



CONTENTS, APRIL, 1914

COVER DESIGN: <i>Photograph by A. F. Loomis</i>	QUALITY CROPS FOR THE HOME..... 281 <i>By D. R. Edson</i>
CONTENTS DESIGN: <i>Photograph by Ella M. Boulton</i>	WHAT YOU MUST DO WITH THE GARDEN NOW..... 282 <i>By F. F. Rockwell</i>
FRONTISPIECE: THE ALL ROUND GARDEN	THE VEGETABLE GARDEN GUIDE..... 284
PUTTERIN' 'ROUND THE GARDEN..... 259 <i>By Walter Prichard Eaton</i>	CHOOSING FLOWERS FOR THEIR COLOR..... 286 <i>By Mary Youngs</i>
THE SPECIAL USES OF GARDEN PLANTS..... 262	THE GARDEN CLUB..... 288
HEDGES FOR EVERY GARDEN..... 265 <i>By Grace Tabor</i>	THE HOME OF MR. HENRY S. BROPHY, MAPLEWOOD, NEW JERSEY..... 290
CHAPTERS FROM A GARDENER'S EXPERIENCES..... 268 <i>By Cornelia L. Clarkson</i>	THE RESIDENCE OF MR. GAGE E. TARBELL, GARDEN CITY, LONG ISLAND..... 291
RENOVATING OLD LAWNS AND MAKING NEW ONES.... 271	INSIDE THE HOUSE..... 292 Bathroom Fittings A Rubbish Burner
UP THE HILL TO OUR HOUSE..... 273 <i>By Martha McLeod</i>	GARDEN SUGGESTIONS AND QUERIES..... 294 Transplanting Seedlings Hardening the Plants
A GARDEN PLAN FOR EVERY MAN..... 277	THE GARDENER'S CALENDAR..... 295
FIRST AID TO THE ORCHARD..... 278 <i>By Walter C. O'Kane</i>	EDITORIAL..... 296
THE NEW WAY TO SUCCEED WITH DAHLIAS..... 280 <i>By Anna Pitt</i>	

McBRIDE, NAST & CO., - - Union Square, North, New York City

Robert M. McBride, President; Condé Nast, Vice-President and Treasurer; Frederick A. Leland, Secretary; John T. Elsröad, Assistant Treasurer. Published monthly. 25 cents per copy; \$3.00 per year. For Foreign Postage, add \$1.00; Canadian, 50 cents. Entered as second-class matter at the Post-office, at New York, under act of March 3, 1879.



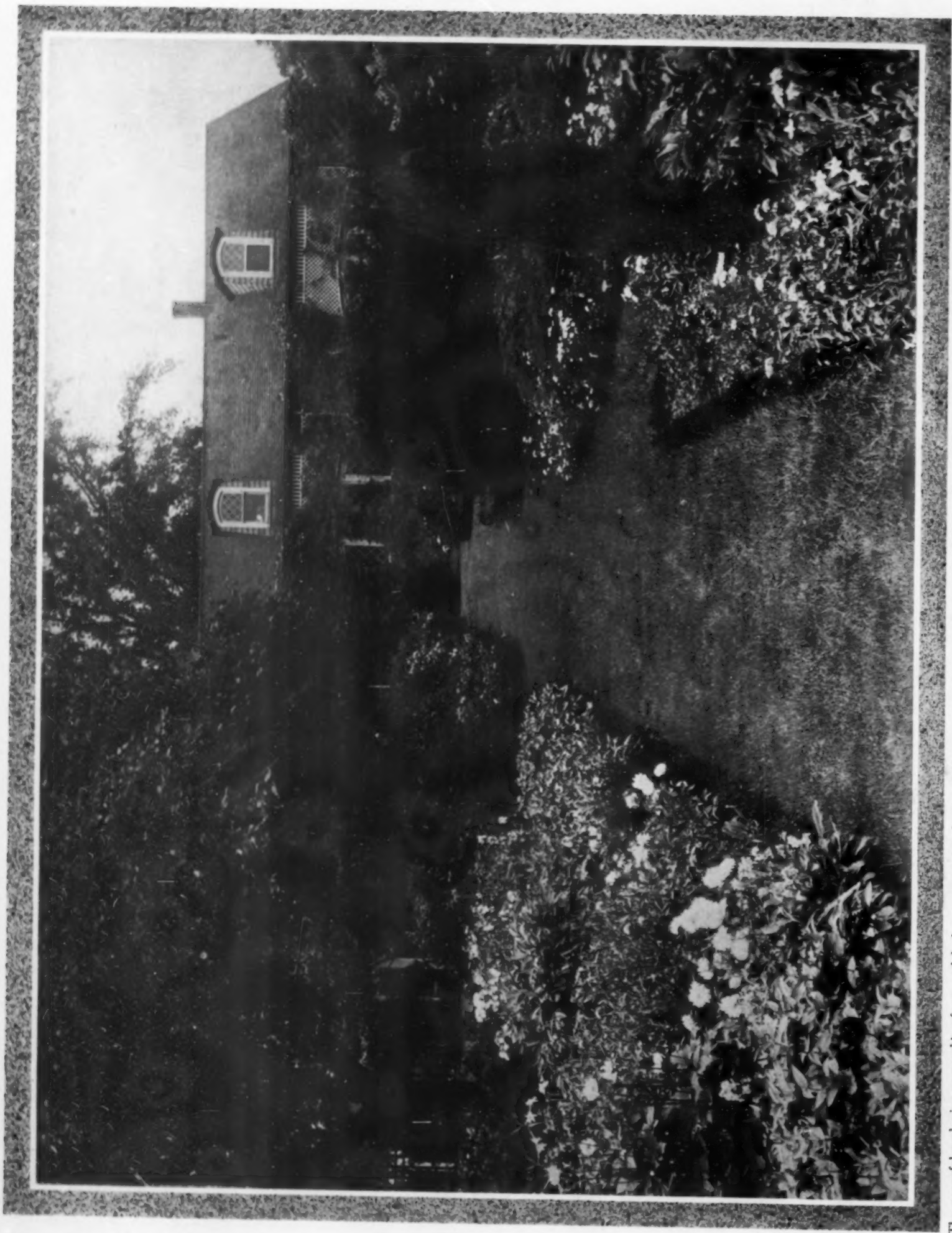
VOLUME XXV

NUMBER 4

WILLIAM A. VOLLMER,
Managing Editor

Copyright, 1914, by McBride, Nast & Co.





The successful garden is a partnership of tree and shrub, evergreen, vine, lawn and blossom, all working together in a scheme that is fitting to the feeling of the house. Here is a garden view that seems to suggest such a partnership, simple but attractive and useful. The grass path, with its box border, lends considerable atmosphere here. It will be noticed at the same time that apple trees are included in the planting



Putterin' 'round the Garden

BY
WALTER
PRICHARD
EATON

A WRITER in the Atlantic Monthly, two or three years ago, said that "the art of puttering consists of doing for yourself, slowly and inefficiently, what you can pay someone else to do for you quickly and well." The only fault in this definition is the spelling. A true putterer always drops his "g," and generally, too, he adds a "'round." You can no more putter successfully with a final "g" than with a high hat and polished boots. Your speech, like your clothes, must be old and easy. Otherwise the definition cannot be improved, and it shows putterin' to be one of the most paradoxical of pleasures, the most soul warming of self-abasements.

I will not enter into the vexed question whether putterin' is not distinctly a masculine art, whether a woman will ever do anything herself, unless economy forces her to, which she can hire done better—some cynics would say, which she can hire done

at all. It is not necessary to raise that question with relation to putterin' 'round the garden, because true garden putterin' is not woman's work. It is too hard for her. She may plant bulbs with a dibble, or set out seedlings, to be sure, but she can do that as well as any professional—till her back gives out. No, true garden putterin' consists of harder labor, and woman's part in it must be advisory, at most. She can, perhaps, putter in place of the architect, planning the pool or designing the trellis or plotting the new beds, but it is the man who must cement and saw and dig.

I confess to being a confirmed putterer; nay, I boast of it. I



"To do something which isn't in your 'line' is to enlarge your power over your environment—to flatter your ego"

have made myself, "slowly and inefficiently," a brick sun-dial, a brick bird bath, two hundred feet of trellis, a rose arch, an ornamental trellis screen (at least, I think it ornamental), several hotbed frames and numerous flower beds, large and small. Presumably I could have employed the time in the practice of my vocation, and earned enough money to have had them made by professionals, twice over. But I'm glad I didn't! I am prouder of that ornamental (honestly, it is!) trellis screen than of anything I ever wrote; and when, after days of back-breaking toil, I had excavated last spring a new perennial bed fifty feet long, in poor soil overrun with witch grass, had filled the bottom of my trench with manure carted in a wheelbarrow, had mixed my top soil with loam and fertilizer and put it once more in place, had sunk boards along the edges to keep the grass roots out, and built a trellis five feet high along

the back, that fifty-foot strip of earth represented something far more precious to me than a potential flower border, which my gardener could have built in half the time at a nod from me.

It represented, first of all, personal, stubborn toil, and nothing so humbles a man as the face-to-face realization of the physical effort involved in successful agriculture. In the second place, it represented the triumph of my hands and muscles over a new obstacle. Any fool with money can have things done for him, and I sometimes think any fool can have money. The gift of "making" it is the lowest of human attributes. But to do some-

thing useful all yourself, something which you were not trained to do, which isn't your "line," is to enlarge your power over your environment, to give yourself a new sense of mastership, to flatter your ego. What credit is it to paint well, or write well, or run a railroad well, when that is what you were expensively educated to do? But when a painter can build a motor boat, or a college president can mend a clock, or a railroad president beat par on the golf links, that is something else, something wonderful, something to boast about. I would no more hire a man to make a trellis in my flower garden than I would employ the golf professional to play around the course for me, though the carpenter's trellis might be as much better than mine as the professional's score would be (*might*, I say; I don't admit it would be).

But, above all, that flower bed and that trellis behind it represent happiness—happiness past and yet to be. They represent long spring afternoons when the April sun beat pleasantly down on the back of my neck and on my arms, bared for the first time after the winter. They represent delicious moments when I paused and stood upright to straighten out the kinks in my spine, while from the nearby evergreen hedge, from the topmost spike of a young Norway spruce, a song-sparrow poured forth his ecstatic song. They represent hours of dream-lightened toil, when each barrow-load of manure, trundled with straining shoulder-sockets half the length of the garden, seemed to hold a nine-foot hollyhock, a giant larkspur, a forest of foxgloves and Canterbury bells, a pink glory of *anemone japonica*, in its wormy disgustingness. When the bed

was filled and smoothed, when the trellis was built and painted, when the grass in front was raked clean, top-dressed and reseeded, then I stood before the work of my putterin' hands, a long hour between work-time and dusk, watching my cardinal climbers cover the trellis, my foxglove swing their fairy bells, my hollyhocks sway in the August breeze. Such an hour of ecstasy in the presence of bare soil only the putterer can know!

Mrs. Margaret Deland has somewhere spoken of "the grim inhibitions of wealth" which prevent certain garden owners from themselves working in their flower beds. I fancy we all know

such people—poor cowards, slaves to their caste, who fear alike their neighbors' and their own servants, and who have lost completely the faculty of self-support, with the joy the exercise of that faculty brings. I know a man—he calls himself a "gentleman

farmer"—who thinks he putters 'round his place. He puts a long, excellent cigar in his mouth, whistles to his West-Highland terrier, buttons the belt of his Norfolk jacket, and walks out over extensive lawns cropped by a power mower to his formal garden, where numerous gardeners are perpetually engaged in digging out one kind of plant and setting in another, which is supposed to be succession. You and I know that succession consists of so filling a bed with permanent inhabitants that one may have steady bloom. Anybody can achieve succession with a dozen gardeners, a huge seed bed off somewhere out of sight, a hothouse and an income of \$100,000 a year. Once our friend has reached his garden, he pokes holes with his cane here and there to indicate where he thinks certain plants should be set. Catching his cap on a thorn as he goes under a rose trellis, he whips out a knife and prunes off the offending shoot. At the pool he picks up a stone from the graveled path, which has hurt his thinly clad feet, and carries it into the bushes to drop it. Thus, laboriously, he

makes the rounds of his estate, and tells his friends at luncheon that he has been puttering (with a final "g").

Rubbish! He doesn't know what the word means. He is not a gardener. He doesn't deserve a garden. He never will till he gets into old clothes and demonstrates his utter inefficiency by building a bed with his own hands, or at the

very least edging a walk, and then feeling vastly more proud of it than of all the rest of his estate put together.

I have often thought that one of the reasons why "Robinson Crusoe" is immortal, and why every book about men wrecked on desert islands appeals to us, is because we ultra-civilized folk deep in our hearts realize our incompetence to master our environment single-handed, and we bow in admiration to the man who can. The Admirable Crichton, in Barrie's delightful play, was a butler in England, but on the desert island he was "King."

Of course, the very first requirement of a man face to face with



I have made by myself "slowly and inefficiently" a brick sundial which tells the time—and tells it beautifully



My wife maintains that she built and painted half this trellis, but when the grass was raked and seeded, I folded my "putterin'" hands and let the cardinal climbers finish the job



When the iris are in bloom, when the water lilies smile, when the fish are swimming in the pool—visitors will admire my garden, but I shall go putterin' away at other tasks

Nature is the ability to house, clothe and feed himself. In our Twentieth Century civilization nobody wishes to make himself ridiculous by wearing clothes of his own manufacture, but he is not made ridiculous by practice in agriculture and carpentry. That is the reason why most men, when they putter, do so with a saw or a spade. That is why a garden is the ideal spot for putterin'. If you can build a hotbed frame and a trellis and a rose arch, and perhaps a summer house; if you can spade up the soil and grow flowers and corn and celery and cauliflowers—obviously you would not be wholly helpless on Crusoe's island. No man likes to feel that he would be helpless on Crusoe's island; no man likes to feel that, however skilful he may be in some super-profession of civilization, he has no command over the primitive arts on which civilization was based back before the dawn of history, and upon which, for that matter, it rests to-day. So, whether he realizes it or not, it is really pride which makes a man putter 'round his garden, or build a book-shelf in his carpenter shop in a corner of the barn. If a man does not feel the urge of such a pride, naturally he doesn't putter—and upon close acquaintance you will generally discover that he lacks certain qualities of healthy virility. It used to

be the fashion to hold up the Yankee jack-of-all-trades to contempt. He was not contemptible. He was merely enamored of his power over his environment—and he was extremely handy 'round the house! In these *effete* days, when we even hire a specialist for so simple an operation as screwing on our double windows, he seems almost a demi-god. And the greatness of New England vanished with his passing.

It is once more spring in my garden. I have a new hotbed to build, which will be a movable framework set on a cement-sided pit. The chestnut lumber and the bags of cement even now stand out behind the tool house. My wife's aunt gave me a new saw for Christmas (under protest, as it seemed to her a most unæsthetic present, and my delight was incomprehensible), and I am eager to be at the work. The floor of my summer house, where I write in warm weather, dashing out to pull weeds between paragraphs, needs repairing. The stumps of a Japanese willow hedge cut down last autumn must be grubbed up before they sprout—a task of heroic proportions, for no tree on earth has such tenacious roots, such hungry, soil-sucking roots, as the Japanese willow. I shall do all these things myself, and many more besides. When
(Continued on page 325)



My putterin's—what delicious moments they represent—when the April sun beats down pleasantly upon my neck—when I pause to straighten out the kinks in my back!

The Special Uses of Garden Plants

AN INDICATION OF THE AVAILABLE FLOWERS AND SHRUBS MOST SUCCESSFUL IN THE GARDEN—HOW TO SELECT THEM, AND CONSIDERATIONS OF THEIR PLANTING AND THEIR CULTURE

FROM the point of view of the amateur, the materials for a garden are shrubs, perennials, annuals and bulbs. What their particular value in the garden scheme may be, can be only indicated in brief space, but some suggestion of the uses of our garden plants and their differences is fitting here.

The ordinary country place will have some space devoted to lawn, driveway and entrance. Grouped along these various boundaries come the shrubs placed irregularly. There are other portions of the garden where straight lines are suggested by path or driveways, and here are the long borders of annuals and perennials. Then there is the flower garden proper; there will be groups of beds here showing some formal arrangement. The long borders at the side, probably protected by hedges, will be the places for perennials, and perennials will form the nucleus of the bed plantings. Rounding out their full beauty, filling in the gaps left between times of blossoming come the annuals. Let us see now how we may make use of these planting materials to round out the scheme of our garden.

Perennials are those garden plants of herbaceous nature which endure season after season, coming into bloom after the winter wilt and decay. Their root systems persevere in semi-dormant condition, and with spring gain new vigor and start new growth. This quality of permanence is their special virtue.

As the perennial garden succeeds season after season, so it gives the attraction of successive glory in the year. With perennials there is opportunity for continuous bloom, flower following flower for nine months. This automatic change, if the selection is carefully made, affords four different displays a year from a single bed. The beginner should be content on one or two changes at first; the more ambitious effects come later, when experience has taught the peculiarities of each sort in his garden. Difference of soil, difference of location affect your plants, and it is only through experience that you can know just how each plant will act for you.

The perennial garden is often called the hardy garden, for among the innumerable varieties found in this class of plants are most of the sorts capable of enduring all sorts of inclemencies of weather. Frost, the greatest garden blight, shows less effect on the hardy perennials than other plants, and, with any sort of care, they are much more able to resist drought than annuals. There is a wonderful diversity of form and habit of growth and a variety in color and shape of blossom that defies classification. From this generous group can be selected plants of greatest beauty and hardihood which are not particularly fastidious of soil conditions, and which need but little special care and attention. These plants, once started, grow and increase so that from the first specimen a great stock may be obtained. The initial investment, therefore, in seeds, as plants, should be spent upon the very best. Even then, perennials will be found the cheapest source of garden supply.

In laying out a garden of any sort there are four cardinal principles governing the selection of plants: The season of bloom, the color of the flowers, the height of plants when grown, and the location most suited for their flourishing. You must know these facts about every plant that goes into your garden, else you will have ugly color contrasts, a jumble of little and big specimens, some spaces bare most of the year, and others crowded with tall varieties entirely concealing their dwarf neighbors.

With these things in mind it is best to go about making a garden plan. The cross-ruled paper purchasable at any stationer's will assist you in making a plan to exact scale that shows at a glance the available space and the relation of beds and borders. All permanent physical features should be included, such as trees, shrubs, ornaments, unmovable rocks, boundaries, etc. The differences of location can be indicated on the plan by shading solid in pencil those portions of the garden well in the shade and slightly shading the spots having but partial shadow.



The perennial garden once planted is little disturbed, but space enough must be provided for the increasing development of the plants year by year

If the garden is to be made anew, see that no bed is wider than six feet or narrower than two and a half. A bed may be twelve feet wide, if it can be reached from both sides, as this restriction in width is governed by the difficulty in giving attention to any space greater than six feet. Less than two or two and a half feet for a border restricts it to too few plants, or to but a single row of most varieties. Such a planting is too stiff.

Hints for the careful selection of flowers for their color are given elsewhere in this issue, and it is only necessary here to advise the attempting of simple color harmonies, or one-color schemes.

The matter of season of bloom is important. In your garden it is desirable to have as many beautiful flowers as possible, and to have them all the time. Some bloom in spring; others summer; still others not till fall. A bed may then be arranged to take advantage of this, and with perennials it is easily possible, as most sorts die down after flowering, and leave their successors to spring into full glory after them. You must pick out plants that accomplish this. The periods of bloom will overlap and leave no part of the border destitute.

Then there is the matter of height. In general, it is best to plant tall-growing sorts at the back of the border against the fence or hedge. If in a bed that may be seen from two or more sides, tall species should go in the center. That is only common sense; you do not want the little plants to be hidden. The creeping plants and those of dwarf growth, for the same reason, are put along borders. These statements do not mean that all tall sorts should be placed in rows, like so many soldiers, backing the border. The gardener will use them for their place in the form part of the composition, probably between two groups of low-growing plants,

to give the bed a wavy, irregular line and to accent it in places.

Location with perennials is not so very important, but the soil demands of some must be considered. There are, too, some flowers that do well in the damp, shaded places, and others that demand much sun. These peculiarities are factors determining where they shall go in your garden.

You have now working data of the main requirements of perennials; you have your plan showing your garden restrictions; you are now ready to make up your mind as to what plants you want. Your plans for color groupings come first, but keep them simple. The elaborate scheme requires experience and knowledge. It is often helpful to sketch in crayon or water color your main color scheme on the plan, making the colors cover the sections you desire to have—red or blue or yellow.

Last issue, the matter of proper fertilization and drainage was elaborated in the Garden Department, and in the article on spring work the matters of sowing and planting explained. If you realize that all your hopes will be frustrated by improper soil conditions you will see to it that the garden earth is friable, well drained, free from acid and well supplied with available plant food.

These same considerations of height, color, location and time of blossom naturally apply to those flowers classed as annuals. Such plants are those which flower from seed the season of planting, and then die down after blossoming or at the approach of winter. Seeds must be planted each year, with the exception of certain varieties that self sow. These will come up in a scattering growth next year. The greatest value of annuals is to supplement a perennial planting. The spaces between the newly set out plants will look bare the first year, and annuals round out this irregularity



Annuals fill in the gaps between perennials and give first-year brightness to the border. *Phlox Drummondii*, the annual phlox, appears in the foreground



The low-growing *Phlox subulata* appears with the tulips. When the early bloom of these plants is past poppies keep up the succession of bloom



Shrubs are the garden fixtures and afford a striking display of blossoms with very little attention. The long, drooping chains of flowers are the white masses of the Van Houtte's *Spiraea*, a most satisfactory shrub for garden massing

and fill up the bare spots; then, too, their rapid development gives beauty to the country place occupied only for a season. They are really emergency plants; the advance guard of the garden. Their treatment is somewhat different from perennials, although generally the soil requirements are about the same, except for depth of cultivation. You do not need to consider season of bloom so closely, as this can be arranged by the time of planting. Annuals set out even as late as June will give blossom the first year. A great many of them are planted where they are to grow, and a seed bed is dispensed with. Some, however—cosmos and salvia—are better started under glass. Enough hardy annuals may be selected for sowing outdoors, thinning to easy growing spaces as they develop. Some of the more delicate sorts, salpiglossis and schizanthus, are also better started in flats in the house, but the majority, if sown thinly in finely prepared soil outdoors, protected from heavy rain, and cut back when they begin to get spindly, will give satisfactory results.

There are some other plants not classed as annual or perennial which should be set out in the spring. These are several of the bulbs. They should be planted from April to June, and the tubers or bulbs taken in after flowering and wintered in some frost-proof place in the cellar. The dahlia is spoken of in a separate article in this issue and its wonderful improvements hinted at. Besides this, another flower well worth planting is the gladiolus. Its enthusiasts have so improved it, that its large, orchid-like flowers may be had in the most wonderful shades and colors. Where it used to be stiff it is now delicate and especially good for cutting. Cannas, if planted where strong effects are needed, and above all, not as a bedding plant, are desirable. Some of the lilies may be set out in the spring—the ixias, African corn lily and

montbretias, with their broad range of color, from vermilion to all the yellow and orange shades. There is a white summer flowering hyacinth of large size, suitable for combining with gladiolus. It grows about three feet in height, and its name is *Hyacinthus candicans*. Add to these some of the summer lilies, the delicate zephyranthes, the fall-blooming saffron crocus (*sativus*) and the chelchicums and your list of common spring-sown bulbs is complete.

What has been said about perennials applies specifically to the shrubs. They are also perennial plants, but of weedy growth, and distinguished by stems or trunks with bark. The beginner would do best to confine himself to a few shrubs. A dozen may be given that will afford nearly enough field of selection for all purposes. The rare specimens and extraordinary sorts should come in the graduating stage of gardening.

The special function of shrubs is to grade between trees and low-growing plants or to act as a graduation from lawn to tree. Shrubbery massings are best freely planted in irregular groups, as they are found in nature. The deciduous shrubs do not adapt themselves to irregularity, and should never be ranged around defined paths or driveways following their exact direction. They frame a lawn, screen an unpleasant view or act as a boundary. In another part of this issue their use for boundaries and hedges is discussed, as is their planting. Shrubs round out the garden scheme well, because of their variation in height and their greater growth than flowers. And the difference of their height must be taken in consideration in planting, as is to be done with other flowers. So also have shrubs a range of bloom, and you must try for this principle of succession to get flowers during much of the

(Continued on page 320)

Hedges for Every Garden



California Privet

THE IDEAL OF BEAUTY AND UTILITY—HOW TO PLANT AND KEEP A HEDGE—SOME DESIRABLE VARIETIES AND THEIR SPECIFIC USES

BY GRACE TABOR

HEDGES are, of all boundary marks, the easiest to acquire and the least expensive; hence they afford us the readiest means to-day of altering our open-to-the-world-generally condition to that ideal of home enclosure that is slowly but surely beginning to prevail. And they afford us, too, a means for this transition that shall make it seem less radical than would the erection of walls and fences—for a hedge comes modestly and insinuatingly upon the scene, barely a line breaking the level of monotony at first, and growing very gradually from this to a thing of form and positive characteristics.

We scarcely realize even the least of the hedge's possibilities here in America, however, for we are not advanced further than the very doubtful low barrier of privet—after all not wholly effective, handled our way, as a barrier; and very often of very little merit as a decoration, thanks to that same way of handling. Of the possibilities of native shrubs—notably the bramble and honey locust—in the construction of actually impenetrable boundary marks, we have no conception; nor have we profited by the example of some of our early-settler ancestors, and planted "quick" or the living barrier of English hawthorn.

Almost anything at all may make a hedge, for, of course, the term means simply that the plants are set in a line. But there is

one characteristic essential to a good hedge plant, whether it is to be sheared or allowed to grow in natural fashion; this is density at the ground. The one great difficulty to be overcome in all hedges, whether sheared or natural, is the open base. No hedge that shows it is to be regarded as a success, although, of course, any unsheared shrubby growth is bound to have a tendency towards it. For this reason, varieties that sprout freely from the

roots by nature, throwing up a mass of shoots rather than one or two or three stems, are to be chosen for hedge planting. And plants of small size that may be thickly set are a wiser selection than those of greater maturity, whose root and branch growth has reached proportions that make close setting in the row impossible.

For the defensive outlining of a property, a thorny hedge has advantages which make its choice usual in lands where hedges prevail. But nothing in America as yet represents, either practically or sentimentally, what the hawthorn represents to the English; yet we have here a plant well qualified to take its place, save that it lacks in showiness somewhat, its blossoms being rather inconspicuous. This is the honey locust, or tri-thorned acacia, native over a large portion of the United States and adapted to all portions. It is a tree, of course—so is the English haw—but, planted in its infancy at a height



Hydrangea paniculata has form as well as profuse bloom. The floral hedge, of course, requires no cutting. It is most effective as a boundary within the garden proper



Of the evergreen hedges, hemlock spruce is the first choice. It lends itself to precise lines and its feathery grace has no rival either in summer or winter

not exceeding two feet, when the plants should be set eight inches apart, it makes, with its delicate, airy foliage, one of the most beautiful of hedges and sweet when in blossom. Its cost at this age and size of plants is so trifling, too, that only lack of knowledge concerning it, I am sure, prevents its being used more extensively than any other species; for, from a cent and a half to two cents a plant, is surely the very minimum price one may expect to pay for anything. Nothing that I know of for the garden is any cheaper than this, save possibly seeds in their packets!

Another thorny plant used to a considerable degree before wire fencing came into such general farm popularity is the buckthorn—not a native, though now growing wild to a limited degree through



If one wants an uncropped evergreen hedge, *arbutus* will grow up erect and trim of its own accord and, with its density and strength, it makes an admirable protective boundary

"escapes" from cultivated plantings. This should be planted in the same way as the honey locust, and at the same size.

The native black-cap, whose branches take root at their tips as soon as these touch the ground, is almost, if not quite, unheard of as a hedge planting nowadays; yet some of the earliest defensive hedges planted on this continent were of it. The plants were set six inches apart in the old time, and the over-arching branches allowed to widen the hedge out by tip rooting, until it was as wide as desired. After this these branches were "whipped off" in August annually, to prevent further spreading. A better way, now that land is less available for wide hedges, is to direct the tip rooting by a little training, crossing the branches as they grow and confining all those allowed to take root to the plane of the hedge's direction. The others should be cut away completely. This results in a more definite surface, although, of course, by its very nature such a hedge is a tangled mass, with new growth interwoven around old dead canes until neither can be extricated from the other. This is exactly what is wanted; and as a protective hedge and a protective cover for birds it is unequalled. It is therefore a barrier of twofold value to the fruit or truck garden.

The English hawthorn is not advisable here, being subject to a fungous disease which only constant spraying would keep in check; whereas constant spraying is hardly practicable, nor, indeed, worth while, when wiser planting will make it unnecessary.

Hedges of this large type and scale are hardly suited to the limits of a small place, however, and are consequently not advised where land space is restricted. On an acre of ground they do not, perhaps, encroach too much, but on anything less I feel that a less arboreal species than the honey locust or buckthorn, and a less aggressive species than the blackcap, serves better. This is not altogether because of the ground space occupied, but partly because a large, broad hedge is generally out of scale with a

division of land into units smaller than the acre. Outlying circumstances must be considered, however, as well as the place itself, in deciding on any planting that affects in appearance, or is affected by these general outside conditions.

No hedge in the world is more beautiful than one of beech, although the hornbeam is similar enough, perhaps, to have very strong claims. Both of these are trees also, but, as they lend themselves to very even, close shearing, they are not quite so impossible in restricted areas as the ones just mentioned. They should go into the ground fifteen inches apart when planted as a hedge, and plants two feet in height are the maximum that should be chosen for this sort of thing.

One of the most interesting living barriers that I have ever seen I once found surrounding a tiny farm that was brought to its state of high productiveness by a humble immigrant, some time since

gathered to his fathers. Almost reclaimed from the marshes is the land, yet not actually on the marsh is it, either; for in front the roadway is hard and firm, and a spring-fed well just within the gates yields most delicious, fresh, sweet water, icy cold in midsummer. Set into the ground perhaps a decade ago, at intervals of six or eight feet, were willow twigs. These were the hedge or fence foundations, grown to goodly trees in short order, and pollarded when five or six feet high, at which time they were ready to receive the rails that are nailed from each to each in three tiers. The lower line is about six inches from the ground; the second is two feet; the third four feet or a little more. When these were ready, the long willow shoots were cut and woven vertically behind the lower and upper and before the middle of these three rows of rails, as close together as they could be laid. And an absolutely impenetrable barrier is the result, because the shoots touch the ground at the bottom, and some, indeed, are thrust in, while others have taken root and thus thrust themselves in! So that all along this curious hedge, green and living willow tops are waving here and there, in a naive confusion that exactly suits the quaint little place.

While nonchalance carried to this extreme is hardly desirable in our average gardens, the idea of a woven hedge with living posts is adaptable to many places and well worth working out, particularly where the surroundings are actually sylvan or rural—not imitation.

Of flowering shrubs available, there are barberries, lilacs, Rose of Sharon, Japanese quince, certain of the spireas, a hydrangea, the Japanese wild rose—(*rosa rugosa*)—a viburnum, some of the cornels, deutzias, weigelas and privet in all of its varieties—though this is almost invariably chosen for a sheared hedge. Of this list, the barberry and privet may be trimmed to the most precise form, the Japanese barberry in particular lending itself to as severe cutting and as definite lines as the California or the Amoor privet. Indeed, this particular variety is frequently substituted for boxwood edging in sections where the latter will not endure the winters; and a very satisfactory substitute it makes, providing very small plants are used and set close—six inches being a better distance between than more. The larger plants and greater distance will leave gaps at the ground when sheared, in spite of all the after care in the world. It is only when plants small enough to mingle their branches right at the ground, as these first start to grow, are used that an unbroken and truly boxlike edging can be developed.

But, of course, flowering shrubs will not flower to any really satisfactory degree when restricted with the shears and cut into unnatural shape. So, with all of these species and varieties it is assumed that no shearing will be done. For the trim, close-cropped, high-growing hedge it is much better to plant the commonly used privet or an evergreen of some kind, using the floral hedge only



For utility and form nothing can equal a sturdy boxwood hedge. It is a rapid grower and after the first winter requires only passing attention

in such positions as its natural characteristics demand and will adorn.

As to just what these positions are it is difficult to say definitely. Generally speaking, the floral hedge is more suitable to the subdivisions within grounds than to the outer boundaries of a place; but, as such a hedge takes up a considerable space, it is not, of course, practicable on small places. As a screen planting it may be used to advantage sometimes, however, in smaller places than would seem naturally to invite it; but on the whole it is pretty safe to limit it also to the acre of land which we have set as necessary for the loose and rank-growing brambles and the arboreal

(Continued on page 298)



Barberry is one of the best-flowering shrubs available for hedge planting. In trimming, care must be exercised not to destroy the buds. By planting closely at the start the shrubs will grow up without gaps



The garden is laid out on two levels, and from a bit of woodland a path leads to the garden laid out in formal arrangement. This is surrounded by a hedge at either end and has a wall at either side

Chapters from a Gardener's Experiences

WHAT ONE AMATEUR LEARNED ABOUT MAKING A BORDER THAT LASTED
THROUGH THE SEASON—PLANTING FOR COLOR AND FORM EFFECTS

BY CORNELIA L. CLARKSON

Photographs by the Author

LIKE all beginners, I read many garden books and learned the names of flowers and the time of bloom; but what their diseases, insect enemies and individual peculiarities were I learnt from experience. Now, when I see a successful garden, I know what obstacles have been overcome and what a triumph it represents.

My garden is very near the house, so it can be seen and enjoyed at all hours; and on rainy days I can watch the plants satisfy their thirst, and know that the ground will be soft and delightful for me to work in when the sun shines.

The garden is laid out on two levels, and is approached from a terrace, at each end of which steps lead to the first level. Here are the hardy borders, a hidden fountain and a path leading to a wild garden. A few steps descend from this level to the formal garden, which is surrounded by hedges and walls.

The charm of a garden is greatly added to when the whole cannot be seen at once; surprises for the eyes—a spot of color behind hedge or wall, the unexpected—keep the interest awake and quicken the steps to the hidden blossoms.

In my hardy border I have tried my experiments and I have seen them succeed or fail! I watch it for six months, and every spring brings the same thrill of excitement at the first look. What shall I find killed and what alive? Day by day that question is answered.

The border is 11 feet x 68 feet, and has a southern exposure; the stone wall on the north side is 5 feet high and is covered with vines, the *Wichuriana* rose, with its buds tipped with pink, its white single blooms in clusters, and its pretty, dark, shiny, green leaves, makes an effective wall covering all summer honey suckle and clematis, with their delicious odor, also help to cover this wall.

At first I put all my large plants at the back, shorter ones in the middle and the smallest in front; the result can be imagined. I began to realize the importance of form and proportion. After many transplantings a better effect was obtained. Most gardens depend entirely on color, and when photographed look uninteresting. A well designed and planted garden should make a beautiful picture.

To have a hardy border that is always gay with colors which blend and never clash is a difficult task, but most fascinating. Mistakes only suggest new ideas and add to the longing for "next year."

Another hard task is correct staking. To hide the stakes and yet give the plant a natural appearance takes long experience. Even Miss Jekyll admits that dahlia stakes must show before the plant grows, but her suggestions for general staking are most helpful.

The first flowers to bloom in my border are tulips and pansies. When the tulips are brown and can be cut off, the pansies are pulled up and annuals planted in their places. A long row of

yellow primroses (*Polyanthus*) is soon in bloom, and the dainty bleeding heart (*Dielytra spectabilis*) follows. This plant has a beautiful foliage, but by July turns brown and has to be cut down, so I plant mallows with it, and they fill the space with their effective blossoms in September. By the end of May the border is full of color, with plenty of white flowers, which I like better every year. White lupins, fraxinella (*Dictamnus alba*) and *astilbe japonica* flower with the pink and white pyrethrums and lavender and yellow German iris. These are succeeded by Oriental poppies—the deep scarlet *Pekennanii*, not the

orange—forget-me-nots (*Myosotis palustris*), quantities of small purple English iris and great clumps of purple and white colum-



By the path leading to the formal garden is a hidden fountain where ferns and rock plants grow



From the hardy border steps lead into the formal garden. The approach is made attractive by large foliage plants



The main hardy border is shaded at one end, and here such plants as foxgloves and Canterbury bells lend their color for most of the season

bine (*aquilegia*); the short-spurred variety make large plants and do not die out, like the long-spurred. White foxgloves (*digitalis*), with purple and white Canterbury bells, come next, and then the colors change to blue, yellow and white, with the gorgeous delphiniums, Dropmore anchusa, veronicas (*longifolia* and *longifolia subsessilis*), Candidum lilies, the early white phlox, Miss Lingard, the pearl achillea and the pale, lemon-yellow calendulas and anthemis.

Annuals—stock, snapdragons (*antirrhinum*), phlox Drummondi, arctotis and asters—are planted in the place of the bulbs and Canterbury bells, and these flower until frost.

July brings the wonderful phloxes—the salmon pink Elizabeth Campbell being one of the best—and the white *platycodous*; and in a shady corner, red monardo, with ferns and meadow rue, does

well. In late August the phyostegia and *Boltonia asteroides* bloom; the latter may be kept down to four feet by pinching off the tops several times during the summer. In September the dahlias, *pyrethrum uliginosum*, *artemisia pactiflora*, *actia japonica* and blue salvia (*azurea grandiflora*) keep the border gay. October adds the lovely white anemones (*japonica*, whirlwind) and chrysanthemums, and the border is full until Jack Frost turns it black and puts it to sleep for the winter.

The charm of gardening lies in "finding out for oneself." The Perfect Gardener, if there is one, will seek to express himself not by the reading or making of books, but in living, growing trees and flowers. All this the amateur realizes ever more fully as he watches the border wake from sleep to life, live intensely for a while—and then to sleep again!



Realizing the importance of proportion, we departed from the old order of large plants in back, short ones in front



The interest of a garden is increased when it commands a view. This one is so laid out that the landscape lying below it, where the river stretches, may be fully appreciated

Renovating Old Lawns and Making New Ones

DEFINITE ADVICE FOR ACQUIRING AND MAINTAINING A SMOOTH GREEN SWARD—DETAILS OF SOWING SEED, ROLLING AND WATERING

Curing Bad Lawns

WHEN your grass plot begins to show signs of raggedness and the weeds become hopelessly persistent and unduly vigorous; when the ground is hard and patches of moss creep in, it is a warning that the soil is out of condition and that it should be restored before it is too late. There are many ways to do the work, all depending on the existing conditions at the time. For large areas, the plough,—and deep ploughing is the solution,—with the addition of plenty of manure and allowing the land so treated to lie fallow during the winter. In the spring it is to be harrowed and cross-harrowed, then smoothed off and seeded. This, in short, is the story for a large place.

But for small areas such as we find about the average home, a general overhauling and much disturbance is not popular, and frequently the unwillingness to submit to it prevents the needed work being done.

A way to make the proposition attractive must be found that will get results with the minimum of inconvenience.

The purpose is to get into the soil enough fresh loam, with fertilizers, to overcome the condition that is causing the trouble, and it can be done in this way:

Pick out the worst spots, and from these remove all the weeds, going deep enough to insure effective work. Afterwards take a heavy crowbar or a piece of "two by two" timber pointed at the end, and drive it into the ground to a depth of ten inches, with the holes one foot apart and well opened up. Next, fill these holes with the



A small piece of sod should be rammed into each hole

amounts to suit. Ram the loam hard into the holes flush with the top. Get a few weedless sods, and cut them into pieces to fit the holes. Pound the pieces of sod into each hole, soak with water, and go on to the next spot.

These pieces of sods will quickly take root, and it will be but a very short time before an improvement will be noticed. When all the very bad places have been renovated in this way, procure a half-inch spike, and go over the rest of the place by driving this spike into the ground to a depth of ten inches. This is done to allow water to get through the hardened soil.

The work of renovation should be spread over a couple of periods, doing half in the Spring and finishing in the Fall. Later still the ground that has not been given the new loam should be attended to. The results will be just as satisfactory as if the entire place had been dug, and without any inconvenience.

Should the spike alone be used, a betterment will be quickly noticed, but, of course, the results will not be as lasting as if the manure and loam had been used.

Where patching by seeding is preferred, it must be remembered that the mere scratching of the hard ground will not make a place where grass will grow, and it is very probable that the first few hot days will shrivel it up. Before putting in the seed loosen up the earth at least four inches, afterwards breaking it down very fine. Sow the seed, and, after rolling or



Ram the crowbar down hard and open each hole well



Add new soil in the holes and pound in pieces of weedless sod

new material. It should be the best loam that can be had, with which has been mixed a liberal amount of manure that has been reduced to an almost powdery fineness. Sheep manure is ideal for this, as it is not only effective, but it can be purchased in powdered form and bagged in

leveling with the back of the spade, water lightly, but regularly. This sort of repair work gives a spotty effect, with slow recovery, but satisfactory in time.

In patching with sods, as with seeding, loosen the soil deeply and hammer the sod into place with the back of the spade or a rammer.



Select the bad spots first and use a half-inch spike to loosen up the earth

It is very important that this pounding of the sod should be done with vigor, as it serves to work it into place, making a firm contact with the loam beneath.

After all the repair work, a great help to success is a frequent rolling, or, if a roller is not handy, a pounding with a spade or a mallet made out of heavy timber. It improves the mechanical condition of the soil greatly.

These suggestions, closely followed, have been most effective many times in my own experience. As was said in the beginning, however, the above method will appeal more strongly to those who have small, shabby grass plots which would never be touched unless a minimum of labor and expense was assured.

L. J. D.

Sowing the Seed

HAVE you ever read instructions in garden books on how to sow grass seed, and have you noticed how these almost invariably include two main points, viz.: to sow when the wind is not blowing and just before a rain? It is not always possible to wait for a quiet day, neither are we all good forecasters of weather. It is often necessary to make arrangements for seeding a day or two ahead, and to stand about waiting for the psychological moment is rarely practicable.

The following experience is a case in point. It was late in September and full time the seed should be sown. The work was being done by contract, and the men could not be held indefinitely; also rain had been threatening, and it was very necessary to take advantage of any possible shower, as there was no artificial means at hand for sprinkling.

The ground having been prepared, a batch of top soil was screened and placed in readiness the day before the seeding



With a sharp knife cut all plantains, dandelions and crab grass out from the roots



The sower spreads a pailful of mixture to each six-foot strip

was to be done. The day turned out to be windy, with rain threatening. To insure even seeding and rapid work, the lawn space was divided into 6-foot widths; these were staked, and the first five lined off with a ball of white carpenter's twine. While one man brought the soil two others mixed the seed with it in the proportion of one pail of seed to a wheelbarrow of soil. The sower took a 6-foot strip at a time, using one pailful for each strip. A second man followed with a wooden rake, going over each strip as it was completed by the sower. As soon as the first five strips were seeded and raked, the string was taken up and moved ahead, another mixture made and another seeded. The roller followed immediately after the raker.

The method proved both rapid and effective. The area was completed by noon, just as rain began to fall. Grass appeared in a week, and by the end of October there was a fine lawn.

W. B.

The New Lawn

THE first and prime requirement for a new lawn is good soil. Rich garden loam is a necessity, and it must be deep. If the top soil of rich loam has a depth of one and a half feet the lawn will surely be a success. Such soil may be prepared by gathering the leaves in the fall and putting them in a compost heap with other rubbish from the garden. If this is left over the winter it provides a rich soil foundation. If you have not this depth of soil, at least see that it conserves moisture. A good lawn may be had with a depth of only four to six feet, provided its foundation is packed tight, or of clay consistency. This will form a basis to retain water. Of course, on a golf ground where the grass is low the

(Continued on page 307)



While one man brought soil, others mixed seed with it in proportion of a pail to a barrowful of dirt



The lawn, thirty feet wide, was divided into six-foot strips, which were seeded separately, then raked and rolled at once

Up the Hill to Our House

THE TRUE STORY OF THE JOYS AND
DESPAIRS IN THE LABOR OF MAK-
ING A HOME IN THE COUNTRY

BY MARTHA MCLEOD

EDITOR'S NOTE: The first chapter of this history appeared in the March issue and told of the selection of a site, its reclamation from Nature and the building of the house.

WE had now finished the foundation work of the place, but it looked almost dreary in its bareness. With longing eyes I often studied our landscape plan, and, while we could not at once take upon ourselves the expense of carrying it out, we determined to do it gradually. As we developed the plan, we altered some of its features to suit our needs. When we bought the land the only trees near the site of the house were two ash trees and an old misshapen cherry tree. The latter our builder tried to persuade me to cut down, but I was upheld by the landscape architect in my belief that it lent a rather artistic, Japanese touch. Let me try to give you a crude idea of the topography of our house and grounds. Our property is rectangular in form and is bounded almost entirely by trees. The house is situated transversely in the southwest corner. To the west is the vegetable and fruit garden; directly behind the house is the evergreen garden, and on the east is an extensive lawn, with the various farm buildings. In front of the house a circular drive cuts out a section of the lawn, and here are planted the flowering shrubs and trees arranged for landscape effect.

On entering the front door, as I have before mentioned, one's eyes travel through the piazza door over the terrace to the view. Instead of shaping the piles of earth thrown by the workmen from the foundation into terraces, according to the plan, we shaped it in the easiest way, but in accord with the lines of the house. We hedged it about with barberry and contented ourselves, for the time being, with the fine grass. Before long, however, we intend to carry out this plan in almost every detail. In one respect I deliberately changed it. The plan directed me to put nothing but evergreens about the house, but, wishing to have my flowers within whispering distance, I disregarded the instructions, and gaily went on with my diggings. After all, the best use of advice is the influence which it has upon one's powers of decision. The space on the left of this terrace was intended for the vegetable garden. A tennis court was drawn where our garden is now, but, as we did not build the tennis court and preferred a more distant situation from the house, we arranged our garden on the site mentioned. Along the left border of the place, which runs parallel to the boundary on the right, is a line of fine, old trees, oak, ash, chestnut, and four ancient russet apple trees, which form a foreground to the view.

