, melons and squash, arsenate of lead on tomatoes, eggplant, and potatoes, and hellebore on others that need it, will disappoint the bugs.

Bordeaux mixture is bad for blight, leaf spot and mildew, but good for cucumbers, strawberries and all plants that are subject to fungi.

Just because you are not cutting asparagus, don't forget the plants. Salt, 5 pounds, and nitrate of soda 1 pound, to 100 square feet, will repay you well next year. Cultivate to keep the weeds down.

Celery needs attention from now till fall. Water, nitrate of soda and bleaching spell attention. Bleach by hilling, by means of boards, or (individual plants,) with pieces of drain tile; but, however

you do it, keep dirt out of the heart of every head.

Support the tomato vines well; also the heaviest eggplants.

Vegetables to Plant

PERHAPS you have just "moved in." Don't worry, you can still have a garden. See another page of this issue for a planting table of July-sown vegetables. And look back to THE GARDEN MAGAZINE for July, 1906, for the complete story of a Fourth of July garden.

Now you begin to realize how many celery plants you can use. Transplant them from the seed bed or frame to every bit of land that becomes vacant. (If it seems poor, it will be better to sow a cover crop on part of it.)

Cucumbers will ripen, or be just right for pickles, if planted by July 15th.

The reason more people don't succeed with late-sown peas, lettuce and corn, is that they don't realize that summer conditions are very different from those of spring. The sun is hotter, the soil more dry, water more scarce. Remedy these defects by watering, spraying and cultivating *thoroughly*, and you can sow those crops all the month.

Crops to Harvest

MUSKMELONS show when they are ripe by parting from the stem at the slightest touch. They know best; don't try to hurry them.

Eggplants, too, are often picked too soon. Wait till there is a suggestion of softness, as well as a rich color.

Tomatoes ripen and color very evenly if picked while firm and placed in a sunny window, or on a shelf in the hotbed.

Onions are ripening. Cut the tops when they become yellow, or just before and spread the bulbs on the ground to dry for a day or two.

Notice—

HOW attractive a pond, stream, bog garden, or other bit of water would be these hot days. See if you cannot arrange for one, for next year.

The vines and shrubs that are blossoming now in neighbors' gardens. Resolve to have some another season.

Where certain plants are doing better than others of the same kind elsewhere, and study out why. Then try to provide the same favorable conditions wherever you want that special plant.



On June 22d, the first blossom appeared. It was white, and permeated the atmosphere with a very decided pineapple scent

By the latter part of August, the plant had developed eight leaves, the largest being about four feet in diameter

Gas Heating for Victorias Outdoors—By E. T. Harvey, Ohio

A NOVEL SCHEME FOR GROWING THE GIGANTIC AMAZON WATER LILY IN ORDINARY POOLS—REALLY EASY METHODS OF HANDLING THE TROPICAL RARITY

THE Victoria has a wondrous individuality. The flower reposes on the water like a true water lily and its bloom the first night and the next morning is not excelled for beauty and delicacy by anything in the water lily line. It looks very much like a gigantic, very double *N. odorata*, but of more shining texture.

The flower is very coy and uncertain about opening. The first indication is by the round bud being borne well up upon the top of the water and the calyx slightly open to show a little white. If, for some reason Madame Victoria should change her mind and postpone her appearance for a day, she retires into the water again to come up the next day. As the flower begins to open after sunset, the odor of pineapple is very noticeable all about the garden and gets stronger as the flower is opening. From about nine o'clock that evening until the following morning about nine it is in full glory, but it seems to be especially magnificent at night by artificial light. The second night the flower is quite as extraordinary, but no longer delicate or even beautiful. After that it closes up and sinks into the water to grow and form seed, a prickly, shapeless mass, something like an immense thistle.

My plant two years ago was so late in blooming that it did not have time to mature its seed. It takes ten weeks or more to do this. So last year I planted, with considerable misgiving, the seed of the year before. The first indication of germination is a little thread-like filament that is followed afterward by arrow shaped leaves. The plant has to be transplanted several times before the character leaves appear, and it seems almost incredible that the

delicate little seedling would grow into a giant water lily that has a spread of over twenty feet on the water. To any one who has the facilities and patience, I recommend starting from the seedling. One period of growth is quite as interesting as another.

In January, 1909, I got five seeds by mail, and started them in a tank in my greenhouse. I have two tanks, one of copper and one of galvanized iron, three feet square and one foot deep. Under each is a small gas heating burner. The tanks have wooden sides, and are partly covered on the bottom, leaving just room enough for the heater. The seeds took just four weeks to germinate. One only came up, and that was watched and tended henceforth like a baby. When I came home in the evening, the first thing to do was to see if the temperature was right; and that was also the first thing to be looked at in the morning. I tried to keep the water as near 85 degrees as possible, but as we have natural gas here, it would fluctuate in spite of all precaution. Sometimes I found the water so hot that it seemed the plant must be cooked, but the plant grew right along. The variety was that known as *Victoria Cruziana*, or *Trickeri*, which is said to require a lower temperature than the *Victoria Regia*.

About the time things began to be springlike out of doors, my Victoria had grown so as to nearly fill the tank. That is, it had three or four leaves as large as dinner plates. As I had quite a variety of tender lilies in the same tank, it resembled the young cowbird in the oriole's nest that I have read about. I began to study how to accommodate it in my pond.

My pond is entirely artificial, dug out

and cemented on sides and bottom, and, like the greenhouse, has been added to and changed very often. As a result it has a number of partitions that are concealed when the water is up to the level of the outer rim. I would hardly recommend the plan to one about to build a pond, but it certainly has advantages. I think it gives strength, for one thing; then the dividing walls are useful to walk upon when getting in among the plants, and save wading on the bottom in deep water; also, I can drain one section at a time, and take good care of the fish. Gold fish and sun fish are among the attractions of the pond, the latter being my favorites.

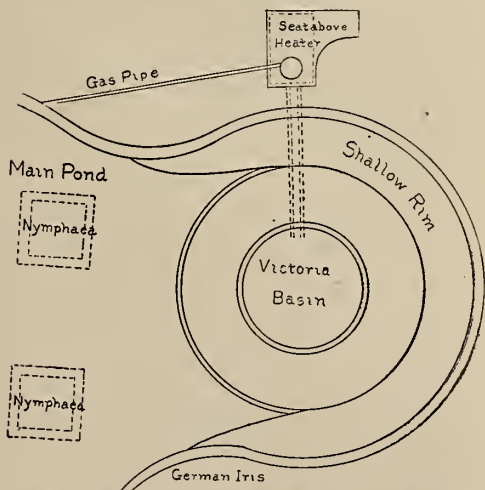
The north end of the pond was selected for the Victoria for several reasons. This part has almost a full sun exposure, and could be better adapted to the required conditions than any other place. It had to be enlarged to give space to float the big leaves, and the cement box in it that had been used for the nymphaeas was much too small and shallow. Also, to be sure of success, some arrangement was necessary to keep the plant from getting chilled the first few weeks after planting out, as the weather is very uncertain here and a cold snap would set the plant back to far to recover that season. But the real enthusiast is not discouraged by a few difficulties, and planning and carrying out a new idea is one of the joys of gardening.

As soon as the weather permitted, a shallow rim three feet wide and one foot deep was added to the dimension of the circular north end of the pond. Then a round basin, six feet wide and four feet deep, was made in the centre of that section, the walls on a level with the other partitions,

which are covered when water is up to its full level. Until the plant was well established the water would be confined within this inmost basin. So far, this was comparatively simple, but when it came to heating the water, I was "up against it." The plan of a boiler and coils of pipe was too elaborate and expensive to be thought of. At last it occurred to me that since I could get hot water in the bathroom from a heater in the kitchen, a plan of that kind might be practicable outside. From the greenhouse to the lotus pond there was an overflow pipe to carry off water from the roof, and inside of this I had a gas pipe placed, carrying it across to the bank within a few feet of the Victoria basin. There I built a cement box, partly below and partly above ground, to furnish a receptacle for a gas water-heater. The box was open at one end, that I might get down inside when necessary. The part above ground formed a seat.

From the gas heater run two pipes, partly under the ground and partly through the water, open, with strainers at the ends, right into the inside basin, that taking the place of a tank. When I had the heater in working order, I got four short boards and rested them on the circular walls of the Victoria tank, to square and somewhat reduce the opening. Upon this I placed an old greenhouse sash I happened to have, about six by five feet; thus I had a covered warm tank in the centre of a water space about eighteen feet in diameter.

The scheme worked perfectly, and the expense was trifling. The Victoria was planted out on the 15th of May, and did not seem to feel the change at all, but grew right along. I had to go East in the beginning of June, and returned home on the 22d. The heat had then been turned off for some time. The plant was much crowded in the small space, and the first thing to be done was to remove the cover, fill up the pond, and give the plant the freedom of the open space. A bud was already above water and actually opened the same evening, June 22d.



Plan of the Victoria pond, showing how the central basin is fed with heated water



The gas-heating arrangement is concealed under this box which, in summer, serves as a seat

With one or two short intervals of rest, the plant bloomed until checked by cold weather in October. The great leaves were as much admired as the flowers. Some of the blossoms were exhibited in Cincinnati.

In addition to the Victoria, I had an unusually fine display of more than a dozen of the tender nymphaea, including a plant of *Nymphaea gigantea*, var. *Casperii*, the Australian water lily, which fairly rivaled the Victoria. A tuber of the *N. gigantea*, var. *Hookeri* that came to me direct from New South Wales received almost as much care as the Victoria, but after starting well and making considerable growth it refused to become acclimated and sulked into a tuber again.

However, I did not repeat this Victoria feat the second year, though perhaps I might have done so had I taken all the care and precaution I did at first. I had a great number of plants that came up from my own seed, so did not have to be so particular. I selected the largest, though it was not quite as big as the single one I had the year before, and planted it out about the middle of May. Soon after it was necessary for me to be away from home for over five weeks and when I got home the first week in July, the plant had but two leaves of moderate size. When a third would appear the older one would die off. After waiting for a week or so, I turned the heat on again in the inner basin. The pond was filled up at this time and overflowed the division when the Victoria was planted. But it responded immediately to the warmth at the roots and seemed to be anxious to make up for lost time. The first flower appeared the last of August and from that time it averaged two blossoms a week. When the plant was finally killed by frost it had five leaves; the one the previous year had eight.

Some Water Lily Details

By LUKE J. DOOGUE, Massachusetts

WHETHER water lilies are being grown in a small lily pond or in barrels or tubs, the soil in which they are planted must be a good heavy loam well mixed with old cow manure. Sunshine is also essential. Water lilies are not difficult to grow, and if their habits and requirements are studied a little they can be handled almost as easily as geraniums.

My little water garden consists of a half barrel or tub. This was filled to within six inches of the top with soil and plunged in the ground. A couple of plants were put in the tub and six inches of water was kept over them continuously. They made a splendid showing during the summer with comparatively little care.



A water lily plant after being divided

Hardy lilies may be planted out around the first part of May, but the tender varieties are best held until the latter part of May or the first of June. After the summer the tubers are taken up and put in a cool cellar, where they will be dormant all winter.

In the spring, if it is found that the plants have become too large for your purpose, they can be divided, and by potting the side shoots, placing two or three in a pot, flowering plants can be had in the summer.

Tender lilies are easily grown from seed. I sow the seed in the spring in small pots and cover lightly with sand. I then put the pots in water, about two or three inches of water being over the pot, in a warm place where the sunlight can fall upon them. When the first leaves are formed, the plants should be given one shift before being planted out in June.



This plant can easily be divided and the side shoots will make good plants

Summer-Flowering Hardy Vines—By W. C. McCollom, ^{New York}

CLIMBERS THAT ARE BEAUTIFUL IN LEAF AND FLOWER AND BRIGHTEN UP TRELLISES AND WALLS ALL SUMMER—WHAT TO GROW IN DIFFERENT SOILS AND HOW TO PRUNE FOR MOST FLOWERS

THERE is one important point in the growing of summer-flowering vines that must not be lost sight of. With few exceptions, these vines flower on the current season's growth, and if there is dry weather during the growing season previous to flowering, they should be freely watered at the roots.

In their beauty and freedom of bloom, their extreme hardiness and their adaptability to dry impoverished soils, the honeysuckles are the most useful. They can stand more abuse and neglect than any vine I know of. Don't neglect them, however; they are quick to repay any attention.

The honeysuckles twine and will ascend any suitable support. They are all good growers, are never troubled with insects or disease, excepting under very unfavorable conditions, and once established they are there to stay. They are not tall growers, twenty-five feet being the extreme limit. Although they delight in sunshine, they will do quite well in a moderate shade, and will grow and flower in locations so dry that other plants would perish. Honeysuckles flower on new wood; not, however, on the terminal growths. Cut back severely to produce long shoots of

flowers; but for effect as a vine prune lightly. In both cases, the right time is early spring. Honeysuckles can be transplanted either spring or fall, and young plants raised in quantity by layering.

For mixing in with green-leaved vines, for screens to break up a heavy effect, or for planting separately where good yellow color is desired, the best vine is the golden Japan honeysuckle (*Lonicera Japonica*, var. *reticulata*). Besides being a good foliage plant, it has very attractive flowers which fade from yellow to white. A form which is an excellent ground cover—but not among shrubs, as it will climb them—is the dwarf golden Japan honeysuckle (*L. Japonica*, var. *flexuosa*). This plant has a bad habit of rooting too readily when a shoot touches the ground.

For covering old stumps and boulders, the Belgian honeysuckle (*L. Periclymenum*, var. *Belgica*) will please the most critical; it is a dwarf grower, becoming somewhat bushy, and its long, drooping spikes of fragrant, red flowers, which are borne in profusion all summer, add color to any situation. For a situation that demands winter foliage as a screen, and where flowers would lend attractiveness to the spot in summer, the vine that stands out most prominently is the evergreen honeysuckle (*L. Japonica*, var. *Halliana*). The small, dark-green foliage of this vine would warrant its use even if it never flowered; but fall finds it with long, drooping spikes of pale yellow and white flowers, when fragrant flowers are scarce. For a conspicuous lamp post, or a much frequented summer house, use Heckrott's ever-blooming honeysuckle (*L. Heckrotti*). This plant is covered the entire summer with clusters of fragrant, reddish flowers.

The honeysuckle that grows to the greatest height of all is the native *L. hirsuta*. It has little else to recommend it, however. A good dwarf variety that does not make itself obnoxious by continual suckering is the trumpet honeysuckle (*L. sempervirens*). This is covered all summer with orange-red flowers, but lacks fragrance. The best honeysuckle for shady spots is the woodbine (*L. Periclymenum*), a good, free bloomer. The flowers are yellowish-white and very fragrant. The only pure white honeysuckle is *L. longiflorum*, which is tender and needs protection in the latitude of Long Island.

If you want a natural climber to cover the side of a stone or brick building, lamp post or dead tree, where it is freely exposed to the sun, there is nothing to surpass the trumpet creeper (*Tecoma radicans*). Its gorgeous masses of glowing red tubular flowers—produced during the very hottest period of the year, a time when flowers are scarce—give a wonderfully brilliant effect. Its foliage is also worth while.

In situations where it has plenty of light, the foliage is produced in feathery sprays right down to the ground. Without the sun it will become bare at the bottom.

As it flowers in clusters on the terminal growth of the current season, prune hard in early spring. Another point is training; the vine is very apt to become bare at the base, in which case bend a shoot down to the base. With good, rich soil and a southern exposure, the trumpet creeper will climb to a height of forty feet. It climbs by rootlets; it can be transplanted either spring or fall, but the former is the better time. Young plants can be raised by layering.

The variety *atropurpurea* is identical except in color, being deeper. There is also a bush, or standard form excellent for a conspicuous place on the lawn (*T. radicans*, var. *speciosa*).

FOR FLORAL DISPLAY

For floral effect alone the Chinese trumpet creeper is much superior, because the trumpet expands more, showing the inner color of the flower better, and moreover more flowers are open at one time. The best colored form of this is *T. grandiflora*,



The Japan clematis will flower freely in semi-shade and is not particular as to soil



The trumpet creeper grows anywhere but only flowers when in full sunshine



The true climbing hydrangea is a worthy vine, climbing on brick and reaching twenty feet

var. *atrosanguinea* with flowers a very deep shade of scarlet.

Where a big display of flowers is more important than a foliage screen, nothing surpasses the clematis in beauty and individuality. Unfortunately, the clematis is a rather unsatisfactory grower. In no case should it be used as a screen, as it lacks foliage. It is, in short, to the garden what the orchid is to the greenhouse.

The clematis needs have a good light location and protection from heavy winds, as it is easily torn from its supports. It clings to almost any kind of an openwork trellis, and on poultry wire is perfectly at home. Good soil to start with and a yearly application of manure is advisable. Water freely when in growth. Although clematis can be transplanted spring or fall, spring is the better time. But do not move it unless absolutely necessary, as it is slow to re-establish.

SMALL FLOWERS FOR MASS EFFECTS

The most easily grown clematis, and the only one that will flower in semi-shade, is the Japanese (*C. paniculata*). The pure white flowers, an inch or so across, come late in August. Nor is this vine to be despised for later effect, as the seed pods are very attractive in September. It requires good, hard pruning; cut back at least one-third of the previous season's growth in early spring and remove all very weak shoots. It will attain a height of twenty feet.

Very similar, but demanding full sunlight, is *C. Flammula*. A more vigorous grower than either is the "traveler's joy," or "old man's beard" (*C. vitalba*), but the white flowers are smaller and less showy.

It blooms in July. With full sunshine, and in good soil, it will climb as high as thirty feet.

Valuable for rockeries, or anywhere for rough, natural effect where there is plenty of sun, is the wild clematis (*C. Virginiana*). This is another small-flowering, white variety. It will attain a height of fifteen feet, but seems to be more at home when allowed to scramble over stumps and low hedges. Prune all these in spring.