The next spring we did some planting, and the third spring added to it, the pictures portraying the result of three years' work. Immediately after we bought the land we decided to border the roads with maple trees. I would not run the risk of failure by superintending the planting of these, therefore we left the matter entirely to our landscape architect. Though the expense was considerable, we have never regretted the outlay. He put in thirty



No parent was ever more pleased with a child than was I when my flowers responded to the touch of Spring

sugar maples, fourteen feet high, and of these five were planted below the hill, with which to replace those that might die. Each tree is a fine specimen, straight and full, and they stand like soldiers on guard. With one exception, where a bubbling spring played Lorelei with the roots, they all thrived, in spite of high winds and icy winters. We were greatly puzzled by the state of the leaves after they were fully spread. They became ragged and full of holes. We could not detect any sign of bug, worm or blight. The hired man suggested that there might be an insect whose deeds of darkness were performed after sundown, so I asked David to shake the tree, as our man advised, but David, abhorring all insects, from the slippery earth worm to the loggie June bug, flatly refused for fear they would fall upon him. All my arguments were unavailing, as he had become hardened to my taunts while camping, when I was forced either to bait my hooks or resist the call of stream and brook. I valorously shook each sentinel till its bones rattled, but, in spite of my fears, no bugs rained down. Like the Peterkin family, we searched our manuals and racked our brains, until finally the fact dawned on us that the breezes, taking advantage of the youth of my trees, had blown their spring dresses into tatters. After some time had gone by we planted a few other deciduous trees, and above one corner of the vegetable garden we made a small plantation of poplars.

No matter how well one may plan or the enthusiasm with which one enters into the labors of the Kingdom of Nature, the effort is cast upon barren soil unless one has the help of a competent man.

After being with us for one year, our excellent Swiss was called home. Next in turn came Francois to make my life a burden. He had all the faults, but none of the virtues, of the French race. The only two things he was interested in caring for were the cow and himself. I have a distinct idea that this combination was a matter of cause and effect, for each time I asked him to do some laborious piece of work he spluttered in his bourgeois French that it was most important, Madam, that "*la vach*" should be taken to a distant field to feed on a certain kind of grass, or that she had to be milked, fed, watered or brushed. Until I learnt more about cows, I meekly yielded and wondered at the attentions this gaunt female required. When the hot rays of the sun reached the lan-

guorous heart of each leaf and person, even the daily walk with the cow to hidden pastures grew too much for Francois. Then he would pretend to busy himself with some utterly useless occupation. It made no difference whether I gave him some specific work to do, it was sure to be neglected in a short time.

One hot day I was wearily drawing my feet through the powdered dust of the road, the sun shriveling every picture in my imagination save the one of our piazza, where the combination of breeze, shade and rest awaited me. I climbed slowly up the steps, sank into a wicker chair and closed my eyes. "I wonder what Francois is up to," as my last thought, as I dozed into a little "cat nap." I was brought to consciousness again by a faint, rasping sound, mingling with the droning of the bees. I opened my eyes, looked over the terrace, then leaped to my feet. Francois, with a little saw, was neatly lopping off all the lower branches of my last poplar tree, leaving the most absurd feather dusters in mid air. "*Hah! mon Dieu que faites vor? attendez instant.*" The astonished man saw me rush wildly into the house. I had good reason for this. My French being rather circuitous in its expression, I flew to my dictionary for forcible idioms with which to abase the blunderer. With trembling fingers, I turned the pages, and in a moment hurried out and hurled my tirade eloquent in its vehemence at the cowed Francois. Well, the harm was done, so I bravely tried to think of my trees as adding one of these uncouth landscape effects which some people like Francois admire. When I found him the next week sawing down a dead tree over which I was training a vine I was threatened with permanent ill-temper. Francois was discharged.

In answer to an advertisement, an army of incompetents besieged David's office, to his decided embarrassment and the amusement of the other members of the office. After several changes, our Swiss returned, and the place flourished happily ever after.

For "all-the-year" homes, evergreens are most essential, and should be planted when the place is new, as they are of slow growth. We intended many times to stay well into the winter, so I bought quite a number of hemlock, White Scotch and Austrian pines for winter to adorn with his white mantles. They ranged in height from four to five feet. A neighboring friend, whose chief occupation was reading novels and bemoaning her fate for having built in a place where there was "nothing to do," spent half her days sitting on my porch good-naturedly jeering at my strenuous life. "How can you do it?" was her chief refrain. When I showed her my pine trees and told her I had bought them to blot out her house in winter, she laughed in her lazily, humorous way, saying: "You really don't expect to be alive when they are big enough to do that, do you?" "I hope to be," I answered, laughing; "my ancestors have all been long-lived. I expect these

trees to be really big in eight years." "Well, I simply couldn't bear to plant things unless they were full grown." "Nonsense," I tartly replied. "When you are still saving money enough to buy such trees and are sweltering in the sun, I shall be luxuriously lying in the shade of my evergreens." I thought I did not disdain

a humble beginning, but my mother was really the one to start at the root of things. On her return from a trip through Nova Scotia she brought home an Indian basket filled with seedling larches. She wrote, telling me of her new addition to her garden, and I wrote in reply a letter filled with that lofty tolerance which is so easy to assume when one considers another's foibles. A few seasons later, when I saw those larches, I was positively amazed to note their growth, to say nothing of their beauty. I admired them immensely, and listened with interest to their history. "Do give me one, mother," I begged. "Why," she replied, "you can get any amount from a nursery, and at reasonable prices." I fingered the tender, green foliage. "But I don't want just any larch; I want a larch all my own, from Nova Scotia." My mother smiled, and more kindly than my previous scoffing warranted, merely replied: "That is just the point." By this was it driven home to me that the bit of Nature dearest to our hearts is that over which we have labored and have association. This may be the reason why those who are, unfortunately, rich enough to buy nature so seldom feel that intangible delight that a humble flower can give.

As the trees happened to arrive on a holiday, I thought it would be a good chance to arouse David's enthusiasm by planting them himself. The question was how to get him to do this of his own accord. I felt it was necessary to resort to a ruse. I sorrowfully gazed

at my evergreens, and commented on the lack of labor on a holiday and the risk of loss by leaving the trees unplanted.

I was very anxious to have my evergreens put in at once. David offered his services. We took very careful and expert measurements for the planting from the landscape plan, almost all of which we changed before we were through. When we had finished our measurements we realized with amazement how late it was. David began to dig, and I watched with amusement how each succeeding hole was decreased in size, quite like one's appetite at a Thanksgiving dinner, as the courses progress. We knew less than nothing about planting, but we were in delightful ignorance that there was anything to know. We gaily crammed the roots into their little holes, threw earth in and patted around them with the spade. "No reason why they should not live," commented David. "I don't know," I doubtedly replied; "Do you suppose anything could be successful which is done so easily." "Easily!" David,



"They will never come up," I said, when I planted my hollyhocks—but in two weeks they were elbowing each other shamelessly."



Our tiny brook winds slowly through masses of rosy laurel

who had been leaning on his spade, straightened his cramped back, with a groan. I heartlessly laughed, as I realized that one could hardly call this a holiday for him. Before many months our beloved evergreens had shown kinship to the chameleon, for the emerald green had turned to brown. The hemlocks gradually died down till only feathers of green showed around the roots. "I am going to cut off all but the green," I said. The onlookers smiled condescendingly. "Less trouble than to dig them up," said someone. "Wait and see, my instinct says they will live," and they did. After this drastic pruning, the roots grubbed with fresh energy to do the supporting. That season we ordered a fresh supply, and a very competent man did the planting. To be prepared, I had also studied up the matter. He dug large holes and threw in plenty of top soil; then, standing the tree up, he spread the roots, gradually throwing in earth, and tapped about them with a flat-bottomed pole. We did not fill the hole entirely, but threw in several buckets of water, and the next morning covered it level with the grass. Needless to say, these evergreens grew speedily. When my evergreens were one-season old I wished to add to their number. The only objection to gratifying my desire was the fact that we returned to our home late in June, after the planting season. A short distance away from our place stood a line of young Scotch pines seven feet high, which looked very tempting. I was able to buy them from our neighbor, and decided that it would be worth while to attempt the transplanting. As the ground had been saturated by a three-days' rain, it was comparatively easy to dig them up with a good ball of earth about the roots. This being our first experience of the kind caused us to take more than ordinary care. We followed all the

professional tactics, protecting the roots from the sun and wind, wrapping the ball of earth in burlap, and when safely in the hole, drowning the roots in water. The next day I observed with sorrow all the furry fingers pointing down, but they merely wished to make the one sensation of their lives, as the following evening these strenuous finger shoots were all pointing skyward again. I then believed what a gardener once told me: "You sure can plant annything anny toime, if ye have any sinse." The attitude of gardeners towards the object of their labors varies as widely as that of parents toward their children. One class always taking for granted, but never quite satisfied with the attentions bestowed upon them by their children. Other parents, imbued with the

idea that, having taken upon themselves the responsibility of new lives, feel delightedly grateful if their children crown them with love and success. After a fall planting, the months seem long before the spring shows the result for better or for worse.



The flowered path invites one into the woodland of oak and maple

No parent could have been more pleased over the awarding of a diploma to a child than was I when all my shrubs responded to the touch of spring.

My place must have a feathery boundary, and perish the thought of the stiff privet hedge, so our landscape architect planned a hedge of flowering shrubs. Day after day in the early fall I looked at the odd shapes drawn on my plan, puzzled out the list of numbers and names, and finally arrived at the amount of shrubs needed of the different varieties. Then came the search in catalogues for prices and sizes, and finally a comparison of the selected list with the state of our financial affairs. It was no easy matter to make my checkerboard square satisfactorily. I was, fortunately, only able to order two-thirds of each variety, as otherwise they would have been too thickly planted in the allotted spaces. After some industrious consultation of the cryptic figures and symbols on the plan, I was able to visualize the results and inject my own ideas, which were so vague and indefinite before.

Forsythia fortunea is the golden bell which rings in the early spring. Dogwood then begins to bloom, while next in turn comes the creamy viburnum. Scarcely have these flowers faded when the spi-

rea, appropriately called bridal wreath, is in its glory. When these snowy petals have fallen the weigelia displays flowers of shaded, pink bloom to comfort your loss. Dainty, white deutzia, syringia and masses of white *Hydrangea paniculata* follow in turn. All through the spring and early summer this flowering hedge brings delight to all who pass.

At eighteen, when pleasure and lack of care seem the all-important points in life, I watched with amused tolerance my mother, not only tending her flowers, but fairly slaving over them in mid-summer madness. Occasionally, in an unsuppressed moment of enthusiasm, when she forgot that my thoughts were completely absorbed by tournaments and gayety, she would call: "Oh, do come into the garden for just a minute, and see my wonderful flowers," and, having dragged me reluctantly down the steps, she pointed out to my unseeing eyes the wonders of her Italian garden. "Why, mother," I would vaguely reply, "flowers are nice to have around the house, but I cannot imagine becoming so much interested in them that I could toil out here in the blazing sun. With you, gardening is like eating nuts; when you once start, you cannot stop." "Oh, child," she laughed, "wait until you have your own home, and have no flowers about you; then we will see how you feel about them;" and I wondered if I too would be drawn into the spell of the mystery of living things. It was only a few years after that, I wrote a pleading letter to the flower magician: "I must have flowers around my house, mother; when shall I get; when shall I put them in, and how?" In response to my note I received a great box containing the overflowing offsprings of her



My flowers were modest in their demands, and for one whole summer the yellow iris entertained us with their sunny noddings

plants. I welcomed them, feeling that we were very closely related. I opened the box with all of Pandora's excitement surging over me. In a corner lay a paper with the familiar writing. I snatched it up, and grew confident as I read the detailed directions for planting. I lifted a bundle of roots labeled achillia, and gently fingered them. "Queer things," I mused; "look quite like the 'wild men of Borneo,' with hair sticking up and whiskers hanging down; I wonder which end I should plant!" I was determined that some should live; so our man dug a trench, and I stood half on their whiskers and the rest on their heads. I was glad, may be foolishly so, that I had done this, as many came up to join the ranks of the flowers. In this same box were a number of bulbs, and, even though they had lost their labels, I felt quite proud in recognizing them as iris. Around one end of the house I had planted wisteria, so I placed the iris there to harmonize with the beautiful vine. Imagine my surprise when I found aggressive yellow lillies bursting out of their green jackets with quite the confident air of guests who unwittingly appear on the wrong day, and I was filled with much the same confusion as the host would experience. Fortunately, the wisteria was more conservative in its growth, and the lilies, for one season at least, entertained us with their sunny noddings. Among the other things were quantities of bulbs, which David healed in himself in a very unprofessional, irregular nursery. When they were all settled for their "long winter's nap," a neighbor informed us that they could not be transplanted in the spring, as we had intended. David groaned in despair at the thought of renewed effort, and refused to change them. When the spring came, the unintentional sweep of tulips, narcissus, snow-drops and hyacinths was lovely, and has now become an artistic feature of the place, especially appreciated by David.

For one who has many calls upon them beside the hours of delight spent among the flowers, it will be found most satisfactory to rely upon perennials, with annuals as fillers in. Flowers are the dessert in the feast of Nature, and there should be no burden in connection with them, to even slightly dim one's joy in the delight they have to offer. The flowers which we planted could be well managed by a person either too lazy or too busy to attempt a larger assortment. My flowers are modest in their demands, and with a little hoeing, an occasional drink in dry weather, and a blanket of manure in winter, their only desire is to be left quietly to themselves, and they generously give me the credit for their glory.

Having profited by the experience of my first summer, I again planned the bed at the end of the house, where I had inadvertently placed the yellow lillies. The following Fall

I transplanted them to a corner of the place in a plantation by themselves. I substituted for them an assortment of plants which I had calculated would bloom in succession. By the thorough intermingling of the varieties in the bed, it was a delight throughout the season to note how each recurring bloom presented an almost solid mass. My iris now had found their permanent home, and might flower in all their glory, while the wisteria blossoms nod down in gay approval from their trellis above.

During the mid-summer months I rejoiced in my salmon-pink and white phlox, the colors harmonizing well with the pink geraniums of my flower box, and the Dorothy Perkins vines.

David had collected in a large paper bag myriads of hollyhock seeds from the garden of one of his relatives. I will never forget the day when, too tired and hot to do anything properly, I walked around the house trailing a stick behind me as a child might do, and into the indentation which this made in the earth, I sprinkled the hollyhock seeds, and carelessly fanned the earth over them with my spade. "They will never come up," I thought, "and I'm too hot to care." Not long after, I

was pleased to find David weeding my garden. He fairly reveled in this task. "Each weed killed," said he, "is one less." "Just like our sins," I primly added, looking at him. "What is this weed which is coming up in a sort of row about the house?" he asked, holding up a handful. "My hollyhocks!" I cried, and excitedly ran along the bed. They were elbowing and crowding each other mercilessly, so I left the task to David of thinning them out. That summer they hardly flowered, but the following year they speedily grew over ten feet high. The shades were most beautiful, varying in color from creamy pink to deep red, and there was scarcely a flower which could not boast of exquisite color. A mass of yellow chrysanthemums wound up the joyous summer months, with their feast of sunlight.

Should I attempt to describe the garden of my dreams, with limpid pools and glowing flowers, I would be lost for days in the maze of my fairyland. A group of those most adorable, baby-eyed flowers, forget-me-nots, bring me dangerously near to that land of romance. Lilies of the Valley also stir my heart with a reminiscent thrill of child days, when the princess lily ruled my flower world by her exquisite daintiness. The *Festiva maxima* white peonies are also surrounded by this virgin atmosphere and delight the passerby with their splendor. Myrtle, of shiny leaf and sky-blue flower, is not usually known as border, but, trained in the proper way, it is ideal for that purpose. First it is planted in a single row, and each spring the roots must be gathered in the hands and heartlessly clipped.

(Continued on page 301)



Brilliant iris blooms, with fragrant wisteria, and past the ivied porch, the gentle hills fading into the distance



Our cement stable I screened about with a hedge of golden glow

A Garden Plan for Every Man

The plan below is a suggested arrangement that may be adapted for any garden, in that it contains elements of bed border and boundary planting found everywhere. The arrangement is suggestive, and the lists given for each division are to be selected according to the taste of the individual. The key figure to the plan are followed by the names of plants, their height in inches, their season of bloom, while below is given the distance between plants when they are set out

Low Growing Plants—Bed A

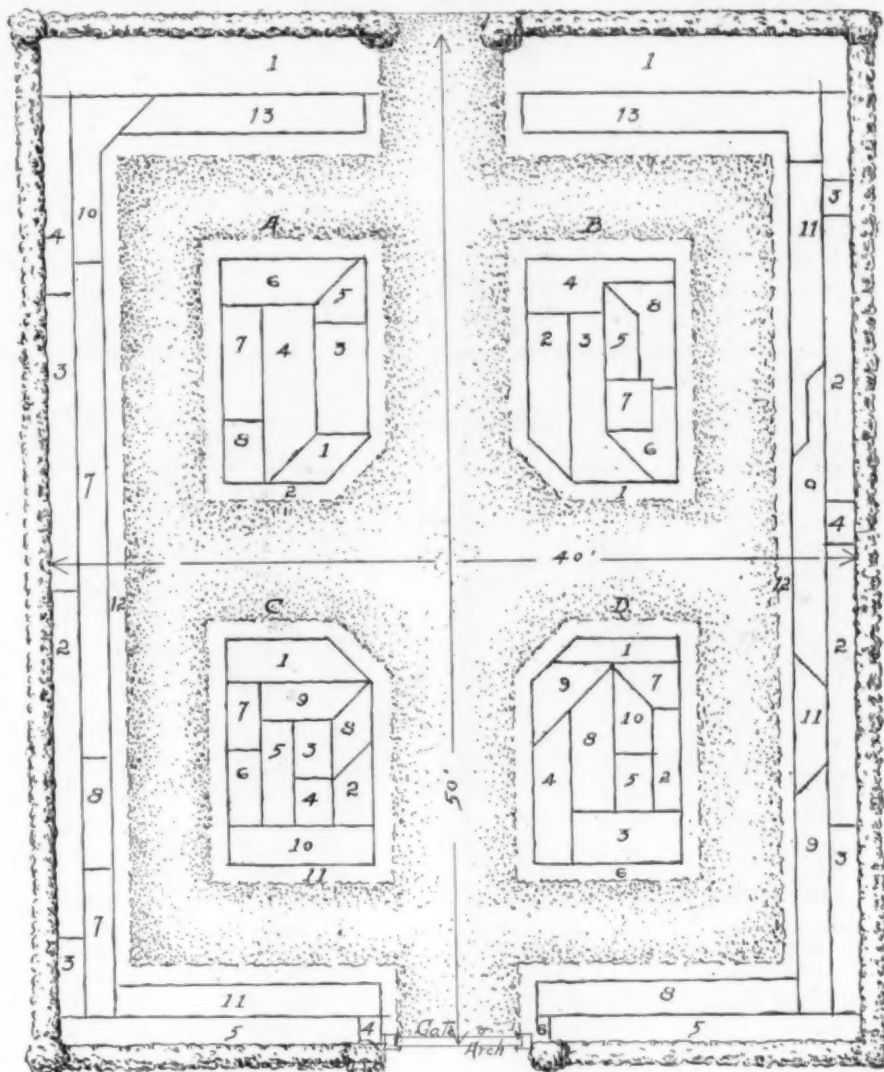
- 1 *Adonis vernalis*.....12" April
6 inches apart.
- 2 *Myosotis palustris*.....8"
Forget-me-not.....May-June
8 inches apart.
- 3 *Papaver nudicaule*.....12"
Iceland poppy.....May on
8 inches apart.
- 4 *Saponaria Caucasica*.....15"
Bouncing Bet.....June on
1 foot apart.
- 5 *Campanula Carpatia*.....8"
Harebell.....May on
1 foot apart.
- 6 *Armeria maritima splendens*.....12"
Thrift, or Sea Pink,
All summer
8 inches apart.
- 7 *Saxifraga umbrosa*.....12"
London Pride.....July on
8 inches apart.
- 8 *Sedum Sieboldi*.....8"
Stonewort.....Sept.-Oct.
8 inches apart.

Succession of Bloom—Bed B

- 1 *Adonis vernalis*.....12" April
6 inches apart.
- 2 *Achillea ptarmica*.....2'
Yarrow.....June on
1 foot apart.
- 3 *Digitalis lanata* (fl. pl.) 3'
Foxglove.....June-July
15 inches apart.
- 4 *Phlox*, "Elizabeth Campbell"
Phlox.....2-3'
12-15 inches apart.
- 5 *Althea rosea*.....5'
Hollyhock.....July-Aug.
18 inches apart.
- 6 *Gaillardia grandiflora*.....2'
Blanket flower.....June
15 inches apart.
- 7 *Boltonia latifolia*.....3'
False chamomile.....Aug.-Sept.
15 inches apart.
- 8 *Chrysanthemum* "Rhoda" 2'
Hardy chrysanthemum,
Sept.-Nov.
18 inches apart.

One Color Plantings—Bed C

- RED.
- 1 *Paeonia offic. rubrum*.....18"
Peony.....May
18 inches apart.
 - 2 *Papaver orientale*.....18"
Poppy.....May-June
8 inches apart.
 - 3 *Phlox Coquelicot*.....2'
Phlox.....June
12-15 inches apart.
 - 4 *Gaillardia grandiflora*.....2'
Blanket flower.....June-Aug.
15 inches apart.
 - 5 *Althea rosea*, double red. 5'
Hollyhock.....Aug.
18 inches apart.
 - 6 *Monarda didyma*.....2-3'
Beebalm.....July-Aug.
15 inches apart.
 - 7 *Lychnis chalcidica*.....3'
Jerusalem cross.....July-Sept.
15 inches apart.
 - 8 *Lobelia cardinalis*.....2-3'
Cardinal flower.....Aug.-Sept.
10-12 inches apart.
 - 9 *Tritoma Pfitzerii*.....3'
Red-hot poker.....Aug.-Sept.
15 inches apart.
 - 10 *Chrysanthemum*, "President"
Hardy chrysanthemum,
Sept.-Nov.
18 inches apart.
 - 11 *Silene Shasta*, for edging. 6"
Catchfly.....July
8 inches apart.
- YELLOW
- 1 *Anthemis tinctoria*.....15"
Hardy Marguerite.....June-Aug.
1 foot apart.
 - 2 *Adonis Amurensis*.....1'
Adonis, or bird's eye.....April
10 inches apart.
 - 3 *Iris*, "King of Iris".....2'
German iris.....May
15 inches apart.
 - 4 *Trollius Europaeus*.....2'
Globe flower.....May-Aug.
1 foot apart.
 - 5 *Althea rosea*, double yellow. 5'
Hollyhock.....July
18 inches apart.



- 6 *Hemerocallis Thunbergii*.....3'
Tawny day lily.....July
1 foot apart.
- 7 *Cassia Marilandica*.....4'
American senna.....July-Aug.
18 inches apart.
- 8 *Hypericum Moserianum*.....2'
St. John's wort.....June on
15 inches apart.
- 9 *Doronicum Caucasicum*.....2'
Leopard's bane.....May
1 foot apart.
- 10 *Chrysanthemum*, "Boston"
and "Sunshine".....2'
Hardy chrysanthemum,
Sept.-Nov.
18 inches apart.
- 11 *Viola lutea splendens*, for
edging pansy.....All summer
8 inches apart.

BLUE.

- 1 *Funkia caerulea*.....18"
Plantain lily.....June-July
1 foot apart.
- 2 *Linum perenne*.....18"
Flax.....July on
1 foot apart.
- 3 *Iris Germanica*, "La Tendre"
German iris.....May
15 inches apart.
- 4 *Gentiana Andrewsii*.....2'
Blue gentian.....Sept.-Oct.
1 foot apart.
- 5 *Delphinium belladonna*.....3-5'
Larkspur.....July
15 inches apart.
- 6 *Veronica longifolia subserilis*.....3'
Speedwell.....July-Aug.
1 foot apart.

- 7 *Anchusa Italica*, "Drop-
more" var.....3'
Bugloss or Italian Alkanet
May-July
1 foot apart.
- 8 *Lupinus polyphyllus*.....3'
Lupine.....May
1 foot apart.
- 9 *Campanula pyramidalis*.....4'
Chimney bellflower.....June-July
1 foot apart.
- 10 *Iris Japonica*, "Samidare"
Japanese iris.....2-3'
15 inches apart.
- 11 *Campanula Carpatia*, for
edging.....8"
Carpathian harebell.....June on
8 inches apart.

PINK.

- 1 *Paeonia officinalis rosea*.....18"
Peony.....May
18 inches apart.
- 2 *Dianthus barbatus*.....18"
Sweet William.....June
10 inches apart.
- 3 *Campanula medium, rosea* 3'
Canterbury bells.....June on
1 foot apart.
- 4 *Dictamnus fraxinella*.....2-3'
Gas plant.....June-July
1 foot apart.
- 5 *Althea rosea*, "Newport
pink".....5'
Hollyhock.....Aug.
18 inches apart.
- 6 *Phlox decussata*, "Manzel-
brunnene".....2-3'
Phlox.....June-July
12-15 inches apart.
- 7 *Heuchera sanguinea*.....2'
Coral bells.....July-Aug.
1 foot apart.
- 8 *Lilium speciosum*.....2'
Lily.....Aug.
10 inches apart.

- 9 *Anemone Japonica*, "Queen
Charlotte".....2'
Japanese anemone.....Aug.-Sept.
10 inches apart.
- 10 *Chrysanthemum*, "Rosin-
nante".....2'
Hardy chrysanthemum,
Sept.-Oct.
18 inches apart.
- 11 *Armeria maritima, splen-*
dens, for edging.....9"
Sea pink.....May-June
8 inches apart.

LAVENDER.

- 1 *Primula caerulea*.....10"
Primrose.....May
8 inches apart.
- 2 *Trillium erectum*.....6"
Wake-robins.....April-May
6 inches apart.
- 3 *Aster alpinus*.....10"
Alpine aster.....May-June
6 inches apart.
- 4 *Aster sub caeruleus*.....12"
Dwarf hardy aster.....June-July
8 inches apart.
- 5 *Aster grandiflorus*.....2-3'
Hardy aster.....Oct.-Nov.
1 foot apart.
- 6 *Stokesia cyanea*.....2'
Stokes aster.....June on
1 foot apart.
- 7 *Statice latifolia*.....18"
Sea lavender.....June on
1 foot apart.
- 8 *Lavandula vera*.....18"
Sweet lavender.....July-Aug.
10 inches apart.
- 9 *Scabiosa Caucasica*.....18"
Blue bonnet.....June on
10 inches apart.

- 10 *Caryopteris mastacanthus*.....3'
Blue spirea.....Sept.-Nov.
15 inches apart.
- 11 *Ajuga reptans, rubra*, for
edging.....6"
Bugle.....May
6 inches apart.

MAUVE TO MAROON

- 1 *Mertensia Virginica*.....18"
Blue bells.....May-June
10 inches apart.
- 2 *Funkia Fortunei*.....18"
Plantain lily.....Aug.
1 foot apart.
- 3 *Iris Germanica*, "Lohen-
grin".....2'
German iris.....May
15 inches apart.
- 4 *Astilbe Arendsii*, "Vesta" 2-4'
Astilbe hybrid.....July-Aug.
18 inches apart.
- 5 *Althea rosea*, double ma-
roon.....5'
Hollyhock.....Aug.
18 inches apart.
- 6 *Eryngium amethystinum* 2-3'
Sea holly.....July-Sept.
1 foot apart.
- 7 *Delphinium*, "Queen Wil-
helmina".....3'
Larkspur.....June-July
18 inches apart.
- 8 *Boltonia latifolia*.....2-3'
False chamomile.....Aug.-Sept.
15 inches apart.
- 9 *Aster Novae Angliae*.....4'
Native aster.....Sept.-Oct.
15 inches apart.
- 10 *Chrysanthemum*, "Little
pet".....18"
Hardy chrysanthemum,
Sept.-Nov.
18 inches apart.
- 11 *Iris cristata*, for edging...3"
Crested iris.....May
10 inches apart.

Two Color Combination Plant- ings—Bed D

YELLOW WITH WHITE

- 1 *Caltha palustris*.....1'
Marsh marigold.....April
6 inches apart.
- 2 *Alyssum saxatile*.....1'
Yellow alyssum.....May
6 inches apart.
- 3 *Hemerocallis flava*.....2'
Lemon lily.....June
1 foot apart.
- 4 *Coreopsis lanceolata*.....3'
Coreopsis.....June on
1 foot apart.
- 5 *Hypericum Moserianum*.....2'
St. John's wort.....June on
15 inches apart.
- 6 *Arabis alpina*.....6"
Rock cress.....April
6 inches apart.
- 7 *Iris Florentina alba*.....2'
Orris root iris.....May
15 inches apart.
- 8 *Phlox*, "Miss Lingard".....2-3'
Phlox.....June
15 inches apart.
- 9 *Achillea ptarmica fl. pl.* 2'
Yarrow.....June
15 inches apart.
- 10 *Cimicifuga simplex*.....8'
Snakeroot.....Sept.-Oct.
1 foot apart.

YELLOW WITH LAVENDER.

- 1 *Primula vulgaris*.....1'
Primrose.....May
8 inches apart.
- 2 *Doronicum Caucasicum*.....2'
Leopard's bane.....May
1 foot apart.
- 3 *Baptisia tinctoria*.....2-3'
False indigo.....June-July
1 foot apart.
- 4 *Heliopsis Patcheriana*.....8'
Small sunflower.....June
18 inches apart.
- 5 *Chrysanthemum*, "Sun-
shine".....2'
Hardy chrysanthemum,
Sept.-Nov.
18 inches apart.
- 6 *Ajuga reptans rubra*.....6"
Bugle.....May
6 inches apart.
- 7 *Primula caerulea*.....10"
Primrose.....May
6 inches apart.
- 8 *Erigeron grandiflorus elatior*.....18"
Flea bane.....June-July
1 foot apart.

(Continued on page 310)

First Aid to the Orchard

INSECT EPIDEMICS—HOW TO DIAGNOSE AND PRESCRIBE FOR THEM—SOME PREVENTIVE AND CURATIVE MEASURES

BY WALTER C. O'KANE

New Hampshire Agricultural Experiment Station

LIKE the ice man, the July sun and hay fever, most bugs take a vacation in winter. Swelling spring and full-blown summer are the heyday of their prosperity.

So be it. We can spare them without greatly stretching our heart-strings. Out of sight is pleasantly out of mind.

The trouble is that summer is coming again, and so are the tribe of insects. Moreover, at this time of year it seems to be their habit to show up without warning and in astonishing numbers, and to get in a lot of damage before we can take them in hand.

We find some morning that half the leaf clusters on our apple trees are turning brown, and thereupon we learn that an invasion of the Bud Moth is in progress—for which we should have sprayed two weeks before. Plant lice curl up the leaves, and can no longer be reached because now hidden in their self-made shelters.

Yet the very reason why some of these hungry fellows catch us napping is because they are here right now—on or about our trees, ready to jump into life with the coming of spring. They may not look much like the lively worm or bug that will be on the job a month from now, but they can be found and recognized. In fact, by the abundance of a species it is entirely possible to judge whether an outbreak is on the way, and to prepare for it. It is not necessary to wait until the house is afire before

taking the trouble to stop up the crack in the chimney.

There are some of the early comers that cannot be counted in, for they are hidden away where no feasible search can reveal them; for instance, those that enter the ground to hibernate. But

the rest are on or about the trees that they will infest. No other trees except those on which they are now at rest will be attacked in the beginning of the season; conversely, any trees on which they are now found will certainly be invaded more or less seriously. It is a definite proposition either way.

The twigs of the trees tell half the story. Eight or ten of the common orchard pests habitually stay there in winter, and two or three others are likely to be near by.

On apple twigs, out toward the end, are the winter eggs of plant lice. Shiny, black, oval, just large enough to be seen easily with the naked eye, they are scattered

thickly in the fuzzy hairs that cover the ends of young shoots, or tucked away in crevices around bud scales. If abundant they mean that thousands of greenish lice will soon be clustered on the opening buds and foliage. A thorough spraying with tobacco extract, or with lime-sulphur, one to seventy, will be needed promptly.

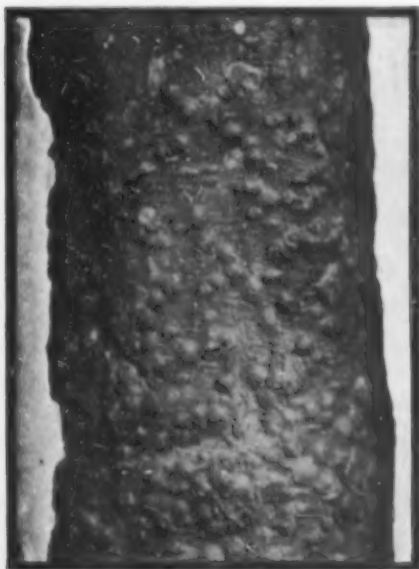
Close by, the egg-masses of the Tent Caterpillar encircle the twig, like a brownish-black swelling, half an inch long and covered with a glistening varnish. Within each egg-



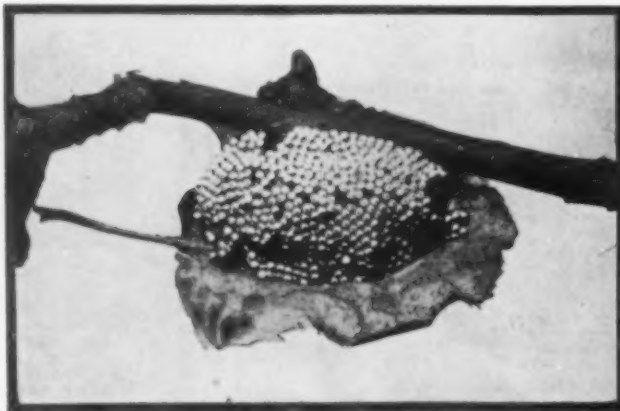
In early April Tent Caterpillars are still in the egg stage. Now is the time to destroy them



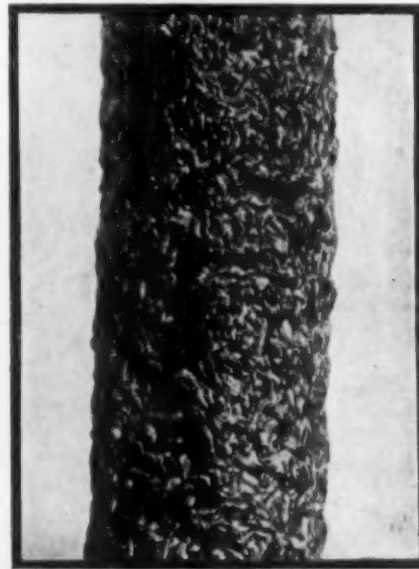
The Woolly Aphis causes characteristic swellings of the twigs. Tobacco dust applied to the roots is a good remedy



The San José Scale is a most destructive growth, and it requires close scrutiny to detect it



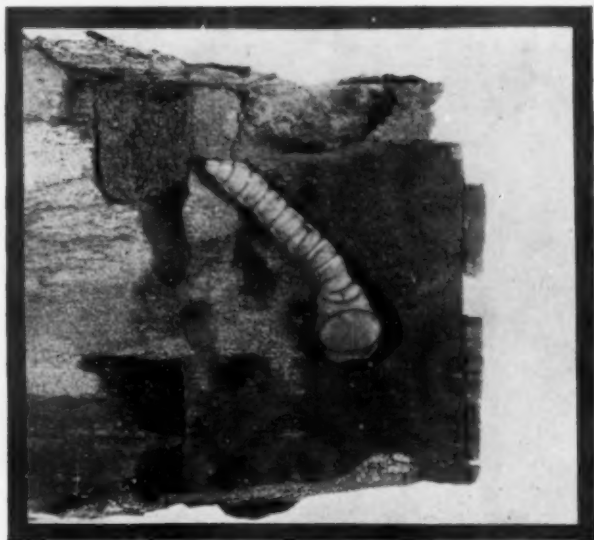
The Rusty Tussock Moth usually fastens a leaf to a twig. Arsenate of lead will kill the egg masses



The Oyster Shell Scale thickly encrusts the bark. Prompt action is necessary to preserve the tender growth



The Round Headed Borer works near the base of the trunk and usually he leaves a trail of sawdust



Under the bark of apple trees is the Flat Headed Borer. A sharp knife will disclose his burrows



There is always tell-tale gum where the Peach Borer is at work. Probing for the grubs with a wire is an effective cure

There is no need to wait until the colonies have made their tents in the forks of the trees. A dose of arsenate of lead before the blossoms open will finish the young worms.

The Woolly Aphis gives almost invariable warning of its presence in peculiar enlargements of the twigs, especially where side buds start. Often these enlargements crack open, and sometimes the bluish, dead body of an aphid will be found in the crevices. It was the feeding of summer colonies that caused the swellings. This was injurious, of course, but the real damage was done by similar colonies then and now on the roots. Old trees usually seem able to withstand this pest. On young trees it will be a wise precaution to draw away the earth from around the crown of the tree, down to the first roots and out for a foot or two, and apply two or three pounds of tobacco dust, replacing the soil afterward.

There is a group of case-makers that follow the fashion of spending the dormant season in little silken hibernacula, attached here and there to twigs or branches. The Bud Moth does this. So does the Leaf Crumpler.

The home of the latter is a small, horn-shaped tube, half an inch long and about the color of the bark. That of the former is still smaller. Two others with similar habits are the Cigar Case-Bearer and the Pistol Case-Bearer. Tear open any of these silk shelters and you will find within a naked worm. If you discover them in numbers, spray the orchard with a poison when the buds begin to break, and don't postpone it, for you can't get at them later.

mass two or three hundred small, hairy caterpillars are ready to come forth as soon as spring is under way.

Twig, branch or trunk is the chosen place of the scale insects. Whatever the species, they occur closely attached to the bark, in greatest numbers, as a rule, wherever the bark is thin and tender. Now is the time to look for them.

The Oyster Shell Scale is well described by its name. It is large enough to be seen distinctly without any lens. Repeated spraying each spring with lime-sulphur will control it. If you desire to finish up the job in one season, use kerosene emulsion, applied when the young scales are found crawling over the bark, which will be when warm and fairly settled weather is at hand.

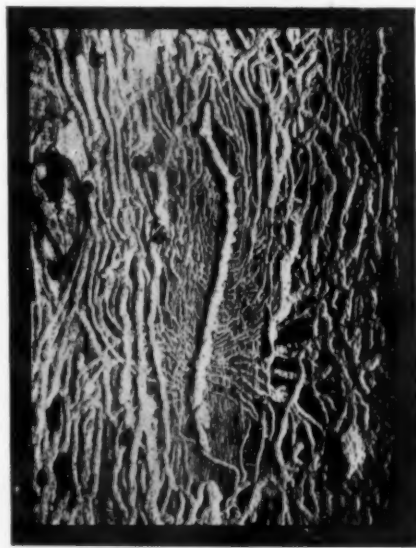
San José scale is one of the most difficult to detect, because it

is so small and so closely matches the color of the surface on which it rests. It is round and flat. If one uses a hand lens one will see that there is a depression in the middle of it, in the center of which there is a distinct, raised point. Lime-sulphur is the best remedy, to be applied when the buds are just beginning to swell.

There are many other species of scales. Most of them are not easy to identify. When a strange one is found, send a sample twig to your State experiment station or to the Bureau of Entomology at Washington.

Curious affairs are the egg-masses of the Tussock Moths. Invariably the eggs occur on the top of the dark, gray cocoon from which the female moth emerges. Wingless, degenerate, her activity carried her no farther than the roof of the house in which she was born. But the caterpillars that will hatch from these eggs, tufted and penciled fellows, will be spry enough

(Continued on page 300)



Tiny round holes through the bark betray the Shot Hole Borer. A dead limb or a decrepit tree is its favorite breeding place



The Shot Hole Borer runs his characteristic galleries underneath the bark. To check it burn or amputate the dead wood in the Spring



The New Way to Succeed with Dahlias

AN IMPROVED METHOD OF CULTIVATION FROM TUBERS WHICH ENSURES EARLY GROWTH—DIRECTIONS FOR PLANTING AND THE CARE OF THE BLOOMS

BY ANNA PITT

THE planting of dahlia bulbs is many years behind the times, according to the experts who have an open eye to these things. England no longer uses the bulbs at all, but sends them to America, retaining only the tuber's shoots at home for her own crop.

These produce earlier results and better, the yield in flowers being decidedly increased, according to those who have tried it.

Here is the entire cycle to be followed: in March, take all the tubers from their storage quarters and spread them out on papers on the cellar floor, or in any convenient place which allows the space. Sort them over and reject all that have not kept well. Now, with a sharp knife divide the perfect ones by cutting the stems in sections lengthwise, making as many sections as there are tubers attached to the stem. Every tuber *must* have a small piece of the main stem attached—this is absolutely necessary.

Now, plant the tubers on their sides in soil in a box or pots, to start the sprouts. Water them as you would water any indoor plant—not often enough to keep them soaking, but as often as the earth indicates the need of it by showing dry on top. When the sprouts have grown to good, strong little plants about four inches long, or high, cut them from the tuber and plant them in other pots or boxes. Paper pots are convenient, as they may be set out from these when the time comes, without disturbing the roots in the least.

In these pots they are to remain until the weather is warm enough for outdoor planting—which is in June, usually, in this latitude. Have strong stakes ready when this time comes, five feet high or higher for the very tall varieties, and set one firmly by the side of each plant when it is put in the ground. Tie the plant at once to this with raffia—or better, with a piece of soft, narrow cloth. I have found the very best tying material to be a stocking or sock, cut any desired width, around and around. Begin at the top and cut one continuous piece, spiral-like, until the toe is reached; then roll into a ball. This makes a soft, clinging and enduring material.

Tie the dahlia again at intervals as it grows taller. When the plants have reached the height of two feet, pinch out the main bud, to make it branch and grow in bush form; this form will produce more flowers.

If, however, one prefers to plant the tubers instead of the sprouts, separate exactly as directed in the beginning, and plant *single* tubers instead of clumps. Planting in the usual way, in clumps, results in much leaf and a dearth of flowers. Lay the single tubers, with their little bit of main stem attached, on their sides at a depth of four to six inches in soil spaded and prepared to a depth of at least eight inches. Plant them no nearer than three feet apart, and do not round up the earth over the tuber. Rather let it be a little

depressed, to hold moisture until it is absorbed by the soil.

Dahlias grow best well out of the reach of the roots of trees or shrubs, and where they have plenty of room and sunshine. Keep the ground cultivated around them and free from weeds—and if you wish exceptionally large flowers, allow only one shoot from a tuber to grow. They require a great deal of moisture, yet it is better never to water them. Keep the moisture from getting away during dry seasons by cultivating. The secret of success always is, "keep the plants growing." Short, extra stakes may be provided for the side branches, if these are allowed to grow, as dahlia stems are brittle, and a strong wind almost any day may break them off.

The best food for growing dahlias is ground bone and muriate of potash—one part of the latter to three parts of the former. When the plants come into full bloom, cut the flowers freely, and you will have a generous supply. Cutting promotes blossoming.

The dahlia will grow in almost any soil, but does the best in a sandy one. Indeed, it will grow in pebbles. If you can select from several kinds, choose a light loam with very good drainage; and it is well to add a little well-rotted manure if the soil is weak. But note particularly that an excess of fertilizer of this nature will produce a leafy growth at the expense of flowers. They may be fed from the surface by spreading manure or commercial fertilizer over the ground around the plant when it reaches a height of fifteen inches or more, and forking it in lightly.

It is best to purchase dahlias here rather than to import the tubers, for seventy-five per cent. of those imported cannot be successfully grown here, owing to unfavorable climatic conditions. Growing them from seed is interesting, and the plants will bloom the first year. They rarely come true to color, however; but the surprises of new colors and shades are very pleasing, especially in the single ones. The seeds themselves may safely be

planted out of doors in May; or the plants may be started in the hotbed or in pots and transplanted into the ground about June. Preserve the seedling tubers in the fall, just as the others are preserved, for at least two years, growing them for a final selection of color and blossom.

When dahlias have stopped blooming, or when frost touches the leaves, dig them up on a sunny day; let them dry in the sun for half a day; then take them under shelter. When thoroughly dry, wrap each clump in a newspaper; tag with a label telling name and color, and pack away in a cool, dry place until another March. This completes the life cycle of one of the loveliest of flowers.

There are, of course, many varieties of dahlias—all lovely enough to suit all tastes. It is a matter of personal preference whether you will have tall bushes or shrubby ones, showy or quiet tones. Do be sure to have them in clumps of color, however, whatever you choose, rather than mingle them where each will fight for

(Continued on page 303)



The secret of dahlia cultivation is to "keep the plants growing." When about a foot high the shoots should be secured to stout stakes

Quality Crops for the Home

PRIME CORN AND ITS CULTIVATION—WHAT VARIETY TO GROW—DIRECTIONS FOR PLANTING AND CARE

BY D. R. EDSON

THE platter of corn that gives you a complete, soul-satisfying sense of perfection is usually an accident. Nothing is easier than to have one or two such delectable, melting feasts of sweetness; but few garden stunts are less frequently achieved than to have a continuous supply of sweet corn, in prime condition, over the six to ten weeks through which it may be had, according to season and climate.

Now, I maintain that a platter of *good* sweet corn is as well worth a little extra thought and effort as anything which the garden has to offer. And, furthermore, to succeed in having a continuous supply of corn in prime condition is not a particularly difficult task—it is a matter of additional “knowing,” rather than of additional “doing.”

Sweet corn, to be at its best, must be taken at just the right stage of development, a condition which it passes through very quickly. A little too early it is too soft and milky; a little too late, and the skin of the kernels has begun to get tough, too much boiling is required, and that indescribable “sweet toothsome-ness” of corn that is just right has begun to disappear. (Incidentally, too, you should “have the pot boiling before you go out to pick the ears.” Sweet corn goes stale very quickly, and, although it will remain edible for a number of days, every hour spent between the garden and the table takes the fine edge off the quality.) So, the only way to solve the sweet-corn problem is to have a new supply coming on every week or two, and have it just about large enough to last until the following one will be ready. If there is a surplus of ears that begin to get hard, they can be used to advantage for stewing—taking the kernels off the ears before cooking—for succotash or for canning.

Either one of two methods may be followed. You can make repeated plantings of one kind, at intervals of one to two weeks, and thus keep it “coming on” until frost. Or, by planting several different varieties at one time, carefully selected to mature in “succession,” a supply for four to six weeks may be had from a single planting, so that two plantings only will be required to cover the whole season. Which method may be best to follow will depend on individual circumstances and taste. By the former the supply can usually be more accurately regulated; and where one variety, such, for instance, as the little honey-eared Golden Bantam, is a universal family favorite, this will be the easiest way—provided the gardener can be depended upon not to forget his planting dates. Where space is limited, too, it gives one the opportunity of planting his weekly row or two of corn where a

previous crop has been cleared off, or between rows of stuff that will soon be gone by, and can be cleared away by the time the corn needs the room. Where space is not so restricted, and variety is appreciated, the second method will probably prove the easiest to follow.

The matter of *variety*, as affecting quality—as well as obtaining a continuous supply—is very important; more so than with most of the garden vegetables. But, before discussing varieties, let us take just a glance at the different *types* to be found, for, after all, they offer more definite distinctions than “varieties” that are, to say the least, dependent to some extent upon the claims of rival seedsmen, as well as upon distinctions of merit.

The several varieties of Early Adams are not true sweet corns at all. Their sole merit lies in their extreme hardness, enabling extra early planting. The gardener who appreciates quality will omit them altogether, realizing that something much better may be had but a few days, if any, later. The second class may be termed the Extra Early true sweet corns, such as the several varieties of Cory and similar sorts. These are of fair table quality, but not nearly so good as the larger later varieties. You may have noticed upon opening a couple of packages of seed corn that there was a great difference in appearance, the kernels of one sort being smoother and very hard and flinty, while those of the other sort looked so shriveled and dried up that you doubted their being fit to plant. The smooth “flint” seed is a characteristic of the hardy, early sorts; when you find seed of a variety like that, you can plant it comparatively early, but plant only enough of it to last you until the better sorts may be had—a week or ten days, perhaps. Then come the medium and late white sorts, of which Crosby’s and Stowell’s Evergreen are types. All these are the regular straight-rowed white sweet corn. Of course, “quality” is to some extent a question of personal taste. For what I consider the top-notch of quality in table corn I look still farther. There are two other types. The “Shoe-peg,” in which the kernels are white, but wedged in irregularly as thick as they will go, and tapering in shape, with plump, round ends; and the *colored* sorts with ears of yellow, black or purplish grains. The latter have had a hard time winning their way to the distinction they deserve, on account of the universal prejudice against their color, especially the yellow sorts, which, until they become known, are generally mistaken for field corn; or, by those who think themselves wise in horticultural matters, for good-intentioned sweet corn which, through too close

(Continued on page 316)



What You Must Do with the Garden Now

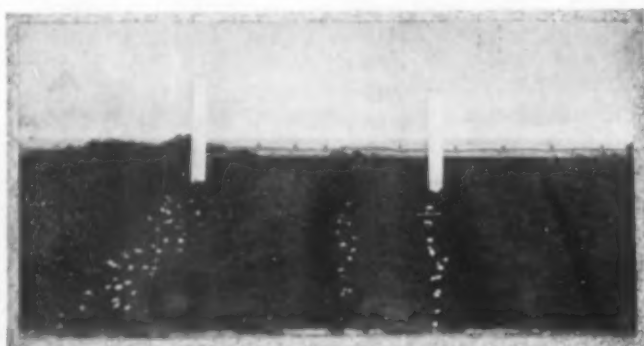
REMARKS ON THE PREPARATION OF THE SOIL, AND SOWING INSTRUCTIONS—TRANSPLANTING SEEDLINGS AND PLANTS—SUGGESTIONS FOR GARDEN ARRANGEMENT AND METHOD

BY F. F. ROCKWELL

It is essential in planting or sowing to make the surface as fine and level as possible before operations

APRIL, with its fleeting sunshine and south winds, marks the advent of the outdoor season, and now is the time to take an inventory of the garden and its needs, if you are looking forward to a profitable year.

First of all, there are the garden patches where the vegetables and annuals grew last year. As soon as the ground is dried out enough so that it will not stick when being plowed up or spaded, have those attended to. If you are not familiar with the details of doing this work, refer to last month's



Depth to plant depends on size of seed. Beans may be set in from two to four inches. The shallow drill on the right is for finer seeds

HOUSE AND GARDEN, where you will find the particulars of manures and fertilizers and breaking up the soil for both vegetable and flower garden discussed. That must, of course, be the first step in a great deal of your gardening, and see to it that it is well done. For this job you will probably require help; you cannot get the real pleasure there is in gardening letting your gardener attend to everything except cutting the flowers, any more than you could enjoy a luscious, new cantalope by letting the cook eat it for you.

Take a good look around and pick out the bare earth spots and corners in the grounds, or the beds and borders of perennials, and make a careful mental, or, better still, a penciled, note of them. Along with the note, make a signed and duly executed resolution not to let this spring go by without doing something to improve them. The hardest part of the job is to go back into the house and sit down and order what you see you will need.

There are several classes of things which you will need. Seeds, both vegetable and garden; these will have been, or should have

been, ordered. Hardy perennials—a dozen or so of these, including some of the splendid new sorts, or the old favorites which you may not happen to have—will cost little, and will give you some results this year. Now is the time to think of such things as roses, flowering shrubs and bush and cane fruits. If you will only order them now, so that they can be shipped as soon as ready, and in the meantime you have a place ready to plant them, the job will be a very short one.

Of course, the first step towards sowing or planting any of these things is to pick out suitable positions for them. Do not plant things that require full sunshine around at the northwest end of the house, where they will only get the tail-end taste of the day's sunshine, and expect them to do well. On the other hand, do not take some bashful little flower whose natural habit it is to "blush unseen" within some shady copse, and stick it out where it will get the full glare of the noonday sun.

In planting, the place, the time and the variety should be severally adapted. After the preliminary jobs of making out the orders and manuring and spading up the garden and beds, the first thing to do when the proper day for planting *does* finally arrive is to prepare a suitable surface. With this job you can hardly take too much pains; and it is, I think, more frequently on just this point than on any other that the amateur falls down. It should make little difference whether you are preparing to set out cabbage plants or to sow mignonette seed; that the planting or sowing, as the case may be, can be done more easily and thoroughly is only one of the many arguments why you should get the surface just as fine and



If the earth is packed, make a hole with the dibber large enough to take the ball of earth and roots



A canvas attachment to the lawn mower will save the grass clippings for use as mulch

ing of having the garden or bed have that neat, trim appearance a smoothly raked surface imparts to the cabbage patch, as well as the flower bed.

Early-spring gardening is, of course, mainly seed sowing. And yet it is remarkable how much time and trouble people will take in hunting up the newest varieties of this or that, while absolutely ignoring the prosaic but vital point of learning to plant properly. As there are, even for the average place, so many things to be planted in the spring that it is impossible to give a list of detailed directions for each one, the best thing we can do is to consider the seeds we are likely to plant, in several groups, and, furthermore, to describe the several different methods of planting. The first distinction which one naturally makes is as to size. The seed of begonia, for instance, is about as fine as red pepper—mere dust—while those of Ricinus (or Castor-oil plant) are as large as good-sized beetles, which, in fact, they very closely resemble. And other vegetable and flower seeds range in almost every conceivable size and shape between these. *Depth to plant* depends in a way upon the size of the seed, and yet no general rule can be followed in all cases. It is much more important to be able to follow the principle involved in planting. In other words, the idea is to place the seeds where there will be warmth and moisture enough to make them germinate; to bring the soil into direct contact with them, so that the tiny embryo tap root, breaking through the shell or skin of the seed, may find itself immediately in congenial surroundings; to have the covering of such a depth and of such a consistency that the tiny sprout that has to make its way up to the light will neither be smothered under too great a depth of soil or be prevented from breaking through by a hard crust. And the corollary of this is, that if you plant seeds

level as it is possible to make it before beginning operations. Another reason is that the soil will, by reason of the dust-mulch, which will be formed on the surface, most efficiently store up and conserve the surplus moisture from spring rains, which will be needed to keep the plant growing when dry weather comes. And a third reason is that it can be worked either by hand or with garden tools and kept clean much more readily than if it is lumpy and rough—to say nothing

in soil that is too wet or too dry or too cold it will either rot or remain dormant, or that if you cover it too loosely in lumpy soil the little rootlet may strike an air space and begin to wither and die or starve before it can begin to absorb nourishment; and if the covering is too deep, or if you plant in such a way or in such soil that a hard crust forms over the seed, the first little leaves may not be able to push up through the surface.

Now, the general rule is to plant to three or four times the seed's diameter. But this general rule must be considered flexible, because seasons and conditions vary. For instance, in planting beets or peas early in the spring the proper conditions of moisture and so forth would probably be found at a quarter of an inch and an inch, respectively, while for the plantings made later in June, after the soil has become dried out more and become warmed up to a greater depth, it might be found that half an inch, or even three-quarters of an inch, for the beets, and two and three inches deep for the peas, was the depth desirable. So it is largely simply a matter of common sense and judgment. Furthermore, as three or four times the diameter of a seed is rather an indefinite system of mensuration, you will probably find it easier to follow these suggestions; plant fine flower seeds and such fine vegetable seeds as celery as shallow as possible, so that the seed is just barely covered with soil, or, better still, with a mixture of leaf mould or chip-dirt and sand, which is light and friable. Onions, carrots, turnips, and other seeds about the same size, which are

quite small, should be put from a quarter to half an inch deep, if the soil is in a fairly good condition and not too moist, the latter depth being preferable to the former. Beets, spinach, parsnips and other medium-sized seed can be put one-half to one inch. And seeds the size of peas, beans, corn, and so forth, two to four inches;



Perennials which grow in clumps should be divided and transplanted in enriched soil



Separate the roots of the seedlings with care when about this size and replant speedily to avoid wilting

the latter figure being only for very dry periods and very light soil.

In all but the very smallest, vest-pocket-sized garden there is only one way to sow seeds, and that is to use a seed drill. It is not merely a question of (Continued on page 310)



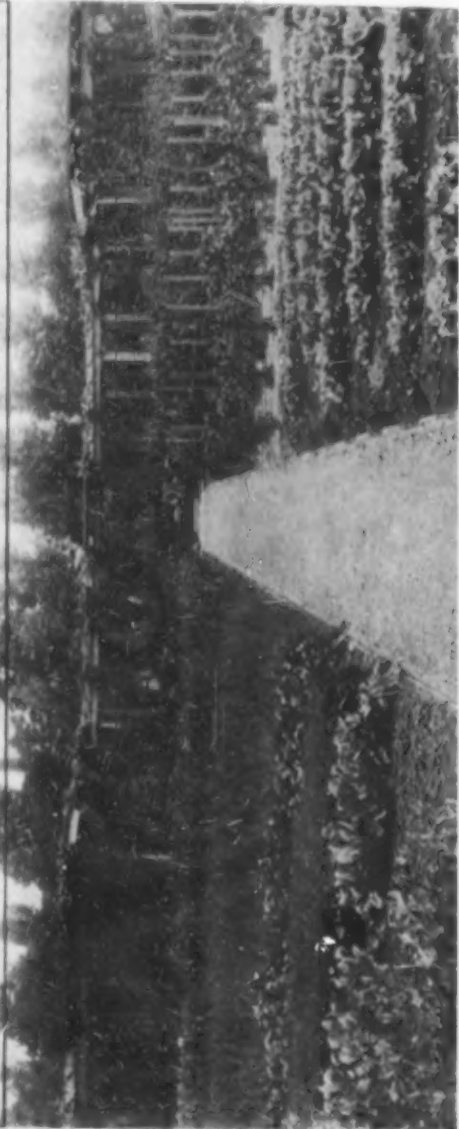
The wheel hoe, with a seed drill attachment, will insure straight, even rows and is easy to operate

THE

The garden plan below is just the way Mr. Rockwell intends to set out his vegetables to supply his family all season.

This home garden space, about 102 feet long by fifty feet wide, has been divided by two plots fifty feet apart, separated by a path. The scale given is correct, so that it shows the space occupied by a row of each sort. Where early cabbage and cauliflower are mentioned the figure $\frac{1}{2}$ refers to the longitudinal dimension of the rows; cabbage 25 feet, cauliflower 25 feet. This is the average of the radish and lettuce planting and the kohlrabi-turnip one below. The plants in the right hand of the first plot are succession crops, celery to follow the first rows of cabbage and cauliflower, when they are out of the way. The right-hand plot contains most of the permanent crops and those whose culture is similar. As cucum-

VEGETABLE GARDEN



GUIDE

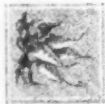
beans, melons and squashes do not mature till late in the summer, a single row of early dwarf peas is planted either side of the space they are to occupy. The peas will all be out of the way by the time the melons, etc., begin to grow.

Some features of this plan worth noting are: a row of a length fitted to the average small country place and convenient for cultivation; crops where they are most expeditiously and easily attended to, because of like habit or like time of maturity; a succession of plantings to provide for two or three crops of the more important vegetables.

Bear in mind the series now appearing in HOUSE & GARDEN called "Quality Crops for the Home." This appeared first in January and gives the latest full information about the named and tested vegetable varieties.

Early	CABBAGE CAULIFLOWER	$\frac{1}{2}$ Row		$\frac{1}{2}$ Row
	CABBAGE	1		2 Rows
	CAULIFLOWER	1		
	BEEFS (P)	1		1 Row
	LETTUCE (P)	1		1
	RADISH	$\frac{1}{2}$		2
	LETTUCE	$\frac{1}{2}$		5
	BEEFS	2		1
	CARROTS	2		
	KOHLEBASI TURNIP	$\frac{1}{2}$		1
	TURNIP	1		$\frac{1}{2}$
	SPINNACH	1		$3\frac{1}{2}$
	ONION SETS	.		3
	ONION	.		3
	PARSNIP	.		3
	SALSIFY	.		3
	SWISS CHARD	.		1
	BRUSSELS SPROUTS	1		1
Dwarf	PEAS	4		3
	LETTUCE	1		1
Early	CORN	5		3
	Tall PEAS			3
Early	POTATOES	2		3
	CORN			3

MELONS 		POLE BEANS		POLE LIMAS	
CORN 4 ROWS					
DWARF BEANS		2 Rows		CELERY OR PEAS	
LIMA BEANS		1 Row		PEAS	
DWARF PEAS					
CUCUMBERS		6 HILLS		WATER MELON & HILLS	
BEFORE CUCUMBER & MELONS					
TOMATOES					
PEPPERS (10)		16 PLANTS		EGG PLANT (10)	
DWARF PEAS					
SUMMER SQUASH		6 HILLS		WINTER SQUASH & HILLS	
BEFORE PLANTING SQUASH					



PLANTING GUIDE

ROOT CROPS



VEGETABLE.	CLASS.	SEEDS OR PLANTS FOR 50 FT. OF ROW.	DAYS TO MATURE.	NUMBER PLANTINGS.	NUMBER VARIETIES.	DEPTH TO SOW.	ROWS APART.	PLANTS ASUNDER.
BEEF	A D E	1 oz.	60-80	3	2	1 1/2 in.	12-15 in.	3-4
CARROT	C	1/4-1/2 oz.	60-90	3	2	1/2 in.	12-15 in.	2-3
KOHLRABI	C	1/4 oz.	60-80	3	2	1/2 in.	15-18 in.	4-6
LEEK	A B	1/4 oz.	120-140	1	1	1/2 in.	15 in.	2-4
ONION	A B	1/4-1/2 oz.	120-175	1	2	1/2 in.	12-15 in.	2-3
PARSNIP	B E	1/4 oz.	150-175	1	2	1/2 in.	18 in.	3-5
POTATO	C	1 peck	60-100	6	3	4-5 in.	2 ft.-2 1/2 ft.	12-14
RADISH	C B	1/2 oz.	25-50	1	3	1/2 in.	12 in.	2-3
SALSIFY	C	1/4 oz.	125-150	1	2	1/2 in.	18 in.	2-3
TURNIP	C	1/4 oz.	60-90	3	2	1 1/2 in.	15 in.	3-5

Sow rather thickly, in drills, on finely-prepared, well-enriched soil. First sowings should be made rather shallower, and late sowing in dry soil deeper than the average depths. Keep clean from weeds and thin out, while small, to proper distances. All these, except potatoes, may be planted as early as the ground can be properly prepared. Potatoes cut to one or two "eyes"—one if the soil is fine and rich—plant from mid-April to mid-June. First plantings of all in Class C should be rather small; last plantings large enough to allow for winter supply.

LEAF CROPS

BROCCOLI, P.	A E	25-35	50-90	1	1	1/2 in.	2 ft.	18
BORECOLE, P.	A E	25-35	60-100	1	1	1/2 in.	2 1/2 ft.	2 ft.
BRUSSELS SPROUTS.	A C E	25-35	120-150	2	2	1/2 in.	2 ft.	18
CABBAGE, P.	A C E	25-35	60-90	2	2	1/2 in.	2-2 1/2 ft.	18-2
CAULIFLOWER, P.	A C E	25-35	50-80	2	2	1/2 in.	2 ft.	18
CELERY	A E	100	125-150	1	1	1/2 in.	3-4 ft.	6
ENDIVE	A E	1/4 oz.	75-100	1	1	1/2 in.	12-15 in.	12
LETTUCE, P.	A C E	1/4 oz.	40-75	1	1	1/2 in.	12-18 in.	12
LETTUCE	C E	1/4 oz.	75-125	3	3	1/2 in.	12-18 in.	6-12
PARSLEY	B	1/2 oz.	90-100	1	1	1/2 in.	12 in.	4-6
SPINACH	C E	1/2-1 oz.	60-75	2	2	1/2 in.	18 in.	3-6
SWISS CHARD	B E	1 oz.	50-60	1	1	1 1/2 in.	18 in.	5-10

All of these may be set out or planted as soon in the spring as danger from hard frosts is over (almost as soon as the ground can be worked), with the exception of celery, for first crop of which start seed about March 1 and set out June 1 to 15. Lettuce and cauliflower will not stand quite such severe weather as will cabbage, and usually follow a few days later if the latter has been set extremely early. Special manuring or fertilizing in the hill is often given, unless the soil is very rich; and a light top dressing with nitrate of soda a week or two after plants are set out or thinned is beneficial.

FRUIT CROPS

BEAN (dwarf)	C	1 pt.	45-75	2	2	2 in.	18-24 in.	2-4
BEAN (lima)	B	1 pkt.	70-100	1	1	2 in.	3-4 ft.	3 ft. (h)
BEAN (pole)	B E	1 pkt.	60-100	1	1	2 in.	3-4 ft.	3 ft. (h)
CORN	B E	1 pkt.	60-80	2	3	2 in.	3-4 ft.	3 ft. (h)
CUCUMBER	A B	1 pkt.	60-75	1	1	1 in.	4 ft.	4 ft. (h)
EGG-PLANT, P.	A B	25	50-75	1	1	1 in.	2 1/2 ft.	2 ft.
MELON (musk)	B	1 pkt.	90-120	1	1	1 in.	4-6 ft.	4-6 ft. (h)
MELON (water)	B	1 pkt.	100-125	1	1	1 in.	6-8 ft.	6-8 ft. (h)
OKRA	B	1/2 oz.	90-100	1	1	1 in.	3 ft.	2 ft.
PEAS	C D E	1 pt.	40-60	3	3	2-3 in.	3 1/2 ft.	2-4
PEPPER, P.	A B	25	60-80	1	1	1 in.	2 1/2 ft.	2 ft.
PUMPKIN, P.	B	1/4 oz.	100-125	1	1	1-1 1/2 ft.	6-8 ft.	6-8 ft. (h)
SQUASH	B	1/4 oz.	60-100	1	1	1-1 1/2 ft.	4-8 ft.	4-8 ft. (h)
TOMATO, P.	A B	25-20	40-60	1	1	3-4 ft.	3-4 ft.	2-3 ft.

All of these, with the exception of peas, are warm-weather plants, and nothing is gained by hurrying them into the ground before conditions are right. On the other hand, having to get a late start anyway, they should be sown or planted without delay when conditions are favorable. This will be usually early May for dwarf beans and early corn; mid-May for pole-beans and other seeds, and late May for plants—tomatoes, etc. Early peas (smooth) should be planted as soon as the ground can be worked, and sugar peas (wrinkled) a week to two weeks later. All but peas and beans are heavy feeders and benefited by especially prepared hills, and applications of nitrate of soda during early stages of growth. (h) Implies distance between hills.

EXPLANATION

Amount of Seed for 50-Foot Row.—This is, of course, only approximate. Seeds in drills should be sown several times as thick as the plants are to stand after thinning, as indicated in the column "distance apart in rows." In hills, from five to fifteen seeds are planted, thinning out to three to five plants when well started. (P) Stands for plants.
Number of Days to Mature.—Depends upon both variety and growing conditions, usually a little longer than the first set of figures in the column.
Number of Plantings and Number of Varieties.—These are the minimum numbers required for a fair succession of crops in a small garden. In larger gardens both may be increased to advantage; but it is a great mistake to use too many varieties.

Class A.—Crops that may advantageously be partly grown, in frames or seed-bed out of doors, before being transplanted to garden.
Class B.—Crops that occupy the ground for the whole or the greater part of the season.
Class C.—Crops that should be sown several times a season to insure a continuous supply.
Class D.—Crops which may be cleared away in time to sow or plant something else. For very late plantings early varieties should be used.
Class E.—Crops which may be sown or planted on the ground where early crops have been grown and cleared off.



Lupine, Canterbury bells and the tall spires of the larkspur are well arranged in the borders along this grass path for a scheme where blue predominates

Choosing Flowers for Their Color

II—A TRUE GUIDE TO THE BLUE FLOWERS, WITH DIRECTIONS FOR THEIR USE IN THE GARDEN EFFECTS WITH YELLOWS AND GOLDS

BY MARY YOUNGS

THE difficulty of obtaining, even from the most reputable dealers, flowers of the exact hue desired for use in a given color scheme leads the distraught gardener to pray for a color standard, and to set forth in the meantime for the benefit of other strugglers a few notes on the differentiation of color as observed in her own garden. These articles, except the one on red, which went to press before the book was received, have been revised with the help of Dr. Robert Ridgway's invaluable—and blessedly simple—"Color Standards and Nomenclature." Most catalogue makers believe in the old song: "The rose is red, the violets blue," for they list as "blue" or "azure" flowers decidedly purple in hue, as well as the pure blues, which last are few and far between. *Anchusa italica* var. "Dropmore" comes very near being a pure spectrum blue, though the buds are pink or lilac; so does the biennial form (*A. capensis*), which is a little

paler in tone and not so tall. They are both fine, clear colors. That earliest spring blossom, *Scilla libirica*, is a lovely clear blue, a little darker than the spectrum tone. Later in the season, with an inconspicuous flower of clearest blue, comes the old-fashioned tradescantia, or day flower, but the newer variety has a larger blossom of a deep blue violet. A beautiful pale blue, coming in late April or early May, is *Mertensia Virginica*; the buds of this are pink, but the flower a very clear pale cerulean blue, and the foliage an unusually bright green. The forget-me-nots, too, are all clear true blues of different tones; some much darker than others, but all good. *Myosotis palustris semperflorens* is perhaps the best for an informal border, as it blooms a long time and is very hardy; it is a light cerulean blue.

Not all delphiniums are a true blue by any means; in fact, nearly all the darker ones verge on violet, except *D. chinensis*, which

is luminous spectrum blue, but the paler varieties, and especially belladonna and cœlestinum, are lovely and a very clear color, though a trifle grayer than the pale spectrum tone—a sort of Venetian blue. *Salira azurea* rejoices in a color name all to itself—"salira blue"—a tint paler than the spectrum blue, and with a silvery effect. Chicory has much the same hue. Then come the charming gray-blues of polemonium and caryopteris—awful names, but delightful blossoms, both! The polemonium is an early border plant, graceful and delicate, of the soft, gray blue known as "Chapman's," while the caryopteris, or blue spirea, much the same in tone, but with a silvery quality, is an exquisite September-blooming plant. By some dealers it is listed as a shrub.

Most of the lobelias—both perennial and annual—are tones of ultramarine, and so is the interesting little red-stemmed *Plumbago sarpenæ*, which makes a good edging plant, as its foliage is almost evergreen. The lighter-toned annual larkspurs and the quaint love-in-a-mist are good, clear pale blues; browallia I have not seen, but have heard it vouched for; and the "thoroughly satisfactory" blue of the cornflower everyone knows—although, by the way, it is *not* the color called "cornflower blue," which is much redder than the flower, and paler.

Blue violets and violet blues, usually listed as blue, include such attractive and useful flowers as iris, "blue" *viola cornuta*, monkshood and a number of others which are charming in the border, but which combine very badly with the true blues. Two of the most commonly used so-called "blue" iris are *I. pallida Dalmatica*, which is a lovely soft blue-violet; and *I. Germanica* "Mme. Chereau," white, frilled with a deeper and somewhat harsher blue-violet. *Aqueligia cœrulea*, listed as sky—or azure—blue, is a light-grayish violet-blue which harmonizes well with "Mme. Chereau."

An attractive flower which I have seen listed as "bright blue" is *Stokesia cyanea*, the "cornflower aster;" it is really a campanula blue, which is slightly tinged with grayish lavender. This is practically the color of most the paler "blue" campanulæ, although perhaps a little pinker than the pretty, low-growing *C. carpatica*, which makes such a charming edging or rock-garden plant. Closer to a true blue, but still a little redder than the pure hue, are the blue *Viola cornuta*, which is of the delicate lavender hue called flax-flower blue, and the blue *Supine*, which is deeper in tone, being nearer the color known as ultramarine ash. The platycodon, or Chinese bellflower, is still deeper, a violaceous, or grayish-violet blue. *Aconitum autumnale*, or monkshood and veronica, are a hyacinth blue, almost violet, and the so-called blues among



Here are exceedingly good phloxes of the paler tones of violet and purple; here they have followed an iris of complementary hue

the lovely race of Michaelmas daisies range from the palest grayish-violet blue to a bright, clear violet.

Among the annuals, the useful ageratum is a little inclined to the lavender side of the scale; in fact, one variety has a decidedly pink hue. The so-called "azure" China asters are a pale grayish violet-blue, and I have even seen heliotrope, the bluest of which is a royal purple, advised as part of a "blue border." Suggested uses for the pure blues in combination are as follows:

- 1st. Spectrum and ultramarine blues, with clear or soft yellow, and creamy white.
- 2d. Clear pale blues with clear rose pinks, cream or blue-white, or pale yellows.
- 3rd. Gray-blues with pale, creamy yellow, pale rose pink, or, if very soft and gray, as the blue spirea, with bright flame pink or pure, clear orange.
- 4th. No clear blue near a violet blue, even if so advised by a "blue borderer"!

Leaving the borderland to revel among the true violets and purples, let us first note that the *violet* of the spectrum is the hue which most of us call purple, and that *purple* is much redder and more nearly approaching what we usually consider as magenta, which, in its turn, is grayer and duller than we are in the habit of regarding it.

The crocus "Royal Purple" is a fine clear violet, and probably the earliest. Next in point of season comes the deeper and slightly redder violet velvet of *Viola cornuta* "Purple Queen," and the hyacinths of deepest and palest clear violet.

In describing tulips it is exceedingly difficult to name the color accurately, because they are nearly all "overlaid," or "flushed" with different tones, but one must consider the effect in mass. There are but few early purple and violet ones, but there are some lovely Darwins, both pale and deep. "Dal Ongarno" is described by the dealer as "pale lavender violet—almost a blue—in certain lights;" this is darker in mass than one might suppose. "Purple Perfection" is a very deep violet; "Velvet King" is redder and a good color; "The Sultan" (synonym "Josef Israels") is described as "rich maroon black" of fine form; "Phillipe de Commynes" is a "velvety dark purple," and "Zulu" is "a rich velvety purple-black," the best and most expensive here given.

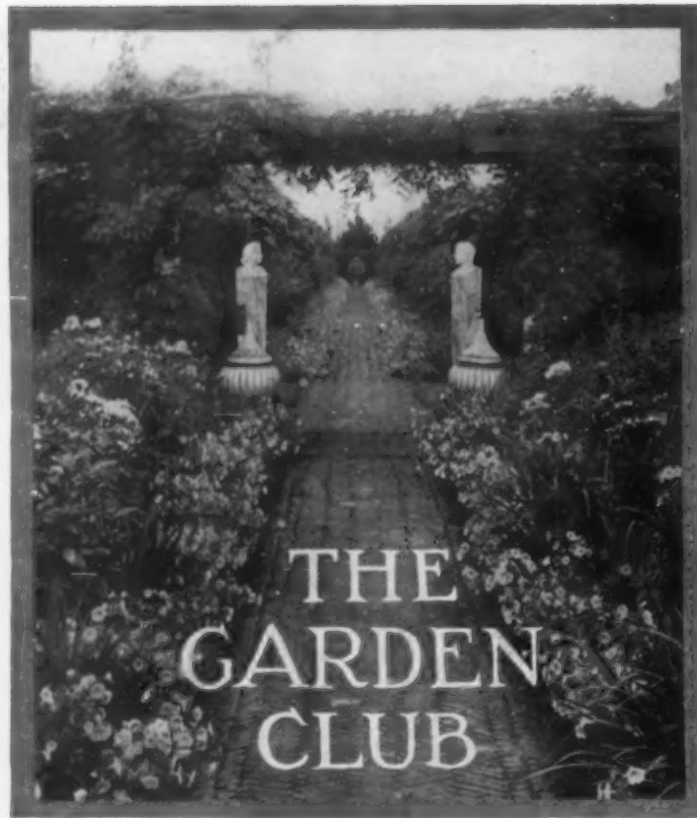
There are two very dark columbines of the *vulgaris* type, one a dark bluish violet, and one a redder prune-purple.

An exquisite early pale blue-violet is the delicate *Phlox divaricata*; this has a faint pink flush which softens the color wonder-

(Continued on page 309)



In a garden of formal arrangement a bed all of one color may form part of a composition with its neighbors, each of a single different shade



EDITOR'S NOTE: *The garden club is a great factor in neighborhood betterment. Here is a true story of the work of a certain such club and its accomplishments taken from the diary of one of its members. What this club actually did should be a stimulus to all who love gardens and a guide to the ways and means of improving our towns and villages. The first and second chapters of the record of the club appeared in the February and March issues respectively.*

THIS month we met at my house—and I was glad it was a soggy afternoon, so no one could go prospecting around to size up my bulbs. The bulb show comes as a special evening meeting later in the month—for everyone felt this would insure its being a greater success. And I want to spring my checkered lilies—*Fritillaria meleagris*—as a novelty, and enter for a special prize; so, of course I do not want anyone to suspect I have them at all. I naturalized them last fall, a hundred strong, on the 12- by 40-foot space where the ground falls gently at the east of the garden to the clump of shadbush that were somehow overlooked—thank the Fates!—when this land was “developed.” We do not mow that grass; it is rather moist ground, and there is partial shade there, which the bulb books say these things like. I have never seen one of the flowers—took them on faith!—even though they are so “common in English meadows;” and I do not think many of the Club have, either. They look very promising for the date of the show, if I am any judge, and I am correspondingly excited at the prospect of producing a small sensation. For, if they fulfil their promise, I shall be able to send an imposing mass of the queer blooms.

Helen Brinkerly will get the first prize, of course. Everyone who knows about her garden concedes that, for she started out to try everything in the catalogues last fall, and in just daffodils and jonquils alone she has over fifty varieties. Then, she has every kind of hyacinth that ever came out of Holland—not quite, but almost—and tulips by scores; and, really, every kind of bulb that will grow here out of doors, in lots of from one to three or four. Of course, her little bulb garden is full—but I don't believe she has a checkered lily. Of naturalizing, she has done none, for her place is not suited to it; and these lilies are at their best, they say, only when naturalized.

This program committee is a worked-to-the-bone set of unfortunates; there is no doubt about that! But I would not give

up the job for a good deal—for it is going to mean a wonderfully varied experience providing the programs, judging by our beginning. We made up our minds that there was just one person in this locality whom we wanted to have come and talk to us about making seedbeds; but he was the very last person that it seemed thinkable would come. But Miss Lucy and Mrs. Hal Addicks—Polly Story that was—and I went touring one day last month in the Addicks machine; and we toured off up the Drift Road, on and on until we were almost to the State line; and then we turned in boldly at his gates—the gates of “Stone Acres.”

I was simply petrified at our temerity—but, as Polly Addicks said, we would never even see this man if we wrote or 'phoned him in advance that we were coming. And there were three of us, she reminded me, which ought to make us equal to whatever the occasion might turn out to be.

Happily for us, the master of “Stone Acres” has a sense of humor—for we nearly ran him down on his own driveway while we were debating loudly—the driveway runs through a rocky, wild, half-mile of woods, and we never dreamed anyone was about—as to who should be spokeswoman, and what she should say, and who should ring at his door. Mrs. Addicks was running the car herself, for we wanted to be without witnesses to our meeting and interview with this ogre-hermit combination, which common belief held the master of “Stone Acres” to be; and she was so startled at her escape and his that she was furious with him, and proceeded to tell him what she thought of the carelessness which led him to step out suddenly into the road from a rocky cut—evidently the end of a path leading off to somewhere—and to scold him roundly and generally. We didn't know then, and have never found out since, whether she knew it was he or thought it one of his men, for she is really quite touchy about it—but I suspect she thought it one of his men, though there is no telling, seeing it was Polly.

He took it very nicely, with a quizzical look—and apologized! And then Miss Lucy rescued us and him and the situation. "We were on our way to see you, I think," said she, as calm and sweet as ever, "for I believe this is Mr. Parke Gladden—is it not?"

It was; and whether it was Mrs. Addicks' severity or Miss Lucy's sweetness, or the two in combination, I do not know, but he was evidently tamed instantly and completely—if ever he had been wild. He was simply lovely to us, and we had really very little difficulty in getting his promise to come and give the seedbed talk this month; and he showed us about over a great deal of the farm, which is wonderful, of course.

All of this was really an achievement, for it is said that he has not gone outside the boundaries of "Stone Acres" more than half a dozen times since he brought the wreck of his mad wife, and of their two lives, to its seclusion nearly seventeen years ago. And he has not received half a dozen visitors in that time, either, so they say. Yet he is a perfectly charming man; and the fame of the "Stone Acre" products is a great deal more than State wide. I do not know how many valuable hybrids he has originated, nor how many fruits and vegetables and flowers bear his, or the farm's, name (of course, his name is not *really* Gladden, nor is the farm "Stone Acres"), but I know they are many.

We are all making our seedbeds exactly as he told us—or, at least we hope and think we are. (I notice they are not all being made the same—which is interesting, considering this hope and belief!) Particularly, he dwelt upon the need for a sturdy, compact growth in seedlings, with a strong root system. I had never thought but that rich soil was as helpful to them as to anything else; but this is altogether wrong, it seems—and I can see why, of course. For rich soil stimulates them to grow too fast, and they spin up and get weak and top-heavy on it—whereas masses of root and strong, well-balanced top is the standard to be taken and worked for.

Once get the right spot for a seedbed, he told us, and one may go on using it year after year, indefinitely—for, of course, seedlings take little from the soil. And, once the soil is well prepared, it is a great waste to turn the space into other uses, for its preparation is a matter of great care and considerable labor, according to the formula he gave us.

The ground is to be well drained, but not on a slope—and it does not matter greatly what the natural soil is, for proper soil may be substituted without much trouble or expense, unless the thing is all being done on a large scale. The general depth of the bed proper—of the soil substituted therefor, if substitution is necessary—is only four inches. And he recommended that we make the space narrow, suggesting a maximum width of two feet. The length is dependent, of course, upon the quantity one wishes to raise:

We are to have the space spaded two or three times over, and every stone picked out to the four-inch depth or a little more, and the soil worked over to the last degree of mellowness and gentleness (this was his word for it, and I think it delightfully expressive), providing it is earth that will so work. He gave us the usual test of crunching a handful of it together and then opening

the hand to see if it would fall apart. If it does not, sand can be added sometimes, to get the texture right, with satisfactory results. But if it cannot—if the earth is very heavy and stiff and unyielding—we are to have about two inches taken out; and then we are to fill this excavation with the four inches of soil prepared by mixing any reasonably good top soil, screened free of stones, with half its quantity of woods humus—which is the rich dirt under the leaves in

a woods—and, adding to this enough sharp, clean sand to make it soft and friable—or "gentle." After this soil is in place, a sod margin is to be laid on the slant up from the general ground level to the level of the surface of the bed; this to hold the earth secure, as well as to give a pleasing, neat finish.

Right alongside the seedbed he advises the transplanting beds—which were quite a new idea to all of us. I have always transplanted tiny plants pretty nearly helter-skelter, as I could find a space, if their permanent locations were not ready for them—and thought that there was no other way of doing; but this is not efficiency in garden practice, it seems.

Instead, we must move the seedlings from their first home into a second temporary one that has been prepared in exactly the same way as the seedbed, except that its soil is six inches deep instead of four, and has well-rotted manure mixed into it in place of the woods humus. Many things he transplants from the seedbed and then transplants twice again from one transplanting bed to another to secure the highly desired dense system of fibrous roots. This means four times shifting before the plants are finally settled; and, as every shift means much new root growth, and as new root growth means increase in feeding capacity, and this means greater strength in the plant, it is easy to see what one of the secrets of "Stone Acres' " superior products is.

Another thing which he was very emphatic about was not sowing seed too deep; and he reminded us in this connection that Nature only scatters it upon the surface of the ground, or into little crannies or "wrinkles" of the earth. Even those seeds which she covers are covered lightly with just leaves and wind-blowings, generally; and the little plants have really almost no effort to make to pierce their way up to light and air. Just deep enough to "keep them dark and evenly moist when carefully watched," is his rule—which seems elastic, indeed, and radical. But I am not going to plant anything to more than twice its depth this year, and only sprinkle the earth over them at that.

Watching the seedbed is as important as seeding it, evidently—if one is to have plants; and watching, he was particular to say, did not consist in giving it a glimpse over once a day. Three times a day in dry weather, and twice a day in cloudy, it should be visited; for an *even* degree of moisture all the time is its absolute essential—not a wetting down and then a drying out.

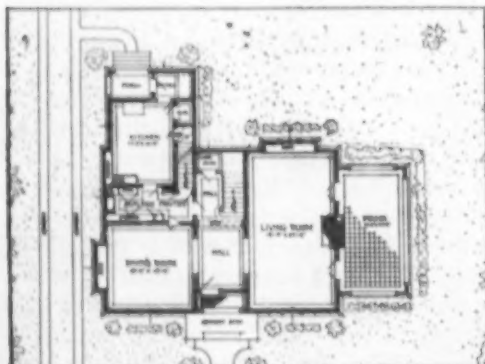
Lath screens, elevated on twelve-inch legs, are to be kept in place all of the time on sunny days, and mostly all of the time in any case, for they protect the bed from rain, as well as sun, which beats down little plants dreadfully, as I very well know from my experience trying to raise phlox last summer. The laths are laid their own width apart on frames two by three feet in size, these frames being of strips seven-eighths of an inch thick and one and one-quarter inches wide. We do not cut the lath, although it is laid across the shortest dimension of the frame; this leaves a six-inch projection on each side, so even the slanting sun rays cannot reach the sides of the beds. And I am planning to have only half of my frames with legs; these can then be set almost three feet apart, and the legless ones laid on them between, to fill the gaps. Everyone is making these now, and lath will go up, I expect—for we are each to have enough for seedbed and transplanting beds. And they are very useful to set above plants newly transplanted into the garden, too, so I may have a few extra made, just for good measure.

Of seedbed space one does not need a great amount, of course—I am having only six feet in length—but of transplanting beds I am having twenty feet prepared, divided into two ten-foot beds on each side of the seed-bed.





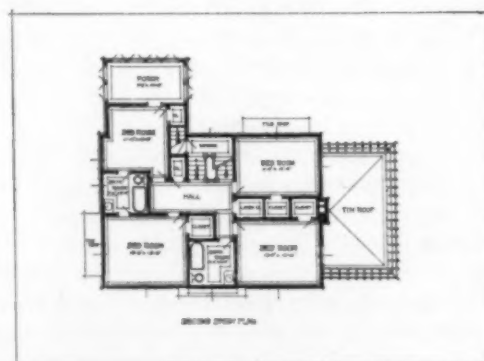
The front elevation of this house is devoid of all ornamentation, but the window box, the structural utilities, the copper leaders and the shutters are extremely decorative, and the impression of the whole is of pleasing interest. The grass-cement-bordered garage drive is worth emulation



Economy in building is achieved by the single chimney; the kitchen is equipped for gas

THE HOME OF
MR. HENRY S. BROPHY
MAPLEWOOD, N. J.

B. Halsted Shepard, architect



Though a moderate-sized house, there are full conveniences for a family of five



The large living-room serves the more formal needs of the family and is suitably furnished and equipped

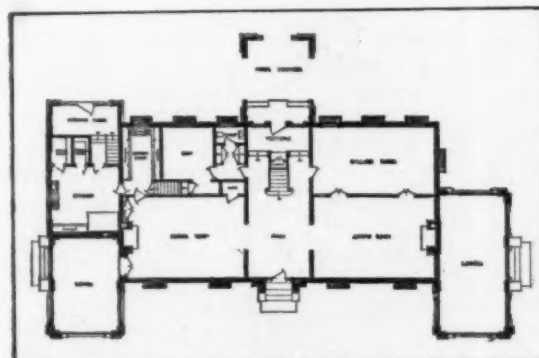
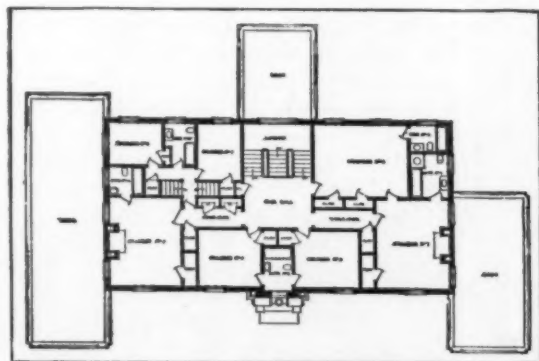


For the "extra room" so necessary in a house the enclosed and heated porch is admirable; the cheerful chintz-covered wicker ware is filling here



There are a number of sources of decoration in this façade used with an exceedingly fine sense of color and proportion and productive of a rich dignity. The loggia of this sort is supplanting the columned porch, its services are greater

THE RESIDENCE OF MR. GAGE E. TARBELL, GARDEN CITY, L. I. *Oswald C. Hering, architect*



Room balances room in this exceedingly symmetrical plan; each chamber has access to a bath



Receiving its keynote from the lattice outdoors, this loggia is frescoed to emulate a green lattice. The treatment is effective for an enclosed porch and lends a cheeriness without the heaviness of real wood



Inside the House

Timely Suggestions and
Answers to Correspondents



The editor will gladly answer queries pertaining to individual problems of interior decoration and furnishing. When an immediate reply is desired, please enclose a self-addressed stamped envelope

Bath Room Fittings

THE combination of porcelain and nickel has been generally considered most satisfactory for bath-room fittings, and towel racks, sponge holders, soap dishes and other articles of nickel that match the shining pipes and faucets, will make as attractive a looking bath-room as one could possibly wish. A new variety of bathroom ware has recently been introduced, however, that helps to solve the everlasting problem of how to simplify housework by the ease with which it is kept clean. It is a white enamel much like any ordinary enamel ware in appearance, but the foundation is brass, and the enamel is applied by a special process that makes it as indestructible as the brass itself. It is quickly and easily cleaned by wiping off with a damp cloth, and there is no possibility of its cracking or peeling as some enamel has a way of doing.

All of the necessary small articles are made of it, including soap dishes of various sorts, glass holders, with toothbrush racks, hooks of different sizes, towel racks and shelves.

After all the fixtures in one's bathroom are entirely a matter of personal taste, and whether racks, shelves, holders and other accessories are of nickel, enamel or glass depends on the individual householder. Glass shelves are considered most satisfactory by many persons, for they are, without doubt, sanitary and easily cleaned, while the glass towel racks, particularly the newer ones that are finished with handsome cut-glass balls, are really quite ornamental. Towel racks of opal glass, with white enamel ends and brackets, are to be had for the all-white bathroom, and white celluloid holders for bottles also add to its attractions.

A new piece that has various uses is quite good looking and especially serviceable where space is limited, as it is apt to be, even in the most carefully planned houses. This is a glass shelf with a nickel holder for a tumbler at either end and a nickel towel rack underneath, all in one piece and occupying little wall space, while another space saver is the narrow

glass shelf with metal fender for holding a set of labeled bottles of uniform size.

Fittings for the tub include everything that could possibly contribute to the comfort of the user. There are the non-slip mats of corrugated rubber to be placed on the bottom of the tub that are quite a necessity with the big, slippery porcelain tubs so generally used; the white enamel seats with curved ends that fit over the sides of the tub are a decided comfort in



The new white enamel fittings will not crack or peel and are easily cleaned

taking a foot bath, and there are even head rests for lazy people, made in the same way as the tub seats, but in place of the wooden seat there is a broad band of webbing that supports the head while lying in the tub. Soap racks of various sizes and shapes in nickel or enamel, and nickel sponge racks of generous size are made with curved handles that fasten over the side of the tub, but quite the newest accessory of this sort is a soap dish made of celluloid that floats on the water, and is consequently always within reach.

There are all sorts of shower-bath arrangements, from the elaborately fitted up shower that is a separate feature of

the bathroom, with its stationary overhead sprinkler, porcelain base and rubber curtain, to the newest and smallest contrivance that has a sprinkler only about three inches in diameter attached to a holder about six inches long. This not only supplies extra force of the water to a small surface, but makes it much easier to handle, and there is an extra piece, made of rubber and perforated, that slips on over the sprinkler for use in massage.

The mirror is, of course, an important feature of the bathroom, and for the comfort of the man who shaves it should be in a good light. In many well arranged bathrooms there is a medicine chest or cabinet built into the wall, with an excellent mirror in the door, which opens in such a position that the light is reflected to the best advantage. Separate mirrors in frames of white enamel can be had in all sizes, and are doubtless most generally used, while for the bathroom that has only nickel fittings there are handsome oval mirrors with beveled edges and no frames, but substantial racks at the back, by which they are hung.