LARGE-FLOWERING CLEMATIS

For real splendor and showiness, the enormous masses of bloom of the large-flowering clematis are unique among vines. Unfortunately, even more than the small-flowering kinds they lack a vigorous habit and free bloom; but a plant once established and doing well, will outflower any other vine.

For a deep violet effect, where a big burst of that color is desired in midsummer, *C. Jackmani* is unique. It has flowers which measure as much as six or seven inches across. Another good variety of the same color is *C. Devoniensis*.

A good white variety that has stood the test of time and can be relied upon is *C. Henryi* with flowers six inches across. The only really good crimson variety, and a rather shy one at that, is Madame Edouard

Andre. The best pink variety is Madame Baron Veillard.

FLOWERING ON THE NEW WOOD

Because when killed to the ground it will spring up and bloom again, I recommend the Viticella group of clematis. Although the flowers are not as large as in the foregoing, the plants of this group make just as good a display from a distance. The blooms are about two inches across. The type is blue, but there are numerous hybrid varieties to be had in all colors. A fine light blue is var. *ilicina-floribunda*. The best deep blue is Lady Bovill, and the best purple is Othello.

The best clematis flowering on new wood is Madame Grange, violet. Star of India is the best purple, and *C. Viticella*, var. *venosa* the finest reddish purple. These must be pruned in early spring; but don't cut a double clematis as you would a maple tree. They are slow growers, and all the pruning that is necessary is the removal of any very poor shoots and about one-quarter of the previous season's growth in early spring. This will give several strong shoots for flowering from each shoot cut.

CLEMATIS THAT FLOWERS ON RIPENED WOOD

The varieties mentioned below flower on mature wood and should be pruned lightly. After flowering, remove all very



Clematis Flammula flowers in July earlier than the Japan clematis, but demands full sun



For a large white-flowered vine blooming in summer plant *Clematis Henri*

thin, weak shoots. The best and most popular of the double-flowered is Duchess of Edinburgh. This is a free grower and the double white flowers are produced with great freedom in midsummer; another good double white is Snowdrift. A desirable double blue is Countess of Lovelace, and Louis van Houtte is a pleasing shade of rosy white. Among the singles, the best are *C. caerulea*, var. *Standishi*, light purple; Miss Bateman, pure white; *C. florida*, white, barred with purple; and *C. florida*, var. *bicolor*, a variety with purple predominating. The great drawback to all the groups is the likelihood of losing the season's flowers by a heavy late frost.

OTHER VINES

For a piazza vine, in abundant sunlight, you cannot find a more attractive plant than the white jasmine (*Jasminum officinale*). It blooms all summer and its fragrance is delightful, especially on a still evening, when its sweetness will penetrate to the innermost rooms of the house. The plant is a twiner, but must be assisted, and if sprayed occasionally during the summer it will grow much better. In a hot, sunny location it will climb to a height of twenty feet.

The nurserymen

have frightened people away from growing the white jasmine, as they fix the latitude of Philadelphia as its northern limit. The plant can be grown in the latitude of New York, by covering the tops with mats and hilling up about the base before frost, mulching all after the first good freeze.

For a combination of foliage and flowers, and also for making a permanent, heavy screen, the actinidias are excellent. Their small, green foliage is particularly attractive from a distance when the sun is shining on it. The actinidias are remarkably free from the attacks of insects, excepting the San Jose scale which is quite partial to them.

Actinidias delight in a sunny location. They are good growers, twining close to their support. Do not prune severely for the first two seasons after planting; rather let the plant become thoroughly established. After that, however, in spring cut back at least one-third of the previous season's growth to produce flowers.

Because of its robust growth and dark green foliage, the best vine of this family is *A. arguta*. The flowers are creamy white, with black anthers, and are produced in small, drooping clusters. The foliage is always attractive. Under good conditions this plant will attain a height of seventy-five feet. The only reason for growing *A. polygama* is that it flowers in early July, a time when flowering vines are scarce. The foliage of this is a lighter green, and the plant attains a height of only thirty feet. *A. Kolomikta* is similar to *A. polygama*, but a much sparser grower.

THE AMERICAN WISTARIA

For bluest effects in early spring, plant the wistaria. When pruning in spring, remove all very weak, thin shoots, and do

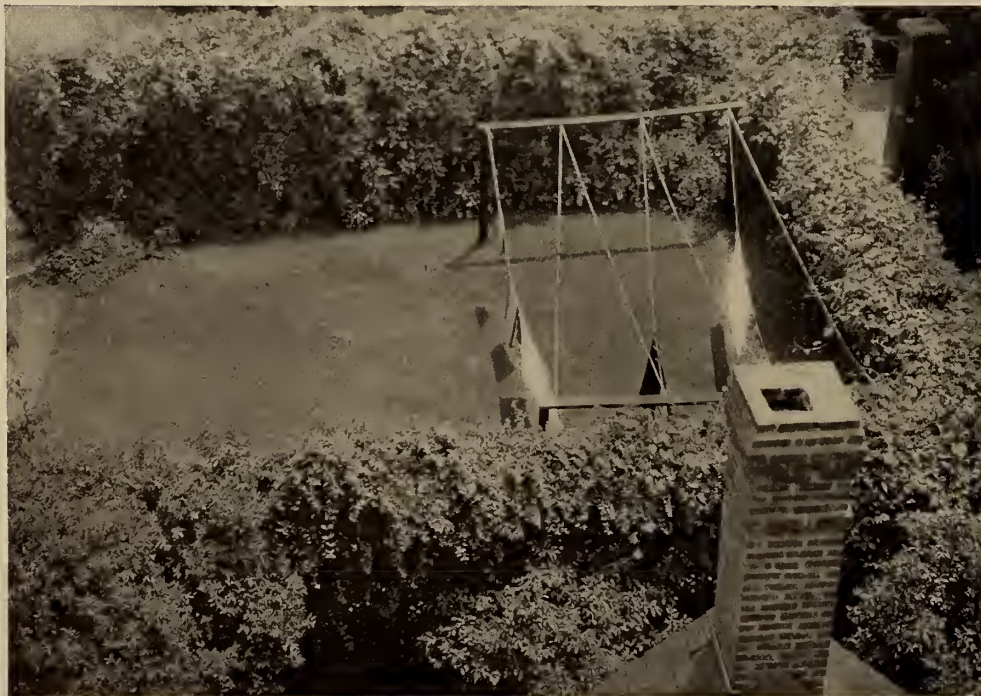


The star-like flowers of the large-flowered clematis are always effective, but the plants are the least sturdy of all vines

nothing else. Those specially interested in wistarias should read last month's issue of THE GARDEN MAGAZINE.

On places where there is but a small strip of lawn between the house and highway, it is not infrequently a hard matter to find something to break up the monotony of the stretch of plain, green grass. It is too small a space for a flower bed, and just the place where a specimen shrub or tree looks stiff. The plant for such a location is the short-clustered wistaria (*W. brachybotrys*). This is very dwarf, six feet being the limit, but, grown in a good, sunny location, as a headed-in standard, it is unequalled. The flowers are light purple and are freely borne about the middle of July. There is also a white form (var. *alba*) and a beautiful red one (var. *rubra*).

The climbing hydrangea (*H. petiolaris*) is a slow vine to establish itself, but, once worked up to the flowering stage, there are few vines to approach it. In its masses of small, white flowers, it slightly resembles the clematis, but it is the better of the two for some purposes, as it is a natural rootlet climber and can be used for stone or brick build-



A combination of vines used for screening. Honeysuckle on the west; akebia on the south; akebia and native wistaria on the east

ings. It will not cling to wood. This plant requires a little coddling at the start, as it dislikes moving. For this reason it should not be transplanted except when very necessary. Don't let it bloom for the first two or three seasons. Prune in early spring and remove all the very thin, weak shoots and cut back far enough on good wood to produce fine growth. In case of flowering wood appearing, cut it off. It should have a light, but rather sheltered location, and protection by wrapping in straw or burlap for the first two winters, at least. Under good cultivation it will grow to a height of twenty feet.

The unfavorable attitude toward this plant is due to its being confused by dealers with another Japanese climber, *Schizophragma hydrangeoides*, which is sent out under the same common name and which is a mere weed by comparison. It can be distinguished by the foliage, which is deeply lobed, while the leaf of the true plant is entire.

THE POLYGONUMS OR KNOTWEEDS

The immense drooping panicles of beautiful rose-colored, feathery flowers of *Polygonum Baldschuanicum* make this vine a very desirable one for low trellises and fences. It quickly establishes itself and

will flower freely the second year from planting, but needs a light location, as it is a quick, soft grower and runs up to a height of ten to twelve feet in a single season. It kills to the ground in severe winters, but when protected, will become woody at the base. It should be cut back to live wood in early spring.

Another good climbing knotweed for quick effect, flowering the second season from planting, is *P. multiflorum*. It is a heavier grower and the flowers are dispersed all over the plant, appearing from the axils of each leaf and not in a panicle as in the former variety. Also, it flowers one month later, in September.

Making Water Effects a Feature—By W. S. Rogers

SIMPLE WAYS OF USING AN ADJACENT STREAM FOR CHARMING GARDEN EFFECTS
— HOW THE GREATEST RESULTS ARE TO BE HAD FOR THE LEAST TROUBLE

THERE is something so delightful in the living, moving presence of water in the landscape that gardeners may be excused their desire to introduce it into their flower ground. In a garden of limited size the effect which appeals to us amidst natural surroundings is practically unrealizable. At the same time water can be introduced without appearing to be too artificial a feature.

The making of a water garden is a simple matter compared with its efficient maintenance. The gardener should prepare to give unremitting attention to his water plants and to their artificial homes. This implies frequent changing of water and cleansing of ponds.

In the case of a garden bounded by a stream at its far end, the probability is that the gardener would have no rights over the water, but also that no objection would exist to his diverting some of it through his garden. He might excavate a backwater, say with an extension in the form of a bay, as shown in the illustration.

By this means he would obtain running

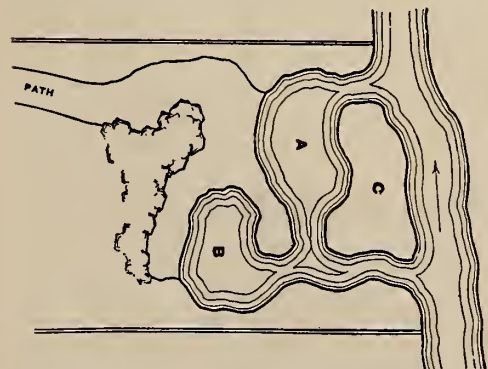
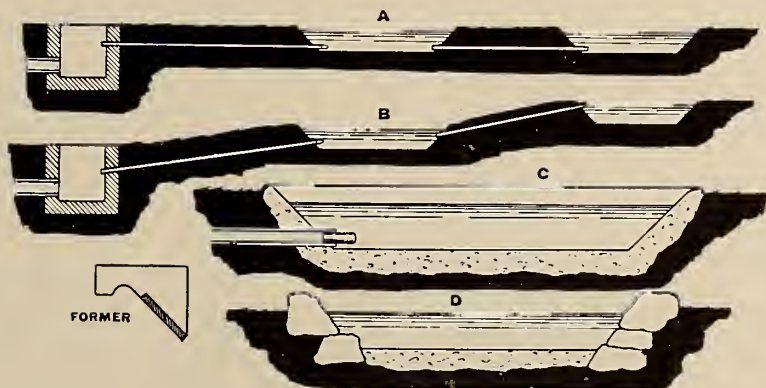


Fig. 1. Showing a provision for a still lagoon (B), with moving water at A

water (A), and a piece (B) more or less stagnant. The depth need not exceed eighteen inches. The island (C) would be useful for treatment with bold waterside plants and the margins of the backwater and pond could accommodate others of less sturdy growth. Clear spaces should be left for access to the water's edge and



Methods of margin treatment of artificial water effects (C and D). Drainage and connecting pools are shown at A and B

to permit of the plants being seen. A small collection of dwarf hybrid nymphæas may be established in the pond (B) and in the backwater, with which might be associated the common native pond lily. Other plants may be added if space permits, including such subjects as the pickerel weed, the flowering rush, and water buttercup. Typha and swamp mallow might be planted along the fence line at B.

Iris will thrive at the margin of the water, as well as phlox, trollius, spirea, and a host of others. When all is complete and the plants are established keep the entrances clear and remove all rubbish which may find access to the water. Deciduous trees or shrubs should not be placed near the water.

In excavating the water bed the sides should slope gently to the edge, or trouble will ensue by the banks breaking away and fouling the water. This also insures

that the soil is water-logged for some distance from the water's edge, and is therefore in a condition for supporting a colony of semi-aquatic plants.

When a stream intersects the garden, the general treatment should be such as to considerably expand the water area, and this may be done by adopting an arrangement like that illustrated in Fig. 2, in which a lily-pond is made beyond the brook, having inlet and outlet. Bays should be formed on the near side. Communication across the stream may be by a simple bridge, or by stepping stones if the depth of water is shallow. Resist the temptation to give a "rustic" character to the bridge. It should be a plain affair well and firmly built, as befits its purpose, and provided with a hand-rail on either side.

The first consideration will be the planning of the ponds, for such they are, and in that we must be guided by the levels in the garden.

If there is a distinct slope in the garden surface, so much the better; it will help

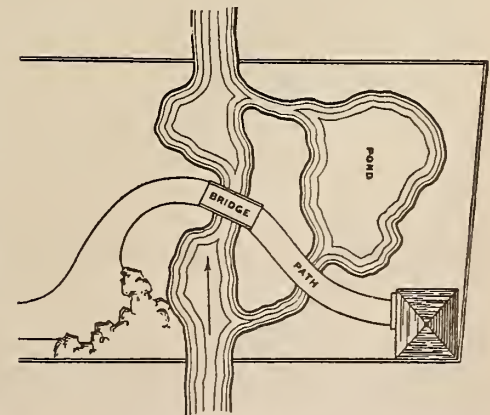


Fig. 2. Making a pond of a flowing stream, with a bridge over the main channel

to a simple arrangement for running off the water, which must be done from time to time to keep the ponds clean.

The waste or overflow from the pond or series of ponds must be provided for, and when the garden slopes toward the house the most convenient way is to carry it into a gully in connection with the house drainage system. When the slope is in a contrary direction the best expedient is to make a "soak-away" drain. This is merely a pit sunk in the soil and filled with rubble, into which the overflow pipe is conducted.

Fig. 3 shows both the mode of forming the bottom and of building up the sides. If rock or rubble sides are used, as in D, they must be built in cement, and the joints made watertight. The floor may then be made with six or eight inches of concrete, faced with cement. The surface should not be finished to a dead level, but with a slight fall toward the outlet, to facilitate running off the water.

If the pond sides are built of cement the scheme shown at C must be followed, making the edges battered, and finishing them neatly at top with a rounded nosing. Fresh cement of good quality should be used, using one part of sharp sand to two parts cement.

Pipes for inlets and outlets should be

inserted when the sides of the pond are being made. If a single pond is installed it will only be necessary to carry a waste-pipe from its bottom to the drain, a straight line, if possible, to facilitate unstopping in case of obstruction. The most suitable piping is $1\frac{1}{2}$ -inch iron gas pipe. A plug must be provided to close the inlet, and this may be a simple cone of wood.

When two or more ponds are made, they should be connected by piping into a single system, the waste-pipe connecting the one nearest the drain to the latter.

If all ponds stand at the same level, the connecting pipes may enter and leave at the bottom; but if the levels are stepped, as would be the case on sloping ground, the overflow from each pond to the next lower one of the series must be placed at the water-line, otherwise the water would all flow to the lowest pond. This point is made clear in the diagrams A and B. The filling up and renewal of the water may be done conveniently with the garden hose.

A constant movement of water is quite unnecessary. Water lilies will thrive in perfectly stagnant water which has not been changed for months.

When the gardener has done his work, he should fill up the ponds, mark the

water-level, and allow them to stand for a week, noting whether there is any leakage which would show itself by a drop in the surface level. If all is satisfactory, the water may be run off and the ponds will be ready for planting.

The soil may be a compost consisting of:

Pond mud	2 parts
Loam	1 part
Leaf-mold	1 part
Road scrapings	1 part

If the first ingredient cannot be obtained double the quantities of loam and leaf-mold. A layer of drainage material (broken tile or brick rubbish) should be spread upon the pond floor, on which the compost is heaped to the water-level height at the points where the plants are to be placed. The water should stand for a couple of days to assume the temperature of the atmosphere. The plants may then be inserted in their mounds, which by this time will have settled down considerably below the water-level.

The water may be run off and renewed every two weeks. Twice a year the ponds must be thoroughly cleansed.

Goldfish are useful in restraining undesirable vegetable growth, water-snails, and they also devour the larvæ of the mosquito.

The Most Rugged of the Hardy Evergreens —By C. L. Meller, ^{North Dakota}

A DOZEN TREES THAT WILL POSITIVELY WITHSTAND THE WINDS OF THE PRAIRIES AND THE COLD OF THE NORTHWEST—WINDBREAKS AND SCREENS FOR EXPOSED PLACES IN ANY SECTION

MORE than any other section of our country does the Northwest need the cheer of evergreens. It is not so much a matter of soils or of temperature, this growing of evergreens in the Northwest, as it is a question of winds with their resultant evaporation. The dry winds, as they sweep across the miles of unobstructed prairies, absorb moisture at a tremendous rate, a vital matter to an evergreen with its large evaporating surface active throughout the entire year. The windy month of March is the severest in this respect, for then there are days when the moisture is fairly sucked out of the foliage, while the roots, in ground as yet frozen, are powerless to replenish the loss. Under such conditions an evergreen may turn brown as if scorched by fire. Nevertheless, we find enough hardy material to enable us to bring warmth into our winter landscape and to add a touch of coolness to our summers.