Mirrors of good size, with extension holders that can be fastened to the window frame, are ideal for shaving, and really a necessity when the stationary mirror is not in a satisfactory light, but quite the most ingenious shaving mirror is circular in shape, with an easel back, and has a small electric bulb inserted near the lower edge. The bulb is protected by opaque glass which keeps the glare out of the eyes, and yet an even, steady light is thrown on one's face and reflected thus in the mirror.

In the way of actual furniture, a well-equipped bathroom should have at least a white enamel chair, or if, through lack of space or for any other reason, a chair is not available, there are stools finished in white enamel that are quite as useful. These stools are, as a usual thing, provided with cork tips, making them noiseless when moved about on the tiled floor.

An excellent chair for a bathroom that has but little floor space is made to serve as a polishing stand as well. The seat of the chair lifts up, showing various

brushes and polishers in racks on the underside, and a small compartment in which bottles and brushes of blacking can be stowed away. The chair may be had in either oak or white enamel.

A Rug Fastener and Stretcher

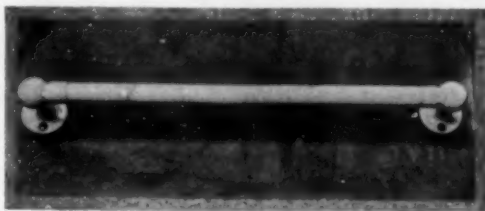
THE satisfaction of having a rug "stay put" and neither slide all over the floor nor turn up at the corners is denied to the average householder, because he has failed to find a fastener that is unobtrusive and will not harm the rug. A neat and effective method of holding the rug to the floor, without damage to either, is found in a simple device, with two curved and pointed fingers, which is fastened to the floor by two tiny nails. As many of these little fasteners—they measure not much more than an inch in length and lie quite flat—as are needed to hold the rug are tacked to the floor about an inch inside the edge of the rug. As the fabric is placed over them, the curved fingers clutch the warp, and gentle pressure on top clamps the fastener, stretches the rug, presses it flat and holds it in place. The fastener is as good for carpets and runners as for rugs.

For Burning Rubbish

THE disposition of rubbish is a matter for serious consideration both from the standpoint of safety from fire and sanitation. Especially is this true in localities where there is no municipal collection of refuse.

The zeal of the housewife in disposing of waste paper and other trash by making a bonfire of them has often been responsible for a disastrous house fire. The up-to-date householder disposes of all burnable trash in a rubbish burner, which eliminates the danger of conflagration and makes one entirely independent of the call of the waste-paper man. The burning of large quan-

ties of paper and trash in a stove or furnace causes an overheating of the pipes; also quite likely to result disastrously. An approved style of rubbish burner is a large covered basket made of galvanized wire, with heavy iron sup-



The towel rack is of opal glass, with white enamel ends and brackets

ports that have been dipped in asphaltum,—a strong receptacle that should last a lifetime. The mesh of the wire is fine, so that it retains the papers till burned out. The rubbish burner may be lighted in any place where there is an escape for the smoke, and is specially good for outdoor use. The prices range, according to

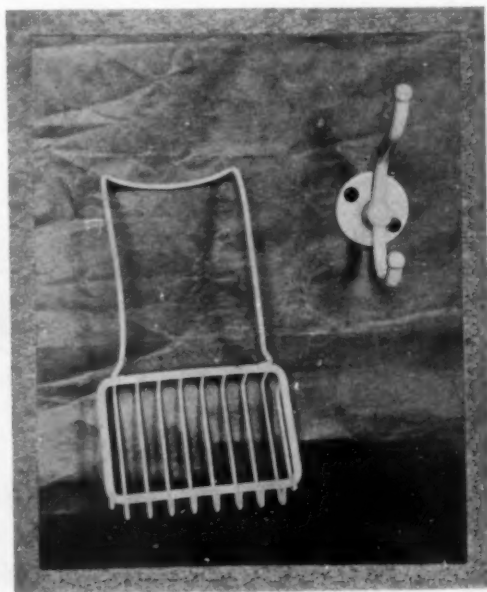


Combination enameled tooth-brush rack and soap dish

size and strength of basket, from two to ten dollars.

Haircloth Upholstery

HAIRCLOTH is again used as an upholstery fabric, but instead of the black, shiny variety that was thoroughly uncomfortable and hideously ugly, it comes in a number of different colors and designs and in a much less clumsy weave. Some of the pieces are so effective that it is almost impossible to associate them in any way with the old-fashioned variety. Conventionalized figures on self-tone grounds are shown in a number of good shades, and there are also striped patterns in which several colors are perfectly blended. Excellent reproductions of old chairs, including Chippendale and Hepplewhite models, may be had with the seats upholstered in this old-new material, and the effect is pleasing, to say the least.



All the necessary small fittings are made of the new white enamel

A Cream and Sugar Holder

A QUAIN little novelty for the breakfast tray or the individual tea-tray is a combination cream pitcher and sugar holder of silver. The little pitcher is made on perfectly plain lines, and is quite like an ordinary cream pitcher, except that there is a little compartment inserted between the back of the pitcher and the handle that is just the size of the regulation lump of sugar. It will hold six or seven lumps, and the pitcher holds sufficient cream for several cups of tea or coffee, so that it need be necessarily limited to individual use.

A Convenient Workstand

FOR the room in which a work-stand is a necessary and much-used article there is a most satisfactory little stand of mahogany that is extremely lightweight and easy to handle. The work-basket proper is not unlike an ordinary silver basket in size and shape, and has a cane bottom with mahogany sides and handle over the top, and stands on a framework about three feet high. A considerable amount of work can be accommodated, and yet the whole piece is small and quite inconspicuous, even in a limited space.

New Telephone Stand

SO serviceable and popular have the little telephone stands proved themselves that they are now being made in willow for summer use. The design is practically the same as in the wooden ones, with the shelf for the directory, telephone bracket and small chair that slips under the table, and the stands may be bought stained in any desired shade, as well as in the natural willow.



The enameled bottles, with label attached, are sanitary and their contents unmistakable



Garden Suggestions and Queries

The Vegetable Garden

CONDUCTED BY F. F. ROCKWELL
Author of *Home Vegetable Gardening* and *Gardening
Indoors and Under Glass*



Transplanting Seedlings

ONE little job that keeps turning up through the spring months is the transplanting, or "pricking off," of seedlings of various flowers and vegetables. This should be done as soon as they are large enough, usually as soon as they begin to show the second or third true leaf, and in any case before they begin to crowd each other and grow lean and lanky. Water the seed flats thoroughly the day before you expect to transplant, so that the soil will be in the best condition, not wet enough to stick, or dry enough to crumble off the roots. Take the plants out carefully, a small chunk of a dozen or two at a time, and then carefully pull them apart, disturbing the roots as little as possible. Have other flats, or a place in the hotbed, cold-frame or garden, ready to receive them. In the former case a layer of well-rotted manure in the bottom of the flat, under the soil, is advisable. In the latter the soil should be very fine and smooth, with no lumps. The little seedlings are usually set about two inches apart each way; at least enough space must be given to allow them plenty of room to grow without crowding each other closely. If the top leaves or the roots are long, it is well to trim them back, quite severely if necessary, before transplanting. Mark the rows out first, so you will get them straight, and then, with the forefinger or a small pointed stick, make a hole just

large enough to take the little ball of earth and roots and a half or more of the stem of the plant. Drop it into place, and with the first fingers and thumb of each hand press the earth closely about it, so that it will stand up firmly by itself just as if it had grown there. Four to eight dozen plants are usually put in an ordinary cracker-box flat. They should be lightly watered and kept shaded from

in the center. Most annuals and perennials in pots, whether intended to flower in the pots or to be set out in the garden, will be improved by pinching back the main shoot, when they grow up to a single stem, to induce a good, stocky growth. Small plants in pots that require repotting should be shifted before the white "working" roots become hard and "pot-bound." Use pots only one or two sizes larger than those in which they have been growing, and pot them so that they will be as deep, or a little deeper, in the soil than before. *Do not fill the pot level full;* leave enough of a depression to hold water when watering until it can soak into the soil.



"Take the plants out gently, a small clump at a time, and then separate them without injuring the roots"

the sun for two or three days after transplanting, until they have "taken root."

Transplanting to pots is much the same process. Tomatoes, peppers and eggplants, after the second transplanting, should be put in individual pots, three or three and a half, or even four, inch. Use a rich compost or put a little manure in the bottom of each pot. One of the mistakes most frequently made in "potting off" is to put small plants in too large pots. It is much better to transplant small plants to a flat first. Where a small plant must be put in a pot too big for it, set it *near one edge*, rather than

Hardening the Plants

The time is fast approaching when the hardiest plants, such as cabbage, beets, lettuce and cauliflower, can go outdoors. Give these plants more and more air, and leave them uncovered altogether for a few nights when it seems probable there will be no frost, before setting out. If they should happen to get "touched," give a good drenching with ice-cold water as soon as possible, and keep them shaded from the sun. If the frames are crowded, construct a temporary shelter or frame that can be covered at night with old bags, matting, blankets, or anything of the sort that can be found lying around not in use, and shove the hardier things out into

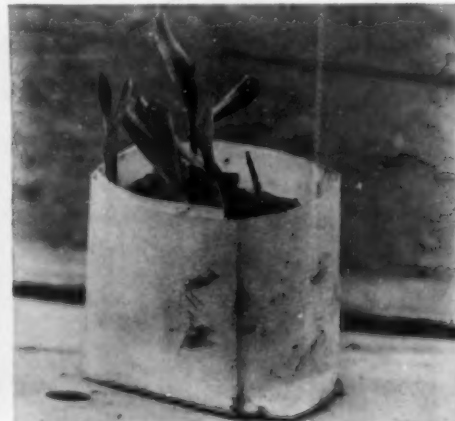
(Continued on page 327)



"Water the flats well the day before 'pricking off,' so that the soil will be in proper condition for transplanting"



"Prepare the soil carefully in the hot-bed to receive the seedlings and, with a dibble, make a hole just the size of the roots and the attached earth"



"Paper pots for hardening the plants are cheap and convenient. Do not set them out while there is danger from frost"

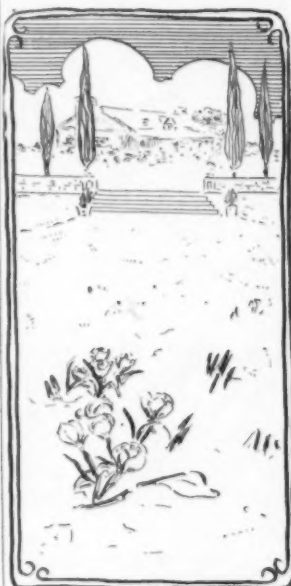
THE GARDENER'S CALENDAR

Wherein is laid out his daily work for the year, together with sundry facts useful or interesting.

Fourth month
Morning stars—Mercury, Jupiter

April, 1914

Thirty days
Evening stars—Saturn, Venus



Sunday

Monday

Tuesday

Wednesday

Thursday

Friday

Saturday

5. ☉ Palm Sunday.
Lawns should be seeded now in preference to later. Pruning dormant fruit trees is said to promote wood growth; prune *after* leafing to induce fruit.

6. ☉ Peary at North Pole, 1909.
Remove mulch generally, but keep it at hand in case of sudden cold. Apply nitrate of soda to rhubarb and asparagus, 1 oz. to the square yard, and rake in.

7. ☉ Cut all old wood out of currant and gooseberry bushes; prune raspberries and blackberries; cut back strong roses one-third, medium growers one-half, and weak growers two-thirds.

8. ☉ Apply potash to all woody fruits at rate of 125 lbs. actual potash per acre. This will require 250 lbs. muriate of potash to supply, or 1,000 lbs. unleached wood ashes.

9. ☉ Actual potash needed per plant—estimated: Currant, gooseberry, raspberry, 2 oz.; blackberry, 3 oz.; grape, 8 oz.; cherry, plum, peach, apricot, 2 lbs.; apple, 3½ to 5 lbs.

10. ☉ Full moon, 8h. 28m. A. M. Good Friday; the day of the Crucifixion.
New shrubs and trees may be set out now if the ground is dry. Never work it when its not.

11. ☉ Apply all fertilizers to the ground from the *tips* of branches *in towards* the tree or shrub, stopping when within 2 to 5 feet from the bole or main branches of the tree.

12. ☉ Easter Sunday.
Take a look around for the insects that are now rousing from their dormancy to aggressive crawling and eating.

13. ☉ Tent caterpillars strip wild cherry first, then go to apples as their leaves open. Spray as buds open with lead arsenate and Bordeaux mixed, as manufacturers direct.

14. ☉ Lincoln shot, 1865; S. S. Titanic lost, 1912.
If the ground is drying nicely roll lawns, to smooth out the furrows and hummocks made by frost. Always go over them in two directions.

15. ☉ Lincoln's first call for volunteers, 1861.
Take up and divide roots of perennials that have been three years in one place, except such as are better undisturbed for indefinite periods.

16. ☉ Rub off adventitious buds from trees and shrubs, rather than cut branches away later. Never allow anything to start unless you intend to let it grow; this conserves every bit of a plant's vitality.

17. ☉ Last quar. 2h. 52m. A. M.
Pansies that have wintered in the cold-frame may go out in their permanent places now, also violets; vegetable plants may begin to go into the garden, too.

18. ☉ Watch hotbeds and cold-frames more carefully than ever; give plenty of air; head off aphids and white fly the instant they appear with soapsuds, tobacco dust or kerosene emulsion.

19. ☉ Low Sunday, or Little Easter. Patriots' Day; battle of Lexington and Concord, 1775.
Look up on spraying once more and prepare for first spraying "in the blossom."

20. ☉ Sun enters Taurus 3m. A. M.
Set out bulbs of Easter plants, either in permanent garden quarters or where they can ripen undisturbed. Be careful not to injure leaves or roots.

21. ☉ Set out new strawberry plants, rhubarb roots and sea kale. Rhubarb that has been forced is about ready to cut. Set new asparagus beds now.

22. ☉ All plowing and spading and preparing of the soil should be done by now, unless the season is unusually wet. Be patient if it is; it ruins soil to work it when wet.

23. ☉ Shakespeare born, 1564.
Do not relax attention to the birds. They no longer need suet, but their bathing and drinking basin should be ready. Beguile them in every way possible.

24. ☉ Provide shelters for toads in the garden, and then provide the toads! A space 6 ins. deep and wide covered with a board under which they can crawl pleases them. They devour cutworms.

25. ☉ New moon 6h. 22m. A. M.
A sowing day. Beans, beets, carrots, lettuce, peas, spinach—everything indeed may go in now. Some will be second sowings, of course.

26. ☉ Look up unfamiliar vegetables and try some of them. Sorrel is one of the most delicious; mallows are toothsome, and the "ornamental" gourds are eaten by those who know their qualities.

27. ☉ General U. S. Grant born, 1822.
Sow last of hardy annuals in garden, thinning out to proper distances apart instead of transplanting.

28. ☉ Apply second ration of nitrate of soda to asparagus and rhubarb, using same amount as before. Final spraying for scale; also spray for fungi, curculio, codling moth and psylla.

29. ☉ All planting of new shrubs, trees, etc., should be finished by now, and all garden work well under way.

30. ☉ Washington inaugurated first President, 1789.
Watch for cutworms, root maggots, etc. Begin weeding in the garden as soon as the first weed appears.



"Whanne that Aprile with her showres sote, the droughts of March hath perced to the rote."

"A cherry year, a merry year; a plum year, a dumb year; A windy year, an apple year; a rainy Easter, a cheese year."

Stormy around the sixth and twentieth, cold the second week—generally a fair month.



EDITORIAL



YOUR OWN VEGETABLES

AMONG the many dreadful dangers that hedged about the precarious career of the adventurous mariner in our childhood pirate tales was one more terrible than all the rest. It was the insidious scurvy, and before its fatal approach the bravest privateer was helpless. We did not know what this fabulous disease was like, but unless the becalmed ship adventitiously arrived at some tropical island where vegetables and fruits abounded all hands were doomed. Since those days the word scurvy has stood for some hideous monster, even though the disease is now understandable. But not so long ago there came a true report of a present-day privateer, a pleasure sailor in Pacific seas, and he caught scurvy. The story awakened the slumbering recollection of those boyhood stories, especially when it was discovered that the sufferer was only brought relief by getting in touch with a passing ship, from which he received a crate of onions. Just as in the pirate stories, the cure was almost immediate.

While the chord of recollection was still pleasantly stirring over this tribute to the saving vegetable there came another recommendation from a different source. In a bulletin from the Department of Agriculture was an analysis of the diet of the present day. So much was grain, so much flesh, some little fruit and a very considerable part some patented cathartic. The pamphlet went on to show how these medicines—sometimes harmful—were all unnecessary, for their function was naturally carried out by a liberal use of vegetables in the daily menu.

These facts are not new; the incontestable value of vegetables in the diet is generally understood, but the vegetable forms but a slim part of the meal. In cities it is scarce. Look at a hotel menu card. Meat and game appear in innumerable disguises; eggs parade the names of most French literary or historic dignitaries, but, with the exception of the salads and potatoes, vegetables take but a very small space on the bill, and their preparation shows as much lack of care as absence of distinguishing name. In the country it is even worse. The only purchasable vegetables worth while are those in cans; all the local crop is shipped to the city, where evidently it immediately evaporates. The rural, native population is generally found subsisting almost entirely without any but canned vegetables.

If you want fresh vegetables, and your reason should tell you that you must have them, grow them yourself. This statement here used appears like a last, grim alternative. If you become convinced of the necessity, you will find that the best way is the pleasantest. If there is a finer delight to be enjoyed than the first meal of home-grown vegetables it has not been described to us. And the vegetables are ever so much better than you can buy. The flavor and freshness of the garden-patch crop is beyond the competition of the grocer.

There is another satisfaction; perhaps to some it ranks above all the rest. It is that delicious sense of self-dependence that comes when you really produce your own food; when you see, in place of a few seeds given to the chill hospitality of the ground, luscious, ripe tomatoes or crisp, green lettuce. The satisfaction of Robinson Crusoe when he first found himself self-sufficient by his own handiwork, is little greater than that felt by the man who has kept his table filled from his own back yard. And when we speak of the delights found in the novelty of growing one's own provender we do not, by any means, intend that, with the novelty gone, the pleasure also fades. To us it is a perpetual wonder to watch those few grains of seed develop into great, hulking fruits that bear down the sturdy vines and stout supports. If you are of an intensely practical turn of mind, weigh the tomato seed you set out

this spring; then keep track of the weight of the fruit produced, and figure out the tremendous increase in weight dividends that accrues to you for your slight labor. We hope, however, that this existence will not be necessary to convince you of the pleasure and profit to be had in growing your own vegetables.

A SENSE OF BEAUTY FOR EVERY DAY

IT seems a far cry to go back to the Greek state to find out what is the matter with our own, but that is what Mr. Livingstone has done. The message brought back in his book, "The Greek Genius," indicates clearly a general fault of most Americans. He speaks to an English audience, but his charge is as justly directed against us.

"The modern man has a just and well-trained sense for beautiful things," he says. That is particularly true here, where every other individual is a collector of china or brasses, furniture or prints, and most of us have a genuine appreciation for what is gathered. Some of the choicest art of all ages is found in our private galleries and our museums. We are critics all, and most of us diletantes in the artistic. That is the fault; our need for beauty is purely spasmodic; it is not vital. Our sense of beauty is frivolous. As the author puts it: "We have what I may call a picture-gallery sense of beauty; a sense that can be turned on and off, like a tap."

It is this "on-again, off-again" beauty sense that accounts for the fact that beautiful houses architecturally are ugly and ill-furnished inside. This accounts for our being oblivious to the lack of harmony and attractiveness of much within our very doors, while we prate about the merits of the latest art exhibition.

If we are granted even a "picture-gallery beauty sense" there is a chance for our full development. We will *insist* upon the beautiful about us where we are now content with the dull. With such an awakening, billboard nuisances, outrageous tenement constructions, bare, ill-kept garden spaces and like blots upon the landscape will disappear. We will find new experiences in our life, indoors and out.

A NEW CASE OF FADDISM

THE modern conception of a paternal government which legislates to supervise the morals of the community has by no means exhausted its possibilities with correcting such abuses as gambling and intemperance. There are many other chances for restraining the common fault of going to excess. The bungalow fad, for instance, is a case in point. This house was a good thing in itself when built rationally, but an overplus of zeal in producing it soon resulted in a most astonishing mushroom growth of every sort and variety of bungalow, until certain sections of the country are covered with it in every conceivable duplication. Later, an enterprising architect discovered the adaptability of the Swiss chalet to America. Now some localities show no other type of building.

The present excess of building faddism is the penchant for built-in furniture. The economy and convenience of built-in settles and cupboards are unquestioned. There are several other articles of furniture that are most acceptable when built with the house. But here again we see a good idea run wild. Some recent houses appear with built-in tables and clothes hampers! Before the craze spreads to built-in waste baskets and built-in chairs we offer a plea for restraint. Let us have an awakened conscience as to the fitness of things or call out the militia. Some furniture is by nature portable; much remains too immovable as it is; so we must not kill all opportunity for change and variety within our homes. Why cannot there be a sane regard for functions?

IN ENGLAND during the XVIIth Century, the Bedroom furniture was really a composite style, combining Jacobean, Elizabethan, and Flemish motifs. The Flemish and Elizabethan was somewhat severe in treatment, whereas the Jacobean was decidedly ornate.

As we today study from these periods, we produce designs in perfect keeping with the best thought of the period, while adapting them to present day requirements.

The present trend toward those English styles has re-established Oak as a beautiful wood for furniture construction. Oak is a wood of rare dignity and charm, when designed and finished in a manner which permits its tint and grain to be enjoyed.

Our "Travelogue" on Flanders furniture is a short treatise on these XVIIth Century styles. It will be sent free upon request. Our complete set of period "Travelogues" is mailed you for five two-cent stamps.

Berkey & Gay furniture is sold in the better furniture stores of the United States and Canada. With the display on their floors, and our complete portfolio of direct photogravures, our dealers enable you to choose from our entire line of upwards of five thousand pieces of high grade furniture.

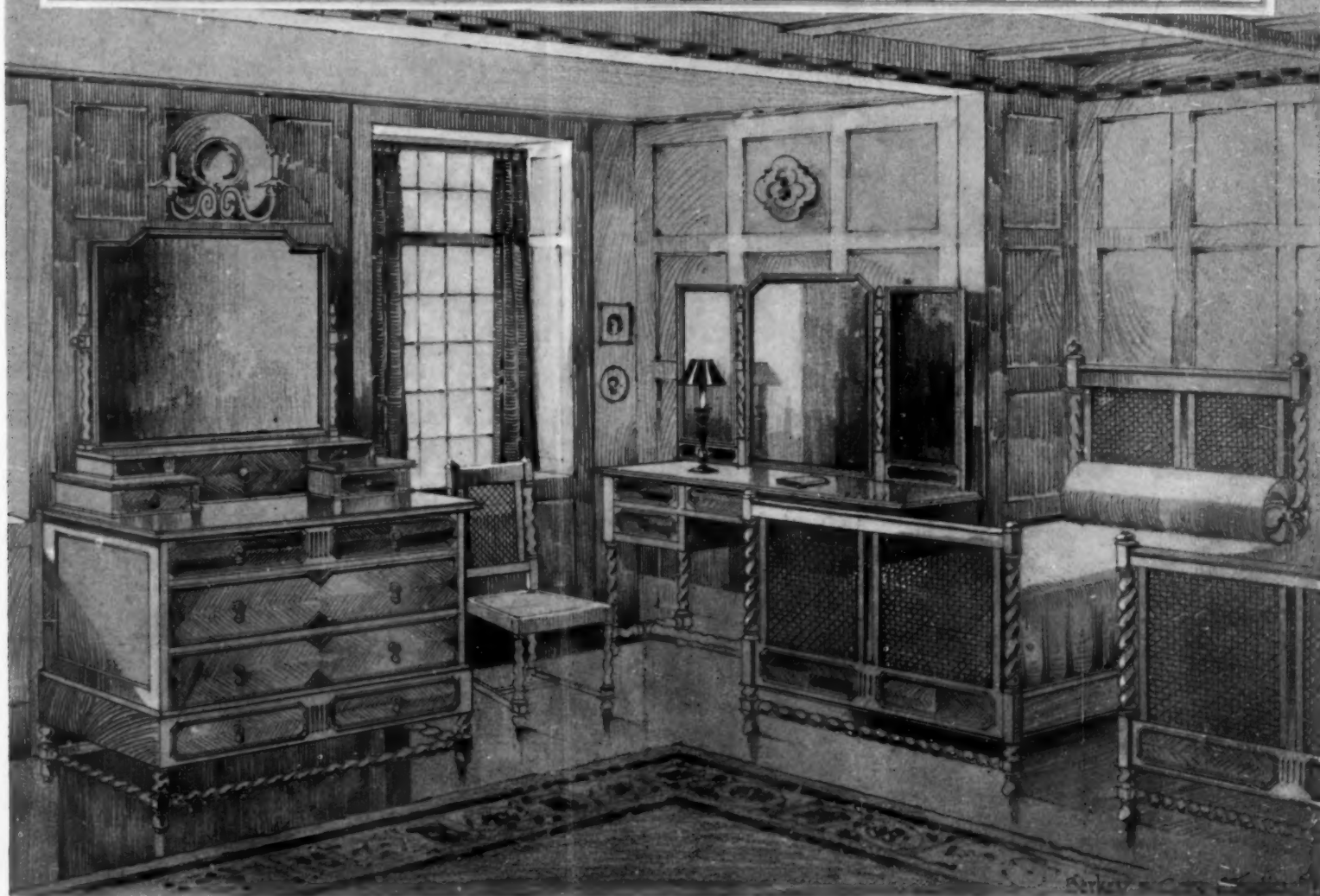
Our de luxe book on period furniture, "Character in Furniture," will more than interest you. Send fifteen two-cent stamps for it.

The reproductions of furniture shown here are from actual Berkey & Gay pieces.

Berkey & Gay Furniture Co.
184 Monroe Avenue, Grand Rapids, Michigan.



This infold mark of honor identifies to you each Berkey & Gay piece.



In writing to advertisers please mention HOUSE & GARDEN.

What Are You Getting From Your Coal?

Smoke is nothing but unconsumed fuel. So take a look at every smoke stack you own, or are interested in: If you see smoke grimly sailing forth to pollute the atmosphere get it firmly in your mind that some of your coal money is being wasted.

It is a proven fact that smoke is waste—good heat giving gases and small particles of carbon going up the chimney unburned.

And it is absolutely unnecessary. The right boiler will allow you to burn the cheapest sort of soft coal without making any smoke—simply because the right boiler will burn all the fuel, using it all to make heat instead of wasting some of it as smoke.

KEWANEE

Smokeless Firebox Boilers



Hartman Furn. & Carpet Co., Office and Warehouse, Chicago. Ottenheimer, Stern & Reichert, Archt. 2 Kewanee Smokeless Boilers installed.

for apartments, churches, schools, large homes and buildings of all kinds, are designed to burn the cheapest soft coal without smoke. And they do it. That is a proven fact. In practically every large city having a smoke ordinance the smoke inspector has put his O. K. on Kewanee Smokeless Boilers.

And they will make a noticeable saving when semi-anthracite or smokeless coal is used.

Hartman Furniture & Carpet Co., says:—"When fired right, they are absolutely smokeless and instead of using the very best smokeless coal which we formerly consumed in our boilers we now use an ordinary mine run at much lower cost.

Our booklet "Cutting Coal Costs" will interest you. Ask for it.



KEWANEE BOILER COMPANY

Kewanee, Illinois

Steel Power and Heating Boilers,
Radiators, Tanks and Garbage Burners

Branches: Chicago, New York, St.
Louis, Kansas City, Salt Lake City



Hedges for Every Garden

(Continued from page 267)

species. A space of from four to six or seven feet must be calculated for the width of a flowering hedge, or fully twice as much as a sheared hedge will require. This is more than a small garden can afford to spare usually.

The shrubs mentioned as available should be planted at the following distances, when they are to be left to grow naturally—that is, unsheared; *Berberis Thunbergii*, Japanese barberry, nine inches; *Berberis vulgaris purpurea*, common purple barberry, ten inches; *Syringa vulgaris*, common lilac, 12 inches; *Hibiscus Syriacus*, rose of Sharon, six inches; *Cydonia Japonica*, Japanese quince, twelve inches; *Spiraea Van Houttei*, Van Hout's spirea, twelve inches; *Spiraea Thunbergii*, Thunberg's spirea, nine inches; *Hydrangea paniculata grandiflora*, panicle hydrangea, twelve inches; *Rosa rugosa*, Japanese wild rose, eighteen inches; *Viburnum dentatum*, viburnum, twelve inches; *Cornus stolonifera*, cornel, twelve inches; *Cornus paniculata*, panicle cornel, ten inches; *Deutzia gracilis*, Deutzia, nine inches; *Diervilla rosea*, Weigela, twelve inches; *Ligustrum Ibo*, privet, six inches; *Ligustrum Rege-lianum*, Regel's privet, eight inches; *Ligustrum ovalifolium*, California privet, ten inches; *Ligustrum Amurense*, Amoor privet, twelve inches.

An attractive combination hedge is the Rose of Sharon as a back planting with any of the low-growing species before it to screen its bare lower third. The Deutzia is particularly good, and so are the spireas and the Weigelas. Without this lower growing foreground, planting hibiscus is likely to be a disappointment owing to its tall spare growth.

Of evergreens the hemlock is perhaps first choice for hedge planting. It stands close shearing well and its feathery exquisite beauty has no rival either in winter or in summer. But arborvitae are the best of all if an unsheared evergreen hedge is wanted, for of themselves these hold erect and trim and keep just the best shape in the world for a hedge. Norway spruce is good and endures great exposure and hardships; and white pine, little used, is very satisfactory and beautiful and suited to the northernmost climates. All of these may be kept of any desired form and at any height; all should be set at the same distance apart—namely, fifteen inches.

For a hedge that is not to be exposed to all sorts of boundary indignities, there is nothing that will ever take the place of boxwood; and though its cost is considerable compared to the commoner things, it is worth the money every bit. Moreover, special prices are always made for the purchases of quantities. Nothing that can be planted gives such an immediate effect, for the smallest size plants are impressive in their sturdy assurance of

One of ground plans in our booklet on "Hardy Gardens Easily Made"

Hardy Permanent Gardens Now an Open Sesame to the Busy Man

In our attractive booklet "Hardy Gardens Easily Made for the Busy Man" we have endeavored to simplify the making of a Garden of Perennials or Old-Fashioned Flowers by prepared plans adaptable to most situations, with the lowest estimates of cost that make them no longer a Utopian Dream. Let us send you one and save hours of needless worry over catalogue and surprise yourself what can be done for so little money together

with our handsomely illustrated catalogue (48 pages—9x12), on receipt of 10 cents in stamps, which pays postage only, and the amount of which is credited on first order.

THE PALISADES NURSERIES, Inc.

Growers of Palisades Popular Perennials, and Landscape Gardeners

R. W. CLUCAS, Mgr.

Sparkill, N. Y.

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

good breeding and permanence. The one secret of success with it is its first wintering. After this, in a climate where it will endure at all, it requires no further attention. Be sure in planting this, however, that you select the hardy and enduring *buxus sempervirens*, and never the unhappy baby dwarf box, *buxus suffruticosa*. This is the plant that has given boxwood generally a bad name as to endurance.

Thorough preparation for a hedge will pay quite as much as thorough preparation for anything else about the out-of-doors. It is not necessary to give up a year or two to cultivation, of course, as it sometimes is for a special crop; but deep working of the ground to lighten it if it is heavy will result in a quicker response in the plants and in a consequently finer hedge within a given time, than simply setting them into the ground without taking the trouble to make this specially ready for them. A trench should be dug ordinarily somewhat deeper than the roots themselves demand; then over the bottom of this well rotted manure may be spread, and over this in turn a sifting of the good top soil taken out and piled separately when the ground was broken. Onto this set of plants, using a tape line stretched along the length of the trench, to fix the distances apart. Be sure that these distances are accurate—that is, within one quarter inch of being exact. This is quite possible—for it is the middle of the plant by which judgment should be made. Two plants ten inches apart are not ten inches apart actually, but ten inches apart *on centers*, as a carpenter would say—that is, it is ten inches from the center of one to the center of the next—which means that the actual distance between roots and branches may be *nil*. As a matter of fact, hedge plants usually are set so that root bunches touch. And sometimes they must even be plessed together a little bit to come within the stipulated distance; but not if you do not buy plants larger than the sizes advised.

As the plants are set along the trench at proper distances, a helper should follow and shovel in earth to stay each in its place. Two others may follow him, if this amount of assistance is available, to finish the job; or the trench may be set for a distance of twenty-five or fifty feet, according to the length of the tape line used, and then gone over again and finished. Work the soil down among the roots exactly as it is worked down about any shrub or tree, firmly and thoroughly, and be very sure that the trench is deep enough to receive these without having any of them turned upward or snarled into a knot, or in any way handled other than the roots of specimen shrubs would be handled.

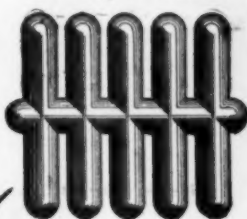
A good watering to settle the earth after it is nearly all in place is advisable, and then the last of the earth should be thrown on as soon as this water seeps in.

Protect boxwood through its first winter, even when spring planted, by a covering of burlap, pinned, pinned down like a

SAFETY FIRST

It's the Tough Goodrich Safety Tread that Prevents Tough Luck

The Goodrich Safety Tread



Five Bars and a Crosstie the "Safety First" Symbol

Just the unit-group of bars and crosstie to grip the road and distribute jolts and strains evenly, so that the Safety Tread runs like a smooth tread and gives longer wear and service.



This picture from a photograph shows how the Goodrich Safety Tread Tires on the rear wheels overcame the skid of the smooth tires on the front wheels.

Goodrich Safety Tread Tires

Best in the Long Run

The thick, tough Goodrich rubber fingers of the Safety Tread dig down and grip the road. They stop the skid. They make the brake effective and steering sure. Goodrich *quality* in the tire backs up the Goodrich Safety Tread.

Here are the prices to pay for the best tires ever produced in the Goodrich factory:

Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices	Size	Smooth Tread Prices	Safety Tread Prices	Grey Inner Tube Prices
30 x 3	\$11.70	\$12.65	\$2.80	34 x 4 1/2	\$33.00	\$35.00	\$6.15
30 x 3 1/2	15.75	17.00	3.50	35 x 4 1/2	34.00	36.05	6.30
32 x 3 1/2	16.75	18.10	3.70	36 x 4 1/2	35.00	37.10	6.45
33 x 4	23.55	25.25	4.75	37 x 5	41.95	44.45	7.70
34 x 4	24.35	26.05	4.90	38 x 5 1/2	54.00	57.30	8.35

Dealers almost everywhere have Goodrich Tires or can get them for you from one of our Branches or Depots.



Factories: **AKRON, OHIO** The B. F. Goodrich Co. Branches in All Principal Cities



There is nothing in Goodrich Advertising that isn't in Goodrich Goods



Stained with Cabot's Creosote Stains
C. M. Hart, Architect, Bay Shore, N. Y.

Pictorial Proof

of the artistic, wood-preserving and lasting qualities of

Cabot's Creosote Stains

is given in all our advertisements. These houses, designed by the leading architects for owners of refined tastes, are all stained with our stains, and thousands of other houses all over the world testify to their beautiful and durable coloring effects, low cost and preservative value. "Cheap" stains cost a few cents less but wash off and waste your money.

You can get Cabot's Stains all over the country. Send for stained wood samples and name of nearest agent.

SAMUEL CABOT, Inc., Manufacturing Chemists,
11 Oliver Street, Boston, Mass.



Reduce the Cost of Living

by equipping your home with a scientifically constructed-sanitary refrigerator, which prevents waste of food through spoilage, tainting and souring.

The healthfulness of your food is dependent upon the efficiency of your refrigerator. Safeguard your health and reduce the cost of living by installing a

McCray Sanitary Refrigerator

That Keeps Food Sweet, Healthful and Untainted.

Adopted by U. S. Pure Food Laboratories as best adapted to meet the rigid requirements. Approved by Good Housekeeping Institute.

Recognized for 30 years as the world's best refrigerator. Used in the finest homes, hotels, clubs, hospitals, restaurants, public institutions, etc.

Why the McCray Excels

—*how* it keeps food fresh and healthful, why the air is always *dry* in McCray Refrigerators, is told in our catalogues, which describe the opal glass, porcelain and other sanitary linings, outside icing and superior features of the McCray.

Send for the Catalog That Interests YOU

No. 91 Regular Sizes for Residences	No. 69 For Grocers
No. 73 For Florists	No. 50 For Hotels, Clubs and Institutions
No. A11 Built-to-Order for Residences	No. 60 For Meat Markets

McCray Refrigerator Co., 693 Lake St., Kendallville, Ind.
 Chicago—158 N. Walsh Avenue New York—McCray Bldg., 7-9 W. 30th Street
For Branch Salesrooms in Your City See Your Telephone Directory

tent over a little framework that will keep it just above the plants. Fill this with oak leaves, and secure it thoroughly so it cannot blow away. Cut all privet intended for a sheared hedge down to within four inches of the ground at time of planting. This is absolutely essential if any sort of a satisfactory hedge is to result, for this simply will not grow from the ground up unless made to do so by such cutting back. The first year will show astonishing growth, however, so you need not feel it a great loss to cut down even large bushes.

All hedges that are sheared, whether evergreen or deciduous, suffer greatly usually through being given a form that is non-resistant to weather and storm and that prevents their best development as well. Remember that where no sunlight reaches no branches will grow, and remember that a hedge wider at the top than at the bottom is bound to shade itself from the sun, as well as catch and hold a greater weight of snow and ice in winter than its foundation can endure. So aim always at the inverted wedge form in shearing. Keep the hedge wide at the bottom, narrow it at the top, and it will never break down under ice or snow, or wind and sleet. Whatever the height, keep to this form, and whatever the material of which the hedge is planted. The top may be flattened if preferred, but even here a conical oval is better than a flat surface, as offering less ice hold.

First Aid to the Orchard

(Continued from page 279)

at hunting out foliage.

The eggs of the White-marked Tussock Moth are laid in a white, brittle froth. Those of the Rusty species are uncovered, each separate egg showing distinctly. Arsenate of lead will easily poison either species.

If one were to step a few paces from a tree and pepper the trunk or limbs with a charge of fine bird shot, the result would closely simulate the work of the Shot-Hole Borer. Apple or cherry, peach or plum, may be attacked. Strip off a bit of the bark where the holes are numerous, and beneath will be found characteristic, slender galleries, radiating from a central brood-chamber. The holes show where the adult beetles came out.

A dead limb or a decrepit tree is the favorite breeding-place of this insect. From these it spreads to other trees near by that may be weakened. To check it, remove and burn any dead wood before growth starts in the spring.

The borer at the base of the trunk of apples, and the species that works similarly in the peach, are due for attention now. Sawdust or gum betray their presence. A sharp knife is the best tool with which to locate their burrows, followed by a soft wire to probe for the grub. Nick the end of the wire so as to give it rough barks; then you may know whether your probing has been successful.



Bring the Birds Around Your Home

Our 1914 Catalog

Tells you how to attract them by planting. It also gives reliable information regarding Hardy Trees, Shrubs, Vines, Roses and Hardy Flowering Plants for every purpose. Send for a copy.

We solicit correspondence relative to any planting problem.

The New England Nurseries Co.
 Dept. E, Bedford, Mass.

In writing to advertisers please mention HOUSE & GARDEN.

Up the Hill to Our House

(Continued from page 276)

White fox glove, bleeding heart and fuchsia lend their touch of quaintness. The lavender funkia increases in perfection each year as the clump grows heavier. No garden is complete without lemon verbana, rose geranium, heliotrope and the old-fashioned clove pink.

Veronica is most effective when placed in a thickly planted bed, yet the graceful stem with its sky-blue flower is charming mingled with the delicate green of other plants. This also applies to red pentstemon, which has none of the garishness of other red flowers. It blooms soon after veronica; therefore a bed with this combination can hardly be improved upon.

I mention my yellow lilies and Golden Glow with a feeling of defiance for those who scorn them. To me they have been friends in need. The first summer the drains about the house were eyesores with their grassless rims of hard pan thrown there by the workmen. I replaced some of this by top soil, but did not find time to have deep beds made. I tried one flower after the other, but all died. Discouraged, I planted the lilies. They alone seemed to revel in the worst abiding place in the garden, and transformed the drains into places of deceptive attraction. That first season a neighbor gave me of her overflowing Golden Glow. I had planted these near the house, but after having made their acquaintance, the following spring I treated them politely, but with few words walked them down the hill. Our small cement stable, pump house and chicken coop being in plain view of the house, I fretted over their unclad appearance. I could not buy more shrubs, as it would take many and large ones to screen these buildings. In their place, I planted my Golden Glow in a long hedge about ten feet up the hill. It grows very quickly each season, and has made a most satisfactory screen, permitting only a view of the stable roof. In fact, it has filled its position so well that I have long delayed ordering the hemlock hedge for a permanent feature.

The subject of vines is a pleasant one to dwell upon. They furnish interest out of all proportion to the money invested, and require the least trouble except the planting, if trouble this could be called. With an eye to the distant future, I placed three wistaria plants, five Dorothy Perkins, and four ampelopsis about the house.

It was marvelous how they jumped up the first summer. The next winter was fiercely cold and some of my vines died down several feet. The ivy on one end of the house had grown in a very pretty shape, a thick tapestry of green pointing highest in the center. Our living room fireplace was behind its home wall, and during the cold October days we indulged in many blazing fires, to which I attribute the death of the main branch of this ivy.



Are You a Rose Lover?

If so, I want to know you—you should know me.
Let's get acquainted.
How?

Let me send you, free, a copy of my famous

"A Little Book About Roses"

You will be charmed by its beauty, surprised at its honesty, and pleased with its helpfulness.

4300 W. Kostner Ave., Chicago, Ill., Jan. 22, 1914
"During the last ten years I have purchased roses and peonies from most of the leading growers throughout the country, and can safely say, after this experience, that I have never found any to compare with yours—always true to name—always the best obtainable. My experience during these ten years I have been buying from you is that I have always received even more than I expected from descriptions given. The plants you furnish—both roses and peonies—are the finest I have ever seen."
SAM'L GARNER.

This little book and the business it represents have done more to promote the successful culture of outdoor Roses, all over this country and Canada, than all other agencies combined.

If, this year, you want to buy REAL ROSES and let "the other fellow" buy experience, let's get acquainted—today.

Here's my hand!

GEORGE H. PETERSON

Rose and Peony Specialist

BOX 30

FAIR LAWN, N. J.

KEWANEE

Private Water Supply Plants — Private Electric Light Plants
Sewage Disposal Plants — Gasoline Storage Tanks and Pumps
Home Power Plants — Gasoline Engines — Pumping Machinery

Bulletin on Any Outfit Sent on Request

KEWANEE WATER SUPPLY COMPANY
New York City Kewanee, Ill. Chicago



SUNDIALS

Real Bronze Colonial Designs
From \$5.00 Up
Also full line of Bird Fountains and other garden requisites.

Manufactured by
The M. D. JONES CO., 71 Portland St., Boston, Mass.
Send for illustrated Price-List.



Garage



Play House



Hodgson Portable Houses

Artistically designed and finished, made of the most durable materials and practical at any time of the year in any climate. Made for innumerable purposes. Erection of building extremely simple and can be done by unskilled labor in a few hours' time.

Send For Illustrated Catalog

E. F. HODGSON CO.

Visit our showrooms Room 226, 116 Washington St., Boston, Mass. Address all correspondence to Boston
Craftsman Bldg., 6 East 39th St., New York

Garden House



Sand House

In writing to advertisers please mention HOUSE & GARDEN.

A Garden Full of Gladioli for \$1.00

The **GLADIOLI** is one of the most satisfactory flowers grown because it blooms continuously when it is cut and put in water just as well as when in the ground.

There is no reason why every family cannot enjoy this grand flower, for the simple reason that it is as easy to grow as the potato.

You can have them in bloom from July to frost if you plant a few bulbs each month from April to July.

For only **ONE DOLLAR** we will send **75 BULBS** of our **GRAND PRIZE MIXTURE**, which covers every conceivable shade in the Gladioli kingdom.

Last year we sold 150,000 of the bulbs and have received hundreds of testimonials as to their merits.

Order Your Bulbs Now

so as to have them to plant when you begin making your garden.

The culture of Gladioli is a simple one; bulbs may be inserted in the ground with a trowel, about four inches deep and one to two feet apart, being careful to

rake over the ground with a small weeder, after the bulbs have started to grow, so as to keep it from becoming hard or cakey. This will insure splendid blooms.

Write or call at our store, mention "House and Garden," and secure this splendid collection of Gladioli Bulbs for only **\$1.00**, prepaid to your home, anywhere in the United States, with our **1914 Catalogue**.

Stumpp & Walter Co

30-32 Barclay Street

NEW YORK

I had to wait for over a year for its renewed growth. The wistaria grew without a halt, but, alas! my poor Dorothy Perkins. During the second summer, always the critical one for babies, they showed symptoms of a disease. I rushed to my medical book, thinking anything would be better than to have this germ, or insect, sap the vitality of my pet ones. Instead of dosing them with mild home remedies, I sprayed them with Paris green which had been left over from my apple tree doctoring. A few days passed and the strong drug had done its work. The leaves all dry, hung brown and limp, and the stems of all but one started childhood over again. The next summer I sprayed them with pyrox, one pound to eight gallons of water, and in a few days sprinkled them with water and threw on tobacco dust to kill the aphid. This was successful. One vine I forgot to mention was clematis. I planted two vines before the posts of the piazza facing the view. Each summer they stood before me as living examples of that most maddening of all precepts, "If you don't at first succeed, try, try again." Instead of growing taller and more luxuriant each year, they started over from the bottom up. They tantalized me so that I finally turned them out in a vicious temper. David pleaded for their lives, saying they were not strong enough to weather the winter gales. "I despise weaklings and have no room for them on my place," I replied, pulling at them harder than before, and in their place planted Virginia creeper.

At times everyone has a longing for seclusion in various degrees. Of course to some four walls are sufficient, but I am speaking of those rooms and temples of nature where the mind and body can rest and the spirit grow. There is nothing more delightful than the little outdoor room shaped by the natural growth of tree and shrub, but tamed down into a chamber, where hammock and rustic chair cater to one's comfort. In our line of trees there is a space twelve by fifteen feet, with an oak and elm tree growing at either end, while bushy undergrowth partially screens the outer world from view. As the slope of the ground declines sharply it was necessary to form a terrace. Our man dug up the sod, laying it aside. He then built up the lower portion with a multitude of small rocks, making it almost level with the top, then pulled down the top soil to cover them and replaced the sod. At the lower edge he built a miniature wall with steps in the center, and so my room was finished. All this work was done in one day. The space below the steps was quite as suitable for room building as the one finished, so I eagerly planned a second room and carried it out in the same way. Here were two stalwart trees just the right distance apart for a hammock—this we called the lounging room, while the first was the tea room. To furnish it I found rustic chairs which were both artistic and comfortable and a



The **SWISS CHALET**, by its individuality, beauty, coziness and comfort has won the heart of the refined American public.

We design and execute country houses, residences, hunting lodges, boat and sporting houses in this charming style.

Ask for Folder H.

The Swiss Chalet Specialists

Architects

200 Fifth Avenue

NEW YORK CITY

STEINWAY The World's Greatest Piano



Made to order—to exactly match the color scheme of any room

HAVE your fine rugs made to order, not cheap stereotyped fabrics, made in unlimited quantities; but rugs that are different and sold only through exclusive shops. We are only too glad to submit sketch in color to harmonize with surroundings of the room. Woven in selected camel's hair in undyed effects or pure wool in any color tone. Any length, any width—seamless up to 16 ft. Order through your furnisher.

Write us for color card—today.

Thread & Thrum Workshop
Auburn, New York

small rustic table. There were on the neighboring place some buildings which were in full view, and I planted flowering shrubs to serve as a screen. These rooms are conveniently near the house and have what is most desirable of all—the distant stretch of our beautiful view. If the solitude of the woods, with hushed gurgle of brook and love twitter of bird, calls one, it is not surprising if this comfortable room is forsaken and moss and fern become your couch.

We will wander down the line of trees by a foot-path and pass from the sunshine into the gold-flecked woods. Still downward we go by winding path beneath tall forest oaks and maples. We must resist the invitation to rest in the laziness of spring fever upon the moss-covered rocks by the side of the path. We come to the brook and take our choice of gliding across a fallen giant oak or slipping from stone to stone moist with the splash of tiny ripples. We reach the edge and glance ahead. In a gradual sweep upward rise crags and boulders adorned by masses of rosy, dawn-tinted laurel on ledge and slope. Neither heaven nor earth could hold a more lovely picture, and we revel in the aroma of forest pine and blooming flowers till our reluctant return.

EDITOR'S NOTE: The concluding chapter in this experience in home making will appear next month.

A New Way to Succeed with Dahlias

(Continued from page 280)

dominance.

The flowers may be kept perfectly for four or five days by cutting them at night and plunging the stems in a vessel of boiling water for a few minutes. Then put them into cold water and put them away in a cool place—the cellar if necessary—over night. By morning the stems will be found to be strong and stiff.

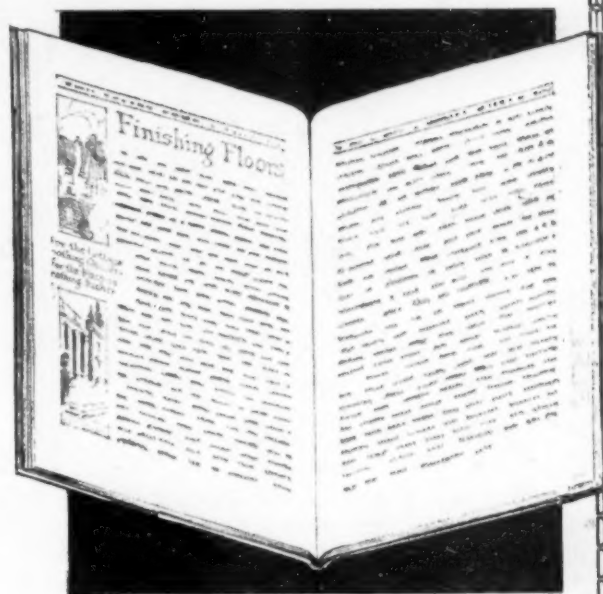
The plants are grown for three purposes: First, for garden decoration; second, for cut flowers; and third, for exhibition. Varieties should always be chosen, therefore, for the purpose of the grower in mind. There are the cactus forms, distinguished by the long twisted or pointed petals; show dahlias, large, round and quilled, well formed and in solid colors, though sometimes shaded at the tips; the fancy dahlias, which are really just the variegated quilled varieties; the decorative dahlias, which are loose flowering and full, or nearly full, to the center with broad, nearly flat petals; the peony flowered or art dahlias, of immense size, with two or three rows of petals; the pompon dahlias, which are round and miniature, and usually of dwarf habit; the collarette type, which has one row of petals and a collarette of small petals around the yellow center; and the single dahlias, which is just

This Book Sent Free on Request

"Beautiful Floors, Their Finish and Care"

It is a 24-page edition—just out—which gives valuable suggestions as to the treatment of floors. It tells how inexpensive and easy it is to turn old floors into new ones; how to save energy and money. An authority on

Finishing New Floors Cleaning and Polishing
Finishing Old Floors Care of Waxed Floors
Hardwood Floors Finishing Dance Floors
Pine Floors Finishing Furniture
Kitchen, Pantry and Interior Woodwork
Bathroom Floors Stopping Cracks
Removing Varnish, etc.



Old English Floor Wax

brings a rich, subdued lustre to the floor. And you can cover a floor with Old English for about half the cost of varnish and shellac.

Old English is the best and most enduring floor wax made. It contains more of the hard (and expensive) imported wax, and so spreads farther and lasts longer than other floor waxes. It doesn't collect dust, is easily applied and may be used over any stain. 60 cents' worth will do a large room for six months or more.

Send for Free Sample and Our Free Book

Paint Dealers, House Furnishing Departments (Druggists) sell Old English.

For the Cottage—Nothing Cheaper
For the Mansion—Nothing Richer



THE A. S. BOYLE CO., 1943 Dana Ave., Cincinnati, O.

The
A. S.
Boyle Co.
1943 Dana Ave.
Cincinnati, Ohio

Send BOOK
and FREE Sam-
ple so I may try Old
English at home.

Name.....

Address.....

My dealer is.....

SETH THOMAS CLOCKS

For a Century the National Timekeeper
SETH THOMAS CLOCK CO., 15 Maiden Lane, New York City

PLANTLIFE

PLANTLIFE has many advantages over all liquid insecticides. Containing refined tobacco dust it can be mixed with the soil, acting as an excellent fertilizer, and at the same time destroying worms and insects in the ground before they have a chance to reach the plant.

PLANTLIFE has been found very effective in ridding greenhouses of insects by dusting on plants. When dry, use for dusting about once a week.

Bag of 100 lbs. \$3.50

5lb. trial bag by parcel post, 35 cents.

THE PLANTLIFE COMPANY 253 East 66th Street
NEW YORK, N. Y.

Herbert's Dahlias

The finest varieties to date in decorative, fancy, cactus, show, peony-flowered, collarette, single, century, duplex century and pompon dahlias are all illustrated and described in our

New Catalog, Illustrated in Natural Colors

This helpful book is free. It tells where, when and how to plant Dahlias to get best results; is an accurate, complete guide on Gladioli, Cannas, Lillium and other summer-flowering bulbs and plants. Send today for your copy.

DAVID HERBERT & SON

Box 471 Atco, New Jersey

100 acres devoted to dahlia-culture—the greatest plant in the world.

"Reputation Set"

Five beautiful dahlias selected for exceptional quality. The choice of our 600 best varieties, sent postpaid for \$1.





The "Making" of a Park

THE United States Government on its parks and reservations, Golf and Country Clubs, and owners of Private Estates all over the country are using the

COLDWELL Combination Roller and Motor Lawn Mower

They find it the best and most economical equipment for caring for large stretches of lawn.

The Coldwell both mows and rolls at the same time. It does the work of three men and three horse mowers on less than a gallon of gasoline an hour. It climbs 25% grades easily. It is simply designed and easy to operate.

The Coldwell line includes horse mowers with the new demountable cutter feature. Also hand mowers in 150 different styles and sizes. Write for catalogs and an interesting booklet "The Care of Lawns."

**COLDWELL
LAWN MOWER COMPANY**
Philadelphia NEWBURGH, N. Y. Chicago



COLDWELL LAWN MOWERS

what its name implies. A selection of good varieties in each of these forms follows:

CACTUS

White, Laume; yellow, Success; orange, Mrs. de Luca; autumn tint, Sec' Field; pink salmon, Countess of Lonsdale; light pink, Margaret Boncher; red, René Cayeux.

SHOW

White, overlaid with amethyst-blue, W. W. Rawson; yellow, Charles Lenere; canary yellow, Caesar; red, Hussar.

DECORATIVE

White, Kaiserin Augusta Victoria; yellow, Colossus; dark rosy-pink; Delice; scarlet, Lyndhurst; white, tipped scarlet, Mme. a Lumier.

POMPON

Pink and crimson, Brunette; Buff, tinted orange, Ariel; yellow, Fairy Queen.

PEONY FLOWERED

White, Queen Wilhelmina; light pink, Andrew Carnegie; white and yellow, Queen Alexandra; salmon pink, Bertha von Suttner; canary yellow, Caesar; yellow and red, Geisha.

COLLARETTE

Carmine, white collar, President Viger; white and purple, Directeur Rene Gerard; yellow, Souvenir de Chabaune.

SINGLE

White, Bride; cerise pink, Coquette; deep red, Mme. Curtelin; deep maroon, Dr. Peary; scarlet, Duke Henry.

Choosing Flowers for Their Color (Continued from page 287)

fully, and is an altogether charming flower, lower-growing and more informal than the later phloxes.

There are so many purples in the iris tribe that space fails in which to describe them. Speaking in general, the Germanica purples incline to violet, both clear and velvety; the Pallida section has all tones, from "rosy mauve" to "pale blue" (dealers' description); the Neglecta section has, usually, standards and falls of very different tones; and those of the Plicata section are nearly all white, frilled with varying tones of blue-violet. *I. Sibirica* is rather a crude blue-violet, a "shouting" color; lovely, tiny; *I. cristata* is called "sky-blue," but is really a soft blue violet; as are the paler pumila hybrids, the darker ones of which are a fine deep purple. The Japanese iris seem to embrace almost every tone of violet and purple.

The old-fashioned, freely self-sowing sweet rocket (*Hesperis matronalis*) is a light phlox-purple, and very pretty with pale rhododendrons of pink foxgloves, being between them in tone and of much the same hue.

The deep purple *campanula*, although a fine, clear violet, are an ugly color, hard and harsh, like the violet *clematis Jackmani*, which so many people are possessed

ASTERS DAHLIAS GLADIOLUS

The three Greatest flowers for the open ground and for cut flowers.

Aster Plants—150 Aster plants of the best cut flower sorts in the world, all colors assorted \$1.00

Dahlias—12 of the worlds freest blooming and most exquisite colored varieties, in Decorative, Cactus, Show, Pom Pon and Peony Flowered types, \$1.00.

Gladiolus—50 Giant flowered bulbs in a great variety of Colors, just the shades and types to gladden your garden, \$1.00.

The three special offers together \$2.50.

National Show Gardens

Box 1200

Spencer, Indiana, U. S. A.

to train over red brick walls! *S. rapunculoides* is a fine, clear light violet, good for naturalizing, but will, if permitted, crowd everything except golden glow out of the border!

A flower of a clear, pale bluish violet is the purple funkia; it is not particularly effective, but its really good color should be borne in mind when planting it for its foliage effect.

The *Monarda fistulosa*, or wild bergamot, is a most happy flower in the garden. It is shaped like the bee balm (*M. didyma*), but is more delicate; it is palest phlox-pink, taking up the lilac just where physostegia leaves the rose, and fits into almost any color scheme.

There are several exceedingly good phloxes of the paler tones of violet and purple, and a few of the deeper ones; in fact, some of the finest purples of the garden are found in this class, but the true purple, while a wonderful color in itself, is almost impossible to combine with other flowers. "Lord Raleigh," for example, is a splendid one, but completely shouts out everything else in the garden. "Comte von Hochberg" is also a fine color, a trifle redder than "Lord Raleigh," and ever harder to combine; either would be beautiful, with white, against dark evergreens. "Eugene Danzanvilliers" is the palest tint of amethyst violet, called Hortense violet; "Antonin Mercie" is lower growing and a little pinker, but about the same tone. "Nana cœrulea" is a dwarf of a pale lavender violet.

The exquisite Michaelmas daisies come in varying tones of purple, as well as the bluer ones already alluded to, and range from a pale phlox pink to a true purple. In general, however, the ones listed as "pink" are more nearly pale lilac.

There are not many desirable purple annuals. Pansies, of course, in all hues; ugly little *Mathiola bicornis*, with its small lilac blossom, valuable and beloved for its delightful evening perfume; purple larkspurs, not a good color and seldom two blossoms the same tone; purple cornflowers, a reddish raisin purple, not bad, but apt to overrun the garden and contaminate the other colors of the same flower, which seem to revert to this if it is allowed to self-sow in mixture; schizanthus, the butterfly-flower (not butterfly-weed, which is *Asclepias tuberosa*, and an orange hue). The schizanthus comes in varying tones of pale and deeper purple, and is exceedingly pretty; it comes in other colors as well. The purple scabiosas (Mourning Bride) are good, a pale Hortense violet, and a pale violet of a bluer tone, as well as a very dark blue violet. There are very good dark violet verbenas, and a number of clear violet China asters of varying depth of tone, from pale to very deep.

There are several purple gladioli; one of the best is "Baron Joseph Hulot," which is almost a blackish violet, so deep and velvety is its tone. This is sometimes listed as synonymous with "Blue Jay," but the

Weighing the Cost



A few pounds of Prevention outweighs tons of Neglect

YOU hear the fire alarm, with thousands of other people, and a little thrill of terror shakes you lest it be your home.

But you are fortunate—it chances this time to be your neighbor's instead of your own.

After the thrill has passed, do you ask yourself why you should continue to gamble with fate, staking your home against the trifling cost of protection?

Consider the time and the love you have spent, aside from the actual cash outlay, in creating the sentiment of home which hovers over your hearth stone.

Nothing in the world could compensate you for its loss.

Nothing could ever compensate you for the loss or injury of a single member of your household through fire.

Yet the risk is constant.

And the cost of protection, as it has been recognized by the best authorities and most careful investigators in the country, is the cost of a few Pyrene fire extinguishers.

Pyrene is scientific, common-sense protection. Immediately on contact with heat the liquid is turned into a heavy gas-blanket which instantly chokes the flames.

If the fire is between partitions, or between the floors, this gas blanket crawls quickly to the flame and unerringly smothers it.

Used by leading transportation lines, electric and manufacturing concerns everywhere. Write for "The Vital Five Minutes," free. Or ask your hardware merchant for the Pyrene Extinguisher. Weight 5 lbs., 14 in. long, 3 in. diameter.

PYRENE MANUFACTURING CO., 1358 Broadway, N. Y.

Brass and Nickel-plated Pyrene Fire Extinguishers are the only one-quart fire extinguishers included in the lists of Approved Fire Appliances issued by the National Board of Underwriters

Alton
Atlanta
Baltimore
Boston
Birmingham
Bridgeport
Buffalo
Chicago
Cincinnati
Cleveland
Dayton
Denver
Detroit
Duluth
Jacksonville



Louisville
Memphis
Milwaukee
New Orleans
Norfolk
Oklahoma City
Philadelphia
Phoenix
Pittsburgh
Richmond
St. Louis
St. Paul
Salt Lake City
San Antonio
San Antonio
York, Neb.

PACIFIC COAST DISTRIBUTORS: GORHAM FIRE APPARATUS CO., San Francisco, Los Angeles, Seattle
Distributors for Great Britain and the Continent: The Pyrene Co., 29A Charing Road, London, W. C.

Any One Can Set Up a Corcoran Tank

They are easier to put together than a picture puzzle. Any workman who can handle a wrench can assemble the various parts, so carefully and accurately are they made. No riveting of bands, no calking of seams—everything simple—and the whole tank watertight without paint, putty, whitelead or metal lining. Don't think because Steel sounds better than Iron that it is best for the banding of a tank. We use Iron—a Special Iron—and our booklet tells why—it also tells how our patented lugs make the banding adjustable at any portion of the tank. Before you buy a tank of any kind give us the opportunity to prove the superiority of the Corcoran. Get our Catalogue of Windmills and Tanks.

A. J. CORCORAN, Inc., 17 JOHN STREET
NEW YORK, N. Y.



NATCO·HOLLOW·TILE



DAY by day, the folly of non-fireproof buildings and houses becomes more and more widely recognized—their erection more severely condemned. You attain fire safety in its highest form, when you build of

NATCO·HOLLOW·TILE

Fireproof, age-proof, damp-proof, vermin-proof; warmer in Winter, cooler in Summer

Investigation of the merits of Natco Hollow Tile and comparison with older materials invariably dictates Natco Hollow Tile construction—for partitions, floors and roof, as well as exterior walls.

Whatever the building's purpose, size, proposed cost—the advantages all lie on the side of Natco Hollow Tile construction, a construction that anticipates and eliminates all that fire and time can do to destroy or depreciate the structure.

The important word to remember is "Natco." The only genuine Natco Hollow Tile is the hollow tile that bears, pressed into the blocks, the trademark "Natco."

Before defining your building plans, send for our 64-page handbook, "Fireproof Houses," fully describing, with illustrations, every detail and phase of Natco construction. Contains 80 photographs of Natco buildings. Mailed anywhere for 20 cents to cover postage.

NATIONAL FIRE-PROOFING COMPANY

PITTSBURGH, PENNSYLVANIA, Dept. 9 Offices in all Principal Cities

Write today



Organized 1889



Classic Art in Garden Furniture of Imperishable Concrete

Copies of Antique and modern masterpieces
Special designs to order in marble or stone.

FREE—Our photographically illustrated catalogue—a valuable art reference volume—sent on request.

TOGNARELLI & VOIGT CO., 1745 NORTH 12th STREET **PHILADELPHIA**

In writing to advertisers please mention HOUSE & GARDEN.

true "Blue Jay" is larger, and is a cold, light-bluish violet, beautifully marked with a deep blue violet and white. "Baron Joseph Hulot" would work perfectly into a purple scheme; "Blue Jay" would not. There are a few good pale dahlias of violet and purple tones, but the darker ones are awful!

Simple rules for using purple and violet in combination with other colors are as follows:

1st. Purples, pale and deep, from phlox pink to prune purple, with each other, with creamy white and pale creamy yellow.

2d. With deep blue violets, a brighter yellow, and sometimes a cold white. With pale blue violets, creamy yellow. All blue violets with each other, and with creamy white.

3d. With palest violets and palest purples, rose pink and pale rose pink. (Rose color is much deeper.)

4th. If one is experienced, one may make wonderful combinations of clear violet and spectrum blue, purple and Tyrian rose, and daring "dabs" of bright rose, scarlet, or orange, but for the average colorist, in the average garden, the first, second and third plans are the best.

* * * * *

In natural sequence to the consideration of blue in the border comes the thought of its complement, yellow, and with equal spontaneity the thought of gold follows upon that of the royal purple. But, in handling this most useful and delightful color, one must not lose sight of the fact that *yellow* is *not* gold, and will not draw a color scheme together as true gold would do.

There is a class of yellows, however, almost "as good as gold," and second only to cream white in value—the creamy, opaque pale tints, maize, and straw and pale buff-yellows. The earliest of these are shown among the tulips, and they are a little deeper, perhaps, than the best of these "binding" colors. Delicate, lily-like *Tulipa retroflexa*, and later "Flava," "Moonlight," and "Miss Allen Willmott," are all exquisite, the last-named being a trifle darker than the others, and delightfully sweet-scented.

One of the very best of these tints is *Iris flavescens*, a heavenly tint of palest straw, which will combine literally with any color. *Thalictrum flavum*, which is listed by Kelway and by one or two American dealers, is a most useful straw color; the foliage is like a large, pale green Maiden's-hair, and the flowers a feathery mass of pale, creamy yellow, which would lighten and relieve almost any composition in both color and form.

If climate permits—"south of Philadelphia"—the loveliest pale yellow of all is the yellow Tree Lupine, absolutely perfect in every essential save that of hardiness. The palest yellow snapdragons are good, but, like the deeper ones, which are equally valuable in their place, they are

(Continued on page 309)

Renovating Old Lawns

(Continued from page 272)

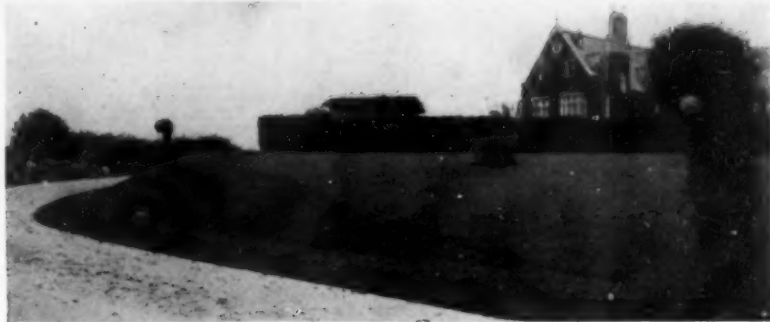
reverse is true. A sandy loam on top of gravel is the best, as it is desirable to keep the grass low.

Do not make the general mistake of covering the ground heavily with manure in the fall and spring. Make your initial investment in the soil cover this annual expense and your lawn will last for years. Hardwood ashes of test showing 7 to 9 per cent potash scattered over as a top dressing so that it shows white on the grass, will be all the fertilizer generally necessary, if spread in the spring. Try to select a time before rain for this work. Seed may be sown early in the spring or the fall. If in the spring, the work must be done early enough to allow the plants to become established before hot weather; in the fall, soon enough to grow before frost. Sow seed about three bushels to the acre, spreading evenly. A lawn seeder will make you independent of wind and weather and accomplish even distribution. Without it the ground should be raked thoroughly to cover the seed.

Now comes the important matter of rolling. After sowing, roll with a heavy roller, then sprinkle, and when the water soaks in roll again. The roller is a tremendously important adjunct to the lawn, and it should be rolled at intervals during spring and summer. This even pressure assists the ground in retaining moisture, and when rolled in the spring overcomes the effects of the alternate freezing and thawing so destructive to plant life. Rolling in summer discourages worms, moles, ants and other pests, and is invaluable for a successful lawn. One need not consider the rolling of the lawn an athletic exercise, for the old-fashioned, awkward, rusty back-breaker of other days should be a thing of the past. Its shrieking complaints as it was dragged across the lawn sounded like murder and often induced a temper to commit murder. Today you may get a ball-bearing, silent, easy moving machine, the weight of which may be adjusted.

In watering the lawn the prime requisite is to get the moisture to the roots of the plant, and as efficient a way as any is to allow the hose to lie in the grass long enough to make the immediate district marshy and sodden.

Weeds will probably come if stable manure is used. You must attack them regularly in the spring and the fall, and if you have not a long-bladed asparagus knife with a V cut in the end, file a steel kitchen knife into this shape. Dig dandelions and plantains deep and sprinkle seeds when you take the weeds out. Crab grass should be pulled out in the fall with the teeth of the rake. Dig out the roots. Close cropping of the grass will prevent its developing and sowing its seed which spread for another year. But pull it up wherever seen, and keep at it. Use a good lawn



The terrace was spread with Alphano. The rest of the lawn with barnyard manures. Three days before the photo was taken, entire grass was mown. The larger growth and deeper color tells its own story in favor of Alphano.

Alphano Humus Will Keep Your Lawn Sod Thick and the Grass Green

SPREAD it on your lawn now. Rake it in. The grass will soon cover it up and you would never know it was there. But the grass will. In a couple of weeks' time, it will be noticeably thicker. All summer it will grow quickly and stay green even during the hot dry weather, when it used to yellow up a bit.

The effects of that same application of Alphano will last for several seasons.

Being in a powdered form, it can easily be spread on at any time. Being odorless, it can be used freely anywhere without objection.



\$12 a Ton—\$8 a Ton by the Carload. F. O. B. Alphano, N. J.

Further than that it contains no weed seeds. Being rich in the essentials of plant life, it is an ideal fertilizer. Being so rich in Humus, it will hold 14 times its weight in water, fortifying the grass roots against the hot sun and drying wind.

For both your vegetable and flower gardens, it is far better than animal manures and much more lasting than chemical fertilizers. Being so reasonable in price and lasting in its effects, you can use it freely.

Send for the Alphano Lawn Book. It tells about Lawns, their Care and Fare.



Note the rugged grass blades and the thick mass of roots. It was grown in only eight weeks on white sea sand mixed with one-half Alphano.



The under side view of the same Alphano Humus grown sod shows the close net work of roots. Sod like this has back bone to it.

Alphano Humus Co

936 Whitehall Building, NEW YORK

A Beautiful Lawn

Insure a velvety, green, quick-growing lawn; also double the yield of the garden and produce earlier and better vegetables, by feeding the soil with



SHEEP'S HEAD SHEEP MANURE

Rich in nitrogen, phosphoric acid and potash. Pulverized, ready to apply. Also will show quick results on flower beds, shrubbery and orchard. Two 100-lb. bags, \$4, freight prepaid east of the Missouri River. Send for folder.

Natural Guano Co., 804 River Street, Aurora, Ill.

A Fine Garden

WELL ROTTED Horse Manure Dried—Ground—Odorless

To insure increased Garden Crops—larger and brighter Flowers and a rich green Lawn, give your soil a heavy coating of Dried, Ground Horse Manure. No weed seeds—no refuse, it becomes part of the soil.

Plant food is immediately available and lasting. Your planting will be successful when you use Well Rotted Horse Manure. Put up in bags 100 lbs. each. Write for Circular B and prices.

NEW YORK STABLE MANURE COMPANY

273 Washington Street, Jersey City, N. J.



Those who want bright, thick, velvety lawns; or golf courses and putting greens which will stand the hard usage—all who have difficult grass-growing problems to solve—have long realized that the most desirable invigorator would be a proper combination of

LIME and HUMUS

for lightening clay soil and sweetening sour ones—for increasing the vigor and brightness of the grass while decreasing the growth of weeds.

for enabling clay soils to absorb and hold moisture and warmth; for overcoming the lack of moisture of light, sandy soils and tendency of such lawns to burn out quickly.

The right combination of these ideal grass invigorators has never seemed possible, until the recent discovery at Pope's Creek, Maryland, of a wonderful deposit of naturally combined

"CALCIUM-HUMUS"

as we have called this natural grass invigorator. Analyses by the most disinterested authorities indicate that nature has done here—probably over a period of thousands of years—what man has unsuccessfully attempted again and again.

HUMUS—that first essential to plant life; and **CALCIUM** are combined here in their most efficient proportions. On this property was grass of remarkable luxuriance and beauty—similar to the Kentucky blue grass—while for miles around there were no lawns of this highly satisfactory character. It was this fact that first indicated the treasure under ground—the rare, natural combination of "**CALCIUM-HUMUS**."

Throughout the East and wherever soils are deficient in limestone; along the Coast and wherever light sandy soils predominate; in the clay districts and wherever friability and warmth of soil is lacking, "CALCIUM-HUMUS" is first aid to the lover of fine lawns, flower beds, etc.

It costs only half as much as the average lawn dressing—requires only a ton to the acre for good results on the average lawn—is odorless and easy to apply, and of lasting benefit to all vegetation; but particularly grasses.

"**CALCIUM-HUMUS**" is not "just another fertilizer"—rather a soil stimulant which makes active and effective those elements of plant life found in every soil.

Be fair to your lawn. Write today for Booklet "H," describing and giving prices on this wonderful new product of nature. Name your dealer or seedman and we will see that you are supplied at minimum cost for carriage.

Maryland Calcium-Humus Co.

Deposit:
Pope's Creek,
Maryland

Main Office: 806 Penn Square Building
PHILADELPHIA, PA.

HILL'S EVERGREENS Make Homes Beautiful



A little money, wisely invested in thrifty evergreens, transforms an ordinary place into one of rare beauty, taste, elegance. We are specialists, not only in growing but planning artistic effects. Established 50 years. Largest and choicest selection in America. Prices lowest—quality considered. Don't risk failure. *Hill's Free Evergreen Book* will help you, and our expert advice is free. Write today for book illustrated in colors.

D. HILL NURSERY CO., Inc.
Evergreen Specialists
301 Cedar Street, Dundee, Ill.

8 Grape Vines, 6 Currant Bushes

All best 3 year old stock. If planted now or early spring will fruit next summer. Should ground be frozen we tell you how to protect and keep them dormant, ready for early spring planting. Orders accepted now and forwarded at any future time if preferred. Grapes are Worden, Niagara, Iona, Concord, the best early mid-season and late varieties. Large cherry currants. Write for list of our **\$1 Friend Makers**, consisting of all kinds of Fruit Trees, Berries and Roses.

Cultivate Horse-Radish

Nothing as profitable. We tell you all about it.

The Landscape Garden Co., Newburgh, N. Y.

mower as often as the grass shows irregularities and becomes too thick. In the dry summer weather raise the cutting knives of the lawn mower to avoid cutting too close and drying the roots. Do not cut after fall is well established, as the grass should leave its own winter protection, but let this not be too long. Lawn mowers have been improved and they now come with ball bearings and large, efficient cutting edges. Most kinds may be equipped with a device for catching grass clippings and keeping the lawn in trim condition.

If you would know what sort of grass to use for different conditions, you can do no better than consult a reliable seedsmen, whose lawn mixtures he will guarantee as he does his reputation. But the following description of grass plants, compiled by Mr. Luke J. Doogue, will be of help:

Kentucky Blue Grass—*Poa pratensis*. Fine for lawns; grows slowly but vigorously almost everywhere but on an acid soil.

Red Top—*Agrostis vulgaris*. Shows results more quickly than Blue Grass; will thrive on a sandy soil; fine in combination with Blue Grass.

English Rye Grass—*Lolium perenne*. Grows quickly and shows almost immediate results; good to combine with the slow-growing Blue Grass.

Various-leaved Fescue—*Festuca heterophylla*. Good for shady and moist places.

Rhode Island Bent—*Agrostis canina*. Has a creeping habit; good for putting-greens, sandy soils.

Creeping Bent—*Agrostis stolonifera*. Creeping habit; good for sandy places and to bind banks or sloping places. Combined with Rhode Island Bent for putting-greens.

Crested Dog's-tail—*Cynosurus cristatus*. Forms a low and compact sward; good for slopes and shady places.

Wood Meadow Grass—*Poa nemoralis*. Good for shady places; is very hardy.

Red Fescue—*Festuca rubra*. Thrives on poor soils and gravelly banks.

White Clover—*Trifolium repens*. Good for slopes; not to be recommended for a lawn.

Sheep Fescue—*Festuca ovina*. Good for light, dry soils.

To introduce the ready-made lawn, use a combination of Kentucky Blue, Red Top and English Rye. The Blue Grass is slow, but the Rye and Red Top produce speedier results. The first month will see the newly seeded space a carpet of green. In time the Rye passes, the Red Top continues to cover, while the Blue Grass grows sturdier each day until it crowds everything out by virtue of its own strength. Use 12 pounds of Kentucky Blue Grass, 5 pounds of Red Top and 3 pounds of English Rye Grass to the bushel, and sow $3\frac{1}{2}$ to 4 bushels to the acre.

For shady places Kentucky Blue Grass, Wood Meadow Grass, various leaved Fescue, and crested Dog's-tail. Use 35 per cent of the first two and 15 per cent of the last two.

For conditions that require a quick-growing grass, and something that will bind and make a holding upon slopes under difficult conditions, the following is recommended: Kentucky Blue Grass, 30 per cent; R. I. Bent, 30 per cent; Creeping Bent, 25 per cent; Sheep Fescue, 10

per cent, and White Clover, 5 per cent. This is one of the places where White Clover is an essential. Under these conditions it fulfils its mission perfectly. While all the named kinds may not flourish, there will be enough to make the work successful.

Choosing Flowers for Their Color

(Continued from page 306)

more of a lemon yellow. The graceful, long-spurred yellow columbine (*Agnelia Chrysantha*) is a good, soft color, a trifle deeper and brighter than a maize yellow.

Of the annuals, the various calendulae are good; the palest tints are a pinkish cream, shading through deeper and deeper maize yellow until the warm cadmium and orange shades are reached. The yellow gladiolus "Canary Bird" is a good, deep maize yellow, but best of all is the ever-lovely phlox *Drummondii*, listed as "Isabellina" or "Primrose," as perfect in color as *Iris flavescens*, but deeper and pinker—the palest buff. Could I have but one pale yellow in my garden, it would be this annual phlox.

Turning to the clearer and brighter hues, we open the season with the fine, deep chrome yellow crocus, "Cloth of Gold." Then come the clear lemon chrome of *Viola cornuta* "Sutca," and the pale tint of the dear little English Primrose. A good early yellow, which, though almost a bright sulphur, has a strangely silvery quality, is *Alyssum saxatile*. This, like *Anthemis tinctoria*, which has a daisy-like flower of light lemon chrome, may owe its silvery effect to its soft, gray-green foliage. The deeper lemon chrome, Iceland Poppy, is a charming flower, of good color.

The good, bright yellow tulips are almost "too numerous to mention." Yellow Pottbakker is a good early one, small, charming, black-anthered "Bouton d'Or," a pretty late one, and between come all sorts of beauties, which are more accurately described than most—it is hard to go far wrong in buying bright yellow tulips! A few of the irises, notably *I. Germanica* "Aurea," are good clear yellow, but most of them have bronze or reddish markings. The wild yellow flog, *I. pseudo-cornus*, has a flower of good color.

The very double, very shiny, old-fashioned gold button (*Ranunculus repens*) is a creeping double buttercup of brightest lemon chrome, so bright as to be almost real gold. The "California" primrose (*Oenothera fruticosa* var. *Youngii*) is a pretty flower of a bright pale lemon yellow. The well-known *Coreopsis lanceolata*, though a bit rampant, is a good color. The lemon lily (*Hemerocallis flava*) is a soft chrome yellow, and the variety *H. Thunbergii*, a charming, creamy orange yellow. A flower much used in England, and deserving of more notice here, is the

Unseen Forces Behind Your Telephone

THE telephone instrument is a common sight, but it affords no idea of the magnitude of the mechanical equipment by which it is made effective.

To give you some conception of the great number of persons and the enormous quantity of materials required to maintain an always-efficient service, various comparisons are here presented.

The cost of these materials unassembled is only 45% of the cost of constructing the telephone plant.



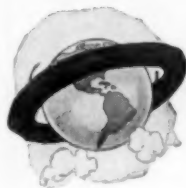
Poles

enough to build a stockade around California—12,480,000 of them, worth in the lumber yard about \$40,000,000.



Telephones

enough to string around Lake Erie—8,000,000 of them, 5,000,000 Bell-owned, which, with equipment, cost at the factory \$45,000,000.



Wire

to coil around the earth 621 times—15,460,000 miles of it, worth about \$100,000,000, including 260,000 tons of copper, worth \$88,000,000.



Switchboards

in a line would extend thirty-six miles—55,000 of them, which cost, unassembled, \$90,000,000.



Lead and Tin

to load 6,600 coal cars—being 659,960,000 pounds, worth more than \$37,000,000.



Buildings

sufficient to house a city of 150,000—more than a thousand buildings, which, unfurnished, and without land, cost \$44,000,000.



Conduits

to go five times through the earth from pole to pole—225,778,000 feet, worth in the warehouse \$9,000,000.



People

equal in numbers to the entire population of Wyoming—150,000 Bell System employees, not including those of connecting companies.

The poles are set all over this country, and strung with wires and cables; the conduits are buried under the great cities; the telephones are installed in separate homes and offices; the switchboards housed, connected and supplemented with other machinery, and the whole Bell System kept in running order so that each subscriber may talk at any time, anywhere.



AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy

One System

Universal Service

Before Ordering Your Gladiolus Bulbs

send for our Catalog which contains descriptions of the best that Europe and America have produced, including many varieties not listed elsewhere—all grown in our own gardens.

CHAMBERLAIN & GAGE

Wellesley, Mass.



A GREENHOUSE GLIMPSE
AND HOW TO GET THE REST OF THE STORY

IF you are looking for suggestions for a charming layout of your grounds, so that your greenhouse, your flower garden and your residence are grouped in delightful association, we will be only too glad to mail you a photographic birdseye view of the above interesting grounds, taken from the top of the water tower.

At the same time, we will send along our catalog so you can see what manner of greenhouses Hitchings have been building for a quarter of a century and more.

Hitchings and Company

NEW YORK
1170 Broadway

BOSTON
49 Federal Street
Factory, Elizabeth, N. J.

PHILADELPHIA
Pennsylvania Bldg.

leopard's bane (*Doronicum*). It is rather coarse, but has an interesting flower of a cadmium hue and good foliage. A good June yellow is *Thermopsis Caroliniana*, about five feet tall, with pretty foliage and feathery spikes of pea-shaped blossoms of a pale lemon chrome.

Most of the rudbeckias, helenium and gaillardias are too orange, but some of the named hybrid gaillardias are good yellows. Several of the helianthi are fine, clear yellows of the lemon chrome tones. Common tansy (*Tanacetum vulgare*) is a good deep chrome, but turns rusty. Sentimental-sounding Bible Leaf, Sweet Mary, or Costmary (*T. Balsamita*), is a delusion and a snare, with roots like a doormat. One of the best of backgrounds is Jerusalem artichoke, like a small sunflower; lift it like a dahlia, to prevent spreading. Of the early chrysanthemums, "Well's Primrose" is a lovely pale lemon, and "Roi des Jaunes," a deeper tone.

Of the annuals, the best are the African marigolds, "Lemon Queen" (sulphur color), and "Pride of the Garden" (bright lemon chrome). The lovely California poppies are a little inclined to orange, and might form the connecting link between that and yellow; they vary somewhat and are hard to place. The dwarf annual sunflowers "Cucumerifolius" and "Perkeo" are good, and bloom profusely. There is one "bedding-out" flower, beloved of English gardeners, without which no article on "yellow" would be complete—the fat little *Calceolaria*. This comes in a variety of colors, but the yellow kind is *not* yellow—it is *yeller!*

The points to bear in mind in using yellow are these

1st. Use the pale straw and maize tints anywhere, just as you would white.

2d. Clear yellow with most blues, using cream white freely in the group; creamy yellow of any depth with any blue, white not being necessary.

3d. Bright yellow with deep blue and deep violet (not the red-purples). Clear yellow very sparingly with pale blue-violet, and not at all with pink.

4th. Remember that yellow "carries" farther than other colors, so it is best to have the other color in a combination in greater quantity than the yellow—"picked out," as the dressmakers would say—with touches of the fairy gold.

What You Must Do With the Garden Now

(Continued from page 283)

tion of getting the job done more quickly; think of the difference in marking out the rows straight as a string; opening the drill; dropping the seed; covering and rolling, all at one operation, and all as fast as you care to walk, and performing these jobs in succession, laboriously, one by one, by hand and with an aching back!



Villa Reale della Petraja, Florence, Italy

THERE is a charm and a fascination about the formal garden that cannot be gainsaid. One feels always that it reflects the mind of the designer in the careful arrangement of every detail, the fine sense of proportion between architecture and landscape, between verdure and stone.

The Italians of the Middle Ages have left us superb examples of the formal garden adorned with masterpieces of sculpture unrivalled for garden ornamentation. Our collection of over 1500 models of Pompeian Stone contains a wide variety of reproductions of Old World masterpieces. In it you will find just what you want for your garden.

Our handsomely illustrated catalogue of vases, fountains, sundials, statuary and benches sent on request.

THE ERKINS STUDIOS 226 Lexington Ave. New York

THE LARGEST MANUFACTURERS OF ORNAMENTAL STONE

Factory
Astoria, L. I.

You can do the work better, *much* better, with the seed drill—the rows will be straighter, the seed sown more evenly, and the plants will come up in a thin, narrow line, which very greatly facilitates the work of cultivating and weeding. By all means, your garden equipment should include a garden line on a reel; without it you will be tempted to put in some rows "by eye" when you are in a hurry, and the result is likely to sadden your life for the rest of the season whenever you have occasion to look at it. Get every row as straight as a string, and have them parallel. A yard stick, such as many hardware stores are in the habit of giving away for advertising, is very handy to have along in the wheel-barrow when you are planting.

Many flower seeds, however, and occasionally vegetable seeds, in a small garden cannot be put in with a seed drill; and wherever planting by hand becomes necessary, the job should, of course, be done well. A great convenience when sowing by hand is to have a wide, flat board of convenient length upon which to stand or kneel while sowing the seeds; it serves also as a straight-edge, as the drill for the seed can be marked along one side of it, and, after the seed is sown and covered, the edge of the board may be pressed down along the row, thus firming the seed in the soil. For very fine flower seeds, it is well to have a supply of a special soil for covering mixed up, and the drill can be filled with this, after the seed is sown. Occasionally, where mass effects are desired, fine seeds are sown broadcast; in this case the surface, which should be especially dug up and raked, is made as fine as possible, and the seed, after being scattered thinly, is raked lightly into the surface of the soil.

Some seed is very refractory and slow to germinate. A good plan with seed such as these—parsley and celery are instances—is to soak them from twelve to twenty-four hours in lukewarm water before planting; then in a warm place, and sometimes they are actually pre-sprouted before planting by leaving them either in water or in a very moist, warm place until the sprouts actually begin to appear. Other seeds, such as cannas and noon-flowers, are covered with very hard shells, which the swelling germ has difficulty in bursting; these are assisted by making one or two small notches with a sharp knife blade, or by filing a slit in the shell part way around with a very fine file. In addition to this, they may be soaked until they begin to swell before planting. Still other seeds, such as lima beans and Castorol beans should be placed into the soil with the germ, or "eye," down, so that the large, leafy cotyledons will be able to force their way through the soil to the surface.

Of course, in planting these seeds of either flowers or vegetables, you must

Have It Built Into the Kitchen to Save You Miles of Steps

Write for Free Book That Tells All About the Pantryette

Seven hundred thousand women already know a part of the convenience and saving of the Hoosier Pantryette which is now being built into hundreds of new homes as an integral part of scientifically designed kitchens.

For there are now 700,000 Hoosier Kitchen Cabinets in use. The Pantryette contains all the features that have made these cabinets famous, and has far more storage space and other convenience.

Why wait and decide later that you must have this convenience in your home when it is easier and cheaper to include a Pantryette in your plans now?

You want a modern home—a convenient home—and you know that a convenient kitchen is worth its weight in gold.

It doesn't matter if it is your own time or the maid's time you are saving. You are the gainer in home efficiency.

And think of the pride of exhibiting this scientific Pantryette-equipped kitchen to your friends when you show them through the new home.

The Pantryette comes ready for the builders to set into any kitchen, without finish so it can be finished with the woodwork, and combines:



- (1) A large Kitchen Cupboard.
- (2) A spacious Work Table with top made of hard maple, heavily paraffined like a butcher's block, the finest kitchen table top known.
- (3) The labor-saving convenience of over 700,000 Hoosier Kitchen Cabinets now in use.

Your architect or builder may have already submitted plans and specifications to you, but he will be glad to figure on the installation of the Pantryette, which has a uniform fixed price, in any community.

The Pantryette is built in sectional units so there is a Pantryette for every home, large or small, at a price to correspond with the cost of the house.

We have written a book called, "Kitchen Efficiency," that we believe everyone contemplating a new home should read. It describes and pictures the Pantryette. Write for it. Show it to your architect. Tell us the size of your new kitchen and we'll quote you the price of a Pantryette to fit. Don't wait. Send for the book now.

The PANTRYETTE

THE HOOSIER MFG. CO., Builder's Dept., 144 Harvey Ave., New Castle, Ind

Hand-Painted Oriental Rugs

When a rug is washed with lye and acid in the vat or otherwise, some of the colors are so badly burned that they have to be painted in. It is a highly-paid trade, and the painters are real artists, but not as great artists as the dealers who sell such trash. All so-called Kermanshahs are bleached, and the bulk of them are painted. Also, in threadbare relics the naked warps are painted so as to conceal them.

If you want to avoid such rugs send for monograph and list.

L. B. LAWTON, Major, U. S. A., Retired
181 Cayuga Street, Seneca Falls, New York.



TINDALE Music Cabinets

A new idea in keeping music.
A place for every piece.
Every piece in its place.
Variety of styles, sizes and finishes, \$17 to \$85.
May we send you Design Book No. 6

Tindale Cabinet Company
No. 1 West 34th Street
NEW YORK



Unexpected!

"Why, John, you said it was an *old* house!"

"And so it is. But the painter has been at work. That's the difference."

A house is only as old as it looks. A house painted in colors tastefully selected and with paint mixed of

Dutch Boy White Lead

and Dutch Boy linseed oil looks new, and long retains that look of freshness. Such paint wears long and smoothly, without cracking and scaling. Consult your painter as John did his. Make your house new. No other improvement so satisfactory can be made for the same money.

Write for our Paint Adviser No. 143—a group of helps, Free

NATIONAL LEAD COMPANY

New York
Buffalo
(John T. Lewis & Bros. Co., Philadelphia)

Boston
Chicago

Cincinnati
San Francisco
(National Lead & Oil Co., Pittsburgh)

Cleveland
St. Louis



BULBS

We import the finest quality of Bulbs from the best Holland growers direct to you at lowest prices for

Tulips—Hyacinths—Narcissi

They are sound, large and full of Vitality. Our Free catalog gives full description of our **Import** plan. Send for it now, as all orders for Fall delivery must be in our hands by July 1. Address, **QUALITY BULB CO., 825 C. of C. Building ROCHESTER, N. Y.**

Grow Your Own Vegetables

Cut down your living expenses. You'll be astonished how healthful it is to cultivate a garden, and how easy, if you use

Planet Jr Garden Tools

Adapted to almost all garden uses. No. 4 opens furrows, plants, covers, and marks next row in one operation.