For specimen planting there is no pine available. Only two of the larger pines are reliable on the prairies and these, unhappily, are the poorest of all as far as landscape work is concerned. The bull pine (*Pinus ponderosa*) is a large tree with dense foliage and a somewhat coarse character throughout. It will endure extremes of drought, while no degree of cold



The Black Hills spruce on the left. Other trees are the Norway spruce

seems to affect it. Its long tap root makes success in transplanting very uncertain. Naturally, the smaller the plants set out the better are the chances of getting this evergreen to start. It makes an excellent windbreak, which loses not in effectiveness by eventually overtopping the buildings. For enclosing a formal garden out on the prairies nothing surpasses it, though the compact wall of green which it is capable of producing requires years of growth. The bull pine bears its long, coarse needles in groups of both twos and threes, a feature whereby it may be recognized. Out in the western part of the

Dakotas this tree grows to sawlog size. The jack pine (*Pinus divaricata*) is fully as hardy as the bull pine and transplants more readily, though its sparse, open top, which nearly always presents a wind-tousled appearance, precludes its use in landscape work. As a windbreak it is serviceable, but by no means the equal of the bull pine. We must not infer, however, from the fact that we at present have only two pines reliably hardy in the Northwest that this establishes a hard and fast limit, for some of the other pines have not as yet received a fair trial.

Thus the dwarf mountain pine (*Pinus montana*, var. *Mughus*) is proving itself hardy. These trees are exactly what the Northwest wants—low, compact globes of green that with their dark needles seem cool in the heat of summer and warm as it were in the snows of winter. At an angle of a path or flanking the steps to either side they are splendid. Where the limited extent of a lawn makes a more or less formal treatment necessary the use of the dwarf mountain pine is advisable, even, perhaps, to the exclusion of everything else, for such a lawn will be neat and attractive from year end to year end. There are a considerable number of hardy perennials that bloom joyously after the frost has defoliated trees and shrubs, and

anything that will afford a green background for these flowers is worthy of diligent care. If the trees come to you with a ball of native earth well burlapped around their roots they are certain to grow.

In the matter of spruce, we in the Northwest are as fortunate as the more favored sections of the East. A feature worthy of note is that all our spruces are compact growers, while the only one that shows any openness in its growth cannot be classed as reliably hardy. The white spruce (*Picea alba*) is a rather slow grower, somewhat stiff in the carriage of its branches, with the shade of its green possibly a bit lighter than that of the Norway spruce. In its ability to bear crowding, it resembles the ash, and like the ash should be used where a large number of trees is desired on a small area. The prettiest of all the spruces is a native variety of the white spruce, commonly known as the Black Hills spruce (*Picea alba*, var. *compacta*). It is compact in its habit of growth, more decided than other forms in its shade of green and altogether the proper tree for a specimen evergreen on a lawn. Individual plants will take on color as marked as that of a Colorado blue spruce, though they are of a more steely blue and more suggestive of refinement. In both the white and the Black Hills spruces the needles are shorter, the twigs more slender and the growth more compact than in the blue spruce. A Black Hills spruce has a tendency to carry its branches and twigs at right angles to its trunk, producing much the same layer-like effect with its foliage that is such a marked feature of the Colorado blue spruce. Both the white and the Black Hills spruce transplant readily.

The vexatious thing about a Colorado blue spruce (*Picea pungens*) apparently more pronounced in the West than in the East, is the uncertainty concerning its color. I know of a specimen that did not show a particle of color until it was twenty years old. Equally, three-foot material that I planted as blue is now plain green, while some of those originally green are turning blue, within three years. Concerning its hardihood there is no question, and transplanted with the least care one need not lose a tree. This spruce cannot well be used in mass planting, not so much because of its striking color for there are green ones enough to be had, but there is never any telling how these may turn out. In a planting of considerable extent, where there is sufficient green to set off its color, a Colorado blue spruce can be used with excellent results; but where a spruce is desired in a planting of limited area, a green specimen of the Black Hills spruce is to be preferred.

The Norway spruce (*Picea excelsa*) requires shelter on the prairies and in itself will not produce a dependable shelter belt against our sweeping winds. On the grounds of the Agricultural College of North Dakota there is a well developed hedge row of these trees, twenty-five feet



The dwarf juniper is valuable for fronting down. It seems to be quite indifferent as to soil

tall and twenty-five years old. Protection has made them possible. Trees from this very hedge row, grouped out in the open where the prairie winds can reach them, are fast failing; as the outer ones die and are removed the inner ones, lacking this protection, also fail. The soil in which the exposed group was planted is exactly like that of the hedge row. Norway spruce is apt to fail in soil in which the white, Black Hills and Colorado blue spruces do well. This spruce possesses neither the drought-resisting nor the wind-combating qualities of the others and can not be recommended for extensive planting in the Northwest; and as none of the hardy spruces droop as the Norway does, we must forego this effect in our landscape. As an auxiliary to a deciduous windbreak the Norway spruce might be considered, though even here the white or the Black Hills spruces have the advantage, being

far more rugged and, of course, fully as effective in holding back the surface wind during the winter. A well developed spruce with its low spreading branches is about as good a playhouse for children as can be devised.

The firs and the hemlocks are out of the question in the Northwest. Arborvitæ (*Thuja occidentalis*) will grow well, and the reason that most persons experience such trouble with it is that they do not fully understand its requirements. It should be borne in mind that this evergreen is native to cool, wet soils and, where dry soils and a lack of rainfall prevail, young arborvitæ can scarcely be watered too much. It appears not to be a matter of cold or of winds, but merely a matter of sufficient moisture that determines failure or success with an arborvitæ. However, when the grace and beauty and hardiness of a red cedar (*Juniperus Virginiana*) are



The white cedar or arborvitæ needs moisture and therefore is not so useful as the red cedar. Jack pine at the extreme left

considered, it would seem needless to bother with an arborvitæ.

Out in the Badlands grows a variety of the red cedar which, with its feathery grace and silvery sheen, produces an exquisite effect. A few catalogues list it under the name of silver cedar, or *Juniperus Virginiana*, var. *glauca*, though as a rule, nurserymen are unfamiliar with it. It is slow of growth and in winter its green is a bit rusty. It endures shearing well, being the equal of arborvitæ in this respect, though to shear such a tree is like cutting a bird's plumage. Carefully planted, with a sufficient supply of moisture during the first year or two, the trees can be grown on the open prairie and will endure any subsequent neglect. In the Badlands these trees attain some size, though in landscape work they are to be regarded as rather dwarf material with an average height of from three to eight feet. It should be borne in mind that a species so widely distributed as our native red cedar is likely to produce some very marked variations, especially in fitting itself to such unusual conditions of both soil and climate as one finds in the Badlands.

The common, low-spreading juniper (*Juniperus communis*), is a weed for growth and persistency, and of all our evergreens the most indifferent to soil. It is a shrub with a distinct front and back and therefore well adapted to hillsides where it will thrive on exceedingly little moisture. It ought not to be omitted from evergreens on a hillside for, in a way, it acts as a ground cover and its green is always fresh. Once established, it tends to spread of its own accord. There is a little trailing variety of this juniper, a little creeping vine that serves well among rocks. What Latin appellation is it to have I doubt if the

botanists have as yet determined. With the development of the Northwest along horticultural lines there will be found a number of varieties of evergreens so distinct from the species that some varietal name will have to be given each. This is the case with our Black Hills spruce and our Badlands cedars, trees of distinctive character that as yet lack satisfactory variety names by which they may be known.

The foregoing are all the evergreens on which any reliance can be placed in the Northwest, though as already stated the list is not conclusive; as this section of our country demands more landscape material, other evergreens from all manner of sources will be brought in of which some, no doubt, will prove hardy. But aside from their value as landscape material, pines and spruces serve an eminently practical purpose as windbreaks. Windbreaks there must be around the homes of the prairie farmers; a shelter belt of deciduous trees, fronted with low branching evergreens, makes the ideal windbreak.

Transplanting an evergreen is, by most people, undertaken with trembling and doubt, altogether without reason, for nothing is more certain to grow than an evergreen planted with a ball of native soil about its roots. When the buds of an evergreen start in spring its roots are still dormant and remain so until the beginning of summer; consequently, an evergreen transplanted has in spring an evaporation in excess of the capacity of the roots to absorb moisture, for these can as yet draw only upon the soil moved with them and not upon the soil in which they have been placed. To overcome this difficulty transplanted evergreens should be sprayed a few hours during the hottest part of the day. An evergreen handled thus can be moved at any time of the year except when the ground is frozen. Shipping trees a long distance is, of course, another matter for which purpose midspring and early fall are best. However, as far as the Northwest is concerned the emphasis ought not to be laid upon the time of planting but upon the proper handling.

The matter of soil is another phase of evergreen culture that unduly vexes people. Spading sand into the ground in the hope of thereby making it more congenial to an evergreen is a waste of sand. An evergreen will grow in gumbo. An abundance, even a surplus, of manure may, however, be spaded into the soil. Manure is unequalled for breaking up a stiff clay and, moreover, nothing will give the soil, light or heavy, a greater water-holding capacity than the humus thus added. On the other hand, the roots of an evergreen will not endure being brought into contact with fresh manure. The food that manure adds to the soil is not half as important as its influence upon the physical texture of the soil. Spading in manure after the trees are planted is a hindrance rather than a help.

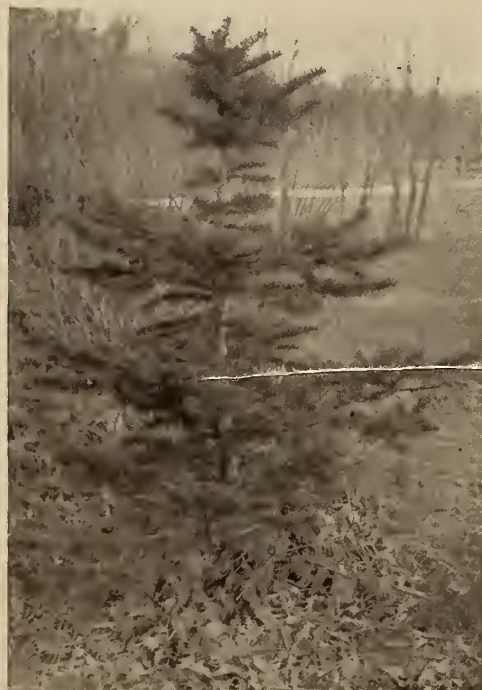


The Black Hills spruce (*Picea alba* var. *compacta*) makes a dense growth and has a black color

Evergreens should be bought only from the man who raises them. The proper way to start an evergreen out on the open prairies is to plant it in the midst of deciduous shrubbery; this will provide the protection it requires. When the fall is dry it is a good plan to send the evergreens into winter quarters with a heavy watering. Merely turning the hose on the trees for a few minutes will not do. Whenever it becomes necessary to water an evergreen the ground about its roots as far out as the branches extend should be soaked until it refuses to absorb any more water. Nor should the ground be permitted to bake about an evergreen, but be kept well stirred. And in fall, just before the ground freezes, mulch with straw. Evergreens, as a rule, can take care of considerably more water than nature provides in most parts of the Northwest, so there is little danger of overwatering them.

The following list gives the evergreens which thus far have proven themselves hardy in the Northwest. It may be superfluous to add that we can boast of no broad-leaved evergreens:

POPULAR NAME	BOTANICAL NAME
Bull pine	<i>Pinus ponderosa</i>
Jack pine	<i>Pinus divaricata</i>
Dwarf mountain pine	<i>Pinus montana</i> , var. <i>mughus</i>
Tamarack	<i>Larix laricina</i>
White spruce	<i>Picea alba</i>
Black Hills spruce	<i>Picea alba</i> , var. <i>compacta</i>
Colorado blue spruce	<i>Picea pungens</i>
Norway spruce	<i>Picea excelsa</i>
White cedar (arborvitæ)	<i>Thuja occidentalis</i>
Red cedar	<i>Juniperus Virginiana</i>
Badlands cedar	<i>Juniperus Virginiana</i> , var. <i>glauca</i>
Common juniper or (dwarf juniper)	<i>Juniperus communis</i>
Trailing juniper	There appears to be no authoritative name that would distinguish this from the preceding



The Colorado spruce is a valuable hardy tree, but not so dense as the Black Hills spruce

An Inexpensive Water Lily Pond—By Lena Smith Ford, ^{Connec-}ticut

MOST of the water gardens described in garden literature are elaborate naturalistic ponds or formal pools of masonry, beautiful but costly and quite unattainable to the modest gardener; the case of the amateur seems to be limited to tubs and cemented tanks. We did not doubt that beautiful water lilies could be grown in tubs or tanks, but we wanted a small, naturally outlined pond (about twelve feet long) with no cement edges showing and we wanted to locate it in a low, unowned spot at one side of the lawn, where some young hemlocks would be a protection for it. We were the veriest of beginners in gardening and desperately afraid of doing something ridiculous; mistakes might be "stepping-stones to higher things," but a misfit lily pond would be very uncomfortable to have ever before one's eyes.

However we determined to follow our own ideas. We believed that the honest expression of the best that is in one might be permitted, at least, in the privacy of one's back yard, and that a garden of one's own making, mistakes and all, would give more joy than the perfectly correct product of another. After staking out the curving outlines of the pond, we dug out the soil to a depth of two feet and three inches, saving the good top loam to put back later into the finished pond. The sides were slanted to an angle of 45 degrees, and both the bottom and sides were lined with stones about six inches thick. A three-inch layer of cement (three parts of coarse sand to one part of cement) was laid over the stones, the top rim being cut under the turf in order to hide the cement edge. The pond was fortunately located over a cellar drain and we merely had to cement a pipe into this drain to provide for emptying. After a thorough drying of the cement, it was necessary to soak out its caustic properties

that there might be no damage to plants and fish.

When all was ready we covered the bottom of the pond with one foot of loam enriched by one-third rotted cow manure, planted this with nymphaea roots and aerating plants, and top-dressed the whole surface with two inches of sea sand. There remained a foot of depth for water, but only four inches were put in at first. After the first floating leaves appeared upon the nymphaeas we began letting in a little water each day until the pond was full. Three large gold fishes were added for their beauty and usefulness.

The nymphaeas chosen were of the hardy varieties: the handsome *N. Marliacea*, vars. *chromatella*, *alba*, and *candidissima*, and the white Chinese Pygmy (*N. tetragona*). We also planted a few roots of pickerel weed and arrow head from a nearby brook, and anchored a small clump of water hyacinth at one side of the pond. A potted umbrella plant (*Cyperus alternifolius*) was added with good effect. Both the lilies and the wild plants bloomed beautifully and continuously all summer. The nymphaeas were of the varieties bound to succeed, and surely nothing could be easier than raising water lilies if these sorts are chosen.

The margin of the pond was not very extensive, but we wanted to make the most of it. The side toward the lawn was left open so that we could see the lilies from any part of the lawn or garden; the remaining sides and back were planted thickly among stones and grasses with plants of the following kinds:

Near the edge, forget-me-nots, English daisies, and tiny ferns; back of these, iris (German, Japanese and common blue flag) *Hemerocallis flava* and *Dumortieri*, Funkia, cardinal flower, closed gentian, turtle head, and some phlox. Back of

all were the young hemlock trees. The forget-me-nots grew right out into the water a foot and were a sheet of bloom for a long time. All the other plants did well here, as the place was naturally somewhat moist and one only had to flood the pond a little to give them an extra drink. Every three or four days we sprayed the pond to replace the water lost by evaporation, but the amount of water used increased our water bill less than a dollar for the whole season.

All summer long something delightfully interesting was happening in and about this little pond. Three green-brown frogs came to live in it; toads laid their eggs in long strings to the overhanging forget-me-nots, and soon the bottom of the pond was covered with little gray tadpoles. We supplied our own garden and the whole neighborhood with plenty of toads. Soon, too, young gold fishes began to hatch by the hundreds and by the end of summer many of them had changed their color from brown to gold. But most charming of all were the waxy flowers and bronze-green leaves of the nymphaeas. They bloomed continuously until the frost finally froze the half open buds.

In late fall we took out the fishes, drained the pond, covered the nymphaea roots with manure and filled the whole opening with hay and cornstalks, bringing the mulch out two feet over the edge to protect the sides from cracking by the frost.

Considering the happiness our little pond brought us in its first summer alone, its cost seemed very trifling. We had only stones, cement, plants and fishes to buy and the expense of all came under twelve dollars. There was no labor to pay for as we did the work ourselves.



The back-yard water garden was made at a cost of twelve dollars and successfully accommodated water lilies and other aquatics, besides goldfish, etc.

The "Fun" of Collecting Anemones, III—By Wilhelm Miller, ^{New York}

THE "SUMMER WINDFLOWERS" WHICH MAKE THE HOT PERIOD SEEM COOLER, HARMONIZE COLOR DISCORDS IN THE GARDEN, AND LEND ENCHANTMENT TO COMMONPLACE WOODLOTS

(EDITORS' NOTE.—The "Fun of Collecting" series is designed especially for beginners who would like to become experts. It explains the highest and lowest ideals in collecting, and instead of airing botanical pedantry, tries to show the peculiar beauty of each species, its special use, and honestly reveals its limitations.)

EVERYBODY knows the Japanese anemone, which glorifies the autumn with its chaste, white blossoms, but very few people know its summer-blooming representatives, of which the Canada anemone, here pictured, is a fair sample. They will not give as many flowers for the money, or as large ones, but they perform three services for which we ought to be thankful.

First, they help to make the hot days seem cooler, because they are, as a rule, white flowers. A good way to make a garden hot and stuffy in July and August is to have long lines of scarlet sage, or big masses of red and purple flowers. The coolest colors are green and white. Of green we usually get enough from foliage and grass, but of white few gardens have enough in summer. In our hot climate, about one-half the summer flowers in a garden ought to be white, or near-white. It is a bad plan to look at the thermometer when the mercury is in the nineties. So, too, if you look at hot-colored flowers you will feel hotter. But if you have white-caps to look at, or white flowers, you feel more comfortable.

Secondly, these summer windflowers help to give a garden that precious quality—color harmony, because white flowers are the only "peace-makers" we have, except green foliage. Nine hundred and ninety-nine gardens out of 1,000 are full of color discords, because people do not know any way of keeping them out without too much fuss and pother. But there is a very simple way—let about half of your flowers be white. Use them in every part of your garden, for everywhere will bob up those wretched magenta flowers which cause nine-tenths of the color discords. Who wants a simpler plan than this?

Third, these summer windflowers have a genius for giving mystery and charm to commonplace situations—especially woodlands. This may shock my readers, for woods always sound alluring and everybody would like to own some. But, if you go to buy any piece of woodland near a large city you will find that practically all romance has fled from it. You can look right through the woods because the underbrush has been cut out and therefore there is nothing to stimulate the imagination. Cows have got in, or the trees are so far apart that there is grass every where and few flowers. Or, if you are lucky enough to have a big show of hepaticas, bloodroot, spring beauty and the like, the chances are ten to one that you will not have one good mass of flowers after the trees leaf out until the asters come in the fall—only dots of bloom here and there. Therefore, the

great problem with pleasure woods is how to restore wild flowers and charm without undue expense or any sign of human effort. And in this we get considerable help from summer windflowers which are sturdy enough to hold their own against deep shade and hungry roots and delicate enough in their beauty to please a dryad. For, there is nothing so exciting in summer woods as to glimpse white flowers at a distance. You cannot make out what they are, and hasten eagerly to discover this mystery in the heart of the woods.

THE BEST FOR NATURALIZING

The most familiar of the summer windflowers is the Canada anemone (*Anemone Canadensis*, but known to the older generation as *A. Pennsylvanica*). It has pure white flowers about two inches across, blooms in June, and gives scattering flowers until midsummer. This is the favorite for garden or border cultivation. My friend Mr. R. B. Whyte has thrown it out of his garden, on the ground that it seems a bit weedy there. But for naturalizing in woods or meadows it is the best of all the species here described, and is one of the few flowers that really seem to do equally well in sun and shade. Imagine a thousand of these starry white blossoms swaying on their slender stems in those



The cut-leaved anemone or red windflower (*Anemone multifida*)

woods you know which are now too open. You can buy 100 collected plants for only \$5, or get a dozen nursery-grown plants for \$1.50. Or, if you have no woods, they are strong enough to serve as a ground cover in your shrubbery.

THE CHEAPEST WINDFLOWER

The cheapest species, as a rule, is the one most abundant in your locality. Why not search for and collect the tall anemone (*A. Virginiana*)? I am opposed to the extermination of wild flowers, and think it shameful to move them from the deep woods to the open garden. But here is a species that is in no danger of extermination, has an enormous range, and generally grows in good sized colonies. If it is abundant in your neighborhood, there is no harm in hiring a farmer to bring a wagon load of it from his woods to yours. It is the tallest of the summer windflowers, often growing three feet high, while the Canada anemone attains only twelve to eighteen inches. The flowers are white or greenish and about an inch and a half across. No nurseryman offers it, for I dare say it is a bit weedy for the garden and does not bloom long enough. But the wild garden is just the place for such things, since they must be strong enough to take care of themselves and you do not mind a short period of bloom for any particular flower, since it is easy to get a succession.

THE NARCISSUS-FLOWERED ANEMONE

We now come to the species suitable for the rock garden, and one of the most interesting of them is the narcissus-flowered anemone (*A. narcissiflora*), which can be recognized at once whenever it has five or more flowers in a flat-topped cluster, or umbel. Unfortunately, you cannot distinguish these summer windflowers by the number of blossoms, for every species may have from one to five in an axil. The average is about three. Nicholson calls it "an extremely variable and beautiful species." The flower is usually cream-colored, but sometimes purplish outside, while the plant varies from six to eighteen inches in height, and the flowers from one-half to one inch wide. It is a European species, but is hardy at Ottawa. Unfortunately it is a hard plant to multiply, compared with the Japanese anemone which is easily propagated by division. In Europe it blooms in May, but in our Northern states we should perhaps expect it in June.

THE CUT-LEAVED ANEMONE

The cut-leaved anemone or red windflower (*A. multifida*) has, perhaps, the

greatest range of color among these summer windflowers, including white, yellow, and red, though the red is rather dull and the other colors greenish. The flowers are about an inch across and the plant grows about a foot high, though it is reported two and a half feet high at Ottawa. Curiously enough this species grows as far north as Hudson Bay and is also found at the Straits of Magellan. Like all the windflowers it has a woolly fruit-head, which is rather pretty. The expression "wild and woolly westerner" is literally true of this flower.

THE LONG-FRUITED ANEMONE

The long-fruited anemone (*A. cylindrica*) is chiefly remarkable for its pencil-like fruit-heads about an inch long, which are in marked contrast to the globose heads of the Canada and cut-leaved anemones. It is practically unknown to cultivation. It has the smallest flower of the group (one half to three quarters of an inch) and inhabits open places, generally growing a foot or two high.

A BOG-LOVING ANEMONE

The most exquisite of these summer windflowers is the riverbank anemone (*A. rivularis*), which has white flowers, shaded outside, with rose or blue, and about two inches across. Like many other plants from the Himalayas it has blue anthers. It is hardy at Ottawa, but I doubt if it could be treated as a border plant in the region of variable winters. Reginald Farrer gives it a choice place in his bog garden and praises it highly in his "Alpine and Bog Plants."

THE GIANT ANEMONE

Even more tender, I fear, is the giant anemone (*A. Fannini*), a native of South Africa, which sometimes attains the astonishing height of five feet, bearing fragrant, white flowers three or four inches across in June. Like many other flowers from the Cape it has numerous linear petals—or "sepals," as the botanists say in this genus—twelve to thirty of them, whereas an ordinary anemone has about five. The foliage, also, is interesting, the leaves being sometimes two feet long, with stalks a foot or two long. Truly a giant among anemones!

THE NODDING WINDFLOWER

Last, but not least, is the nodding windflower (*Anemonopsis macrophylla*) which is practically a small, summer-blooming edition of the Japanese anemone, growing only a foot and a half high and bearing white flowers, shaded with pink, and about an inch and a half across. The foliage is quite unlike any anemone, but resembles *Actæa* or *Cimicifuga*, since the leaves are ternately. Moreover, anemones have erect flowers, while these are drooping or, at least, nodding. This plant must have well drained soil and partial shade. Occasionally you hear of its being a success in an ordinary border, but I should



The Canada anemone (*Anemone Canadensis* or *Pennsylvanica*) is the best of the summer windflowers for naturalizing

not trust so precious a plant outside the rock garden. This genus comes from Japan and has only one species. Its large clusters of waxy flowers are clearly forerunners of the glorious plant which I hope to describe in the autumn.

HINTS TO COLLECTORS

Collectors will find other names of summer-blooming anemones but if there is any good reason why we should part with our hard earned money to get them I do not know it. The collector is sure to stumble upon *A. dichotoma*, which sounds interesting, but the European nurseryman thinks it the same as our old friend the Canada anemone. Dr. Britton says the true *dichotoma* is a Siberian species differing from *Canadensis* in having glabrous, ovate achenes instead of pubescent, orbicular ones. It may be worth growing, but I want to be "shown," for there is not much human interest in achenes, and *Anemone Canadensis* is so lovely and cheap that I hope

all my readers will grow it or, at least, learn to know it this month.

CULTURE

All the anemones here mentioned should be planted in spring rather than in autumn, but now is the time to study them, while they are in flower, and arrange for buying or collecting them in sufficient quantity for pictorial effects next year. They can be raised from seed, and it is a good plan to mark now any anemones that are in flower and note the localities, so that you can gather the seed in early autumn. You can label a colony in the woods; otherwise, you may forget all about it or else lose it entirely.

No one American nurseryman offers all these species. Some can be procured from specialists in native plants and collectors in New Jersey, Colorado, North Carolina, etc. Others must be imported from England or Scotland. The Readers' Service will help any beginner by suggesting where rare plants of any kind may be secured.

Vegetables for July Planting—By W. C. McCollom, Long Island

NAME	VARIETY	DISTANCE TO THIN OR PLANT	WHEN CROP WILL MATURE	REMARKS
Bush beans, green " " " " " wax	Early Mohawk Black Valentine Imp. Black Wax	6 inches 6 " 6 "	Aug. 20 Aug. 30 Aug. 30 onward	Keep crop growing fast by good cultivation Plant rows 1 ft. apart so as to protect from frost for later sowings
Pole beans Bush beans	Extra Early Jersey Lima New Wonder	3 inches 6 "	Sept. 15 onward Sept. 7 onward	Use plenty of seed and thin out because germination is poor at this season
Beet	Any variety; Electric Eclipse or Edmands	4 inches	Sept. 1	Keep well watered during warm weather
Brussels sprouts	Long Island Imp. Dwarf Buchin Castle	2 inches	Oct. 15	This crop is no good until frosted a bit to give it flavor
Cabbage	Jersey Wakefield, Early Spring	18 inches	Oct. 1	Keep well watered to prevent club root
Carrot	Scarlet Horn, Danvers Guerande	4 inches	Sept. 1 onward	Sow every 2 or 3 weeks for succession. Make last sowing Aug. 1st for winter
Cauliflower	Extra Early Erfurt Early Snowball	18 inches	Oct. 15 onward	Do not make soil too rich and when they start to head feed with liquid manure for quality
Celery	Golden Self Blanching	6 inches	Nov. 1 onward	Keep well watered and hilled all the time
Swiss chard	Lucullus	8 inches	Sept. 1 onward	Keep well watered
Corn	Use early sorts: Golden Bantam, Early Minnesota, Metropolitan	8 inches in rows	Sept. 10 onward	Keep well cultivated. Plant in rows 2½ ft. apart so protection can be given in fall
Corn salad	Large Seeded	4 inches	Sept. 15 onward	Sow for succession. Protect for spring use
Cress	Extra Curled, Upland Plain Leaved	Don't thin out; sow thin in rows	Aug. 1	Sow every ten days for succession
Cress	Water	Thinly broadcast	Oct 1	Keep well watered
Cucumber	Extra Early White Spine The Davis	Hills 4 ft. apart, 3 in hill	Sept. 10 onward	Keep sprayed with Bordeaux mixture
Endive	Batavian, Green Curled White Curled	12 inches	Sept. 1 onward	Cover with boards to bleach when large enough
Kale	Dwarf Purple " Green	2 feet	Oct. 15	Needs frost to flavor. Cover with hay and it will keep all winter
Kohlrabi	Early White Vienna " Purple "	6 inches	Sept. 30	Better as a fall vegetable than a summer crop Gets mild and tasteful during cool weather
Lettuce	May King } Cabbage Maximum } type New York } Crisp Wonderful } heading Black Seeded } Loose Simpson } heading Cypress } Cos Paris White } type	12 inches	Sept. 20 onward	This crop should be kept cool nights Plant in open in plenty of air and not under a building Shade during the day will help it
Mustard	Chinese White London	Sow thinly Don't thin	Sept. 1	Keep well watered for good flavor
Onions	White Bunch, Queen Adriatic Barletta	Don't thin: 2 in.	Aug. 15 Oct. 1	For green onions only
Peas	New York Market Nott's Excelsior American Wonder	Don't thin Sow in rows 1 ft. wide	Sept. 10 onward	Keep well watered and if weather is dry mulch with rough manure
Potato	Noroton Beauty Bovee	12 inches	Oct. 1	Keep well cultivated and use plenty of fertilizer when planting
Radish	-Any variety either summer or winter type		Aug. 10 for summer Oct. 15 for winter	Sow summer radish thinly; don't thin out. Winter radish 6 in.
Rutabaga	Long Island Imp. Imp. Purple Top	8 inches	Nov. 1	No good until frosted a little to give flavor
Spinach	Victoria Long Standing Viroflay	Sow thinly in rows; don't thin out	Sept. 1	Sow every two weeks for succession; what is too small to use cover during winter for early spring
Turnips	Early Milan, Strap Leaved Golden Ball, Scarlet Koshyr	6 inches	Sept. 15	Make two sowings during the month
Herbs	Sage, Thyme Dill, Fennel	6 inches	Nov. 1	Cut and store before heavy frosts

Water Effects in the Garden

NOTHING ADDS TO THE QUIET CHARM OF A GARDEN IN THE WAY THAT WATER DOES—IT ALSO LARGELY INCREASES THE OPPORTUNITY FOR GROWING DIFFERENT KINDS OF PLANTS AND FOR MAKING PICTORIAL EFFECTS



The central piece of statuary, used as a fountain, concentrates interest and gives life in heavy surroundings



A natural stream may be utilized for aquatics along the banks



Water used as an ornamental feature. The reflections emphasize the lights and shadows



A frankly formal treatment, where the whole idea is to accommodate water plants. Such construction is quite inexpensive



Statuary used as this centrepiece of a garden is greatly improved or justified if it takes the form of a fountain



An elaborate, but perfectly natural, treatment for a water garden. Only available on large areas, however



The basal treatment here is appropriate: provision is made for water to run off



An artificial pool in a small garden that, however, looks natural and has a rich collection of plants



The absence of any visible escape for the water gives a sense of unfitness to this basin

CHILDREN'S GARDENS EVERYWHERE



REWARDS AND PRIZES FOR CHILDREN'S WORK—COMMON GARDEN PESTS AND HOW TO FIGHT THEM—METHODS OF CONDUCTING A COMMUNITY GARDEN FOR BOYS AND GIRLS

Conducted by
ELLEN EDDY SHAW
New York



Garden Prizes

EVERY child enjoys the incentive of working for a prize. It does not matter if the prize is a small one; there is still the joy of working toward a definite goal. We all love to run races. We all prize highly the mark of our attainment.

Some people think that working for a prize detracts from the higher object of the work. So it might if the prize offered were a large sum of money. But few of us would think of offering this. To be sure some of the horticultural societies give small sums as prizes for the children's work, but these rarely amount to more than three dollars for a first prize. The usual range for money prizes is from twenty-five cents to three dollars.

But there are prizes, not of money, which represent actual garden helps to the young gardener. It seems as if the prize is worth while which places in a child's hands the means toward better gardening. This is the reason why we offer as prizes our magazine and certain garden books.

The South End Industrial School in Roxbury, Mass., presents bulbs, garden tools and magazine subscriptions as prizes. A child going home with fifty tulip bulbs or an order for the same is perfectly satisfied. One girl with a large, green watering pot was the envy of an entire group of girls.

Sometimes just a ribbon or card is given as the prize. North Andover, Mass., gives ribbons plus a small sum of money. A first prize is a blue ribbon and fifty cents; second prize, a red ribbon and twenty-five cents. School prizes are given, too. The number of ribbons won by the children of a given school count so many points toward the prize. The school having the highest number of points wins a large framed picture.

Cleveland, Ohio, gives premium cards which represent certificates for the prizes which are given after the exhibit time is over.



Potato beetle

One school in Scotland gives for the best plants raised such simple, childlike things as dolls, balls, and pocket knives. A civic improvement league in an English city presents small sums of money ranging from twopence to five shillings.

Some places depend entirely on the prizes this department offers. If a school or child wins, then the success seems the greater since the contest is national and not local.

The disagreeable features of competition disappear if the contest is managed properly.

Garden Pests

ALL our garden seedlings seem to be doing well when suddenly some pest appears. From now on we must keep persistently at it; with bugs and weeds the time will be fully occupied.



Celery caterpillar

Often this question is asked concerning the pests one is most likely to have in the garden and what is to be done in each case. Well, there are the big caterpillars, such as the celery caterpillar, the cabbage worm, and the cutworm.

The celery caterpillar is a large, green fellow with a black band on each ring of its body. It attacks the celery plant and is so large that it can be seen easily and picked off by hand.

The cabbage worm is green, too, but is much smaller than the celery caterpillar. This pest may be destroyed by a resin-lime spray, or by a spray made from one ounce of white hellebore powder dissolved in three gallons of water.

The cutworm is a different proposition for one so rarely gets a peep at it. Cutworms are known by their deeds. They cut off the tender stalks of bulbs, the young tomato plants and even the violets. If you ever see one, it will look to be just a rather dull, grayish, striped caterpillar. To be rid of this pest first buy five cents' worth of hellebore powder at any drug store. In late afternoon go out to the



Squash bug

garden and with your finger make a ring in the soil about six inches from the stalk of the infested plant. The ring should circle the plant stalk. Sprinkle hellebore powder in this ring. The dews keep the powder in place. An-

other way is to put a paper collar about the plant stalk and some two inches from it. Sink this collar into the ground to the depth of an inch, and the same distance, or a trifle more, above the ground.

The potato bug, a black and yellow striped beetle, also attacks the tomato plants. These bugs appear in May and stay through the season. A spray of Paris green or Bordeaux mixture should be used.

The squash bug, a dark brown, evil smelling chap, feeds on both the squash plants and the melon vines. This bug can be picked right off and easily kept down.

Many plants may have aphids or lice during the season. An emulsion of strong soapy water and kerosene or whale oil soap is effective and easy to apply.

Of course, there are many, many other pests but these are more common than many of the others. Careful, clean cultivation helps to keep down the bugs.

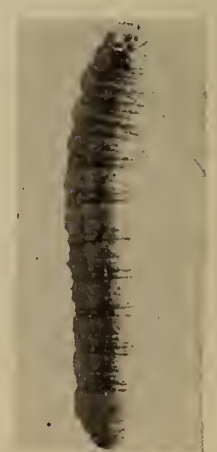
Garden Hints

THE following are suggestions for this month's outdoor work:

(1) It is not too late to plant dahlias. In fact when this number of the magazine comes to you it is just the right time. Plant one bulbous part to a place. Plant in the school garden ready for the fall.