FREE An instructive, 72-page catalogue. Send postal for it today. **S. L. ALLEN & CO. Box 1292C Philadelphia**



The Next Storm May Do This to Your Finest Trees

Your trees may appear strong and healthy—and yet be so unsound that the next storm will snap them off like the one shown here. If your trees need no attention you want to know it. If they do, you ought to know it. If you wish real Tree Surgery, it must be Davey Tree Surgery. **Expert examinations without charge.** Representatives with credentials available everywhere. Write today for beautiful free book and letters from estate owners to whom our examinations have been a revelation. Write today.

THE DAVEY TREE EXPERT COMPANY, Inc. 424 Elm Street, KENT, OHIO
Branches with Telephone Connections: New York, Philadelphia, Chicago, Montreal, San Francisco.



JOHN DAVEY
Father of Tree Surgery

take into consideration, besides the size of the seed, the size and habits of growth of the plant. The distances apart for planting the various vegetables are shown in the table on page —. You are probably familiar with the normal size and shapes of most of the flowers you plant, and if not, the height is usually mentioned on the packet, and a distance of *half the height*, for the plants to stand after they are transplanted or thinned out, will generally be about right, although they are often planted much closer or left to stand much closer where a mass of solid color is desired, as for edging or solid beds or design work.

Aside from the question of distances, the method of planting will depend also upon the size and habit of growth of the plant. In the planting table, the method of planting—drills, rows or hills—is indicated. In "drills" the plants are grown in a continuous row quite close together; the seed is usually sown quite thick; that is, compared to the distance at which the plants are to stand, and then the plants are "thinned out" sufficiently to give them room to mature; where good seed and good conditions can both be relied upon, the sowing should be thin enough so that little thinning out by hand will be required. In rows, the plants stand at regular intervals, either being transplanted from the seed bed or cold-frames, such as cabbage or tomato plants, or a few seeds are put into a hill and thinned after the plants get a good start, to one or two more to the best plant, as is frequently done with cabbage or cauliflower to avoid the necessity of transplanting. With both drills and rows, the cultivating is all done in one direction, and when weeding or hoeing is required it must be done by hand, and removing the weeds between the plants. In *hills*, the plants are grown, usually the same distance apart each way, at sufficient distance to allow cultivation with the horse or wheel hoe in both directions; corn, melons and cucumbers are usually grown this way, although for the small garden, worked by hand, I believe that better results from the same amount of ground could be had from planting in rows. The hill system, however, in the case of vine vegetables, gives added convenience by protecting them from bugs during the early stages of growth.

Another small matter, usually overlooked in planning the garden, but one which, however, will give a great deal of satisfaction if attended to properly, is that of providing suitable labels and tags; when eight-inch wooden labels cost only thirty-five cents a hundred (and ten- and twelve-inch ones, if you prefer them, in proportion) there is no excuse for not having the name and date of every planting of flowers and vegetables; information which at the end of the season you will, in a great many instances, be very thankful for.

Adequate plant supports are another item which should be looked out for at this stage; it is much better to put them in first rather than to wait until the plants need supports, for once they have begun to fall over it is very difficult to make them grow straight or to take kindly to a support, and there is more danger of injuring the roots in putting the stake in place when the plants are fully grown. Gladiolus, dahlias and other tall-growing flowers, and tomatoes and pole beans in the vegetable garden, require supports. For the various flowers, plain, round or square stakes painted green, which can be bought at a very low price, are the most convenient things to use. Rough, wooden poles of either cedar or birch are frequently used in the garden; but regular plant supports of two or two-by-four scantling, with laths nailed across at intervals of one to two feet, and of a suitable height, are more satisfactory, and if properly looked out for they will last for a number of years; with them it is easier to care for the plants, and a much better bearing surface is exposed to the sunshine than with poles.

Of equal importance with the planting of the seed in the making of the spring garden is the setting out of plants. The first point to learn in connection with this job is how to select the plants when you are buying them; it may be a box of cabbages, a dozen geraniums or a couple of dozen tomatoes—remember that a small, sturdy, stocky plant that looks vigorous and tough will outstrip a tall, lanky or stalky one that has not had sufficient ventilation or hardening off, every time. In the case of buying plants, do not be particular about buying those with blossoms on; as long as you are sure of the variety, a plant with well-developed buds is much to be preferred to a blooming one. In the matter of vegetable plants it is very important that you are sure of the variety, and in the case of tomatoes it is very frequently the case that those of dark green color and stocky form, making splendid growth, are very poor varieties; but they are such very nice-looking plants that they sell more readily than do others to people who do not know. Dwarf Giant and Dwarf Stone, however, are plants of this type which do bear good fruits, and both are very satisfactory for the home garden.

In setting out your plants, both flower and vegetable, make the surface as smooth and fine as you would for sowing seed, and mark out for your rows and the places where the plants are to go just as carefully. If manure and fertilizer is to be added "in the hill" and under the individual plant, it is best to mix it thoroughly into the soil before setting the plants out. A little well-rotted hen manure, or bone flour, or, better still, bone dust and cotton-seed meal mixed, are good for this purpose. In the case of such vegetable plants as cabbage,



"Father built this house!"

Your children—when they grow up—will they be proud of the "House that Father built"? Twenty years from now, will it be a modern, soundly built, valuable property?

The next generation won't tolerate inflammable houses. The next generation will laugh at a house that has to be constantly repaired. For the house of the future will be a permanent, dependable house. Almost as cheaply as with wood you can build that sort of a house now. Stucco houses are no longer luxuries.

Herringbone Metal Lath is the reason

why you can have a dependable Stucco house if you want to. It provides the best method of construction.

Build with your eyes open. Let us

Herringbone Metal Lath

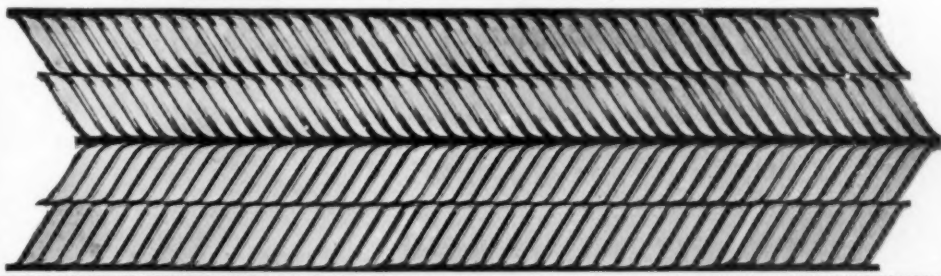
explain to you this whole fireproof construction problem. It will be an immense help to your architect if

you know what he is talking about. Tell us what sort of a building you are planning and we will mail invaluable books on the subject and give you any special help needed.

Also mention architect's name so we can co-operate through him.

THE GENERAL FIREPROOFING CO., 1304 Logan Ave., Youngstown, Ohio

Also makers of Self-Sentering, the expanded metal that makes reinforced concrete without forms.



THE OWNER OF THIS ATTRACTIVE HOUSE ENJOYS HIS WINDOWS

They're all casements hinged to swing out—tight in winter and catching all the breezes in summer.

They're equipped with our famous Hold-fast Adjusters to operate and lock easily with one hand without disturbing screens, storm sash, curtains or Venetian blinds.

Our free Handbook tells you all about up-to-date casements and our remarkable casement devices.

Write today to

THE CASEMENT HARDWARE COMPANY, 9 So. Clinton St., Chicago



Residence of H. S. Rominger, Indianapolis

Clarence Martindale, Architect

Hy-tex Light Golden Mottled Mats, American Bond, Brown Mortar, raked one-half inch.

There is durable satisfaction in a home faced with Hy-tex Brick

—satisfaction from every point of view: real economy, safety, comfort, permanence, and beauty. These are the qualities every home-builder seeks.

If you are going to build you owe it to yourself to know Hy-tex Brick and the many advantages it offers.

Investigate now and obviate later regrets. Send for any of the following booklets:

"*Genuine Economy in Home-Building*," a beautiful 64-page booklet, illustrated in colors, and dealing in a comprehensive way with the problems that confront every prospective home-builder. Sent for ten cents.

"*Suggestions for Small Hy-tex Homes*," a helpful book of plans for homes of moderate cost. Sent for four cents.

Or, "*Bonds and Mortars*," especially for the architect and builder—a 28-page illustrated booklet on design in patterns for brickwork, showing the wide possibilities for securing beauty of texture in the wall of brick. Sent for ten cents.

HYDRAULIC-PRESS BRICK COMPANY

Dept. G.4.

St. Louis, Missouri

Largest Manufacturers of Face Brick in the World

BRANCH OFFICES and EXHIBIT ROOMS:—Baltimore, Md.; Chicago, Ill.; Cleveland, O.; Davenport, Iowa; Dubois, Pa.; Indianapolis, Ind.; Kansas City, Mo.; Minneapolis, Minn.; New York City; Omaha, Neb.; Philadelphia, Pa.; Toledo, O.; Washington, D. C.

lettuce or tomato it is usually convenient to open up a drill with the plow attachment of the wheel-hoe, cross-mark it to show plainly where the plants are to be set, drop the manure or fertilizer at the proper point and cover in again with the hand hoe or the plows, reversed, on the wheel-hoe before proceeding to set the plants. In setting out flowers, the hole can be made, a little fertilizer can be dropped in and mixed thoroughly with the soil with the trowel, and the plants set afterwards in these spots before they have dried out and while the soil is still moist enough to make them easily discernible.

One of the chief things to be guarded against in the transplanting either of vegetable plants or of flowers is the exposure of the earth and ball of roots to the sun and wind; it is therefore best, whenever possible, to do the work late in the afternoon or on a cloudy day; when this cannot be managed, take out and drop into the soil only a few plants at a time, and get them in as soon as possible. Never attempt to pull your plants either from the seed bed or from flats, but take up a number together with transplanting fork or trowel and break them apart with as little injury to the roots as possible, or cut them out with a knife. If the leaves are large and succulent trim them back about a half, as this will do a great deal to keep the plants from wilting after they are set, which is very undesirable. If the weather or the soil is exceptionally dry it may be necessary to take the extra precautions when planting of putting a pint or so of water into each hole previous to setting the plants in; it does little or no good to pour water on the surface after the plants are set.

With the fingers of one hand, or with the trowel or dibber, if the earth is packed, make a hole large enough to conveniently take the ball of earth and roots, and placing the plant into it so that it will go deep enough and be covered half way or so up the stem; pack the earth down carefully against it with the thumbs and the knuckles of either hand, so that it will stand up straight and stiff; a plant that looks top heavy or at all wobbly is not set right. In moist soil and in good weather this firming with the hands will be enough; but, unless all conditions are favorable, it is safest to go back over the rows and firm the plants into the soil still further by compacting the earth with the balls of the feet, placing one on either side. After the plants are set out, go over the patch with the iron rake and rake the surface off clean and level, which will not only make a much better-looking job, but will also destroy any sprouting weed seeds and leave the surface with that fine, dry soil mulch which is so much to be desired.

These instructions apply also to the numerous little jobs of replanting which have to be attended to in the spring. The hardy perennials are increased by "di-



TO HELP YOU SAVE YOUR WOUNDED TREES

Practical Tree Repair

By ELBERT PEETS

In this new and authoritative book is the only complete exposition of the subject of tree surgery. Its value to the layman is considerably enhanced by the clearness of the language in which it is written, and the illustrations have been chosen with a view to practical use. 12mo. Illustrated.

\$2.00 net; postage 14c.

McBRIDE, NAST & CO., Publishers, Union Square, New York City



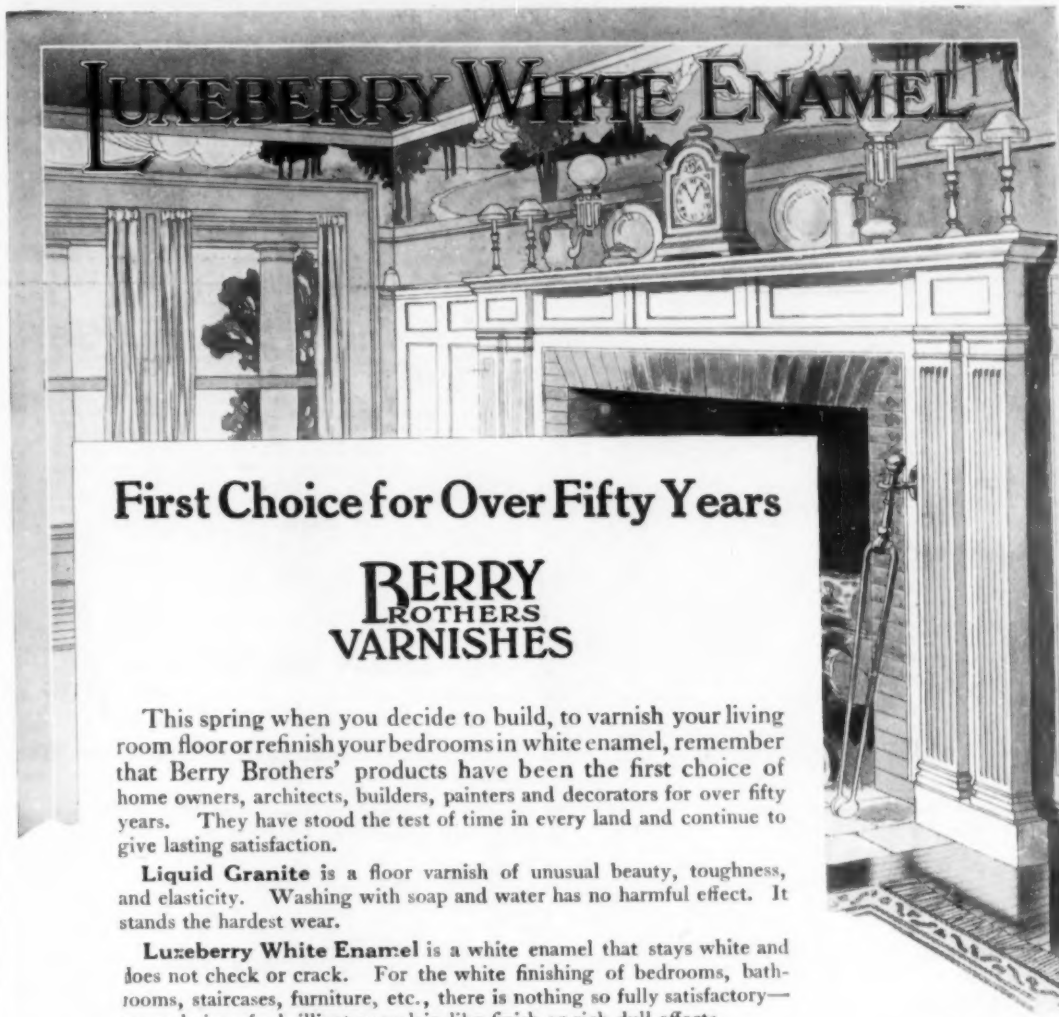
vision"—the separating up of the clumps of the old roots into two or more parts. Then set out or discard the extra plants. Enrich the soil, before replanting part of the clump, with old manure or with a little bone flour.

Many of the flowers whose habit of growth is in thick clumps will be found after a few years to be decreasing in size and number of blossoms. This can usually be remedied by division and replanting, especially if the soil is enriched as suggested. Plants that cannot conveniently be moved should be given several copious waterings during early spring with liquid fertilizer or liquid manure, especially about the time the buds are beginning to form.

On small places, where it is necessary to make the flower gardens not far from large trees, most of the plant foods designed for the flower beds are frequently stolen by thieving tree roots. To avoid this, cut down a foot, or even two feet, into the soil all around the edge of the bed with some sharp instrument such as an edger or a hay knife. The best time to do this is just before breaking the beds up in the spring, so that pieces of roots near the surface can be forked up, shaken out and removed.

On the place that is being steadily improved every spring should see at least a few of the newer shrubs, bush fruits or small fruit trees set out. There are many small gardens in which dwarf fruits might perfectly well be grown, which go from year to year without fruit of any sort whatever. In setting out these things the same care should be exercised not to expose the roots to sun and wind while transplanting. The ground should be prepared in advance, and any manure or fertilizer added. The holes should be made large enough so that the roots of shrubs or trees can be set into them without cramping and bending. Any roots which may have been broken or bruised in shipment should be cut back with a sharp knife to firm, hard wood. The tops also, unless they have been cut back before shipping, should be pruned in, in most cases a third or so. In planting, after the shrub or tree has been set in its place in the hole, pack the earth in well around the roots with the fingers, so that no air spaces will be left. Then, as the hole is filled up, stamp the earth firmly into the hole with the foot, or with a blunt stick. If the soil is very dry, pour in a generous quantity of water, wait until it soaks away, and then complete the filling. A summer mulch will help newly set trees to come safely through the dry season.

After these preliminaries, it would be a good plan to go over the lawn with the mowers. This will clear away any rough patches and improve the general appearance of the place.

First Choice for Over Fifty Years

BERRY BROTHERS VARNISHES

This spring when you decide to build, to varnish your living room floor or refinish your bedrooms in white enamel, remember that Berry Brothers' products have been the first choice of home owners, architects, builders, painters and decorators for over fifty years. They have stood the test of time in every land and continue to give lasting satisfaction.

Liquid Granite is a floor varnish of unusual beauty, toughness, and elasticity. Washing with soap and water has no harmful effect. It stands the hardest wear.

Luxeberry White Enamel is a white enamel that stays white and does not check or crack. For the white finishing of bedrooms, bathrooms, staircases, furniture, etc., there is nothing so fully satisfactory—your choice of a brilliant porcelain-like finish or rich dull effects.

See your dealer about these finishes or write us direct.



BERRY BROTHERS

(INCORPORATED)
World's Largest Varnish Makers

Established 1858

Member of
Branches in
Principal Cities
of the World

Factories:
Detroit, Mich.
Walkerville, Ont.
San Francisco, Cal.




LIQUID GRANITE



EUGENE LUGGHESE
748 Lexington Ave.
and 121 E. 59th St.,
NEW YORK
Est. 26 years

Garden and Hall Furniture
Guaranteed to stand any climate:
Marbles, Terra Cotta, Stones, etc., Vases, Benches, Sun Dial Terminals, Tables, Fountains, Flower Boxes, Mantels, Statues, Reliefs, etc.
Send 25c for illustrated catalog of 295 pages. The best copies of the best originals.

SUN DIALS

A Beautiful, Illustrated Booklet, "SUN DIALS" sent upon request. Estimates furnished. Any Latitude. Ask for Booklet No. 4.

E. B. MEYROWITZ, Inc., 237 Fifth Avenue, New York
Branches: New York, Minneapolis, St. Paul, London, Paris



SILVER LAKE A Sash Cord.

(Name stamped indelibly on every foot)

The man who builds a house without asking about the sash-cord to be used is laying up trouble for himself. Insist that the specifications mention SILVER LAKE A. Its smooth surface offers nothing on which the pulley can catch. Guaranteed for twenty years.

Write for Free Booklet.

SILVER LAKE COMPANY
87 Chauncy St., Boston, Mass.
Makers of SILVER LAKE solid braided clothes lines.





PECAN TREES

for Zero Climates

Growing at the 43d Parallel of latitude

We are headquarters for hardy northern grown Pecan trees, and were the first to begin their propagation and to offer *real paper-shell* Pecan trees for safe planting in the North. We are still the most northern growers of hardy Pecan trees. We have spent much time and thousands of dollars in establishing the safety of planting Pecans in the Northern states. Your assurance of success is fully established by the 40,000 trees in various stages of development to be seen at our nursery in Fairport, ten miles east of Rochester.

Our six varieties of hardy, acclimated Pecan trees, are budded with bearing wood from northern grown trees, upon northern grown seedlings, raised from northern grown nuts. Our winter conditions, far below zero at times, breeds iron-clad vigor and vitality—supreme requisites which you must have and which cannot be had in southern grown trees. The difference of a few degrees of latitude in the origin of your trees may mean success or failure, hence we cannot emphasize too much the importance of securing the "Farthest North" grown trees.

This Pecan Tree

was one of several shipped to Mr. F. M. Pierce, who appears in photograph. It was between 5 and 6 feet high when set in April, 1911, in Ashtabula, O. Picture was made October, 1912, after passing through a temperature of 25 below zero the winter of 1911-12. The splendid growth (nearly 4 feet) made by the tree during 17 months, show that it is perfectly hardy on the shores of Lake Erie.

We make a specialty of Pecans, English Walnuts and Sober Paragon, Mammoth Sweet Chestnuts.

Our 1914 Catalog and Planting Guide — Includes Nut Culture, Fruits, Roses, Shrubs, Evergreens, etc., mailed Free on Request

GLEN BROS., Inc.

Glenwood Nursery

Established 1866

2208 Main St., ROCHESTER, N. Y.

BIG SURPLUS OF ROSES

In all latest varieties. Strong two-year-old plants, true to name. Equal to those usually offered at twice the prices.

Killarney, Grus aus Teplitz, Capt. Christy, Jack, Brunner, Chateau, Testout, LaFrance.

3 Plants 60c, 6 Plants \$1.12

Delivered Free in the United States. Sixty other varieties at equally low prices. Write for Price List.

OTHER COLLECTIONS

15 Assorted Hardy Perennials \$1.00

6 " " " 50c

Satisfaction or Money Back.

F. T. LANGE

Weehawken P.O., N.J.

ROSES

that Bloom
are now a certainty.

G. & R. own-root roses cannot help but bloom. They are healthy, vigorous plants, grown on their own roots. G. & R. summer-propagated, winter-rested, ever-blooming roses

**MUST BLOOM THE FIRST YEAR
or YOUR MONEY BACK**

Our guarantee gives full protection. The improved qualities of our roses are fully described in **Free Illustrated Booklet**. Tells all about the G. & R. way of growing roses by the millions. Explains iron-clad guarantee of satisfaction or no money. Write for this book today.

THE GOOD & REESE CO., Box 159 Springfield, O.
Largest Rose Growers in the World

YOUR PROTECTION

— IS — THE BAY STATER



BAY STATE

Wadsworth, Howland & Company, Inc.

Paint and Varnish Makers and Lead Corroders

82-84 Washington Street

BOSTON, MASS.

When ordering a Coating for the protection or Decoration of Concrete, Cement, Brick and Stucco purchase

BAY STATE

and see that every container bears our trade mark.

We are the *only* manufacturers of Bay State Brick and Cement Coating. Bear in mind that we made and introduced the first *successful* Brick and Cement Coating placed on the market. Send for Booklet L.

Quality Crops for the Home

(Continued from page 281)

proximity to field corn, has become tainted—for corn will "mix" the first season when it gets an opportunity. It is to the varieties found in these two classes that, personally, I would award the palm for that nectar-like sweetness and melting tenderness which elevates corn into a dish for the gods!

Of the extra Earlies, the several varieties of Cory are still very popular, especially for market planting, but I think that such sorts as Metropolitan and Howling Mob are far superior in quality, and they are practically as early. Stabler's Early, Cosmopolitan and Hiawatha are three sorts which have largely superseded the old Crosby's Twelve-rowed as medium sorts. Stowell's Evergreen and White Evergreen, an improved Stowell's, are unexcelled as late sorts. Mammoth Late is even later than Stowell's, and of equally good quality. Of the "shoe-peg" sorts, that old favorite, Country Gentleman, which has delighted the palates of the particular for nearly a quarter of a century, has not, so far as I know, yet been improved upon. It is ready for table a little sooner than Stowell's.

As to the colored sorts, not many years ago there was just one sort that was used to any extent. That was Black Mexican, which, in spite of its unattractive color, was still appreciated by the discerning few for their private tables. Then came Golden Bantam; which, on account of its surpassing deliciousness, remarkable hardiness and "catchy" name, was within two or three seasons known from one end of the country to the other. Since then there have been a number of "golden" corns. I have not yet come across any so early as Golden Bantam; though not "flint"-grained, may be planted as early as the white extra earlies—and none is superior in flavor. Some of the others have larger ears, and, maturing a little later, do well to use for a succession planting. Without doubt, we will soon have a complete "set" of golden varieties. Earliest Catawba is another early colored sort of the utmost sweetness and tenderness imaginable. It matures a little later than Golden Bantam; the grains are tinged with light purplish-red, which increases as they ripen. The ears are a little small, but they are produced freely.

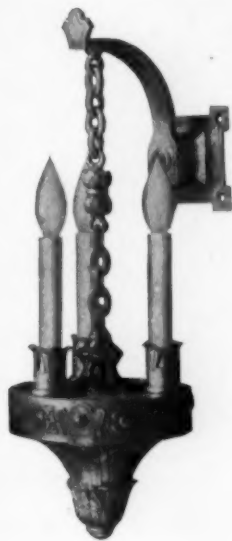
Cosmopolitan, Country Gentleman, Stabler's Early and White Evergreen make a good combination planting. I have planted Golden Bantam, Catawba, Seymour's Sweet-Orange, Black Mexican and Country Gentleman side by side, and, though they colored each other somewhat (spoiling the ears for seed, but not injuring the quality), and mature too quickly after each other to make an ideal successive planting, still they come along in the order named, and make a combination that for quality is hard to beat, if you like the extra sweet corns.

It is a simple matter to have corn from one to two weeks earlier than you have been having it, and that without resorting to any of the inferior extra-early varieties. Of course, starting and transplanting corn as you would lettuce or tomato plants would not be practical. But here is a simple method which I have used the last two years with success. Procure a hundred or so square paper-pots, or "dirt-bands." Pack these into flats, or directly into the cold-frame, and shovel them full of light, rich soil, filling the interspaces with soil or moss. Plant in these, putting only four or five kernels to a pot, as practically every one will sprout if the seed is good. Start them two to four weeks before it is safe to plant outside, and keep them in a warm, sunny place protected from frost at night, and well watered. Do not set outside until the weather is settled and warm—usually when the trees are well out in leaf. Then set quite deeply; that is, so the surface of the pots will be two or three inches below the surface; and under or near each hill put a good handful of hen-manure and ashes or half a handful of bone flour and cotton-seed meal. Be sure to give plenty of ventilation while the plants are growing in the frames, and to harden off well before setting in the open.

The soil most fancied by corn, where any choice may be given, is that which is well drained and "warm." But it should do well enough in any good garden soil. It is a good plan to put your sweet corn on greensward, or on any part of the garden which you may want to get into extra good shape for the following year. It is a splendid preparer, or antecedent crop,—and the planter with a small garden should plan his "rotations" and successions as carefully as the farmer. The part of your garden which is to be occupied by corn should be forked up or plowed as long in advance as possible, so that it will have time to be thoroughly warmed up.

Corn is a strong forager and does not require coddling in the way of plant-food; but an adequate amount of nitrogen during the earlier stages of growth and an abundance of potash during the latter stages are necessary for best results. Either manure or fertilizer may be used. It is a good plan to manure the corn section of the garden generously each year, and shift it around, following it with root crops, to which it is not so desirable to apply manure. Where manure alone is used on the corn patch, a suitable dressing of ashes, or of muriate or sulphate of potash, should be raked into the soil before planting. If fertilizer has to be relied upon, give a good dressing of a high-grade or market-garden brand. A fraction of a handful of nitrate of soda worked in about each hill at the time of the second hoeing will give the

Helps on The Selection of Lighting Fixtures



If you could walk into a living room and see displayed there a selection of several fixtures, especially adapted for its lighting, also a library, dining room, and entrance hall, it would not only greatly simplify the selection of your lighting fixtures, but insure continued contentment when installed in your house.

Here, at 101 Park Avenue, right near the Grand Central Station, New York, we have just such a series of rooms fitted with appropriate fixtures.

We want you to come and see them.

If you can't come, we hope you will feel free to write us about your needs. We will gladly make suggestions and send you our Brochure. Or, perhaps, we might also send some photos of subjects we feel are particularly adapted for your purpose.

Wahle & Phillips Co.

Architects Bldg.,

Park Ave. and 40th St.,

New York

Are You Looking for a Country Home?

Have You a Place For Sale?

If you are seeking for, or wish to dispose of, any particular kind of a place—an inexpensive rural property within reasonable distance of a city, a suburban house and plot, a summer house in the mountains or at the seashore, or a farm adapted to the raising of any special product—the Real Estate Bureau will help you without any charge for its services.

In writing state in as much detail as possible just what is required, or just what you have, and address the

**Manager of the
REAL ESTATE BUREAU
HOUSE & GARDEN
Union Square New York**



YOUR ROSE GUIDE

—yours for the asking. It's a guide both as to the best methods of growing roses and as to the selection of the variety best adapted to your climate, soil and tastes. It's

THE RESULT OF OVER FIFTY YEARS OF ROSE GROWING

during which time the actual love of the work has, through perseverance, resulted in our being called the "rose specialists." This Rose Guide

SHOWS 360 CAREFULLY TESTED VARIETIES which for combined color, growth, form, hardiness and fragrance are unequalled. Every plant sold is **guaranteed to grow and bloom.** We also offer

FOURTEEN BEAUTIFUL NEW VARIETIES for 1914, that have distinguished themselves in recent American and European exhibitions. They are the latest additions to our list of

"THE BEST ROSES FOR AMERICA"

—by which title the C. & J. roses are known everywhere. All are healthy, vigorous, fragrant, beautiful.

THE GUIDE IS FREE—SEND FOR IT AT ONCE. Now is the time to make selections for the coming season. An especially fine stock on hand.

THE CONARD & JONES CO.

Rose Specialists—
Over Fifty Years' Experience
BOX 126 WEST GROVE, PA.



SATISFACTION ROSES AND HARDY PLANTS

IF any one's roses and hardy plants will give you satisfaction, these from Cromwell Gardens will. For forty years we have been growing roses. Right now we have some exceptionally fine ones in large pots that when planted in your garden will go right on growing and start blooming as happily as if still growing right here in Cromwell Gardens. Altogether our catalog lists one hundred and fifty varieties for outdoors, and some thirty or more for the greenhouses. Every one of them tested varieties. We stand back of them and know they will give satisfaction.

As for our Hardy Plants. Ours grew in the open last summer and were potted in the fall. We feel that we never have handled a finer lot. Good, husky, full rooted plants, every one of them. Planted in your garden this spring, they ought to bloom this summer.

Don't fuss with planting seeds and then have to wait two years for blooms, when you can buy Satisfaction Plants like these that will bloom first year.

Send for our catalog. Make out your list and get your order in early, so we can ship it just as early as you wish. You'll like that catalog. It contains a lot of plain, everyday, common-sense gardening suggestions to aid you in making your garden in keeping with your home.



A. N. PIERSON INC.
CROMWELL GARDENS
CROMWELL CONN

HORSFORD'S Cold Weather Plants

and Flower Seeds that Grow
Flowering Plants, Shrubs, Trees, Vines, Wild Flowers, Hardy Ferns, Lilies, etc.—for sun and for shade. Raised in the rigorous climate of Vermont. Will thrive in the cold north or the sunny south. Get our new catalog before placing your spring orders—we have just what you need. Write to-day.
F. H. HORSFORD, Charlotte, Vt.

GOLF FOR THE LATE BEGINNER

By HENRY HUGHES

The title describes precisely the purpose of this practical book. The author himself took up the game in middle age, and with his experience fresh upon him explains the correct principles of golf in a way especially helpful to the late beginner. The illustrations are from actual photographs, showing correct and incorrect methods, also the various positions for the different strokes. Illustrated. 60 cents net. Postage, 5 cents.

McBride, Nast & Co., New York

Dreer's Dahlias

WE grew more than 50 acres last year. Over 800 varieties including the cream of the world's novelties as well as the best of the old favorites.

As cut flowers for decorating or sending to friends, nothing equals Dahlias in the late summer or fall. You can cut them by the armful every day from even a small bed. The newer types are a revelation to most people.

Dreer's Special Dahlia Catalogue

is absolutely necessary to all who wish to keep down-to-date on the Dahlia interest which is sweeping over the country.

Mailed FREE. Please mention this publication.

HENRY A. DREER, 714 Chestnut St., Philadelphia



Peony-flowered Dahlia.

leaves that desirable dark-green color and the plants a strong start.

One of the fine points about getting sweet corn early is to pick just the right time for planting. The inferior-quality extra earlies can go in about as soon as danger from hard frosts is over—from middle of April to middle of May, according to locality and season. But the later real "sugar" sorts, in damp, cold soil, are pretty sure to pot. The trees are usually well in leaf before it is safe to plant them. Covering the seed for the first planting an inch or so deep will often save seed that would otherwise be lost. Quick-growing varieties, such as Cosmopolitan and Golden Bantam, may be planted until as late as the first to the middle of July, to furnish a supply of ears for late fall, until killing frosts. Ears that are fairly well developed will usually mature even after the foliage is touched by the first frosts. These late plantings should be made quite deep, especially if the soil is very dry near the surface. Under such conditions, three inches will not be too much.

It is the general practice to plant corn in "hills." People have the habit of doing it that way. They got the habit because, where corn is planted in large areas, it is convenient to "work" it both ways with a cultivator, to save hand work. But in the case of the person with a small garden no such reason exists. I am convinced that more and better corn may be grown, with no more trouble, by sowing thinly in drills. The stalks left to mature should stand six to nine inches apart. Some thinning may be required; but this usually is, or should be, done where it is planted in hills. But the individual stalks will have more room in which to develop, and there will be more of them. Besides this, especially if the rows run east and west—which is preferable, if it can conveniently be managed—the ground will be shaded sooner and better than where the stalks are growing in hills; an item well worth considering in a dry season.

Another old method which is still persistently clung to in the small garden is to "hill up" corn as much as possible. Except on heavy soil or during a very wet season there is no reason for doing this; in fact, there are good reasons for not doing it. In the first place, corn is a very shallow feeder, the roots running near the surface, and where earth is heaped up in a series of little mounds it naturally dries out much more quickly than where it is left level. Then, too, high hilling makes it more difficult to keep the ground clean to the end of the season; and to spade up and prepare again for the following crop.

Corn requires a great amount of water. Therefore, cultivation should be frequent enough to maintain an effectual dust mulch all the time. But, as the root system develops near the surface of the soil, you will have to be very careful, espe-

cially after the first one or two cultivations, to work your hoe or wheel-hoe very shallow. It is all right to work some soil up about the stalks, especially in smothering out little weeds that have just started, but with a small, narrow-bladed hoe, with which you can cut quickly and easily next to the stalks, or between them if they are growing in a continuous row, as suggested above, not much of this will be necessary. Be careful to pull out any large late weeds before they go to seed.

After the ears are pulled, cut the stalks off clean, whether you have use for them as forage or not. Do not leave them to grow on, wasting useful plant-food, making hard "clumps" of roots and stalks that will be in the way for the next "fitting" of the ground, and sheltering late weeds and insect pests or their eggs.

This series of Quality Crops for the Home was begun in the January issue, which dealt with the growth of peas; February, salad plants; March, the root crops. Each of the divisions of the home vegetable garden will be taken up from the standpoint of quality, not only in selecting the right seed, but also in the best cultural directions. With the other articles in this issue, on pages 282 and 283, this series should bring success in growing better vegetables than can be bought.—EDITOR.

A Garden Plan for Every Man

(Continued from page 277)

- 9 *Scabiosa Caucasica*, 18", blue bonnet, June. 1 foot apart.
10 *Caryopteris mastacanthus*, 3', blue spirea, Sept.-Nov. 15 inches apart.

YELLOW WITH SCARLET

- 1 *Phimula vulgaris*, 8 inches apart.
2 *Doronicum Caucasianum*, 1 foot apart.
3 *Baptisia tinctoria*, 1 foot apart.
4 *Hypericum Moserianum*, 15 inches apart.
5 *Chrysanthemum*, "Boston," 18 inches apart.
6 *Aquilegia Canadensis*, 18", native Columbine, May, 1 foot apart.
7 *Papaver orientale*, 18", poppy, June-July. 8 inches apart.
8 *Pentstemon barbatus*, 3', beard tongue, June-August. 18 inches apart.
9 *Gaillardia grandiflora*, 2-3', blanket flower, June-Sept. 15 inches apart.
10 *Tritoma Pfitzerii*, 3', red-hot poker, Sept.-Nov. 15 inches apart.

YELLOW WITH BLUE

- 1 *Doronicum Caucasianum*, 2', leopard's bane, May. 1 foot apart.
2 *Trollius Europaens*, 2', globe flower, May-August. 1 foot apart.
3 *Hemerocallis Thunbergii*, 3', tawny day lily, July. 1 foot apart.
4 *Hypericum Moserianum*, 2', St. John's wort, June. 15 inches apart.
5 *Chrysanthemum*, "Globe d'Or," 2', hardy chrysanthemum, Sept.-Nov. 18 inches apart.
6 *Funkia caerulea*, 18", plantain lily, June-July. 1 foot apart.
7 *Linum perenne*, 18", flax, July. 1 foot apart.
8 *Anchusa Italica*, "Dropmore," 3', Italian alkanet, May-July.
9 *Veronica longifolia subsessilis*, 3', Speedwell, July-August. 1 foot apart.
10 *Delphinium belladonna*, 3-5', Larkspur, July. 18 inches apart.

Border Planting

- 1 *Rosa rugosa*, Japanese rose, June. 3 feet apart.
2 *Lonicera Halliana*, honeysuckle, all summer at fence post or 10 feet apart.
3 *Lonicera Belgica*, woodbine, Chinese honeysuckle, late summer. As above.
4 *Clematis paniculata grandiflora*, Virgin's bower, Aug. As above or as indicated.
5 *Rosa rubiginosa*, sweet briar rose, June-July. Every 6 feet.
6 *Rosa*, "Dorothy Perkins," climbing rose, July. As indicated.
7 *Althea rosea*, mixed hollyhock, July-August. 18 inches apart.
8 *Digitalis lanata*, Foxglove, June-July. 15 inches apart.
9 *Delphinium belladonna*, Larkspur, June and on if cut back. 18 inches apart.
10 *Veronica longifolia subsessilis*, Speedwell, August. 1 foot apart.
11 *Phlox*, assorted as preferred. Phlox as selected June-July. 15 inches apart.
12 *Dianthus barbatus*, Sweet William, June. 10 inches apart.
13 *Anemone Japonica*, "Queen Charlotte," Sept.-Oct. 10 inches apart.



Johnson's Wood Dye

In 17 shades—for the artistic coloring of wood—soft and hard.

Johnson's Prepared Wax

A complete finish and polish for all wood—floors, woodwork and furniture.

Ask Your Dealer in Paints

for Free trial packages and Instruction Book, "The Proper Treatment for Floors, Woodwork and Furniture."

S.C. Johnson & Son
"The Wood Finishing Authorities"
Racine, Wis.

Architects and Home Builders

need one of our \$1.00 portfolios of Wood Panels. It shows on actual woods just how floors and woodwork will look when finished "The Johnson Way."

We will send this \$1.00 portfolio FREE and post-paid on request.

ASHES OF VENGEANCE

In Old France, Love Overcometh Enmity
By H. B. SOMERVILLE



Romance, adventure and chivalry in the stormy days of old France, in which glorious love overcomes an ancient feud between two noble houses. The robust quality and charm of this tale of hearts courageous and triumphant love recalls the Stanley Weyman of *The Red Robe*. How the Comte de Briège obtained bodily possession of a Huguenot soldier, making him a feudal slave, how each man in this strange position learned the worth of the other, how a haughty, beautiful woman stood between them, and how out of the "Ashes of Vengeance" the blossom of love arose, is told in a story marked by heroic deeds and tender sentiment. 12mo. \$1.25 net; postage 12 cents.

McBRIDE, NAST & CO., Publishers, NEW YORK



The Home Beautiful

may be made an everlasting monument to the good taste and wisdom of its owner and architect if covered with the beautiful, element-resisting

KELLASTONE

IMPERISHABLE STUCCO

—the stucco that hardens like stone and yet possesses an elasticity that enables it to "give" with the settling of the building to a far greater extent than ordinary stuccos, without cracking, chipping or peeling off. It contains no Portland cement or lime.

Kellastone is a non-conductor of heat, cold and dampness. It is weatherproof and retains its beautiful, clean, attractive appearance for years after ordinary stuccos have cracked, flaked, and gone to ruin.

Kellastone can be applied rough cast or smooth finish to new or old buildings from the most palatial home to the most humble bungalow. It is fireproof and commands a very low rate of insurance.

As an interior finish, it has no equal. Kellastoned walls will not crack, can not be dented by knocks from furniture, and are not affected by steam from cooking, etc. It can be tinted, stenciled, painted or papered without injury to colors or fabric.

Kellastone Composition Flooring

retains its beauty indefinitely. It is sanitary, waterproof, fireproof and abrasion proof. It is not slippery, easily kept clean and forms a perfect flooring for bathrooms, kitchens, etc.

Send for catalog showing the wonderful possibilities of Kellastone. Do it now. Have it included in your specifications.

The National Kellastone Company

19 S. La Salle Street

Dept. 8,

Chicago, Illinois

The Special Uses of Garden Plants

(Continued from page 264)

year, although most of them bloom in the spring, and perennials may take up the color sequence in the garden. If you keep in mind the necessity of flowing lines you will be successful in shrubbery planting. Note how a coast line is irregularly indented by bays and sends out peninsulas and points or capes. This is the effect shrubs should give. Keep in mind the desirability of using few varieties together. The great, white masses of snowball or *spiraea*, shaded with the lilac blossoms, make better pictures than where many varieties of form and shade and color are mixed. Look through a list for shrubs that are beautiful for their berries or bark in fall or winter, and strive to use some of the low evergreens for borders. There are a few specialties that are not in the subjoined list, to which you may be partial. The flowering almond, with its delicate white and pink double flowers, is very hardy; then the magnolia, with its cloud of great, waxy flowers in the spring, or the dogwood, where you have a vista, and want the white flowers early in the season and the berries later. The sumacs (*rhus*) are attractive for fall color, and *rhus cotinus*, the smoke bush, is an old-fashioned and pleasing shrub.

Rhus Canadensis flowers in the spring before the leaves appear. This is one of the best cover shrubs. It will flourish in any soil and is especially adapted to dry, rocky banks. Its flowers are yellow.

Here follows a simple list of annuals and perennials and shrubs, with data that will help to fit them in your garden scheme:

SHRUBS

(Blooming in April)

DAPHNE (*Daphne Mezereum*)—Three feet high; lilac flowers.

GOLDEN BELLS (*Forsythia Fortunei*)—Eight feet; yellow flowers.

(Blooming in May)

BARBERRY (*Berberis Thunbergii*)—Four feet; yellow (berries).

FLOWERING PLUM (*Prunus triloba*)—Five feet high; pink flowers.

BUSH HONEYSUCKLE (*Lonicera Morrowi*)—Six feet; white flowers.

SPIRAEA (*Spiraea Van Houttei*)—Eight feet; white.

HIGHBUSH CRANBERRY (*Viburnum opulus*)—Twelve feet; white (berries).

LILAC (*Syringa vulgaris*)—Twelve feet; white and lilac.

(Blooming in June)

SHRUBBY CINQUEFOIL (*Potentilla Fruticosa*)—Three feet; yellow.

DENTZIA (*Dentzia Crocilis*)—Three feet; white.

MOCK ORANGE (*Philadelphus Coronarius*)—Five feet; creamy.

WEIGELIA (*Diervilla floribunda*)—Six to eight feet; crimson.

RED OSIER (*Cornus sanguinea*)—Twelve feet; white (berries).

(Blooming in July)

STEEPLE BUSH (*Spiraea tomentosa*)—Four feet; purple-pink.

OAKLEAVED HYDRANGEA (*Hydrangea quercifolia*)—Four to six feet; white.

PANICLED HYDRANGEA (*Hydrangea paniculata*)—Ten feet; white.

(Blooming in August)

Baroque Architecture

By MARTIN S. BRIGGS

A period of art which is attracting a good deal of interest and about which little has been written in English. In bridging so important a gap in the library shelf of the architect and general reader, the author, an eminent architect, takes a new view of this period, and considers architecture in relation to contemporary history, manners and religion. His criticisms are enhanced by ample and interesting illustrations, many from his own sketches in all parts of Europe. A full bibliography enables students to make further research in this interesting field.

With over 100 Illustrations. Crown 4to. \$5.00 net.

McBRIDE, NAST & CO. Publishers NEW YORK



PURPLE FRUITED CALLICARPA (*Callicarpa pur-pura*)—Four feet; pink.

HIBISCUS (*Hibiscus Syriacus*)—Twelve feet; white and pink.

(Blooming in September)

BLUE SPIRAEA (*Caryopteris mastacanthus*)—Four feet; blue.

ANNUALS

In the following descriptions the first two figures after the names of the flowers indicate the distance apart for planting. The third and fourth figures indicate the height of the plants.

NOTE—C, flowers especially for cutting; S, flowers thriving in partial shade; P, flowers that should be started early under glass, or purchased from the florist.

While most of these can be sown in the open ground in May or early June to flower the same year, quicker results will be had if they are started early in flats, in the hotbed or window, and transplanted. With some (marked "P" above) it is quite necessary to do this. With annuals especially it is important to keep the flowers cut off before ripening seed if a long season of bloom is wanted.

AFRICAN DAISY—6-10 in.; 12-15 in.; color, rich, various; flowers June to frost. New profuse flowering plants, good for beds and borders.

AGERATUM—6-12 in.; 12 in.; color, blue, white; flowers June to frost. Popular old-fashioned plants for edging. P.

ASTER—12-24 in.; 18-30 in.; color, various; flowers July-September. Protect from aster beetle by hand picking and Paris green. P. C.

BACHELOR'S BUTTON—6-10 in.; 15-24 in.; color, blue, white, pink; flowers July. Old favorite for borders. S. C.

BALSAM—15-20 in.; 10-18 in.; color, various; flowers June-September. Use in foreground, where individual flowers will show.

CALENDULA—12-18 in.; 18-24 in.; color, orange, yellow; flowers June to frost. Very free flowering; masses or borders.

CALLIOPSIS—8-10 in.; 12-18 in.; color, yellow (orange-brown); flowers June-September. Of very quick growth, and free flowering. C.

CALIFORNIA POPPY—6-8 in.; 12 in.; color, orange, yellow; flowers August. Sow early. Beautiful in solid beds. Fine new varieties.

CANDYTUFT—4-12 in.; 6-18 in.; color, white, crimson carmine; flowers June-September. Good for solid masses of color, especially white. C.

CASTOR BEAN—24-36 in.; 50-90 in.; color, foliage; flowers July to frost. Very rapid grower; screening and tropical effects. S.