(2) Do not forget that the toad is a garden friend. Have a few stones and bits of wood in the garden as shelters for him.

(3) Before certain flowers run out, which happens during the



Cutworm

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At Brownell Auditorium

Exhibitors No. 70 Class B

Parsnips **No. 18**

**Premiums Payable at the Brownell
School Oct. 15, 1910, at 3 P. M.**

A premium card used at an annual exhibit by the Home Gardening Association, Cleveland, Ohio

summer, make sowings of other seeds. Try marigolds, mignonette, wallflower, and coreopsis.

(4) Thin out the plants if they come up too thickly. Stir the soil constantly.

(5) The little wooden seed labels are excellent as cultivating sticks for the small boys and girls.

(6) Schools would do well to make out and place their bulb orders before the school closing time.

(7) Sink the school-house plants, pots and all, in a shady place in the garden.

(8) The following list represents a wild-flower garden of constant bloom: *For April or earlier:* Anemone, everlasting, spring beauty, hepatica, blood-root; *May:* Columbine, Jack-in-pulpit, wake-robin; *June:* Buttercup, Solomon's seal; *July:* Butterfly weed, bouncing bet; *August:* Elecampane, Joe-Pye, cardinal flower, turtle head; *September:* Blazing star, cardinal flower, boneset; *October:* Fleabane, goldenrod, starwort, sunflower, witch hazel.

(9) Foxglove is good to use for backgrounds and for mass effect, too.

(10) Do not forget to register in our garden contest before the close of school.

A Second Year Garden Experience

THE following is taken from a contest report sent in by William Wildey, supervisor of this garden:

"I opened a garden school in Eastman Park, Poughkeepsie, N. Y., on Saturday, May 14, 1910, for a committee of four influential people in that city. They took it upon themselves to continue the work of the previous year, which was the first year of this work.

"I visited the garden every Saturday and Wednesday, directed and supervised the work in every detail. The committee furnished assistants to carry on the work when I was not there in person.

"Two hundred boys and girls, ranging in age from nine

to thirteen, reported for duty and were given individual gardens. About three times the number registered. Space being limited, the remainder had to be turned away, disappointed, I assure you. A few gave up their gardens during the season. These were given to other boys or girls.

"Very few gardens changed ownership during the year. We cared for all gardens when the owners were sick for two weeks, and gave them the first vacated one when they came back if sick for more than two weeks. If a garden was neglected for two weeks it was given away.

"The ground had been ploughed and harrowed and well fertilized with wood ashes and horse manure. The manure was obtained from the street cleaning department before the time of opening. We found it best to carefully spade and rake the ground before it was ready to plant.

"On the opening day, May 14th, we laid out the gardens in beds or plots 4 x 10 ft., with a path 14 feet running each way through the gardens. A large circle, about 8 feet in diameter, was set with potted plants which gave the gardens a touch of life from the very beginning.

"The committee furnished the seeds. The work of marking and planting was begun the first day. Each pupil assisted in marking and planted his or her own bed with radishes, lettuce, beans, onions, carrots, beets, and turnips.

"Besides about one hundred and eighty individual gardens, nearly one-eighth of the available land was set aside for flowers and such vegetables as were not grown in the individual gardens. The flower gardens had in them transplanted potted plants, plants from seeds and bulbs. Such vegetables as peas, tomatoes, peppers, cauliflower, cucumbers, sweet corn and popcorn were planted and grown in observation gardens. All the children worked together in caring for these beds. They proved a very attractive as well as instructive part of the garden work. Beds of peanuts, cotton, hemp, flax, alfalfa,



The havoc worked by these cabbage worm shows plainly on the leaves of the plants

wheat, millet, and buckwheat were grown for observation purposes.

"One of the committee, furnished and assisted in planting enough herbs of the most useful and familiar kinds to make a very fine assortment. This bed proved very attractive and interesting. Each pupil who assisted in caring for the observation beds was given such products from them as they liked best, after the work was finished each day. Some of the vegetables from observation beds were sold and proceeds turned over to the garden committee. This was a favorite idea with the children in general.

"A new plan was adopted which aided much in attendance and general interest. The committee purchased a pretty American flag and staff. The whole garden was divided into four sections. Each section elected a president and secretary. Two or three of the business men of the city were invited each Saturday afternoon to decide which section was in the best general condition. All walks, borders, and gardens in general were considered. The flag was placed in the best section for one week. Each section chose a president and secretary from their own number. These officers kept the divisions up to the mark.

"The gardens were closed on the last Saturday in August. Each child gathered and took home what vegetables he or she had raised. The observation beds were cared for by volunteer assistants and interested children until the frost spoiled the pretty flowers. The flowers were cut freely and given to children who cared for them. Many were sent to sick members, some to hospitals and even to cemeteries.

"Each child was furnished with a book and encouraged to keep a memorandum of what he did from day to day. Many did this and have accurate records of their work."



Foxglove, planted thus as a background, shows to great advantage



(EDITOR'S NOTE.—We want to know how successful workers do things in order to put actual experiences before our thousands of readers in all parts of the country. Every reader is invited to contribute a short note on some interesting experience. Just state the facts about some ingenious idea that you have actually worked out yourself or have seen.)

Cabbages bursting

I was lamenting to a farmer friend the fact that last year about half of my cabbages, and the very best ones, burst open and were almost a total loss. I especially lamented the large, perfect one with which I was planning to take the first prize at the county fair, and which, only a few days before the fair opened, split straight across the centre. "I can tell you how to prevent that," he said, "just pull each cabbage, not clear up, but enough to break part of the roots. Then the cabbage will remain alive, and keep on growing a little, but not enough to burst it open. The pulling is to be done as soon as the heads have become solid." —C. S. T., South Dakota.

Transplanting in summer

When you are obliged to set out in mid-summer something that offers a great deal of risk, such as a piece of shrub that has not a strong independent root growth, this plan is a good one: Fill the hole up only partially and then put in a layer of green grass—I pull it fresh by hand, but lawn clippings will do. After watering well, add the rest of the soil and then a mulch of grass. Pieces of shrubs and old-fashioned roses, chopped off with little root, and small plants of box I have planted in July and August in this way with success. Not a piece of the box was lost, though the plants were taken up with little soil on the roots and then separated.—H. S. A., Connecticut.

Watering hanging baskets

Every one who has had to water hanging baskets knows that to pour water over them means the washing out of a certain amount of soil each time, and a comparatively small part of the water soaks in, the rest running off rapidly; and that the immersing of the entire basket is a laborious process. I use a siphon of small copper tubing with the outlet end squeezed so that the water comes out no faster than rapid dropping. With the short leg of the siphon, say ten inches long, set into a quart bottle, the longer leg of the siphon twelve inches in length, and

a wire hook around the neck of the bottle, the apparatus may be hung over the basket, and for three-quarters of an hour there will be a steady, fine spray falling over the foliage, giving a thorough soaking. Rubber tubing may be used, if care be taken to keep a long curve at the bend where it leaves the bottle.—J. E. W., Pennsylvania.

The *Milla uniflora* again

Like your correspondent H. S. A., I have grown for several years in my garden a flower which I bought under the above name. It is exceedingly beautiful, "white with a faint lavender stripe on each petal," and exactly like the illustration in his article. It blossoms so profusely that the foliage is almost hidden under a bank of snow. Every one admires it greatly. But the perfume! Alas, it has a strong odor of garlic, as I found to my sorrow when I made a button-hole bouquet for a young man who was going to a dance. The heat of the room soon developed the obnoxious odor, greatly to his mystification. I have not totally condemned the flower; it grows and increases and we enjoy it at a respectful distance. But is it this climate that has wrought a change in the scent? Since my discovery I have wondered that none of the florists who list the bulb in their catalogues mentions this drawback.—I. H., California.

Transplanting poppy seedlings

To raise Oriental poppy seedlings that will transplant successfully, try starting the seeds in a tin can, having first removed both ends by placing the can on the coals. Fill this with finest rich soil and bury it in the garden. By early fall, with the trowel placed well down at the side of the can, raise it carefully and you will find numerous long single roots even below the can. You can slip out the whole mass and separate each little seedling and plant in its permanent place. By using a dibble you can make just the right sort of hole. Press the soil firmly into place.—H. E. M., Connecticut.

Shade for roses

Everblooming roses do better for me with moderate shade. I give it by planting Ramblers in the centre of each clump of tea roses, and pegging down the ends of the rambler canes. They take root where they are fastened to the ground, but bloom just as well and keep the hot sun off the more tender ones. The improved Crimson Rambler, Rubin, is a beauty.—J. D. C., Illinois.

New ideas in labels

To label plants I use linotype metal slugs, with the lettering cast in the line. They are indestructible, and there is room on each line for a descriptive word or two. The description is convenient when moving plants for mass or color effects. For use in the perennial border they are attached to a six-inch wire, which is thrust into the ground. The metal soon loses its polish, and is invisible except to the

one looking for the name. These labels may be "set" almost everywhere, at a cost of about a cent apiece. I steal mine.—M. J., New Jersey.

The surplus seedlings

If you have grown more seedlings than you need, and are tired of transplanting the surplus, just lift them up by spadefuls and put them in the ground. They will stand the winter, in nine cases out of ten, and may be transplanted the next spring to fill gaps. Gardening enthusiasm is higher, too, when the weather is not hot.—K. L. C., Massachusetts.

Screening the porch

If you have a screened-in porch and want to cover it with vines, place poultry netting, or, preferably, heavy, diamond-mesh field fencing, in front of the screens. Run iron rods or heavy wire through the top and bottom meshes, and fasten these with hammock hooks to the top and bottom of the porch. Cut the wire short enough so it will be taut when the fastenings are in place, and the wire always will look well, give the best support to the vines, and come down conveniently in the fall, when it is necessary to remove the screens. The netting can be replaced without disturbing the vines, or if the plants need protection, they may be rolled up with the wire and covered with leaves.—F. H., Illinois.

A run-wild border plant

Sweet rocket, or dame's violet (*Hesperis matronalis*) always wants to own a border, where, after all, only the white variety is particularly desirable and that in only a limited quantity. If the grounds are large enough, remove some of it to a place where it can run wild, and a really beautiful naturalistic effect will be created. Even the deeper of the two pink shades takes on beauty in this way. On Long Island there is a dooryard of an unoccupied house where the long grass is full of sweet rocket and it has strayed through the fence, across the sidewalk and street to the edge of the road, making a charming sight when in full bloom.—B. S., New York.

The Pearl *Achillea* again

In the Readers' Experience Club for April, 1911, E. A. S. makes some scathing remarks about the Pearl *Achillea*, which the Editor has annotated by saying that while E. A. S.'s criticisms may be very well for the West, "it (the Pearl) will be considered as a worthy, pure white, hardy perennial by us in the East." I have found exactly E. A. S.'s faults with The Pearl—ugly color, poor form, and a really terrible propensity for spreading, and for creeping in among the roots of other plants—and have spent three years trying to get rid of it. *Boltonia asteroides*, however, has fulfilled my wildest dreams of a good white flower for massing and cutting, as well as for a background.—M. Y., Long Island.



THE HOUSEKEEPER

Fruit Juices for Hot-Weather Drinks

By M. ROBERTS CONOVER, New Jersey.

IN THE middle of summer, when hot and thirsty, how refreshing is a drink made from fruit syrup! And if the syrup was made from fruit which had been grown in one's own garden, one quickly forgets, in the pleasure of the moment, the trouble it was to make the syrup. Unlike the orange, lemon, and lime, the juices of the apple, pear, peach, etc., require heat to make them taste just right and to ensure against fermentation, and are therefore more or less of a trouble to prepare.

The necessary utensils are an acid-proof preserving kettle, an earthen bowl, a jelly or fruit press (or an enamelled colander and flannel bag), asbestos mat to be used beneath the kettle, and silver spoons and porcelain cups for handling the fruit. Aluminum kettles are the best. If, however, an enamelled one is used it must be well coated and the inside surface free from cracks of any sort. Fruit juice must never come in contact with tin or iron.

Select only fruit that is perfectly sound and thoroughly ripe. If it has not the melting sweetness of maturity it will yield sour juice. Gather it the day before it is to be used and keep it in a cool place. Soiled or dusty fruit which cannot be pared, must be washed by floating in water and draining in a colander.

The juice may either be squeezed from the raw fruit with a press or the fruit may be heated to the boiling point and the juice drained from it.

The juice that has been pressed from the raw fruit should be strained through cheesecloth and put at once over the fire. It

should boil for about fifteen minutes, sugar being added. Sweeten to taste, the sugar being added about five minutes before the liquid is bottled. The juice of the Concord and kindred varieties of grape require very little, if any, sugar.

Juice expressed by boiling the fruit is deeper in color than that which is pressed out. Put the fruit over the fire in a kettle with water enough to float it. Boil until tender in the case of peaches, apples and pears, and until the skin bursts in the case of cherries, currants and grapes. Remove at once from the fire and pour or dip it into an enamelled colander, using the porcelain cup or dipper. Let it run through into a stone or crockery vessel. Stir it slightly, but do not mash the fruit. Strain the juice through the flannel bag previously scalded and return it to the fire to boil fifteen minutes. With pears, peaches, cherries, and the smaller fruits, half a teacupful of sugar will be required for each quart of juice.

In bottling or canning dip the bottles or jars in boiling water immediately before filling and fill to the very brim with the juice so as to leave no air space at the top. Delay in covering will often result in fermentation. Be sure to thoroughly seal.

Syrup intended for immediate use may be placed in a covered stone crock in the refrigerator or on the cellar floor.

Pears, peaches, apples, etc., must be pared before boiling. The skin may be cooked separately and the juice therefrom added to the other liquid. The pulp remaining may be used for jam or preserves.

An essential quality in serving these fruit syrups is to have them very cold. These are some recipes which I use every year:

Apple nectar.—To one quart of apple juice add a bit of orange peel, letting it boil about fifteen minutes. Remove the orange peel and stir into the liquid three-quarters of a cupful of strained honey. Remove it from the fire, flavor with grated nutmeg, and chill.

Rhubarb syrup.—To one quart of the liquor from stewed rhubarb add half a teacupful of scraped maple sugar. Stir it well, and set it in a cold place for four hours before serving.

Strawberry cream.—To render it perfectly clear this syrup may require twice

straining. To one pint of strawberry syrup, add one quart of sweet cream. Chill, and whip until frothed.

Pear and lemon sherbet.—To one quart of pear syrup add the juice and a little of the grated rind of a lemon and a small piece of green ginger root. Boil fifteen minutes. Serve very cold in sherbet cups.

Pear and pineapple sherbet.—Is made by adding one cupful of shredded pineapple to the sweetened syrup and letting it stand several hours to allow the flavors



Ice-cold apple nectar for a real hot day

to blend. Serve with cracked ice. Another agreeable blend is made by cooking a few quinces with the pears before the juice is drained.

Raspberry sherbet.—One quart of raspberry syrup and one-half a cupful of currant syrup or dissolved currant jelly. Sweeten, chill and pour into glass cups. Just before serving, top each cup with a tablespoonful of whipped cream. Blackberry and currant juice may also be served in this way.

Peach cream.—To one quart of peach syrup add one teaspoonful of almond extract, sugar to taste, and one quart of thick, sweet cream. Chill, whip until frothy, and serve.

Grape juice is really at its best when taken without additional flavors. If it is too rich water may be added in the proportion of one-third water to two-thirds of the juice, letting it stand a little while before serving. Grape juice and lemonade is also an agreeably refreshing combination.

Fruit sherbet is made from equal parts of raspberry, strawberry, currant, and cherry syrup. This is served very cold with cracked ice.



For present use, put the syrup in a covered stone crock. For future use, seal in jars



A "Corner" in Celery

FOR two years while I was in high school I worked a garden and several acres besides for one of the families of the village. The agreement was that I was to live with the family for my board, have just as good a garden as I could; that the family were to use all the produce they needed for themselves, and for the boarders that were kept during July and August, and that if I could raise more than was needed, I was to have half the proceeds of what was sold.

I succeeded in having one of the best gardens in the village, and sold enough to keep me in clothing, books, and pay all other necessary expenses the rest of the year.

I really had two gardens each summer—an upland garden and a lowland garden. A part of the land lay along a small stream that ran into a bay a short distance away, and which was bordered by a strip of lowland meadow. The soil from the bank was carted over this meadow to make sufficient land for two garden plots 100 x 100 ft. Here I raised onions in great abundance, and planted especially those vegetables that require the most moisture duplicating in many things the upland garden so that dry or wet I would not fail of a crop. The celery I grew in the lowland garden.

I bought 250 plants of the large-sized Giant Pascal celery and set them about one foot apart in rows about one hundred feet long. I set the plants in a trench about six inches deep after manuring the bottom of the trench with well-rotted cow and horse manure.

I set the plants during the latter part of July. It proved to be a very dry season. The rows were four feet apart but the celery grew so fast there wasn't sufficient soil between them to bank and bleach the mammoth stalks. I had to put up boards and get additional soil.

The season was so dry that almost all upland celery failed. We decided that half a row would be enough for the family use, and that we would sell the remainder—two full rows. I buried it all in a trench on the upland, and sold my portion at Thanksgiving time, peddling it from house to house through the village; I sold it at from fifteen cents to twenty cents a root. Each root was a great cluster as large as the bunches usually containing several roots. I received an average of eighteen cents per root, or \$18 for my row. The other row I dug up and sold off at Christmas time at about the same price.

Long Island. DANIEL H. OVERTON.