CHRYSANTHEMUM—12-18 in.; 12-36 in.; color, various; flowers August-October. Very easily grown and very showy.

CLARKIA—8-10 in.; 18 in.; color, white, rose, purple; flowers June-September. Bright daisy-like flowers, pretty foliage. C.

COCKSCOMB (*Celosia*)—8-18 in.; 6-18 in.; color, white, red, yellow, purple; flowers June to frost. Satisfactory borders, especially for long lines of color.

CORNFLOWER—8-12 in.; 12-40 in.; color, white, blue, lilac; flowers June-August. Greatly improved. One of the best blue flowers. C.

COSMOS—24 in.; 2-8 ft.; color, white, pink, red; flowers August to frost. One of the most beautiful of annuals. Start early. P. C.

GLOBE AMARANTH—10-15 in.; 18 in.; color, pink; flowers July. Also for borders and masses. C.

GODETIA—8-12 in.; 12-24 in.; color red, white; flowers July-October. Good for masses. C. S.

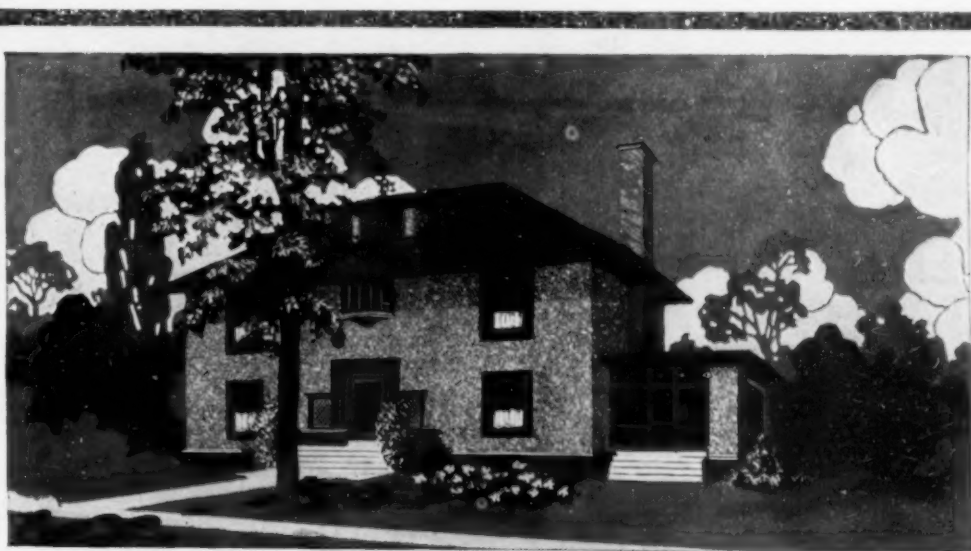
GOURDS—12-24 in.; 5-15 ft.; color, colored fruits; flowers July to frost. Climbers. Fruits of various shapes and colors.

GYPSOPHILA—6-15 in.; 12-24 in.; color, white; flowers June-September. Valuable for bouquets. Make several plantings. C.

LARKSPUR ANNUAL—6-12 in.; 18-36 in.; color, white, blue, pink; flowers June-July. Rich colors. Another of the best blue flowers. C.

LAVATERA—8-12 in.; 3-6 ft.; color, rose; flowers July. Another good screening plant.

LOBELIA—4-8 in.; 6-18 in.; color, blue, white; flowers June-September. Beautiful for low borders and edges; also in mass. S.



Build Your Walls With Care

They are the most important feature of your home

Discriminate in the selection of the base behind your interior plastering and your outside stucco and you will have walls of beauty and permanence.

Kno-Burn

Expanded Metal Lath

is the logical base for plaster and stucco. It is absolutely dependable.

Plaster cracks when the lath behind it does not grip. Kno-Burn is made with a mesh which the plaster surrounds when applied and grips unfailingly as soon as it has hardened.

Plaster falls when the lath behind it begins to rot. Kno-Burn can't rot. It is a metal lath.

Our new booklet "Practical Home-building" tells you all about walls and a great deal more. It treats of home-building from the selection of a suitable site clear through to the finishing touches of construction. It is full of plans, photographs, estimates, comparative prices and building economies—just the sort of information every home-builder wants.

Send ten cents to cover cost of mailing and ask for booklet 379.

North Western Expanded Metal Company
9-7 Old Colony Building Chicago, U. S. A.



FOR YOUR BIOGRAPHICAL SHELF

A Court Painter and His Circle
Francois Boucher (1703-1770)

By MRS. BEARNE
Author of "Heroines of French Society," etc.

Francois Boucher, the celebrated Court painter of Louis XV, was perhaps the most characteristic of the distinguished throng of painters that arose in France, when, after the death of Louis XIV, the solemn and state and splendor which had oppressed and trammelled the freedom of Art gave place to a reign of gaiety, license, and unrestrained worship of beauty and pleasure. Boucher painted in an atmosphere of romance, tragedy and excitement in the Paris and Versailles of the period.
With a colored Frontispiece and 32 other Illustrations.
8vo. Cloth. \$4.00 net. Postage 30 cents.

The Autobiography of Charlotte Amelle
Princess of Aldenburg (1652-1732)

Translated and Edited by her descendant
By MRS. AUBREY LE BLOND

This is the life story of a singularly attractive woman, written for the guidance of her son. Princess Charlotte left the country of her birth when a girl because of religious intolerance and retired to Denmark, where she was sought in marriage by three kings and an infinite array of German princelings. She was married to Anthony I., Count of Aldenburg only to have him snatched from her but six months after their marriage, poisoned by instigators of the heir presumptive.
Illustrated with unpublished Portraits from Private Collections. \$4.00 net. Postage 20 cents.

McBRIDE, NAST & CO., 31 UNION SQ. NORTH, NEW YORK

Is Your Refrigerator Poisoning Your Family?



Never Sold in Stores

30 Days' Trial—Factory Price—Cash or Credit

Direct from factory to you—saving you store profits. We pay freight and guarantee your money back and removal of refrigerator at no expense to you if you are not absolutely satisfied. Easy terms if more convenient for you. Send for book NOW—A letter or postal.

Your doctor will tell you that a refrigerator which cannot be kept sweet, clean and wholesome, as you can easily keep the Monroe, is *always dangerous* to the health of the family.

The "Monroe"

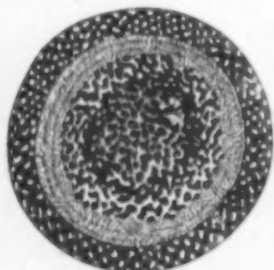
is the Refrigerator You Hear So Much About—the Refrigerator with *Genuine Solid Porcelain Food Compartments—Every Corner Rounded*

which can be kept free of breeding places for the disease germs poison food which in turn poisons people. Not cheap "bath-tub" porcelain-enamel, but one solid piece of snow-white unbreakable porcelain ware—nothing to crack, craze, chip, break or absorb moisture—but *genuine* porcelain, *over an inch thick*—as easily cleaned as a china bowl—not a single crack, crevice, joint, screw-head or any other lodging place for dirt and the germs of disease and decay. Send for

FREE BOOK About Refrigerators

which explains all this and tells you how to select your home refrigerator—how to tell the good from the bad—how to have better and more nourishing food—how to keep food longer without spoiling and how to cut down ice bills—how to guard against sickness and doctor bills.

Monroe Refrigerator Co., Station 4-C, Lockland, O.



Illustrated with photographs, diagrams, and Frontispiece in color.
\$2.00 net. Postage 14 cents.

The Craft of Hand-Made Rugs

By AMY MALI HICKS

The general interest in the arts and crafts movement has revived certain old-time industries and small crafts. These crafts should appeal to the amateur because they require such simple materials and equipment. It is the basis of this book to take these old-time methods of handicraft to revise and refreshen them by careful planning in color and design, and to add to them the art feeling of our own times.

McBRIDE, NAST & CO., Publishers

NEW YORK



Pot with saucer
15 in. high
17½ in. wide

Price \$6.00

Exquisite Italian Old Ivory Tint Pottery

The beautiful colorings and effects of the pottery of Florence and Rome you can have in your own garden—on your own porch.

With shapely vases and pots, graceful sundials and benches, charming boxes and pedestals—you can transplant your grounds to the very heart of Old Italy.

WHEATLEY POTTERY

is absolutely weatherproof—is very tough and hard—and decidedly inexpensive. Its neutral ivory tint permits its harmonious use with any color scheme of decoration, indoors or out.

WRITE TODAY FOR POTTERY PORTFOLIO—and name of nearest Wheatley dealer. If your dealer hasn't genuine Wheatley Old Ivory Tint Pottery, we will supply you direct. Get our portfolio and prices before you buy another piece of pottery. Address Dept. 1

THE WHEATLEY POTTERY
2426-32 Reading Road CINCINNATI, O.
Established 1879

Weather Changes

Scarcely a day goes by that you do not want to know what the weather is "going to do." You can forecast it with certainty if you have an

S. & M. Tycos House Barometer

Our S. & M. House Barometer, No. 2202, is constructed with scientific exactness and is of high quality throughout. It has open enamel dial and visible works. Encased in brass, it makes a most ornamental as well as useful article for the home.

S. & M. Tycos Weather Instruments are sold by the better class Opticians, Scientific Instrument Dealers, etc. Go to your dealer first. If he does not have them, or will not order for you, send us his name and address with \$8.00, and we will send you one. When ordering, give the number "2202."

Other styles described in our "Barometer Book" mailed on request. Mfd. by

SHORT & MASON, Ltd
London, Eng.

division of
TAYLOR INSTRUMENT
COMPANIES

20 Hague St., Rochester, N. Y.
Makers of Scientific Instruments to the U. S., British, Japanese, Canadian, Indian, Australian and other governments.



LOVE-LIES-BLEEDING—10-15 in.; 3-5 ft.; color, yellow to scarlet; flowers June-July. Good for screens and masses. Will self-sow.

LOVE-IN-A-MIST—10-12 in.; 12-24 in.; color, white-blue; flowers June-September. Old favorite; good for borders.

LUPINE—4-8 in.; 12-24 in.; color, white, blue, pink; flowers June. New varieties give a range of colors. C. S.

MARIGOLD—6-18 in.; 10-36 in.; color pale gold to orange; flowers July to frost. Great variety. Dwarf sorts good for edgings.

MIGNONETTE—6 in.; 12-18 in.; color, golden to reddish yellow; flowers July-September. Prized for its delicious fragrance. Second planting in August. C.

MOONFLOWER—6-18 in.; 15-30 ft.; color, white, blue; flowers August to frost. Most beautiful annual climber. Start under glass. P.

MORNING GLORY—4-12 in.; 10-20 in.; color, various; flowers July-September. Flowering annual for quickly covering fences, etc.

NASTURTIUM—5-12 in.; 12-60 in.; color, various; flowers July to frost. Wonderful improvements, especially in the foliage. C. S.

NICOTIANA—8-12 in.; 3-5 ft.; color, white, red; flowers July to frost. Unique, pretty flowers with a jessamine-like fragrance.

PANSY—6-8 in.; 6 in.; color, various; flowers May to frost. Get young, small plants for best results. P. C.

PETUNIA—8-12 in.; 12-24 in.; color, white to claret, mixed; flowers July to frost. Wonderfully free-flowering and showy. S.

PHLOX DRUMMONDI—8-12 in.; 12-36 in.; color, various, brilliant; flowers July to frost. Splendid for solid beds, or medium height bright edges.

PINKS (*Dianthus*)—5-8 in.; 10-18 in.; color, white to rose; flowers August to frost. One of the most satisfactory of all summer annuals. C.

POPPY—4 in.; 6-10 in.; color, white to scarlet; flowers July-September. Will not transplant well. Most effective in mass beds.

PORTULACA—4-6 in.; 6-10 in.; color, white, yellow, red shades; flowers July to frost. Cheery, old-fashioned favorites; full sun, sandy soil.

SALPIGLOSSIS—6-12 in.; 12-24 in.; color, various; flowers June-September. Wonderful velvety texture and delicate pencilings. C.

SALVIA—6-12 in.; 12-36 in.; color, scarlet; flowers August to frost. For mass effects the most vivid of all red flowers. P.

SCHIZANTHUS—8 in.; 24 in.; color mixed, yellow to lilac; flowers July-August. Good for masses when blossoms are scarce.

STOCK—6-12 in.; 12-24 in.; color, various; flowers June-September. Beautifully formed; delicate shades; very fragrant. C.

SUNFLOWER—24-36 in.; 3-7 ft.; color, yellow; flowers August-September. Very rapid growing; useful for screening fences, etc.

SWEET ALYSSUM—4-8 in.; 8-10 in.; color, white; flowers May to frost. Still the most popular of edging plants. S.

SWEET PEA—4-8 in.; 2-6 in.; color, various; flowers June-September. For best results start inside in pots, and set out in April. C.

THUNBERGIA—4-10 in.; 3-8 ft.; color, white, yellow, orange; flowers July-September. Good for low trellises and vases.

TORENTIA—6-12 in.; 8-15 in.; color, blue, white; flowers July-September. Unique; good for vases and hanging baskets.

VERBENA—12-18 in.; 6-9 in.; color, various; flowers July to frost. One of the brightest, cheeriest and most free-flowering.

ZINNIA—8-12 in.; 12-24 in.; color, various, brilliant; flowers July to frost. Brilliant of color; dwarf, red sort splendid for borders.

BIENNIALS

These should also be sown every year, that flowers for the year following may be provided. They may be started in May or June and transplanted later to their permanent places. Foxglove and other short-lived perennials are best treated in the same way.

CAMPANULA—8-12 in.; 18-36 in.; color, white, blue, pink; flowers June-August. Still popular for both beds and borders.

FORGET-ME-NOT—6 in.; 6-12 in.; color, blue, white; flowers April-July. The best blue edging plant; the most dainty. S.

FOXGLOVE—10 in.; 12-36 in.; color, pink, white, various; flowers June. Very easily grown; old favorites for the border.

HOLLYHOCK—12-18 in.; 3-7 ft.; color, white, yellow, scarlet, rose; flowers August-September. Especially valuable against high walls. Gorgeous colors.

SWEET WILLIAM—6-12 in.; 12-18 in.; color, white, pink, red; flowers July-August. Still one of the very best border plants. C.

WALL FLOWER—6 in.; 12-30 in.; color, brown, yellow; flowers July-September. Fragrant. Early sorts may be treated as annuals. C.

PERENNIALS

Many of these, if sown early under glass, will flower the first year—some, even from seed sown in the open. They should be grown to fair size in the seedbed and then transplanted to permanent quarters. The border of hardy perennials should be one of the most beautiful spots in the garden.

ALYSSUM (Saxatile)—6-12 in.; 12 in.; color, golden yellow; flowers May-June. Especially useful around rock-work, bases, etc.

AQUILEGIA—10 in.; 12-36 in.; color, various; flowers June-July. Greatly improved. Very graceful. C.

ADONIS—6 in.; 12 in.; color, yellow; flowers May-June. Good early flower for border.

ANEMONE—12 in.; 12-36 in.; color, white to rose; flowers August to frost. Should have a place in every garden; extremely beautiful. C.

BELLIS—4-6 in.; 6-8 in.; color, white, pink, red; flowers April-July. Low-growing, beautiful little daisies, extremely attractive.

BLEEDING-HEART—12-18 in.; 24-30 in.; color, purple, pink, white; flowers May-June. Peculiar heart-shaped flowers in graceful sprays. S. C.

CANDYTUFT (Iberis)—6 in.; 9 in.; color, white; flowers May-June. A hardy form of the annual above.

CHRYSANTHEMUM—12-18 in.; 24-40 in.; color, various; flowers August to frost. If started early, will flower first year. C.

COREOPSIS—12-15 in.; 24-36 in.; color, golden yellow; flowers June to frost. Free-flowering, for the hardy border. C.

DAHLIA—24-36 in.; 2-4 ft.; color, various; flowers July to frost. Easily grown; likes very rich, heavy soil. C.

FOUR O'CLOCK—10 in.; 30 in.; color, yellow, white, red; flowers July-August. Midsummer; good for border.

GAILLARDIA—10-12 in.; 18-24 in.; color, yellow, crimson; flowers July to frost. If sown early, will bloom first year. C.

HELIOPSIS—8-15 in.; 3-4 ft.; color, yellow; flowers July-September. Good for mass effects in background.

HELIANTHUS—2-4 ft.; 2-10 ft.; color, yellow; flowers August to frost. The improved types are truly gorgeous.

IRIS—12-18 in.; 18-30 in.; color, various; flowers May-July. Some of the shades beautiful as orchids. C.

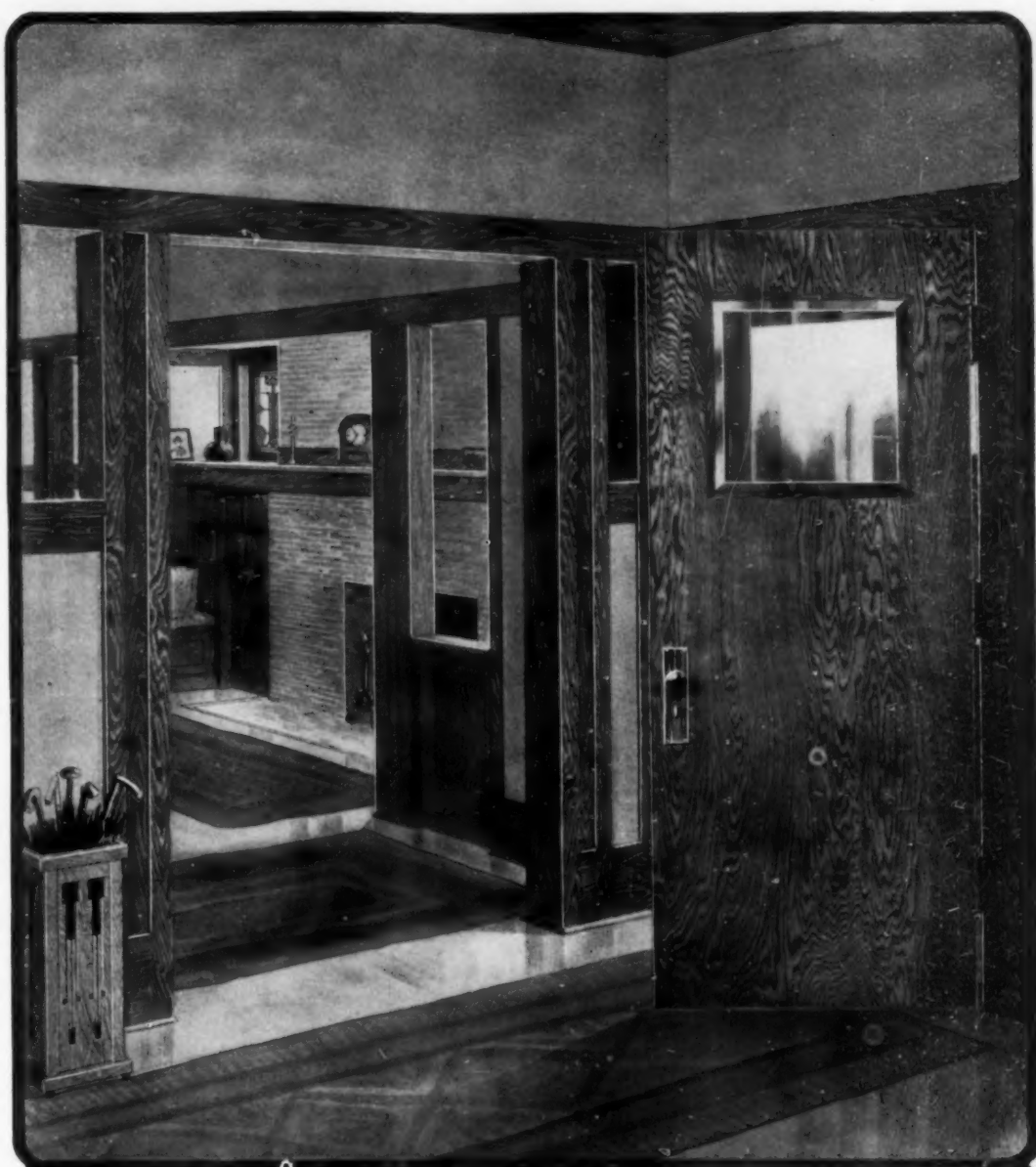
LARKSPUR—12-18 in.; 3-4 ft.; color, blues; flowers July-September. Best blue flowers for the border.

MONKSHOOD—10-15 in.; 36 in.; color, blue-white; flowers July-August. Good for borders, but poisonous.

PEONY—24 in.; 24-36 in.; color, red, pink, white; flowers May-June. Most showy of all border plants. P. C.

PHILOX (Hardy)—12-18 in.; 12-36 in.; color, various; flowers July-September. Permanent and satisfactory border plants. P. C.

PINK—6-10 in.; 8-12 in.; color, various; flowers August-September. Beautiful colors; one of the best for cutting. C.



MORGAN DOORS

proclaim the *character* of the home. They carry out *ideas*. They complete pure architectural harmony and beauty.

The name MORGAN on the top rail of every genuine MORGAN Door guarantees service which insures the highest door economy.

Our Free book, "The Door Beautiful" offers standard styles and stock sizes making selection easy and satisfaction certain. Send for it. Architects see Sweet's Index, Pages 1004 and 1005.

MORGAN SASH & DOOR COMPANY, Dept. C-32, Chicago, U. S. A.

Factory
Morgan Company, Oshkosh, Wis.

Distributed by
Morgan Millwork Company, Baltimore, Md.
New York Office: 6 E. 39th St.

THE EFFICIENT KITCHEN

Practical Directions for Planning and Equipping the Modern Labor-Saving Kitchen

By GEORGE BOYNTON CHILD

The Efficient Kitchen has been written to answer the question of the practical home maker who desires to put her housekeeping on a modern basis. Without going into theory, it tells practically how to eliminate waste and thus lower the cost of living. The adaptation of labor saving inventions to the needs of everyone, prices of household equipment, comparative merits and directions for installing, are some of the practical phases of this guide to an ideal system of meeting the house-keeping problem. It is fitted for the needs of every house owner, whatever the station may be.

Illustrated with Photographs and diagrams. 12mo. \$1.25 net. Postage 14 cents.

McBRIDE, NAST & CO., Publishers, NEW YORK

In writing to advertisers please mention HOUSE & GARDEN.

The Varnish Food



YOU will find that O-Cedar brings out the beauty of the grain of the wood and gives a lasting lustre. Use it the O-Cedar Polish Way. Follow the directions on the bottle.

O-Cedar Polish

cleans as it polishes and gives a hard, dry, durable lustre that does not get gummy or collect dust.

Your polish mop should be renewed with

O-Cedar Polish

for it combines freely with water and permits you to easily and quickly wash, clean and renew your mop. O-Cedar Polish is sold by all grocers, druggists, hardware and department stores in convenient sizes, 25c. to \$2.50. Any dealer will return your money if you are not delighted with O-Cedar.

Channell Chemical Company
Chicago, Ill.

Channell Chemical Company
(Limited)
Toronto, Can.

Use O-Cedar Polish
The O-Cedar Polish Way



POPPY (Iceland)—6 in.; 12-18 in.; color, white, yellow, orange; flowers May-September. Flowers on long, stiff stems. Continuous bloomers. C.

POPPY (Oriental)—12-18 in.; 24-36 in.; color, crimson shades; flowers June-August. Enormous, brilliant flowers; vigorous growth.

PRIMROSE—4-5 in.; 4-6 in.; color, yellow, pink; flowers April-May. Pretty, early flowers for border or edging.

PYRETHRUM—8-12 in.; 12-24 in.; color, various; flowers August to frost. Very attractive little edging plant.

RUBBECKIA—12-18 in.; 4-7 ft.; color, yellow; flowers August-September. Good for screening and mass. Rank grower. P. S.

SCABIOSA—8-12 in.; 15-30 in.; color, white, various, and blue; flowers June-August. Fine light-blue flowers for cutting, blooming very freely. C.

SILENE—5-6 in.; 4-5 in.; color, white to rose; flowers June-August. Low-growing plant, good for masses or broad edgings.

SNAPDRAGON—8-12 in.; 24 in.; color, various; flowers July-September. One of the finest flowers for cutting. Hardy with protection. P. C.

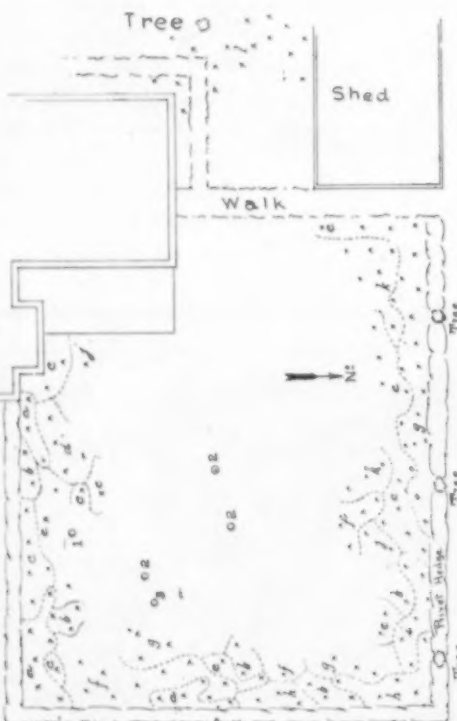
VERONICA—8 in.; 24-30 in.; color, purple; flowers August. Good for edging.



An Outdoor Living Room

THE space here available is, roughly speaking, 40 by 50 feet; the trees on the north are already established. Further shade will be needed, however, as the afternoon sun now shines on the entire plot. A Sycamore, two Lindens and two Catalpas have therefore been indicated; these are placed where their shadows will fall across the larger portion of the enclosure during most of the day.

Absolute privacy is insured by sur-



Plan for outdoor living-room

In writing to advertisers please mention HOUSE & GARDEN.



ON EVERY PIECE



ON EVERY PIECE



ON EVERY PIECE

A Table Necessity

No dinner or luncheon table is properly set without a pair of gleaming candlesticks from the assortment of graceful designs you will find in

Heisey's

Glassware

They add an irresistible charm and "coziness" to your table that your family will respond to

instantly—they give an air of hospitality that your guests will delight in. If your dealer cannot supply candlesticks

with the trademark,

we will deliver them to you by Parcel Post.

Pieces, per pair, No. 21

or 23, seven in. \$2.75;

nine in. \$3.00; eleven in.

\$4.50. No. 2, per pair,

seven in. \$2.50; nine in.

\$2.75; eleven in. \$4.00.

Insist on having this

trade mark on all the

glassware you buy. It

means high quality with-

out high price. Send for

illustrated booklet,

"Table Glass and How

to Use It," showing

everything for the table

in Heisey's Glassware.

A. H. HEISEY & CO.

Dept. 52 Newark, O.

No. 21
11 in.

No. 29
11 in.

IRISES

EXCLUSIVELY

The Gardens

ERITH N. SHOUP
IRIS SPECIALIST
Dayton, Ohio

THIS IS SIGNIFICANT

We have over 500 varieties to choose from, for every location and garden. You should visit THE GARDENS in the blooming season, and see acres of them in their gorgeous colors and stateliness. Beautiful catalog on request.

ERITH N. SHOUP
THE GARDENS, Dayton, Ohio

rounding the entire space with a hedge of California privet (*Ligustrum ovalifolium*), set in two rows, 9 inches apart and 9 inches between the plants. This hedge, though cut back to a height of 10 inches at the time of planting, is to be allowed to grow 8 feet high ultimately; it will form an impenetrable wall 3 feet or more in thickness by such time, and may be kept sheared or allowed to grow in its natural form. A certain measure of shearing is advisable to preserve the density, however; therefore, it will be well to cut back the top once a year, and to trim the outer side at least as often as this, sloping it in so that it is narrower at the top than at the bottom. The inside may grow naturally, and its shoots mingle with the shrubbery planted against it.

The individuals that go to make up this shrubbery mass should be planted as shown by the little crosses. Half-grown specimens that range from 2 to 3 feet in height will produce a very satisfactory result by the third summer—indeed, they will give the effect the second summer if they do well and conditions favor them, particularly if they are planted in the fall. Shrubs of this medium size are preferable to larger ones, and should be chosen always for best results.

Some of the large, strong growing lilies may be introduced effectively at intervals against the shrubbery; peonies are also suitable for such a position, as well as iris. Plant all these in clumps, where the opportunity offers, close against or actually in among the shrubs.

Following is the planting key: a—*Hibiscus Syriacus*; b—*Forsythia Fortunei*; c—*Syringa vulgaris*; d—*Weigela*, "Eva Rathke"; e—*Deutzia crenata fl. pl.*; f—*Spiraea Van Houttei*; g—*Ligustrum Iboia*, *Regelionum*; h—*Viburnum opulus*; i—*Cornus stolonifera*; j—*Philadelphus coronarius*; k—*Hydrangea paniculata, grandiflora*; l—*Berberis vulgaris*.

The trees are: *Plantanus orientalis*; 2—*Catalpa speciosa*; 3—*Tilia Americana*.



Putterin' 'round the Garden

(Continued from page 261)

the flowers are in bloom, when the ornamental (I insist) screen is covered with mountain fringe and the trellises with clematis and ipomoea, when the fish are swimming in the pool and the birds splashing in their bath, visitors will admire my garden, but I shall not. I shall still go putterin' 'round at new tasks and improvements, content merely that the work of this spring has come to fruition and restless for new worlds of stubborn soil or unplanned posts to conquer.

The Only Stucco That Dries a Permanent Artistic Color—

J-M ASBESTOS STUCCO



Residence of Mr. F. M. Kellogg, Short Hills, N. J.
Covered with J-M Asbestos Stucco

is the only stucco that dries with that permanent uniform color effect so desirable for artistic homes. This is because it is positively the **only** stucco that contains no sand.

The base of most other stuccos is sand. Due to the iron and other foreign substances in the sand, such stuccos are liable to become stained and spotted.

J-M Asbestos Stucco is composed of tough asbestos fibres and finely ground asbestos rock. The fibres take the place of hair used in other stuccos, and the ground asbestos rock takes the place of sand. This, when combined with Portland Cement, produces a stucco that can be applied in a large variety of finishes and texture effects.

J-M Asbestos Stucco is lighter in weight than most stuccos, and covers a greater area per ton. In prepared form it can be supplied in white and various shades of gray and buff.

To insure satisfactory results we are prepared to apply J-M Asbestos Stucco.

Write our nearest branch for illustrated booklet

H. W. JOHNS-MANVILLE CO.

Albany
Baltimore
Boston

Buffalo
Chicago
Cincinnati

Cleveland
Dallas
Detroit

Indianapolis
Kansas City
Los Angeles

Louisville
Milwaukee
Minneapolis

New Orleans
New York
Omaha

Philadelphia
Pittsburgh
San Francisco

Seattle
St. Louis
Syracuse

THE CANADIAN H. W. JOHNS-MANVILLE CO., LIMITED, Toronto, Montreal, Winnipeg, Vancouver.

(1776)



STRAWBERRIES

One Quart to Each Plant

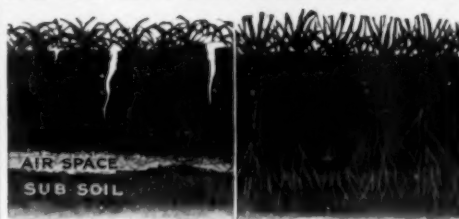
KEVITT'S SYSTEM OF CULTURE

Send for Catalog

T. C. KEVITT

Athenia New Jersey

Free Book on Lawns



Showing lawn before and after rolling.

Here is one of the many things explained in our free book, "The Proper Care of Lawns."

This book gives complete directions for making, seeding, watering and mowing the lawn. It shows why rolling is necessary to give the lawn an early start in the spring, and keep it from drying out through the summer.

The book also illustrates and describes

DUNHAM Water Weight ROLLERS

Ideal rollers for your home lawn. They can be filled with water to any weight you want so that the same roller is perfectly adapted for soft lawns, firm turf or driveway and tennis courts.

Dunham Rollers are "roller bearing and muscle sparing."

Write for the Booklet

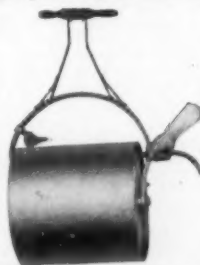
THE DUNHAM CO.

26-46 First Avenue

BEREA, OHIO

47-49 West Street

NEW YORK CITY



How The Kelsey Heat Surpasses Furnace Heat

Some look at the Kelsey Warm Air Generator and class it with furnaces—those coal devouring, wind affected, gas belching and dust distributing monsters of unhappiness.

The Kelsey Generator is constructed entirely different from any Hot Air Furnace. The fire box and combustion chamber is entirely surrounded by hollow zig-zag tubes. Fresh outside air is brought into these tubes and when heated, is delivered in large volumes at an agreeable oxygen laden healthy temperature.

These tubes act as sponges that absorb the heat, and heat the fresh air. Any room can be heated satisfactory in any weather against any wind.

The Kelsey both heats and ventilates.

It's an economizer and healthizer.

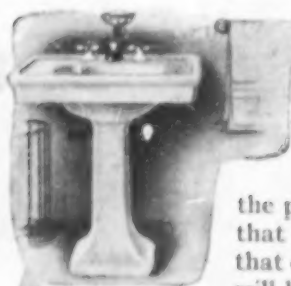
Send for facts, figures and catalog.

THE KELSEY WARM AIR GENERATOR

237 James Street, Syracuse, N. Y.

Dealers in all Principal Cities.

New York 103 E. Park Ave.



Your Home

is no better than its Plumbing

Nothing looks better in a fair-sized room than a pedestal lavatory which reduces to a minimum the places in which dust or water may lodge. Remember that an installation of Wolff's fixtures costs no more than that of the cheaper and inferior grades, while Wolff's fixtures will last as long as the building in which they are installed.

WOLFF QUALITY PLUMBING

Is the Result of Fifty-nine Years of Experience

L. WOLFF MANUFACTURING CO.

Plumbing Goods Exclusively

General Offices: 601 W. Lake Street

Showrooms: 111 N. Dearborn Street

CHICAGO

Send for
Bath Booklet

Pottery:
Trenton, N. J.



Spraying Is Paying Tens of Thousands of Users of Brown's Auto Sprays

Over 300,000 fruit growers, gardeners now use Brown's Auto Sprays. This new method of spraying **does** banish blight, disease and bugs—increases size and quality of crops. 40 styles and sizes hand and power outfits.

Write for **FREE**
Spraying
Guide



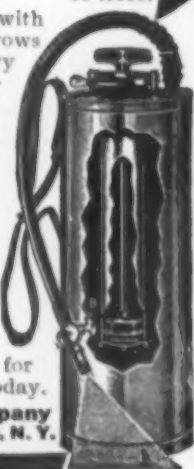
**Non-Clog
Atomic Spray**

Capacity 4 gals. Fitted with Auto Pop Nozzle that throws fine mist-like spray or heavy stream that **saturates** entire tree or plant without clogging. Guarantee satisfaction or money back.

Brown's Non-Clog Atomic Nozzle

for large sprayers. Fits any make. Wonderful time, labor and money saving invention. Cannot clog—no matter what the solution may be. Absolutely self-cleaning. Write for that free Spraying Guide today.

The E. C. Brown Company
7 Jay Street Rochester, N. Y.



How To Win Birds

Mr. Dodson's Free Booklet

tells you how to attract our native song birds to your gardens and how to make them come back to you every year. Write for this book and have bluebirds, wrens, purple martins and other birds living near you.



Here within one small garden—I've drawn a ring about each—are five Dodson Bird Houses, a Sheltered Feeding Table and a Bird Bath. Hundreds of Native Birds live in this garden. The photograph shows—

The Dodson Automatic Feeding Table for Birds. Price, with 8-foot pole, \$6—all-copper roof, \$7.50. Size, 24x22x12 inches.

The Dodson Great-Crested Flycatcher House. Price \$3, with all-copper roof, \$4. Size, 15x12x8 inches.

The Dodson Bluebird House—Solid oak, cypress shingle roof, copper coping. Price \$5. Size, 21 inches high, 16 inches in diameter.

The Dodson Tree-Swallow House—Size 12x14x9 inches. Price \$3; with all-copper roof, \$4.

The Dodson Cement Bird Bath—32 inches high; basin 34 inches in diameter.

The Dodson Wren House—Solid oak, cypress shingle roof, copper coping. Price \$5.

The Dodson Purple Martin House—Three stories; 26 rooms and attic. Over-all, 44x37x31 inches. Price, \$12—with all-copper roof, \$15.

All prices are f.o.b. Chicago.

I have 20 different Houses, Feeding Tables, Shelters and Baths—all for native birds—prices, \$1.50 to \$70. Have been building Bird Houses for 18 years.

The Dodson Sparrow Traps are catching thousands of Sparrows all over America. Get one; banish the pest that drives away song birds. Strong wire, electrically welded, needle points at mouths of two funnels. Price, \$5 f.o.b. Chicago.

If you love birds and want to have them live near you, get Dodson Bird Houses—the ones the birds have approved. Let me send you my illustrated book about birds. If there is any question about Native Birds you want answered, write me. I'll be glad to help any lover of birds.

JOSEPH H. DODSON

1201 Association Bldg. CHICAGO, ILL.

Mr. Dodson is a Director of the Illinois Audubon Society.

So I would have ended, but my wife insists on a postscript. "You will please to add," she says, "a statement to the effect that I built half the long trellis, and painted it, too. Perhaps I can't dig a post hole, but I nailed on nearly all of the stripping, and had to renail some that you did, because you thought your eye was superior to the level, and put it on down hill. It's small credit that you can drive a nail. But that I can is a positive triumph. This is the age of feminism. I insist on putterin', also."

So I welcome my wife, and all of her sex who possess the courage to spoil their complexions and their nails, the imagination and the strength of back and fingers, into the noble army of garden putters!

BOOK REVIEWS

PRODUCTIVE SWINE HUSBANDRY. By G.

E. Day. J. B. Lippincott & Co. 330 pp.

This book was designed to be, and has succeeded in being, equally valuable as a text-book for the agricultural student, and as a reference work for the practical farmer, whether the professional breeder or the small farmer with only a few animals to care for. Types and breeds of swine are thoroughly described and discussed. The practical points of breeding and of selection are taken up and the question of feeds and feeding from the point of view of both results and economy is gone into very thoroughly. Chapters cover Pastures and Soiling Crops, Preparation of Feed, Markets and Swine Products, Curing, Buildings, Sanitation, Common Diseases, and instructions as to the care of the boar, the sow, and the young pigs. The chapters, "The Place of the Hog Upon the Farm," and "Suggestions to Beginners," are especially good. The book is freely illustrated throughout with photographs and with line drawings showing the different types of animals, buildings, pens, labor-saving devices, etc. A series of questions at the end of each chapter is of value in fixing the salient points in the mind of the reader.

TREES IN WINTER—Their Study, Planting, Care and Identification. By Albert Francis Blakeslee, Professor of Botany, Connecticut Agricultural College, and Chester Deacon Jarvis, Horticulturist, Storrs Experiment Station. Fully illustrated. The Macmillan Co., New York. Price, \$1.25.

This is a comprehensive and beautiful book. Part I deals with the Planting and Care of Trees, and covers such matters, structure and growth of trees, propagation of trees, use and care of trees for improving rural districts, towns and cities, and for home decoration, for both summer and winter effect. The chapter on the selection of trees for special purposes is of especial usefulness. The various phases of plant-

ing, care, injury and repair of shade trees, parasites and their control, insecticides, fungicides and spraying, spraying machinery and pruning are all covered in a detailed and authoritative way. The second part of the work takes up the identification of trees, and is profusely illustrated with excellent photographs showing habit of growth, bark, twigs, etc., of each of the scores of trees described. A glossary, explanation of terms, and a key to genera and species add to the value of this part, and there is a thorough index covering the whole. It is an indispensable book for any person interested in our native trees and their care.

Garden Suggestions and Queries (Continued from page 294)

it. If a very cold day should come it will not hurt them to be kept dark. Sash covered with "plant cloth" are very useful for this purpose, and cost little.

While you are hardening off your cabbages be careful not to chill and stunt your tomatoes and eggplants. These are warm-weather things, and likely to require all the warmth you can give them at night in a frame, and up to 70, or even 80, degrees in the day. But don't neglect giving enough ventilation to keep them strong and healthy. If there is no "heat" in the frame, keep the glass covered at nights with mats or shutters. Double-glass sash are especially good for the tenderer vegetables and flowers. They are a great boon to the gardener who has to get along without a green-house.

Two to four weeks before it is safe to plant such tender things as cucumbers, melons, lima beans and sweet corn, or such bulbs as cannas, dahlias, tuberous begonias or caladiums, you may gain a great deal by starting them in the square paper pots, which may now be bought so cheaply. They come "flat," and you can make up a few dozen over the block of wood that accompanies them in ten minutes. Simply fill the pots, packed close together, with rich compost, and plant the seeds or bulbs. (Lima beans, remember, go eye down, edgewise, and rot very easily if you water them too much before they sprout.) *Don't let the pots dry out.* Don't set them in the open until all danger of frost is over, and harden them off well first.

PRUNING.—If your roses have not already been pruned, attend to them at once. Cut back to good live wood, no matter if there's nothing left but a stump. The more severe the pruning, the bigger and better the flowers, but there won't be so many of them. This doesn't apply to climbers and Rugosas. Always cut to an *outside* eye, so the bush will grow to an open centre. Besides roses, some of the flowering shrubs may be pruned now—those which bloom after mid-summer and in fall, as a general rule. The others flower on last year's wood, and cannot be cut back now without sacrificing flower-buds already formed.

SARGENT

Hardware

The Bungalow, the Mission, or the Craftsman type of dwelling—now being built in increasing numbers all over the country—calls for a peculiar harmony, not only along architectural lines, but even down to the smallest detail of the hardware used.

This harmony is always attained in the selection of Sargent Hardware. Architects, builders, home planners and discriminating men and women more and more are specifying Sargent Hardware.

Write for the Sargent Book of Designs

Sent free on request. We also have a Colonial Book, if you are interested in that period.

SARGENT & COMPANY,
142 Leonard Street, New York



THE WORK AND DIVERSIONS OF AN EMPIRE MAKER

Cecil Rhodes—The Man and His Work

By one of His Private and Confidential Secretaries

By Gordon Le Sueur, F.R.G.S.

In this book, the empire maker, Cecil John Rhodes, and his life work is made the subject of an unusual biographical study by one of his confidential secretaries. The impressions of the author are derived from the close and intimate relationship extending over many years in England, at his Cape home or on the Veld. The whole book is enlivened by interesting anecdotes and personalia of this many-sided man, illuminating side lights on his acts and the influences which caused them. The illustrations are carefully selected, many of which are printed here for the first time.

8vo. Illustrated. \$3.50 net. Postage 20 cents.

McBRIDE, NAST & CO.,

31 Union Square North

NEW YORK

Send for Pad of Colors on Wood

Our treatment with creosote gives protection to natural wood just as railroad ties are preserved against worms, dry-rot and decay. You should no more think of leaving shingles unstained than you would think of leaving house and woodwork unpainted.

Our different color shades of green, grey, red and brown permit the most artistic color combinations on roof and side walls.

"CREO-DIPT" STAINED SHINGLES

14 Different Grades; 16, 18, 24 Inch. 10 Different Color Shades

Every "CREO-DIPT" Shingle is treated by our exclusive process. The coloring and preserving is sure and thorough. There is no need of brush-coating or painting the shingles. There is no waste of time—muss of staining on the job. They come in bundles—ready to lay.



Residence R. J. Mebane, Greensboro, N. C., Architect E. Raymond Ellis, Hartford, Conn. One color tone on side walls, darker shade on roof.

Only high quality Red Cedar Shingles are used. No sleazy or wedge-shaped shingles. You buy no waste. Last twice as long as brush-coated or natural wood. Cost less than stained-on-the-job shingles.

Write today for Pad of Colors on Wood and Catalog Showing many attractive houses. Send name of Architect and Lumber Dealer.

STANDARD STAINED SHINGLE COMPANY

1012 OLIVER STREET,

NO. TONAWANDA, N. Y.



House Cleaning

Housecleaning reveals the need of new things—and crowded book shelves become cogent arguments for

Globe-Wernicke Sectional Bookcases

There is a Globe-Wernicke Sectional Bookcase to harmonize with the rest of your furnishings. And you can buy as many sections as you need. They may be stacked in the conventional manner, or made to follow the window line of the walls, or arranged in separate stacks to fill odd spaces. Write for Bookcase Catalog No. 396 for further particulars.

The Globe-Wernicke Co.

Mfrs. of Sectional Bookcases, Filing Cabinets, Stationers' Goods.

Factory, Cincinnati.

Branch Stores and local agents almost everywhere. Where not represented, we ship freight prepaid.

Landscape Gardening



PROF. BEAL

A course for Homemakers and Gardeners taught by 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.

250-page Catalog free.
Write to-day.

THE HOME CORRESPONDENCE SCHOOL
PT. 236. SPRINGFIELD, MASS.

Manures and Fertilizers

ASIDE from the plant food in the soil itself, certain of the several natural and chemical fertilizers, such as manure, bone-dust and potash salts, which are necessary to replenish these inherent elements, are the commonest sources of plant food.

The several elements of plant food must not only be in the soil in abundance, but must be in soluble and available forms. The plant food in manure, for instance, is of little or no use until, through the process of decomposition, it becomes available to the plants' feeding roots.

TAKING CARE OF MANURE—Whether manure is made on the place or bought, it should be kept under cover, preferably in a pit with a cement bottom so that all the liquid shall be saved. If it shows a tendency to heat too much and becomes fire-fanged and burned, it should be turned and tramped down firmly into a square heap, sprinkling it with water if it is very dry. If it can be turned, in fact, several times before using, so much the better. Aim to get it just as fine, well rotted, and "mellow" as possible before using it.

In buying manure, try to get that which is in good condition and well rotted, and remember that its value will depend very largely upon the richness of the food fed the animals; therefore, manure from a livery stable or from a good dairy farm, other things being equal, is likely to be worth much more than that from scrub farm stock.