A Remedy for Wire Worms

I HAD a rather interesting experiment with *Papaver orientale* last summer. It was with one of the hybrids, the beautiful salmon-colored Princess Louise. Just as it was about to flower with eight or ten splendid looking buds of promise, two of the smaller flower stalks wilted over one morning in a most dejected manner. Looking closely at the base of the plant, I found the inevitable skipjack (the better name for wire worm). At my touch he coiled up his shining brown length and lay quiet, looking like a sleeping snail out of his shell. I took away some earth and found many more of the creatures. The poppy's main root was attacked, and had turned to a horrid, black, oozy mass part way through. It seemed a fatal

malady, and the whole plant looked doomed. I could not bear to think of waiting a whole year for these great silky petals to again flaunt themselves, for only one flower was out at this time and the other buds held such promise. I determined on desperate measures.

As the soil around the plant was no doubt full of baby skipjacks, I gently excavated a quantity from around the stalk, then cut away with my pruning knife much of the soft, oozy part of the stem and root, going several inches under ground. I dusted sulphur all around the stem and applied some soil fumigant, called apterite, a red powder which had been sometimes successful though never tried in such an advanced case as this. Then a quantity of absolutely new soil was clapped into the cavity and the plant watered well. Next I sheltered the whole injured side with a newspaper gently pinned in place. This occurred about nine o'clock in the morning of a hot June day. Off came the bandage at night, so that Nature and her healing dew could continue the cure. Back went the bandage next morning and in two days the thankful Princess Louise, to the joy of her anxious owner, announced herself well. Out came every glorious swelling bud in due time, their salmon-colored satin petals more beautiful than ever.

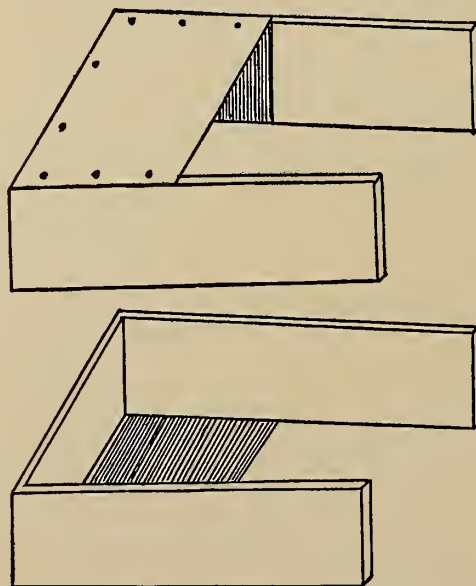
Of course, such tragedies do not happen to my sturdy red scarlet ones. I would have preferred to have had the surgical case on a plant less precious, but as it was successful, it makes me bolder. As the saying goes, "All that is done, is done by daring."

Pennsylvania. FRANCES E. MCILVAINE.

A Wheelbarrow Extension

TO INCREASE the capacity of my wheelbarrow I have made what might appropriately be called a wheelbarrow "extension." It may be described as an oblong box with one end and half of the bottom knocked out, although this is not strictly accurate as the sides are placed at the same slant as those of the wheelbarrow proper so that they may fit against the wheelbarrow side boards when in position.

I use half-inch boards twelve or fourteen inches wide, cutting one piece to fit across the handles close to the wheelbarrow box. This is for the bottom, and, if properly fitted, will give the slant for the sides. Now cut the end piece for the extension one inch shorter than the widest side of the bottom board, and the two side boards long enough to extend well into the wheelbarrow box. Nail the side pieces to the ends of the end piece, then nail on the bottom and the contrivance is completed. Be sure that the side pieces are close



Two views of an "extension" which greatly increases the holding capacity of a wheelbarrow. Easily and cheaply made

enough together at the open end to slip snugly inside the sides of the wheelbarrow box.

This is easily made, easily removed when not needed, and for carting vegetables from the garden, or bulky materials like leaves, will be found very convenient.

Virginia. S. H. A.

How I Propagated Roses

I HAVE in my garden forty-nine little rose bushes growing in 2½- and 3-inch pots, which are the result of a few minutes given now and then during the summer to setting out the cuttings.

The cuttings were taken from time to time from the big rose bushes. At first jelly and drinking glasses were used to cover the cuttings, several being frequently placed under the same tumbler; but when the house supply was finally exhausted, a wooden frame a foot square and four inches deep, covered with a pane of glass, was substituted. The frame being in full sunlight, a thickness of newspaper nearly covering it was laid on the glass to prevent sunburn. The cuttings covered by tumblers were usually set on the north side of sparsely planted rose beds where they had partial shade.

In most cases the two-eye cuttings were taken from the flowering stem, the lower leaf and half of the upper being removed; but any hardened wood of the present year's growth was taken from Hybrid Perpetuals as their first bloom was over before the attempt to propagate them was begun.

Successful cuttings were made from Prince Camille de Rohan, Abel Carrière, Coquette des Alpes, Mrs. John Laing, Frau Karl Druschki, Margaret Dickson, and the climbing Dorothy Perkins.

Among the teas and hybrid teas are rooted cuttings from Mrs. B. R. Cant and Beauty of Rosemawr. The latter was especially beautiful in September and both were almost constantly in bloom from June till frost. Cuttings from Virginia R. Cox, General McArthur, delightfully fragrant, Kaiserin Augusta Victoria, Souv. de Jean de Cabaud, Killarney, Duchess of Albany, La France, Marie Van Houtte and a dozen others also give promise of roses next summer.

Connecticut. C.

A New Way to Water Melons

ON THE farm in Pennsylvania where I grew up lived an old ex-slave from Virginia, who could raise finer melons than any brought from the South. He did this by the use of liquid manure; he puttered round the vines night and morning while the sun was low, with the mixture, although I never actually saw him watering the vines.

Years afterward, when I tried to imitate his methods, I succeeded in doing nothing except to cause the ground to bake when the manure water hardened on the surface. To prevent this I dug a hole in the centre of each melon hill and poured the mixture into it, only to coax the feeding roots up to the surface of the ground, so that if the supply of water was not frequently and regularly renewed the plant withered.

Finally I hit upon this plan: To plant my melon seeds in a circle, reserving the middle of the hill for an old two-quart lard pail, having half-a-dozen holes punched in the bottom. I sink this four inches into the earth before the seeds are planted, so as not to disturb their roots. If this pail is kept filled with liquid manure after the plants begin to run they will grow with wonderful rapidity.

Squashes and pumpkins thus stimulated may have a handful or two of rich earth thrown over the vine where each of the first three or four leaves springs from the main vining stem. Rootlets will strike down at these points and help to support the heavy leaves. Muskmelons will bear the same treatment, and I believe watermelons, citrons and cucumbers will also respond, although I have not yet tried it. A further advantage of this treatment is that the vines will not be seriously injured if attacked by the melon vine borer, a pestiferous enemy in some places

Pennsylvania. WILLIAM F. GIBBONS.

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No Glass Top to Leak in Air. No Poisonous Zinc Cap.



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Economy JAR

Free Teaspoon Actual Size



The day has come when the knowing housewife will no longer be satisfied with any of the screw top, glass top and other old style and unsanitary jars.

All rubber ring jars are a thing of the past.

The public has decreed that they are unsanitary, and pure food commissioners have denounced zinc caps as unhealthy and dangerous to use for home canning.

The Economy is the only jar in the world that uses no rubber ring. It has a patent airtight composition gasket, tasteless, odorless and sanitary, which seals AIRTIGHT and as no other jar has ever been sealed.

The only absolute airtight, sanitary home canning jar is the ECONOMY JAR. WHITE CRYSTAL GLASS—WIDE MOUTH.

Light or heat does not affect contents as air is excluded.

The Economy uses no zinc cap or uneven, leaky glass top, but instead uses a gold enameled cap impervious to action of any food acid, with this patent airtight sanitary gasket, and is recommended and endorsed by all health authorities.

After you have used the Economy Jar once you will say: "I can keep them all in the Economy airtight Jar. No other jar like it. I will tell my neighbors. The Economy is the only jar by the use of which I can have fresh vegetables from my own garden all through the winter months, coming to the table tasting just as fresh and sweet as though they had been freshly picked."

WHY KING'S HALL SILVER, 1066, IS SUPERIOR

After these spoons are silver plated in the ordinary way, fifty per cent more silver is added to the three spots where spoons receive the most wear, the handle, the tip and the reverse side of the bowl. This added sectional plating makes every spoon wear many years longer. It costs us a lot of money to do this, but we believe the extra value is good advertising.

If your dealer is out of Economy Jars be sure to write to us. We will refer you to a dealer who has a stock on hand and send you a booklet of valuable recipes free.

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Is a Perfect Implement for the Small Garden

It has every part necessary for all kinds of hill and drill seeding and for both straddle and between the row cultivating and may be used with one or two wheels. It makes gardening a pleasure for man, woman or child, saves arduous labor and gives the best results.

For the family which has a small home in the country or in the suburbs it is the ideal outfit. Its parts are easily adjusted and the construction is the strongest. Adjusting three bolts changes it from seeder to cultivator. A child can use it.

Ask your dealer to show you an Ames Cultivator and Seeder and look for our name on the handle. It can be used with equal facility in all kinds of soils in every part of the country.

The Ames Plow Company has been manufacturing small and large agricultural implements for almost a century and knows what is best for the garden. If your dealer does not carry it write us direct and we will send you a catalog. In writing kindly mention your dealer's name. Address Dept. 1.

Ames Plow Company, Boston, Mass.



"HAMILTON-MADE" GARDEN HOSE

What our mark on hose means.

"Hamilton-Made" means superior quality in general, and **one thing in particular**. The "one thing in particular" is this:

On every length of Hamilton-Made Hose you will notice a mark not found on any other hose—"Guaranteed 750 lbs. pressure", or 700 or 500, etc., according to the grade. On our "Hamilton" brand, every length has been tested under pressure of 750 lbs. to the square inch. Any piece showing defect is rejected. 750 lbs. is **five times** the usual pressure in **steam boilers**. Think of it! Do you wonder that this hose is strong; that it is stiff and will not kink?

"Hamilton" Brand, our highest grade hose, selling at 25 cents a foot, will last **six to eight years**: it will stand four or five times as much wear as ordinary hose. As often happens, the **high grade** is the **cheapest**.

There's a HAMILTON-MADE HOSE for every different use, each grade made **BETTER THAN IS NECESSARY** to meet the requirements for that use, and **GUARANTEED** to stand a **SPECIFIED PRESSURE**. Whatever kind of hose you need, ask the dealer for **HAMILTON-MADE**, and you will be certain of getting the **BEST HOSE OF THAT GRADE** that is made.

Here are some of the leading grades of Hamilton-Made Garden Hose. Note that every label bears the words **HAMILTON-MADE**



How to get the best hose that is made

SOME dealers do not sell the highest-grade garden hose. They argue that everybody wants low-priced hose. We know better, for we know that our stiff, strong, tough "HAMILTON" brand hose is really the **CHEAPEST OF ALL**, and that many wise buyers will be glad to get it. We therefore make this offer to all who cannot buy it of a dealer:

If your dealer does not keep it, we will deliver to you anywhere in the United States, **PREPAID**, 50-foot lengths of **HAMILTON** brand, our highest grade garden hose, complete with standard brass couplings, for the regular price, **\$12.50 EACH LENGTH**.

This splendid hose stands a pressure of **750 POUNDS** to the square inch, and while it is our highest-priced garden hose, it lasts so long that it is really the **cheapest** hose made.

If hose of such extremely high resistance is not required, we will send **KENMORE** (guaranteed 650 pounds) at **\$10.50**, or **CYGNET** (500 pounds) at **\$8.00**, for 50-foot lengths. Shipped same day order is received.

Hamilton Rubber Manufacturing Co.
Trenton, New Jersey

Points for Water Gardening

NOTHING gives such a finish to a garden as some water feature. For a very small garden the pool should be about two and a half feet, but in larger suburban gardens it may be from four to eight feet across. Have the pool correspond to the style of gardening—if formal, then have the pool round, oblong or square, with a stone or cement rim, in preference to letting the grass grow right down to the edge. Never let the planting round the margin be too thick or too high; in small gardens the marginal planting should be very low and there should be very little of it. Never put a pool on top of a hill or terrace, but have the ground slope toward it as much as possible. A circle of grass outside the cement or stone circle will add greatly to and soften the general appearance if the pool is surrounded by gravel paths.

My own pool, though very small, was made by the coachman in less than a week's time and cost only the price of the cement. After the hole was made it was filled with broken stone, which we took off the hill-side. The sides of the hole were smoothed off, coarse gravel was thrown in and the cement laid on. To shape the pool we put a round wooden tub in the centre of the hole on top of the cement bottom. This left a space of two inches between the tub and sides of the hole, which was also filled with cement. For the outside rim a wooden shape was made and filled with the cement. This was easily knocked away when the cement was hard, but the tub stuck fast and had to be broken apart.

As to keeping the water fresh in small pools, evaporation will be enough with a good sized bucketful of fresh water put in every other day or



so as necessary. Always flush the pool when filling it. Gold fish are a necessity, as they eat mosquitoes and keep the water sweet. Never overcrowd the pool.

My first attempt at a pool was two years ago in a barrel. I knew nothing about lilies or how they should be planted, so I simply stuck the bulb—the pygmy lily—in the bed of the barrel, covered it with about six inches of water and left it alone. In a few weeks tiny leaves appeared and as they grew the water was increased to the top of the tub. The plant bloomed from about the middle of May until I took the tub into the house the first of November, during which time it had over thirty-four blooms. This water lily is the smallest species in cultivation; the flowers are white with deep yellow stamens and greenish-brown, heart-shaped leaves. There is also a yellow variety. Of course, this species would only look well in a small pool, for which it is ideal.

MARY EVANS.

Water Weeds

ONE of the serious things to contend with in shallow ponds is the growth of water weeds. Water must be six feet or over to prevent a growth that will appear on the surface, and even in that depth some water lilies will occasionally push their leaves to the air. Particular care should be taken in shallow ponds not to introduce weedy plants. The *Nelumbium speciosum*, for example, not infrequently takes full possession and the same is true of the western *Nymphaea tuberosa*. Do not permit any plant to continue if it shows a tendency to be too rampant in its growth.

Massachusetts.

W. H. M.

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GARDEN



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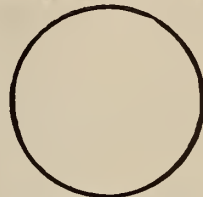
The Burlington Venetian Blind

will make your rooms shady and your porch cool and comfortable. It can be raised or lowered at will, and can be adjusted to any angle to suit the height of the sun.

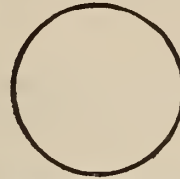
Enclose your porch and see what a change it will make in your whole home. It will give you a cozy, secluded room. The air will circulate freely and you will get all the advantages of open air; at the same time you will not be subjected to an inquisitive public gaze. The Burlington Venetian Blind will give you a place to read, sew or entertain—a place for the children to play, too.

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Ordinary Low-water Flow, 180,800 cubic feet per second.



Present Power Use, 34,000 cubic feet per second.



What Power Users Now Want, 56,000 cubic feet per second.

To the Real Owners of Niagara:

If you are willing to help in permanently preventing further injury to Niagara Falls, write or telegraph today to your Senators and to your Representative in Congress, urging the passage *unamended* of Mr. Burton's Senate Joint Resolution 3, continuing during the life of the Waterways Treaty the provisions of the Burton Bill. Get your friends to do likewise.

The Waterways Treaty with Canada has established a MAXIMUM limit of diversion from Niagara for power production of 56,000 cubic feet per second. This is 25 per cent of the average flow and 30 per cent of the ordinary low-water flow. BUT the treaty puts no limit on the taking of water from Niagara "for sanitary and domestic purposes." There are power schemes now being pushed as drainage canals which would further deplete and more seriously injure the Falls.

FOR the Falls "have unquestionably been seriously injured by the diversions already made," says the report of the Chief of Engineers of the United States Army, and "additional diversions now under way will add to the damage." (See appendix FFF, page 940, Report of Chief of Engineers, 1909.)

In places, the American Fall is very thin. The Bridal Veil is considerably lessened in volume. West of Terrapin Rock hundreds of feet on the brink of the American part of the Horseshoe Fall are barely covered. Portions of the Rapids are much less impressive. One great power-house, right at the foot of the Horseshoe Fall, has been doubled in length.

THE Burton Bill, passed by Congress in 1906, and extended in 1909, was more than fair to the power companies. It gave them all the water they could then use, or were actually preparing to use. It did not stop a single wheel, nor check any going enterprise. **IT EXPIRES** June 29, 1911.

Seizing the opportunity, the power companies insist that they must have at once the full maximum limitation under the Treaty, which would INCREASE THE DRAIN on the already "seriously injured" cataract by SIXTY-EIGHT PER CENT BEYOND PRESENT USES. They also want all limitation removed on the transmission of power from Canada. The reason is plain. At average present rates, their INCREASED INCOME from the water they want to take FROM THE GLORY OF NIAGARA would be OVER FIVE MILLIONS OF DOLLARS ANNUALLY.

NIAGARA as a world wonder draws 1,000,000 visitors each year, who spend fully twenty-five millions of dollars there and on the way. This vast travel income will increase if the Falls remain as a great spectacle. It would surely be bad business to destroy the source of such an income!

Permanent protection of Niagara against further depletion for private power advantage can now be secured if the people, who actually own America's greatest scenic possession, will act promptly and with vigor upon the members of the Sixty-second Congress, now in special session.

Write for further information to the organization that first called President Roosevelt's attention to the national ownership of Niagara, that pushed the Burton Bill through Congress, and that now stands against the aggressions of forty millions of power-company capital. Send us copies of all letters you get from Senators and Congressmen. Use a little of your time and a dozen two-cent stamps to protect your own interest in, and ownership of, Niagara Falls.

J. HORACE McFARLAND, President
 RICHARD B. WATROUS, Secretary
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American Civic Association

914 Union Trust Building, WASHINGTON, D. C.

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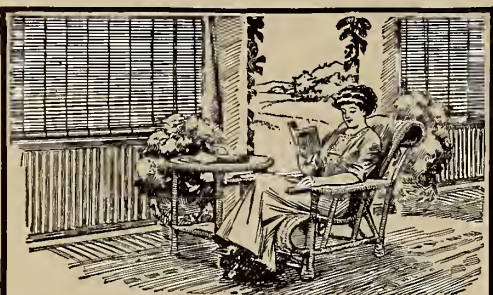
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sown in July and August will be big and sturdy plants by Fall, ready for transplanting to permanent quarters.

Dreer's Summer Catalogue

lists all the standard varieties of hardy perennials, and the novelties that have been tested at our trial grounds, and found worthy of being disseminated. Write for a copy.

Henry A. Dreer 714 Chestnut Philadelphia



What to Do for the Flowers

AS FAR as this year's flowers are concerned, comparatively little can now be done except to water regularly and well, and take such means as surface cultivation and mulching to keep the water where it will do the most good. Sprinkling is worse than useless, flooding is good but expensive and necessitates after cultivation. Probably for most purposes the slow running of water along shallow temporary ditches made among your plants is best, filling these in again when the water has thoroughly permeated the soil underneath. Some few annuals, such as baby's breath (*Gypsophila elegans*) and the dwarf sunflowers (*Helianthus cucumerifolius*), so useful for cutting, may still be sown in the cooler parts of the state and flower quite nicely. Dahlias and chrysanthemums will be improved by a judicious thinning of shoots and removal of surplus buds, and other plants given a longer lease of beauty by keeping the seed pods picked off.

While one cannot raise quite the same enthusiasm for hardy herbaceous perennials in California as in the East, chiefly because during their dormant season we cannot lose them from sight beneath snow banks but must gaze on their dishevelled remains or the bare spot above their roots, still I, for one, feel that many of them are still very much worth while, though I more often choose to put a large group of some variety in one place rather than attempt the impossible task of making a herbaceous border beautiful for twelve months of the year. Columbines, larkspurs, pyrethrums and polyanthus primroses are all nice if given considerable water through our dry summers, and in the case of the last two some shade does no harm. Oriental poppies are easily grown and the perennial gaillardias and coreopsis, even in the blazing sun, will return you a succession of crops of their bright flowers. All these may be sown now and the young, vigorous plants will flower well next spring and summer.

The biennials, too, are indispensable for spring gardens and while they have to be raised more often they can be cleared out of the way when over. Try a corner of foxgloves with sweet Williams in front, a border of Canterbury bells, a mass of wallflowers or a carpet of forget-me-nots. The seed of all these should be in by September 1st, and if you start considerably earlier you have the advantage of large plants.

Except on the coast, where cool fogs abound in summer, pansies only do well during the months from February to June, so it is useless to begin raising plants in spring. August is the month I generally sow my seed, though September is not too late. Don't use cheap seed, as you can easily get a hundred plants from a good twenty-five cent mixture and more satisfaction than from ten times as many low-grade ones. It is just as impossible to raise prize pansies from seed collected from your neighbors' wornout plants as to raise bench show dogs from the mongrels who follow you home. For carpeting the ground underneath bulbs and roses self colors only should be used, making sure that they will harmonize with the other plants, or you will feel hurt every time you see them.

For pansies, perennials and biennials I prefer to sow seed in boxes, prick out into other boxes after they have a couple of characteristic leaves, and get them nicely into their permanent beds before the heavy rains come in December or January. Of course, nice beds of fine soil in a semi-shady place would be as good as boxes, but

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the former method makes for ease in handling. In any case shade from the sun until they germinate and then protect the young seedling from the birds by mosquito netting. When they are larger and tougher they will offer no further temptation. California. SYDNEY B. MITCHELL.

Design for a Lath House

IN SOUTHERN California, the continual sunshine makes a lath house almost a necessity to the ambitious gardener. I experienced a dismal failure in my seed crop the first year of my residence in that locality, and was determined it would not happen again. With this end in view, I strolled around to see how the lath houses in the neighborhood were constructed.

Many people appeared to have designed their lath houses according to their own ideas of beauty, rather than for any consideration for the plants within. Some had massive concrete pillars to support the fragile roof of laths. Others had supported the laths on so slender a frame that one might easily imagine it would be unstable in the gentlest zephyr. But what puzzled me most was the variety of directions in which the laths were placed. Some had the roof laths running north and south, some east and west; some had the laths at the sides vertical, others horizontal, many slanting, and a few criss-cross. The openings were at all points of the compass.

Now, the main object of a lath house is to give seedlings and tender plants alternate periods of shade and shine. Logically, then, the only sensible direction for the roof laths is north and south. The laths on the east and west sides of the house should be horizontal, while those on the south side should be vertical. Except, perhaps, in the very height of the summer, the north side, I think, might be entirely open. With regard to the arrangement of the laths, the roof laths and those on the south side should be fairly close together, while the laths on the east and west sides may be

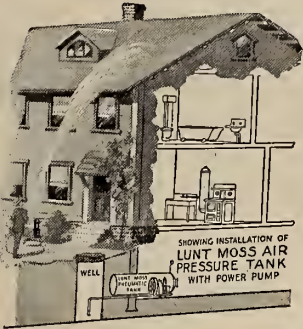


A lath house should be so made as to give alternate periods of sunlight and shade

considerably farther apart. Thus, the cool morning sunshine comes through the larger spaces; then, as the sun approaches its zenith, the rays come slantingly through the larger spaces and little sunlight is admitted. As the sun declines, the same operation is reversed.

Mine is a small house, 8 x 8 and 6 feet high, designed to bring on seedlings and resuscitate faded ferns and house plants. The frame consists of six uprights, 2 inches wide by 2 inches thick resting on two sills, 3 by 4, on edge. The uprights are joined at the south end by three strips of wood 2 by 1 in. placed two feet apart, and by similar strips on the roof. All the corners are braced by two-foot angle braces. The laths on the east and west sides hold the uprights in position. On the roof and south end the laths are spaced the width of a lath apart, while on the east and west sides they are spaced two laths apart. The north end is entirely open, but I have planted canary-bird creepers at the corners, which will be trained to provide shade during the height of the summer. So. California. F. H. MASON.

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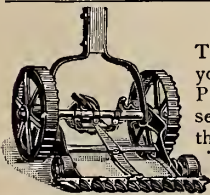
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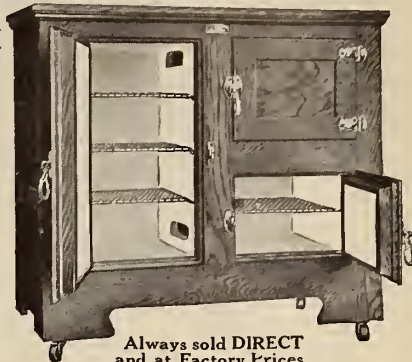
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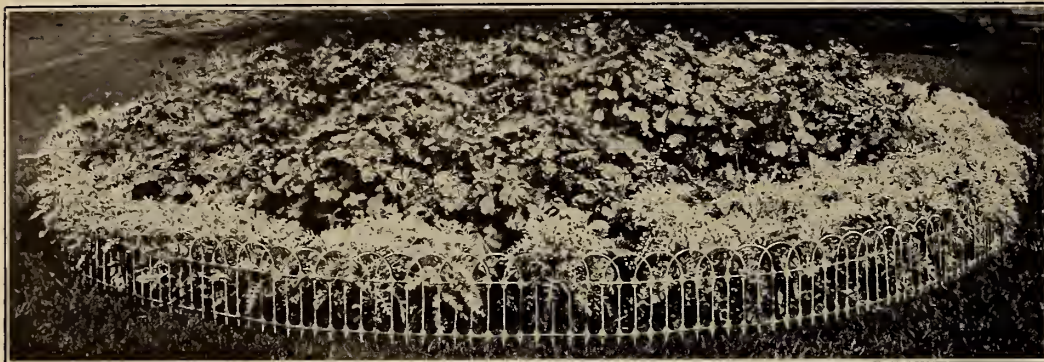
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Hot Weather Work

SOW squash and watermelon seeds now for fall use. In the Lower South the plants should furnish fruit until about Christmas if protected from any possible November frosts. Use the bush varieties of squash and the early and late varieties of watermelon. Halbert Honey and Sweetheart are good varieties for this purpose, the former variety furnishing fruit until the latter begins to ripen. Be sure to get the seed into the ground by the middle of the month. Also be sure to get good seed or you will be disappointed in the quality of the melons.

Seed of muskmelons can also be sown now, although when late planted they have never succeeded very well with me on account of the borer or tomato worm getting into them. It is claimed that corn planted in the muskmelon patch will keep the worms away from the vines.

The last sowing of running beans should be made during the first part of the month. Sow seed of cabbage now for plants to set out in September so that you will have fresh cabbage during November and December. Keep the plants shaded from the mid-day sun until they are well started, when they can be gradually exposed to full sun.

Fresh-cut green grass makes an excellent mulch during dry weather. It not only holds moisture but also keeps the soil cool.

Sow seed of early morning glory, aster, marigold and nasturtiums. They produce the largest and finest flowers in the fall, when the nights are cool, if the plants are well cared for. Give them rich soil.

Seed of Henderson's or Wood's Prolific bush lima beans may be planted now for a late crop.

Plant seed of sweet corn now in trenches six inches below the level of the soil. It will withstand droughts better. Use a fertilizer rich in potash and phosphoric acid, also nitrogen if the soil be poor. Mix the fertilizer thoroughly with the soil two weeks before planting. The large medium early varieties are best for the South. Try White Evergreen, Adams Early, Country Gentleman or Howling Mob, which, despite its name, is an excellent variety, producing a quantity of good-sized ears of excellent quality.

Tomatoes, eggplants and peppers may be set out early in the month in the Lower South. Shade them until the roots get a firm hold. Potted plants are best, being more stocky, though costing a little more.

Continue to bud fruit trees. This is the cheapest way to start an orchard. Of course it is equally as cheap to start it from seeds, but seedlings do not make as large and as fine fruit trees as the budded trees.

Georgia.

THOMAS J. STEED.

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"Thar was the evening I dressed up in my best clothes and ran off to Applegate to take a yellow-haired circus lady, in pink skirts, out to supper. It ought to have been a fine glorious bit of wickedness to remember, but the truth was that I'd put on a new pair of boots an' one of 'em pinched so in the toes that I couldn't think of another thing the whole blessed evening."

"'Tis life, that's what it is," commented Solomon, heaving a sigh that burst a button-hole in his blue shirt. "An' what's mo' than life, it's marriage. I've known a man to throw himself into the river from sheer love before marriage, an' two weeks arter the woman had taken him, to fall out with her because she'd put too much shortenin' in his pie-crust."

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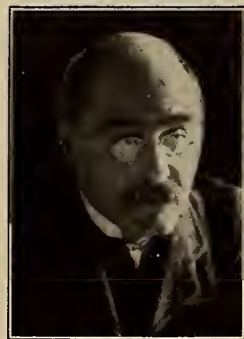


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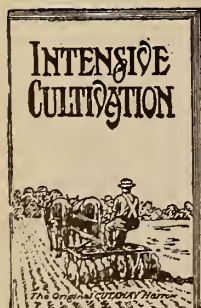
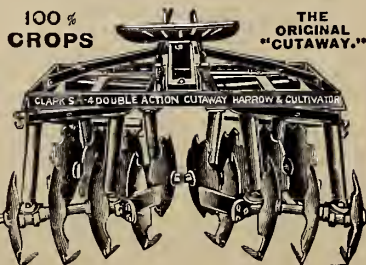
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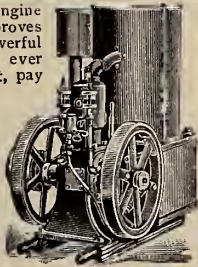
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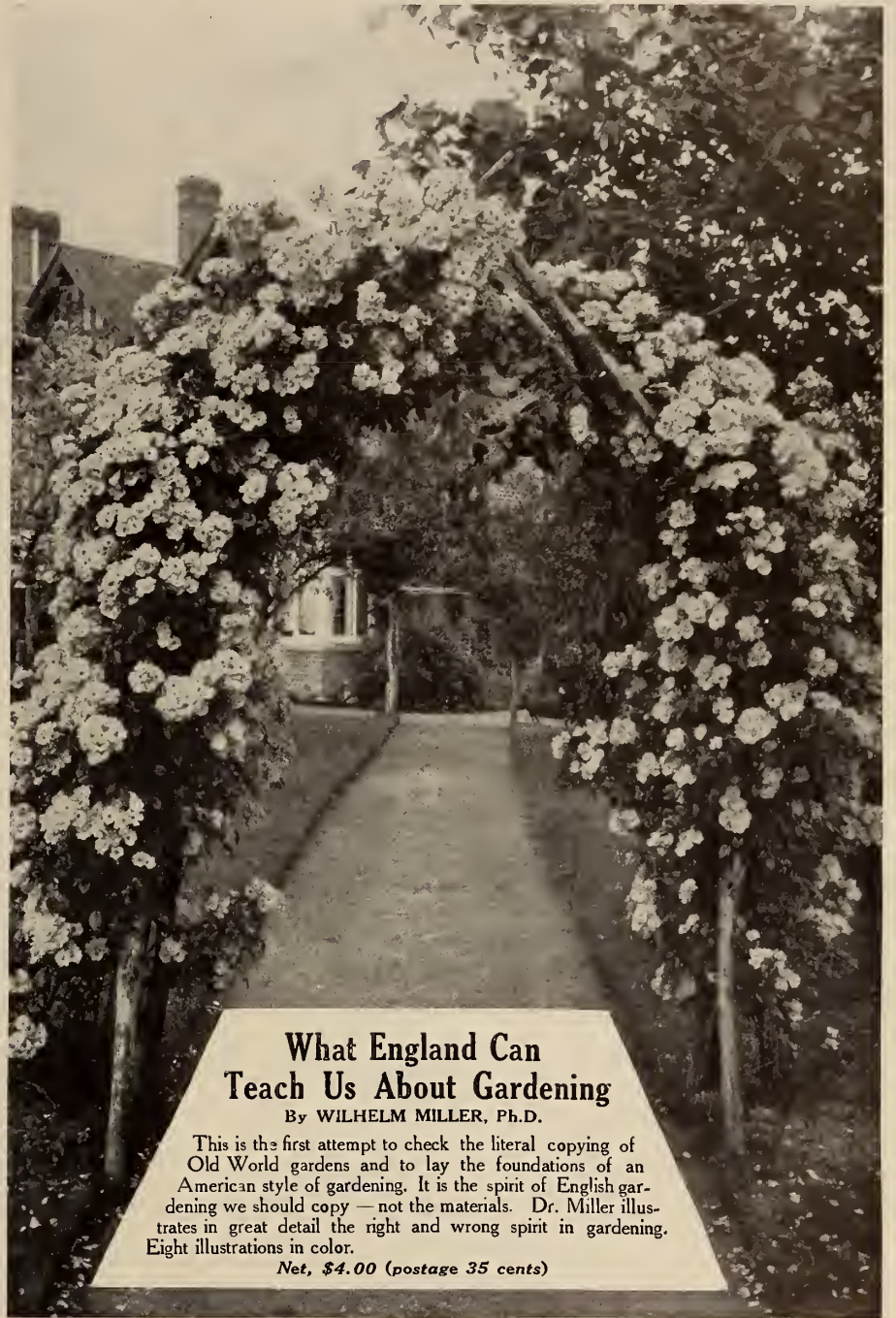
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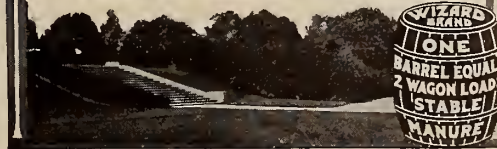
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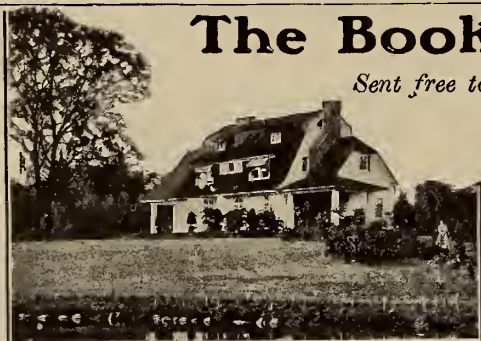
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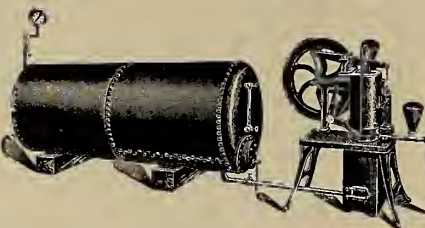
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factorily for us on strong pieces of brush set well into the ground; this provided endless twigs for the tendrils to take hold of. The vines spread well over the brush and hid it from sight.

We have also had very successful crops from cucumbers raised on a 3-foot netting trellis. No doubt the vines would have covered a still higher trellis, for the meshes are conveniently close for the tendrils that are always reaching out for support. One season the vines were trained on strings over the back porch. Barrel culture, also, proved satisfactory, serving the purpose of raising the plants above the ground level, where they could receive more attention and where they could be kept well supplied with soapy water from the laundry.

New York.

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"Living" Bean Poles

A SHORTAGE of poles one season led us to experiment to try to find some strong-growing plant that might act as a sort of "living" pole. We chose Ricinus, or castor bean, because of its rapid growth and thick stalks.

The seeds were planted in a spot where the ordinary bean poles would have been unsightly and where a partial screen was desirable. The type of ricinus selected was not of the rankest growth, so that the shade was not too heavy for the beans. An overabundance of shade was likewise avoided by planting the castor beans a good distance apart. Neither seemed to interfere with the other and it was proved that our limited space was put to good use.

The castor beans were sowed first, for in spite of their rapid growth of three feet in a month, the pole beans would have been too quick for them. When the ricinus was a foot high the beans were sowed. The cost of seed was fifteen cents an ounce, enough to make more than fifty poles. The tallest of the castor beans measured eight feet in height, with stems two inches thick. Ours were



The castor bean plant forms an excellent living substitute for the real thing in bean poles

not troubled by the wind, but in any locality where they would be likely to be so affected, plant them near a fence and tie them as they grow. This can be done without the tying being too much in evidence and spoiling their appearance.

Other "living" bean poles were tried also. Corn proved useful but not specially attractive; the stalks become shabby and weak unless a strong late kind is chosen. Sunflowers also made bean poles that were both strong and ornamental.

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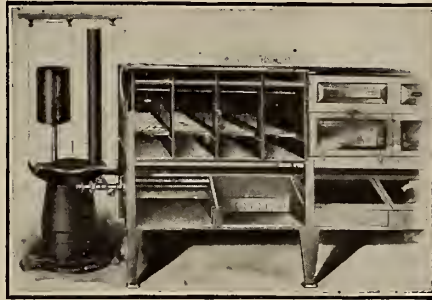


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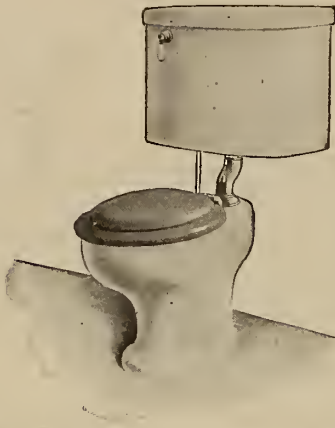
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Transplanting Zinnias in July

LAST year we had planned an effect of dwarf zinnias of many varieties and colors for mid-summer and autumn blooming. Some alterations which we were making to the house had dragged along into the hot July weather. The middle of the month saw our grounds still in disorder and carpenters and painters tramping over the ground where the flowers should have been.

The seeds had been sown in a corner of the vegetable garden. The seedlings, left long after the usual time for replanting, had grown tall and slender and most of them were in bloom. Former experience led us to doubt the wisdom of disturbing zinnias at this stage of their growth, for as



July-transplanted zinnias which owe their lives to profuse waterings

every one knows, zinnias lack backbone and grit. They suddenly collapse and droop their silly heads at the slightest provocation and when they have shrivelled and dropped their leaves one, by one, they stand in all their nakedness and seem to say “Now, see what you have done!”

Late in July the beds were ready and on one of the hottest, driest days the blooming plants were moved. All the earth was shaken from the roots as they had grown so crowded together. The beds were exposed to the sun from early morning until late in the afternoon but no protection was given to the plants. If cut flowers with their stems in water will last for days without wilting, why may not one expect plants to do even better if put in the ground and kept very wet?

The zinnias were watered in the early morning until the water ran in little rivulets around them. This was repeated at ten or eleven o'clock when the heat was intense, and again at sundown. The slightest indication of wilting was a signal for more water, until at the end of a week or more the plants had become well rooted and showed no further signs of drooping.

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A Rose of Two Seasons

THERE is one rambler rose that should be planted not merely for its blossoms but for its fruit as well. This is the ordinary single white rambler, which, doubtless because it is endowed with neither color nor multiplication of petals, is not seen so often as early summer would find to its advantage. Both when in flower and in fruit, this is a most valuable rose for walls, fences, and banks, but nowhere have I seen so fine an effect created with it as by the use of a single plant by the side of a gray boulder, about six feet high and wide. The rambler inclined naturally to the rock and though not particularly conspicuous in early summer, was strikingly showy late in September. Then a larger loose cluster of small scarlet fruit terminated each shoot of the old wood, from which the foliage had fallen, and over this blaze of red the new growth made an irregular lattice of green.

B. G.

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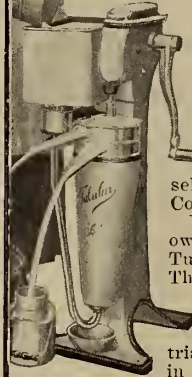
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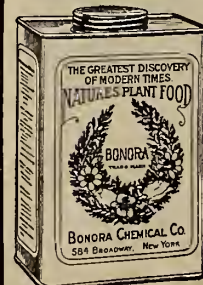
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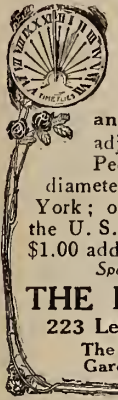
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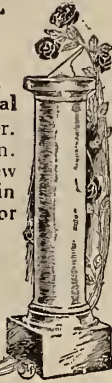
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JULY

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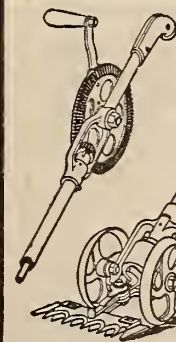
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Remember the name "Atlas E-Z Seal."

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Concerning Yellow Larkspur

I CONFESS that I have not found Zalil's larkspur, the so-called yellow one, "any great shakes." Its yellow is distressingly apologetic and however much its propensity to lie down flat may answer in its native Persia, the habit is both unbecoming and inconvenient in the plain ordinary home garden. One thing about it should be understood, though, if it is to be cultivated at all. This *Delphinium Zalil*, or *D. sulphureum*, or *D. hybridum*, var. *sulphureum*, as you will, has a way of "playing possum." Mine came, a "greenery yallery" plant that looked as if it had spent the winter in a cellar instead of the garden. It threw up a little foliage, then turned brown and appeared to be a goner. But last spring it "bobbed up serenely" and in due time gave generously enough of its washed-out, yellowish bloom, the flower-stalks too weak to stand alone. After blooming, it turned brown again, and I thought it was dead for sure that time, but I now find that this is only its way; so I am leaving it henceforth to its own devices. It's a sort of "What's the use" plant, but if it chooses to thrive, well and good.



The yellow larkspur has poor color and a tendency to "lie down"

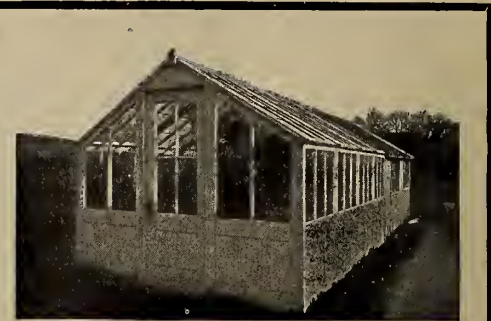
New York.

B. F. O.



Leaf Key to the Trees of the Northern States and Canada, and a Botanical Glossary by Romeyn B. Hough, author of "American Woods and Handbook of Trees." Published by the author, Lowville, N. Y., 1910; 63 pages; price \$1.75.

Every book by Mr. Hough marks a decided advance in knowledge and convenience. This key is far better than a book of pictures, as it will enable anyone to find out the name of any tree growing wild as far south as North Carolina and as far west as Denver, simply by a study of the leaf. The book can be carried in the pocket and is not heavy. In clearness and simplicity, this key is far ahead of the old star and dagger system used by Gray. The only suggestion for improvement of future editions that we can offer is a page or two on "How to use a key." Keys usually repel beginners until they understand the marvellous efficiency of them. A key does four great things: (1) It furnishes the *surest* way of finding the name of a plant; (2) it is *quicker* than reading pages of descriptions; (3) and it gives a greater *mastery* of any subject than pictures or reading matter, because it shows at a glance how each species differs from any and every other and also what any two species have in common.



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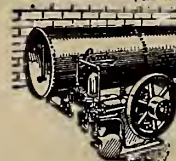


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A Hardy Cape Bulb

IT'S a toss-up whether you buy it as Montbretia, named after M. Montbret, or Tritonia, which refers to the weathercockness of the stamens and not the god of the "wreathed horn"; but by either appellation here is a charming cape bulb that has been proved to be hardy. It has been found perfectly hardy at Lenox, Mass., and even so far north as Bar Harbor, Me., has withstood the winter when planted eighteen inches deep.

This much has been gleaned for a certainty out of a mass of conflicting opinion and is quite enough to warrant considerable experimentation with a bulb, or rather corm, that may be had in named varieties so low as thirty and forty cents a dozen. The Tritonia—that is its accepted name now, according to Bailey—wants rich, but light and deep soil, good drainage and plenty of sunshine. Plant three to six inches apart in clumps. It will thrive in poor, clayey soil if not too wet; if the soil is badly drained raise the height of the bed.

Despite the evidence offered, however, this is not saying that tritonias are hardy everywhere south of Bar Harbor; they may or may not be, according to circumstances. The great point is that they are cheap enough to warrant the test of hardiness in any garden, so that each lover of flowers may be his own court of last resort. That is to say, the cheap ones are cheap enough; some of the new large-flowered hybrids are so costly that a 3 x 6 ft. bed of them that I saw last July represented an expenditure of \$60 and the corms had been planted fairly well apart at that. The blossoms were superb in size and yellow tones, but not that much more so than the forty cents a dozen kind. The grower of these says that tritonias—or montbretias, as he calls them—are hardy, but he advises against taking the risk with expensive varieties. He gives them gladiolus treatment. Bailey says the same for the latitude of New York and Massachusetts, but to winter them indoors "in damp (not wet) earth."

Though Bailey gives preference to this treatment, he adds that tritonias may be planted permanently and protected by mulch in cold weather. Henderson says the type, *T. Pottsii*, is "perfectly hardy" also; *T. crocosmaeflora*, which is also *T. Pottsii* crossed with the pollen of the closely allied *Crocsmia aurea* and is the source of the many beautiful named varieties in cultivation. Two growers call tritonias hardy, but one adds, to give them a heavy covering of leaves or litter. One says "leave undisturbed." In England, in the Cheshire garden of the late C. Wolley-Dod, they were taken up religiously every autumn, potted three to a pot, placed in a sheltered spot, covered with litter, kept well watered until March, and then replanted in the garden. There the annual increase was fourfold. Some English growers maintain that lifting is injurious and Robinson has let them run wild between shrubs to keep the weeds out.

Half a dozen varieties that made good last summer are these:

- Prometheus, rich orange.
- Kohinoor, medium orange.
- Macrophylla, light orange.
- Brilliant, vermilion.
- Germania, red orange.
- Excelsior, light orange.

Other varieties that can be recommended are:

- Rayon d'Or, yellow.
- Gerbe d'Or, golden yellow.
- Drap d'Or, chrome yellow.
- Etoile de Feu, vermilion.
- Aurea Superba, golden yellow.
- Aurantiaca, orange.
- Speciosa, golden yellow.
- Pyramidalis, apricot.
- Bouquet Parfait, vermilion.
- Soleil Couchant, golden yellow.
- Elegans, bright yellow.
- Météore, salmon red.
- Eldorado, golden yellow.
- Phare, orange scarlet.
- Grandiflora, golden yellow.

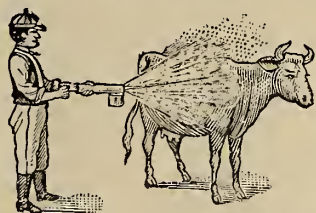
Both *T. Pottsii* and *T. crocosmaeflora* are orange, a rather inadequate color description, as are all the others, inasmuch as the shades are extraordinarily beautiful and sometimes there is marking, or a centre, of a different tone.

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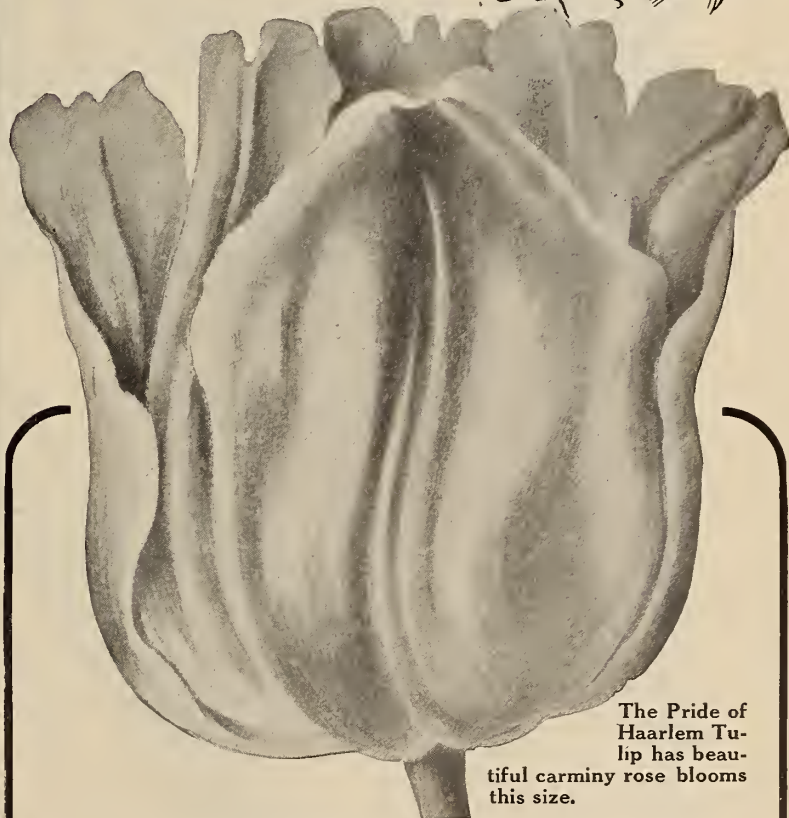
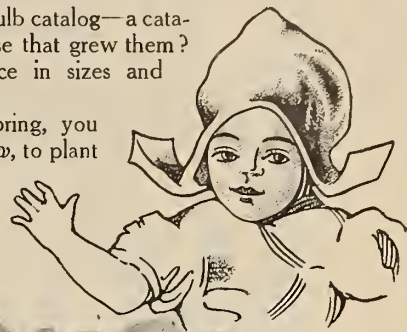
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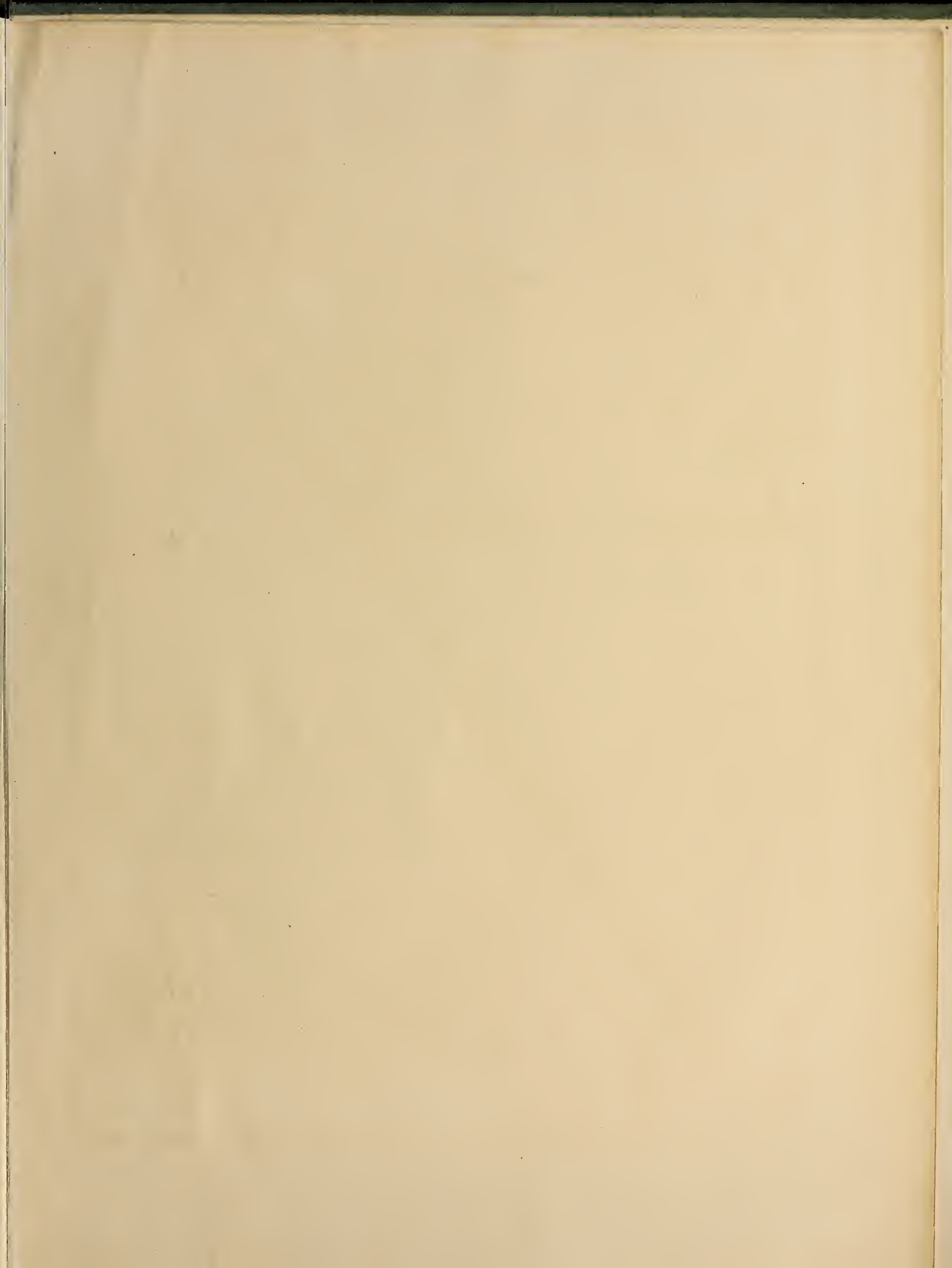
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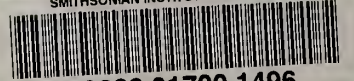
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