FERTILIZERS—Fertilizer is a general term applying to almost any old thing which can be sold in a bag. The high-grade, high-priced goods, costing anywhere from forty to forty-five dollars a ton are, almost invariably, much cheaper than the low-priced goods, costing twenty-five to thirty-five dollars a ton. For garden use, a complete fertilizer, analyzing 4 per cent nitrogen, 8 per cent of available phosphoric acid and 8 per cent of potash, will give good results.

MIXING OF FERTILIZERS—It is not, however, necessary to buy a ready-mixed brand. You can readily mix your own with a square-pointed shovel and a screen on any tight floor or in any large, tight box. Here is a good mixture: 250 pounds of nitrate of soda, 500 of tankage, 700 of acid phosphate, 400 of muriate or sulphate of potash; or, for small amounts, in about those proportions—say 25 pounds nitrate of soda, 50 of tankage, 75 of acid phosphate and 50 potash. This will give approximately a 4-8-10 mixture, fully equal to any you can buy and considerably cheaper.

Place the materials in layers on the floor or in a box, in a square heap, putting the bulkiest at the bottom, and mix *thoroughly* with a shovel or a hoe; then run through a coal sieve or a sand screen.

If another formula is preferred, it can be figured out easily from the accompanying table, as the figures in the third column



"I wish our windows looked like that"

If you are not wholly satisfied with the appearance of your windows, perhaps you have overlooked the importance of the shade.

Thousands of women who made this mistake have discovered in Brenlin Unfilled Window Shades possibilities for artistic window treatment never dreamed of before.

Go to your dealer and "discover" Brenlin for yourself. See particularly the prevailing new color, Vandyke Brown. See also Brenlin Duplex—light one side, dark the other.

Made of closely woven cloth without that "filling" which in the ordinary shade so soon cracks and falls out in unsightly streaks and "pinholes," you will find Brenlin Unfilled Shades by far the cheapest in the end.

Brenlin UNFILLED Window Shades

Write for the Brenlin Book today

With it we will send you the name of the Brenlin dealer in your town, or tell you how to order direct. CHAS. W. BRENLIN & CO., 2087 Reading Road, Cincinnati, O. Genuine Brenlin Unfilled Shades have this mark **BRENLIN** perforated along the edge. Look closely for it.

For temporary uses the two cheaper grades of Brenlin—Brenlin Filled and Brenlin Machine made, will be found by far the best window shade values at their prices.

For sale by dealers everywhere



LOOK OUT FOR SPARKS

No more danger or damage from flying sparks. No more poorly fitted, flimsy fireplace 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.

The Syracuse Wire Works

109 University Avenue, - Syracuse, N. Y.

Now Ready!

Our 1914 Fruit Book and Planters Guide. Everything for Garden and Orchard.

ONE QUALITY—THE BEST

William Street Nurseries, Geneva, N. Y.

"The Nursery City"

Copy of Book mailed free upon request

Send today for a color card of real wood panels—any wood desired—stained with

Glidden's Endurance Wood Stains



They'll insure permanent beauty of the interior of your home.

The sixteen standard colors this card shows, and the infinite number of effects obtainable with the combinations of these colors gives you unlimited freedom in planning your decorative scheme.

Glidden's Endurance Wood Stains are deeply penetrating and are therefore the most fadeproof and durable.

You will want to know these other quality products also. Let us send you booklets about

Glidden's M. P. Durable Floor Varnish
Glidden's M. P. Durable Interior Varnish
Glidden's M. P. Durable Exterior Varnish
Glidden's Velvet White Enamel (eggshell finish)
Glidden's Superior White Enamel (gloss finish)
Glidden's Waterproof Flat Finishes

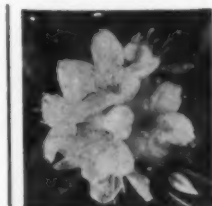
THE GLIDDEN VARNISH COMPANY
10402 Madison Avenue, N. W.
CLEVELAND, OHIO
Factories: Cleveland Toronto



"AMERICA'S GREATEST"
ALL UTILITY LUMBER

Take no chance get the facts

West Coast Lumber Mfrs. Ass'n
703 Tacoma Building, Tacoma, Wash.



Highlands Nursery

Rhododendron Carolinianum—New American Species. Clear pink. Absolutely hardy

Send for prices and full description, and Catalogs of the only large collection of Hardy Native Plants.

Boxford Nursery

HARLAN P. KELSEY, Owner, Salem, Mass.

show the number of pounds of any material required to give 1 per cent in a ton. If the total number of pounds does not figure up to an even two thousand, it will make no difference, as it is the number of pounds of actual *plant food* only which is required.

TOP DRESSINGS—A further advantage in buying the separate materials instead of the ready-mixed fertilizer is that they can be used separately as needed, or to mix with manure, or with any other material which may be lacking in one or more particular element. (Manure, for instance, is usually lacking in the percentage of phosphoric acid and of potash, in proportion to the nitrogen contained.) Nitrate of soda, the nitrate in which is immediately available, is especially valuable as a top dressing for quick-growing crops, such as salads and most of the leaf crops, and a very light application put around the cabbages and similar crops and worked into the soil frequently produces incredible results. Potash is equally valuable for plants which are not maturing properly; especially for grapes, small fruits and such vegetables as require a high percentage of potash.

Lime, which is called a soil "amendment," is not a direct fertilizer, but is of direct benefit to the soil through its physical and chemical effects; it helps to sweeten sour soils and to make available the food already in the soil in unavailable forms. A good dressing of lime, one to two tons per acre, should be applied once every four or five years, to land which is at all inclined to become sour. The most convenient form to use is raw ground limestone, but any good agricultural lime from a reliable source may be used.

Compost. On every place, and especially on places where no stock of any sort is kept, a compost heap should be started every spring as soon as the garden has been planted, and all kinds of refuse which will rot away should be added to it during the summer and fall. Vegetable by-products of all sorts, such as sods, clumps of earth and roots, weeds (that have not gone to seed), roots and tops of plants, leaves, grass clippings and also street sweepings, dishwater, etc., are available material. Make a frame or a pit for the pile somewhere, preferably out of sight, and under cover. Hasten decomposition by forking the heap with the hose so that it will never be dried out. If it seems desirable to give it more "body," mix common garden soil through the heap.

TESTING THE SOIL—You can send samples of your soil to your State Experiment Station and have it analyzed. A better way for practical results is to take five to ten pots full of soil, add a little each of nitrate of soda, acid phosphate and muriate or sulphate of potash, and combinations of two and of all three of these, to the several pots, keeping one of plain soil as a "check," and labeling them all carefully. Plant them all with a few grains of corn or oats, and note which treatment indicates the largest increase of crop.



Yes, Billiards!

The Pastime for Leisure Hours at Home

The time has come when the Billiard Table fills just as important a place in the home as the piano. Billiards is a stimulating, interesting game of skill in which young and old may indulge to their heart's content with the greatest pleasure and profit.

The Brunswick-Balke-Collender Company, oldest and largest of all Billiard Table concerns, now offers a complete line of Home Billiard and Pocket-Billiard Tables at very attractive prices.

"BABY GRAND" The Home Billiard Table With the Fast Cushions

The "Baby Grand" is a superb creation in genuine Mahogany. Fitted with the celebrated Monarch Cushions which have the highest possible speed obtainable with absolute accuracy of angle. Slate Bed is covered with the finest imported Billiard Cloth. Concealed drawer to hold Playing Outfit. The "Baby Grand" is furnished as a Carom, Pocket Billiard, or Combination Carom and Pocket-Billiard Table. Sizes 3x6; 3½x7; 4x8. Other Brunswick styles include the popular "Convertible" Billiard and Pocket-Billiard tables, which serve also as Dining Tables, Library Tables or Davenport. If you have room for a Brunswick Regulation Table, ask for special information.

A Word to Parents

The widespread adoption of billiards by Young Men's Christian Associations, Institutional Churches and Welfare Associations is the highest possible tribute to its value as an innocent diversion for young folks.

Ask for a little book entitled, "Our Boys Now Live at Home," in which fathers and mothers tell how the "Baby Grand" has made home more attractive to boys.

Easy to Buy —Here's Why

We are pleased to extend the most liberal terms of payment on any size or style of Brunswick Billiard Table you may select. Let the small payments cover an entire year if you desire. You will find it true economy to buy a real billiard table, rather than a mere makeshift.

Free Outfit Included

The price of each table includes a complete, high grade Playing Outfit—Cues, Balls, Bridge, Rack, Chalk, Assorted Cue Tips, Cue Tip Cement, Markers, Billiard Brush, Lightning Cue Clamps, Wrench, Spirit Level, Cover, book on "How to Play," etc., etc., etc.

(Send Coupon for Free Book)

The Brunswick-Balke-Collender Co., (206)
Dept. Y-G—623-633 S. Wabash Ave., Chicago

Please send me the free color-illustrated book—

"Billiards—The Home Magnet"

Name.....

Address.....



*Feel this
surface*

It is scratchless—marless
—noiseless

FELTOID Casters and Tips

save floors and rugs. No dents and digs when your furniture is fitted with Feltoids. They work none of the damage so common to metal, wood, fibre and rubber casters.

Feltoids are made of a specially treated material which is very firm and durable yet having a tread as resilient as a kitten's paw. Genuine Feltoids have the name stamped on each wheel.

Sold at furniture and hardware stores.



SPECIAL OFFER—If your dealer cannot supply you, send us 25 cents and we will mail you prepaid two sets of Feltoid Tips for demonstration in your home. Send for booklet No. 12

The Burns & Bassick Company
Dept. X Bridgeport, Conn.



**Build Your Home
"The New Way"**
10% larger bedrooms
—50% larger wardrobe capacity. Send 50c for Plan Book showing 22 Designs.
**JOHN THOMAS
BATTS, GRAND
RAPIDS, MICH.**



JONES & HAMMOND
Underground Garbage Receivers. The Receivers without a Fault. Constructed on Scientific Principles. For sale by leading hardware dealers, or write manufacturers for circular and prices.

JONES & HAMMOND
74 Newburn Ave., Medford, Mass.

To determine if your soil needs *lime*, get a few pieces of litmus paper from the drug store. Select a part of the garden where the soil is fresh and moist, make a cut in it with a knife blade and insert the larger part of the strip of paper, pressing the soil up against it. If the paper turns red or reddish pink, it will indicate that lime is needed—more in the former case than in the latter. A free growth of sorrel is another indication of sour soil.

Handling the Soil

IN the flower garden and the home vegetable garden, no less than on the farm, the way the soil is handled has a great deal to do with what you get out of it.

Besides keeping it rich by adding manure and fertilizer, and sweet by the use of lime, it must be kept in a good mechanical condition by thorough plowing or spading and working over, and also by the addition of humus or decayed vegetable matter from time to time.

PLOWING AND SPADING—It is always much cheaper and better to get a piece plowed, where there is enough room for a team to turn, than to attempt to do it or to have it done by hand. Have it done by somebody who knows his job. The soil should be turned so that it lies smoothly, with no sod, trash, stubble or manure or any material of that kind left on the surface to be in the way for all your other operations throughout the summer.

Have your plowing done deep; usually the soil should be turned clear down to the sub-soil, which should give a depth of furrow of from four to eight inches. Sometimes with a hard sub-soil, a sub-soil plow is used, but its place has been taken lately by the use of agricultural dynamite, used to break up hard and impervious sub-soils. This is not very expensive, and as the soil is benefited for years to come, it frequently pays to do it; if you think your garden suffers from a "hard-pan" sub-soil, consult a local expert in this line.

In many small gardens it is necessary to use a fork or spade instead of a plow. The job should be done no less thoroughly. In loose, loamy soils the spading fork with flat tines will be more satisfactory; in stiff soils, the spade.

TRENCHING is practically sub-soiling with the spade or fork. As each spadeful is turned over, the sub-soil exposed beneath it is spaded up and thrown back into the same place in such a manner as to loosen and to break it up; then the next spadeful of surface soil is thrown over it and the operation repeated.

FALL PREPARATION—Soil for crops to be planted early in the spring, and especially for heavy soils, are frequently plowed or spaded late in the fall. In this case, the surface should be left worked up roughly or thrown in long ridges to leave it the more exposed to the action of the elements.

HARROWING—After the soil is plowed or spaded, as the case may be, it is necessary to break up and pulverize the lumps as



Don't cover up your walls; color them

There is nothing so beautiful, so sanitary and so easily kept clean as a wall painted with

SHERWIN-WILLIAMS

Flat-Tone

Flat-Tone is an oil paint that imparts to walls a richness of color that cannot be secured in any other way. When the walls become dingy or soiled with finger marks, soap and water will restore them without injury to the most delicate tints.

You can get Flat-Tone, ready to apply, from any Sherwin-Williams dealer. Write today for our

Portfolio of Suggestions for Painting and Decorating

It tells how to use Flat-Tone and other Sherwin-Williams Finishes and shows many beautiful rooms and exteriors in colors with complete painting directions.

SHERWIN-WILLIAMS PAINTS & VARNISHES



Sales Offices and Warehouses in principal cities. Best dealers everywhere. Address all inquiries for Portfolio to 627 Canal Road, N.W. Cleveland, Ohio

Smoky Fireplaces

Made to Draw

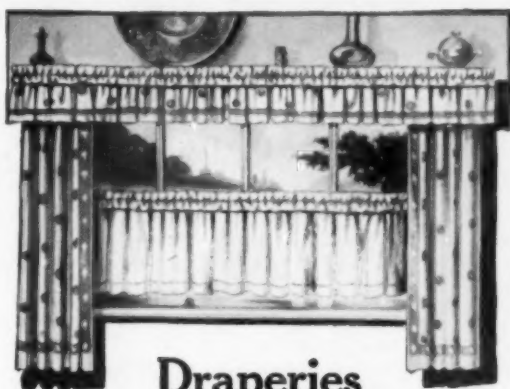
Cooking Odors Carried out of the House
Payment Conditional on Success

FREDERIC N. WHITLEY, Engineer and Contractor
210 Fulton St., Brooklyn, N. Y.
Heating Ventilating Air Filtration

Beautify Your Home with Choice Evergreens and Shrubbery

Our methods of planting and conducting business enable us to offer high-grade Ornamental Trees, Shrubs, Evergreens, Roses, Vines, Water-Lilies, Fruit Trees, Herbaceous Plants, etc., at prices which defy competition.

Send for Illustrated Catalogue
MONTROSE NURSERIES
Montrose, Westchester County NEW YORK



Draperies that Welcome Sunshine

Drape your windows with fabrics that always retain their freshness and beauty. Neither sunshine nor washing can fade

Orinoka GUARANTEED Sunfast Fabrics *For Drapery and Upholstery*

Made in the fullest variety of colors and designs, lending themselves to any decorative scheme, and are *wonderfully inexpensive*.

"Draping the Home" is a booklet of infinite worth to every woman planning home decoration. We'll send it free upon request and give you the name of your nearest dealer.

ORINOKA MILLS

156 Clarendon Bldg. New York

For your protection insist on this GUARANTEE:

These goods are guaranteed absolutely fadeless. If color changes from exposure to the sunlight or from washing, the merchant is hereby authorized to replace them with new goods or refund the purchase price.

This Tag and Guarantee on every bolt.



Popular Perennials

—the flowers of our grandparents, brought to a perfection of which they never dreamed—are helpfully described in our *1914 Specialty Plant Book*.

Meehans' New June Phlox—a distinctive drought-resisting type of our own introduction.

Primula Polyantha—commonly called **Cowslips** in England—are too little used in America. Their varied colors, their masses of bloom from April to June, make them ideal for that shaded border. (See cut.)

Wistaria, in Standard or Tree-form; **Althaea** for hedges; **Roses** for all purposes; and **Shrubs and Perennials** of all sorts, are listed separately and also in special collections with proper combinations and planting plans worked out for you.

Write today for this helpful Free Catalog

Thomas Meehan & Sons
Box 40 Germantown, Philadelphia



finely as possible. Cultivation helps the soil fertility as well before the crops are planted as after. (There are several types of harrow to suit various conditions of soil, but the important thing is, that whichever type is used, it should be used enough.) The earth should be cut up and fined, not only upon the surface, but several inches below it. Where the harrow cannot be used, the hoe and the broad-tined fork will have to take its place. Thoroughly pulverized soil is a vital factor toward the successful garden or a fine flower bed.

DRAINAGE—Soil that is slow or wet, and consequently "late" in the spring, should be thoroughly underdrained. By all means drain if your soil requires it. Draining a half-acre garden will cost from twenty-five to fifty dollars. The most satisfactory method is to use two and one-half-inch round drain tile with collars. The deeper you place them, the more effective they will be; at three feet deep, the lines should be from twenty to thirty feet apart, according to the soil and the slope; if you can put them four feet deep, thirty to fifty feet apart will do. You can do the work yourself or with a digger to help you, but you must take great care that the fall of the pipes is continuous from the highest point of land to the lowest, where the outlet should, of course, be. It is well to put a small flat stone under each joint, to prevent the possibility of sagging, and a piece of inverted sod over it to keep any fine dirt from getting inside of it until after the ground has a chance to settle permanently. A "level" is, of course, used in laying the tiles to see that the proper fall is maintained throughout.

Sowing and Planting

THE first step in making the garden, after the ground is prepared, whether it be a geranium bed, a strip of the home vegetable garden or a ten-acre potato field, is to get a smooth, even surface. The purpose in doing this, aside from neatness and convenience in planting, is to conserve the soil moisture, so that the surface soil will dry rapidly on top and will form a dust mulch, which prevents the moisture from the soil below from escaping into the air, as it does rapidly when a hard crust forms. The smoother and finer the surface is made, the more perfect the dust mulch is.

The implement to do this job with is a steel-toothed rake. Go over the soil carefully, removing all stones or sods that might be in the way later, and use the rake with a backward and forward leveling-off motion so that just as little trash as possible will be dug up. It is best usually to rake at right angles to the way you expect to plant, as the marks left by the rake teeth will then not be confused with your planting marks.

DRILLS, ROWS, HILLS—In drills, the plants are grown in a continuous row, usually quite close together as onions, beets



"I finally made Jones paint his house"

"When I told Jones I was going to paint my house he said, 'Mine looks good enough for a year or two more.' He changed his mind after mine was painted and now he's an enthusiastic neighborhood improvement booster."

You, too, can set the example in improvement work which your neighbors will follow, by painting your home with



It is scientifically made of the finest ingredients. You can rely upon it to withstand the weather, stay bright and attractive for years and give a good surface for repainting. It is the most economical in the end, though it may cost a few cents more per gallon.

Write for Free Book

This book—"Homes Attractive"—is full of suggestions for beautifying homes inside and out, including yard and lawn. With it we'll send portfolio of eighteen houses in harmonious color combinations. Write for this book today and if you don't know your nearest "High Standard" dealer ask us his name.

The Lowe Brothers Company

464 E. Third Street
Dayton, Ohio

Boston Jersey City Chicago
Kansas City Minneapolis
Lowe Brothers, Ltd., Toronto, Canada

ROSES OF NEW CASTLE

—the most reliable and beautiful book on roses ever published. Superbly printed in natural colors. Contains expert advice to home planters on how to grow roses and other plants. It's the boiled down facts of our long experience. Tells all about our famous stock. Send for it today—a postal will do.

HELLER BROS. COMPANY, Box 452 New Castle, Ind.

Beautify Your Gardens



With Mathews Decorations. Make all outdoors your living room. Get our free catalog of suggestions showing 150 designs and plans for Summer Houses, Lattices, Trellises, Furniture, Children's Play Houses Pergolas and all other garden decorations.

THE MATHEWS MFG. CO.
909 Williamson Building
Cleveland, Ohio



A Clock of Lifelong Service

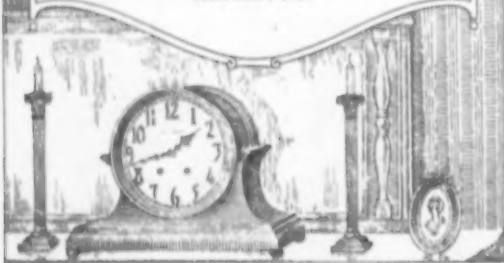
Depend upon The Celtic to faithfully record the flight of time for your household. Its easy-reading bronze figures, on a large silvered dial background, express truth in time telling. A mellow-toned Cathedral bell gently tolls the passing hours. The Celtic is of medium size and moderate price, withal a clock of comeliness and utility. It is but one of the many diverse types known as

SETH THOMAS Clocks

For a century The National Timekeepers

In homes and public buildings throughout the land these clocks have been incentives to promptness and precision for five generations. Surely, this record is ample proof of their worth. Your dealer will show them to you.

SETH THOMAS CLOCK CO.
15 Maiden Lane New York City
Established 1813



CULINARY AND GARDEN PERFECTIONS

The Gardener and the Cook

By LUCY H. YATES

The authoress in writing this book enlisted the co-operation of a clever cook and a capable gardener. Not only does the book tell what vegetables and fruits are profitable to grow, but it gives the instruction to transform them into delicious courses, tempting salads, preserves and jellies with all the perfected art of European chefs. Illustrated. \$1.35 net. Postage, 15 cents.

McBride, Nast & Co., New York

or carrots. In rows, they are grown at regular intervals, usually considerably less than that distance between the rows, and they are cultivated only one way—such as cabbage or potatoes. In hills, the plants are usually far enough apart to be cultivated both ways, so usually the distance is the same in each direction—such as cucumbers or squash.

SOWING THE SEED—The first step is to have a smooth and freshly prepared surface. For good results, it is necessary that moist soil should be brought in direct contact with the seed. Most seed sowing is now done with a seed drill. If any sowing must be done by hand, or with flower seeds sown in the garden, they should be scattered thinly along the bottom of a freshly prepared drill, pressed down into the soil, if it is at all dry, with the edge of a board or the sole of the shoe, and covered immediately with moist earth, being slightly pressed down again with the surface, to indicate where the row is.

DEPTH TO COVER—Most flower seeds are very small and should be covered barely from sight; the general rule, as nearly as can be given, is to cover seeds indoors under glass to two or three times the depth of their diameter; outdoors, to four or five times.

The proper depth to which the cover seeds will depend also upon the season of planting, the character of the soil and the weather conditions. Hardy vegetables, such as early peas and beets, which must be planted when the ground is still wet and cold, should be put comparatively near the surface, where the soil is warmer and there is plenty of moisture for germination. Late plantings of the same things, say in June, should be put deeper than the average depth. In planting in dry soil it is especially desirable that the seed be firmed in the soil before covering.

PLANTING—When plants are to be set out, the ground should be just as carefully prepared as for sowing seed. Mark the rows and crossrows out carefully and have everything in readiness, so that the work, when once begun, may be carried through as quickly as possible. A cloudy or rainy day or late afternoon is the best time to set plants. If the work has to be done in the morning or on a bright day, the plants should be protected, if they are likely to wilt, with pieces of newspaper placed over them and held down by stones or earth or by a screening of some sort, such as a wide board placed on edge along the row.

"HARDENING OFF"—Plants removed from the cold-frame or hothouse to the garden should be hardened off before being set out, especially any which may have had a rapid, soft growth. Tall, spindling plants are also always to be avoided. Short, stocky specimens, even though much smaller in size, will take hold more quickly and soon make up their deficiency in size.

TRIMMING BACK—Nearly all plants, and especially those with a soft, luxurious leaf growth, will stand the operation of transplanting much better if they are

The Gardener's Best Fertilizer

A Mixture of

Nitrate of Soda
Sulphate of Ammonia
Sulphate of Potash
Peruvian Guano
Rose Growers Bone Meal
Gypsum

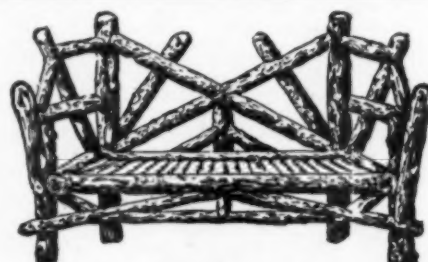
Send for Pamphlet

**Barwell's
Agricultural Works**
WAUKEGAN, ILL.

BISHOPRIC STUCCO OR PLASTER BOARD

Cuts building costs and gives better jobs than old style plaster interiors. Its application means permanent construction, warm and damp-proof insulation. Easy to apply. Goes on dry. Just nail Bishopric Stucco or Plaster Board to bare studding and walls are ready for cement, plaster or stucco. Write for free sample and information book.

The Mastic Wall Board & Roofing Co.
528 East Avenue Cincinnati, Ohio



This Handsome **RUSTIC \$10.00**
GARDEN PIECE

We carry a complete line of Rustic Furniture, Summer House Pergolas, Bridges, Etc.

BIRD HOUSES \$1.00 up

We have them—all kinds

SEND FOR CATALOGUE

Jersey Keystone Wood Co., Trenton, N. J.

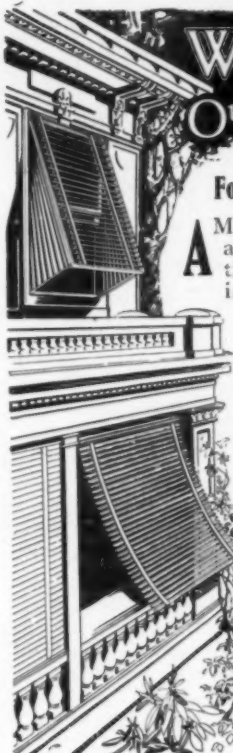
THOSE WISHED-FOR WORDS

A Book of Inscriptions

By ESTHER MATSON

The book is divided into three sections—Much Ado About Place Names—Mottos for Hearth and Garth, which includes suggestive hints for Over-door Inscriptions, Chimney-piece Texts, Texts for the Garden Gracious,—and Gift Accompaniments which includes A Thought or Two Concerning Thanks, With Books, Sweets or Flowers and Occasional Verses. With decorative half-titled and end papers. 12mo. \$1.10 net. Postage, 10 cents.

McBride, Nast & Co., New York



WILSON'S Outside Venetians

For Windows and Piazzas

A MODERN, artistic, practical and substantial combination of Blind and Awnings for town and country houses. More durable and slightly than fabric awnings. Very easily operated; slats open and close to admit air yet exclude sunrays; can be pulled up out of sight if desired; provides much summer comfort. Add artistic distinction to the house.

For Illustrated Booklet specify "Venetian 3"

Jas. G. Wilson Mfg. Co.
1-3-5 West 29th Street
New York

Patentee and Manufacturer of Inside and Outside Venetians, Piazzas, Porch and Veranda Venetians, Rolling Partitions, Rolling Steel Shutters, Hygienic Wardrobes, Wood Block Floors.

A NEW OUTDOOR MOVEMENT

Caravanning and Camping Out

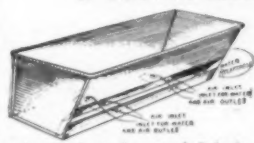
By J. HARRIS STONE, F.L.S., F.C.S.

Dr. Gordon-Stables R.N., the author of the famous books of adventure, was the first advocate of this youngest offspring of the outdoor movement. He traveled for forty years over Scotland and England preferring van life to settled house life. Since then hundreds of caravanners have been exploring rural England, Scotland, Wales and Ireland, seeing at their leisure and in delightful quietude out-of-the-way bits of country. In addition to practical considerations on building a caravan and its fittings, the author has delightful chapters about gypsies and caravanning abroad. 8vo. Illustrated. \$3.75 net. Postage, 20 cents.

McBride, Nast & Co., New York

The Box That Makes the Plants Grow

If You Are Interested in Plants



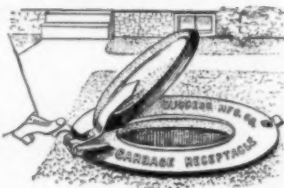
You should see this new patented, galvanized steel box. It can be set inside or outside the window, or on the porch railing—anywhere. Will not leak and damage the woodwork. Patented ventilating and drainage bottom. Made of heavy galvanized steel enameled dark green, 6 in. deep, 7½ in. wide, and made in any length.

To introduce, and show you these boxes, we will send you by Parcel Post one box 30 in. long, anywhere East of the Mississippi, on receipt of \$1.00. Your money back if not satisfactory.

SUCCESS MANUFACTURING COMPANY
406 Sargent Street, Gloucester, Mass.

If Health and Sanitation Appeal to You

You should learn more about the **SUCCESS** underground receptacle. Built of concrete, with strong iron covers, that will not break. Practical. Indestructible. It settles the garbage question once and for all, in a neat, clean and sanitary and convenient manner. Costs little. Accomplishes much.



As the receptacle looks when placed in the ground. Occupies small space. Operated by the foot. Send for circular, and price.

SUCCESS MANUFACTURING COMPANY
406 Sargent Street, Gloucester, Mass.

trimmed back. The roots, too, if long and scraggly, should be cut back to a compact mass, which can be handled and inserted into the soil easily. Long, broken roots, which must be twisted and bent in the process of transplanting, are of no use to the plant. But, in taking plants from the flats, be careful not to break off any of the roots. Cut them out with a knife or lift them out carefully, saving a smuch earth about them as possible.

In setting the plants in the soil, dig a hole with the hand or with a dibble and in placing the ball of earth and roots in it, be careful that the ends of the roots are not turned up toward the surface of the soil or crowded in a bunch into a small space. The plants should be set deep enough so that the earth will come about half way up the stem, or stalk, and the earth pressed down about it very firmly with the fingers and knuckles. It is very important to set the plants firm in the soil. Potted plants like geraniums, nursery plants like rose bushes or small fruits, or even plants being set in the garden like cabbage or lettuce, may be gone over with advantage after planting and made still more firm by pressing the soil down about them with the balls of the feet; this is especially desirable, if the soil is at all dry.

In very dry weather, it is sometimes necessary to use water when setting the plants, and when this is done, half a pint to a pint as conditions may require, should be put in the bottom of the hole before setting the plant in. It will be of little or no use to pour the water around on the surface after setting the plant.

Special fertilization is often given when setting out plants, either in beds with single specimens or in rows in the garden. Tankage or bone meal or a mixture of both are good for this purpose, or well rotted manure or hen manure may be used. In any case this extra fertilizer should be well mixed with the soil before the plants are set out.

Tools and Cultivation

THERE are a few tools essential to the proper care of any garden. Those so fortunate as to have large gardens may, of course, find use for many others which we need not mention here.

THE HAND TOOLS—These few things, however, you should include in your outfit—a spade, a spading fork, a flat-tined hook, a bow rake, an iron-toothed rake, a square-pointed shovel, a plow, a trowel, a dibble, a garden line, a combination seed drill and wheel hoe, and a scuffle hoe. The uses for the first few of these have been mentioned in the instructions for preparing the soil. The seed drill, while it saves a tremendous amount of labor, must, nevertheless, be used with care. First of all, it must be kept scrupulously clean and dry and never put away in a wet or dirty condition, or rust will soon prevent its operating accurately. As the size of seeds vary a great deal, before being put in use for any particular crop it should be care-



Just at this time of year when the temperature changes so often and so quickly every house owner will appreciate the advantage of a heating system that can be immediately regulated to conform to the mildest or most severe weather. With Vapor Vacuum Heating (Kriebel System), by means of the regulating valve (shown above) you can get any in-between heat in any radiator, anywhere in the house, wherever you want it. Also note that this valve is placed on top of the radiators—no back-breaking stoop when regulating heat. The

Vapor-Vacuum Heating
Trade Mark  **Kriebel System**

instead of working against an atmospheric pressure of 15 lbs. to the square inch, displaces this pressure in the system with a partial vacuum, thereby creating a pull on the boiler that draws heat into the radiators. That's the reason V. V. Heating, Kriebel System, will save you 25% in coal consumption.

Our little booklet written so that anyone can understand it, is yours for the asking.

Everyone who is interested in a heating system of any kind, or who expects to be, should have this book. Write for it now.

Vapor Vacuum Heating Co.
1211 Walnut St. Philadelphia, Pa.



STANLEY'S HINGES

The Standard of Quality the world over. Before buying the hardware for your new home, write for booklet "Properly Hung Doors."

Department "H."

THE STANLEY WORKS
New Britain Connecticut

LET US HELP YOU

Our experienced landscape gardeners make a planting plan of your place, selecting trees, shrubs, etc., suitable to soil and situation. Our nurseries (more than 600 acres) offer the finest selection in America for lawn and garden planting. Write for Catalog D.

STEPHEN HOYT'S SONS CO.
Est. 1843. Inc. 1908.
New Canaan, Conn.





THE envied charm of lawns luxuriant in their beauty and regularity, is attributable to one essential—good seed.

A surprisingly large portion of America's finest lawns were made with "The Thorburn Lawn Grass Seed."

This mixture makes a rich green-sward in three or four weeks—its texture constantly improving as it ages.

We want you to plant this seed—to see for yourself the wonderful results it is producing.

So, to acquaint you with its true merits, we submit the following low prices—postage prepaid by us.

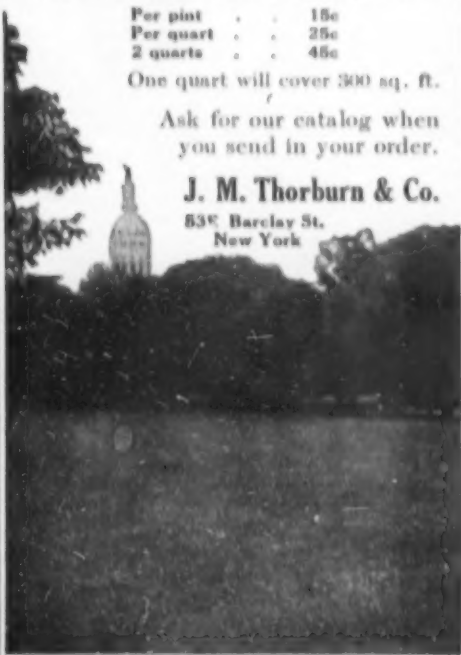
The Thorburn Lawn Grass Seed

Per pint . . . 15c
Per quart . . . 25c
2 quarts . . . 45c

One quart will cover 300 sq. ft.

Ask for our catalog when you send in your order.

J. M. Thorburn & Co.
535 Barclay St.
New York



fully adjusted. The best way to do this is to get along, clean board or sweep a place clean on the shed floor, where you can sow a few feet of seed and see whether it is dropping properly. A great deal of trouble will be saved by so planning your garden, that seed of approximately the same size and requiring planting of the same depth are sown together, so that in planting the garden it will be necessary to adjust the machine as few times as possible. In planting large seeds, such as peas and beans, which have to go quite deep, the rows may be furrowed out first lightly with a hoe or the plow attachment to the wheel-hoe, and the seeds then sown with the drill in the bottom of this. The trench can be filled in immediately, or after the plants are several inches high, at the time of the first hoeing.

For the first cultivation, after the plants have come up, the disc attachment, which shaves close to the row without throwing any dirt toward it, or the hoes with the shank turned toward the row, as illustrated, should be used, with the machine running astraddle of the row. When the plants get larger, the hoes may be turned the other way, so that they overlap, and the machine runs between the rows. The rake attachments are also very valuable in breaking up the crusts where there are no small weeds; in this way the work can be done with great rapidity, and it is much easier to do this, keeping the weeds down when they are just beginning to sprout, than to wait until they are an inch or two high and then have to go over the garden carefully, doing a good deal of the work by hand. Keep the wheelhoe and its attachments as carefully as you would a sewing machine; keep it well oiled and the cutting edges sharp, and do not be afraid to take the time and trouble to get the right attachment and the proper adjustment to do the best work for the particular job you may have in hand. For after you have once succeeded, you will know just what to do the next time without wasting any time.

CULTIVATION—The chief purpose of cultivation is to conserve the moisture in the soil by maintaining a dust mulch. In addition to this, it breaks up and pulverizes the soil below the surface, admitting air, and destroys weeds.

Cultivation should begin just as soon as the planting has been done. The rows will, or should be, plainly marked by the roller on the seed drill or where the soil has been pressed down by the back of the hoe after covering the seed. Some seeds come up in a few days, but others take a much longer period. Do not wait for the plant to appear, keep the surface soil stirred continuously, every week or ten days, between the rows and as near as possible to the rows of little seedlings coming up. The first few cultivations can be quite deep, but as soon as the plant roots begin to spread through the soil it should be kept nearer the surface, so that they will not be cut off or injured. The roots of quick-



Seven Glorious Lillies for ONE DOLLAR Delivery included. STRONG PLUMP BULBS Flower first season. Each

L. ALBUM recurved petals like driven snow. FRAGRANT 3-4 ft. . . . \$ 25
L. AURATUM A GLORIOUS LILY. Through center of each white petal runs a golden yellow band. Ht. 4-6 ft. . . . 20
L. RUBRUM Recurved white petals are spotted rich crimson. Ht. 3-4 ft. . . . 20

L. Umbellatum. Upright flowers, colors vary from buff to rich apricot. 2½-3 ft. . . . 15
L. Tenuifolium. Coral Lily of Siberia. Bright coral red flowers sway in masses on numerous branches. 2-2½ ft. . . . 15
L. Washingtonianum. Native of high Sierras. Large trumpet flowers open pure white, shading into deep rose. Perfume entrancing. Ht. 5-6 ft. Monster Bulbs, 50c. . . . 30
L. GLORIOSA SUPERBA. A GEM of Southern climes. The ONLY climbing LILY KNOWN. Soft tendrils twine around any support. On slender stems are poised, like birds of tropical plumage, the exquisite dazzling yellow and scarlet flowers. Monster Bulbs, 50c. each. . . . 30
All Bulbs are sold singly or in collection of seven. With every order, we send printed directions—HOW TO CULTIVATE LILIES successfully. Our spring, 1914, Gardenbook of 120 pages is FREE on application.

Address H. H. BERGER & COMPANY
70 Warren Street, New York

CYPRESS

"The Wood Eternal."

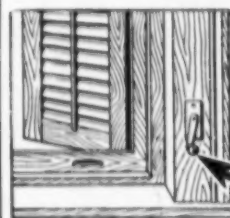
OF COURSE! Lasts and Lasts and Lasts

For durable painting of all kinds use

National Lead Company's Pure White Lead.
(Dutch Boy Painter trade mark.)

Ask for Helps No. 18. Sent free on request.

National Lead Company, 111 Broadway, New York



Open or close
your Shutters
from the In-
side

Every time you open your windows, you create draughts, and let in dust and dirt from the outside.

MALLORY Shutter Worker

is a little crank on the inside of the window which opens or closes the shutters with a slight turn. The shutters stay locked in any position. Write us to-day for information and booklet.

MALLORY MFG. CO.

255 Main Street

Flemington, N. J.

growing plants spread very rapidly; corn, for instance, in the course of only ten or fifteen days, will, in favorable weather, have sent out roots long enough to touch each other when the hills are planted three and a half or four feet apart.

HAND WEEDING—In soils which are fairly free from weeds, and even where cultivation is kept up constantly, some hand weeding will be necessary to keep the plants clean in the rows. Get this done at once. If you attend to it as soon as the weeds can be seen, they can be taken out very rapidly with a small hand weeder. Also take the following hints: Do this work while the ground is soft, as soon after a rain as possible; do not merely pull out the weeds, but break up every square inch of soil surface, thus killing at the start the weeds that have already sprouted but are not yet above ground. Just before hand weeding, run over the rows with the wheelhoe and bring it up as close as possible to the plants, so that no more work than is necessary will have to be done by the fingers.

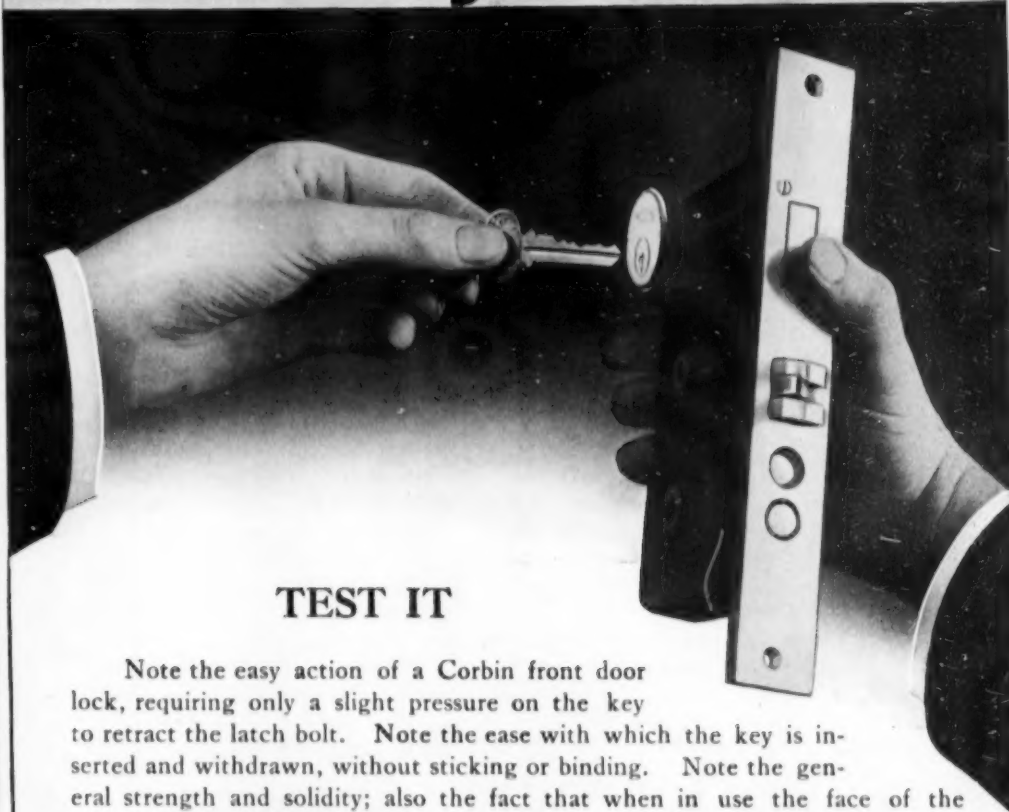
LEVEL CULTURE—It used to be the common practice to hill up most row crops and was due largely to the fact that instruments suited to level cultivation had not yet been introduced. This has now to a very large extent been done away with, and for most crops cultivation is kept as level as possible, although especially during the latter part of the season of growth, it is desirable in some instances to work the soil up toward the plant, such as corn and potatoes, making a very low, flat hill at the second or third hoeing, and in this way many small weeds are smothered out and an extra mulch is placed around the roots. In wet soils or very wet seasons, hilling is of benefit where it would not otherwise be to advantage.

Irrigation

IRRIGATION is of vital importance to the complete success of the garden. Without sufficient water to enable the plant roots to take up the plant food in the soil, dissolving it for them, the crops will fail no matter how rich the soil may have been made nor how good the seed used. Nothing that you can possibly do for the garden will provide such certain and good results as the installation of some sort of a system for watering or irrigating.

If you have a city water supply, the problem is a very simple one. A three-quarter-inch or an inch pipe laid through the garden will not be expensive. If you want to you can use "second-hand" pipe, and if you desire you can do most of the work yourself with the use of a couple of pipe wrenches. If the garden is a small one, one hose connection will be enough. If you prefer, however, for convenience, you may have two or more at intervals of fifty feet, which will allow you to cover the whole garden with a twenty-five-foot hose, along one side or through the center of it. As the pipe, which will not be wanted during the winter, can be discon-

Safety First



TEST IT

Note the easy action of a Corbin front door lock, requiring only a slight pressure on the key to retract the latch bolt. Note the ease with which the key is inserted and withdrawn, without sticking or binding. Note the general strength and solidity; also the fact that when in use the face of the cylinder is the only part visible from the outside when the door is closed, and that the narrow, sinuous key way affords no chance for the use of picking tools. Then you will understand some of the reasons why Corbin locks are favorites with architects and house owners.

Any dealer in Corbin hardware will show you our locks, or we will send you circulars on request.

P. & F. CORBIN

The American Hardware Corporation Successor
NEW BRITAIN, CONNECTICUT

Chicago

New York

Philadelphia

Made in many sizes
Special ones to order

Most efficient direct
system of circulation



Have all food compartments of ONE AN INCH OR MORE THICK with all JOINTS OR CRACKS. More carefully made than most fine china dishes; GUARANTEED AGAINST BREAKING or CRACKING. The sanitary permanence, utility and beauty; the ECONOMY IN ICE CONSUMPTION (due to the FIVE INCH THICK SOLIDLY INSULATED WALLS) recommend them to those seeking the best.

PIECE of genuine solid porcelain ware edges and corners rounded WITHOUT JOINTS OR CRACKS. More carefully made than most fine china dishes; GUARANTEED AGAINST BREAKING or CRACKING. The sanitary permanence, utility and beauty; the ECONOMY IN ICE CONSUMPTION (due to the FIVE INCH THICK SOLIDLY INSULATED WALLS) recommend them to those seeking the best.

BEAVER REFRIGERATOR MFG. CO.

Send for Catalogue.

New Brighton, Pa.

In writing to advertisers please mention HOUSE & GARDEN.



Ideal

POWER LAWN MOWER

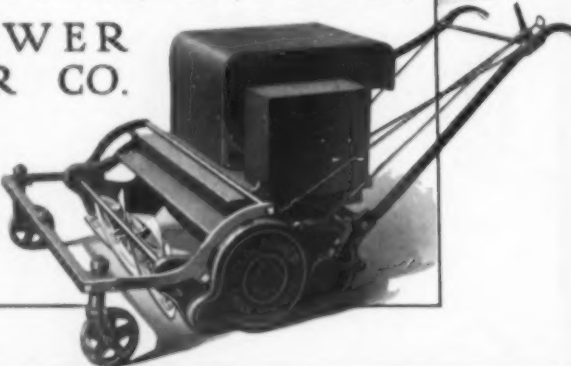
Are You Proud of Your Lawn?

THEN you will be glad to know that Mr. R. E. Olds, the famous inventor and manufacturer of automobiles and gasoline engines, who made his great reputation inventing simple and reliable machinery and selling it at a very reasonable price, has perfected a medium weight, low-priced, power lawn mower and roller that will travel from two to three miles per hour, has a 35-inch cut, and works closely and neatly around corners, flower beds and walks. It rolls the turf as well as cutting the grass, and leaves the lawn in perfect condition. No hoof-marks as when a horse is used, no shrubbery or walks spoiled, easy and economical to operate, perfect in results.

It has been thoroughly tried out and has given the best of satisfaction. Invaluable for parks, large estates, golf links, etc. The price of this mower, ready for shipment, is only \$375.00. Other power lawn mowers that are heavy and cumbersome cost \$1200.00 and up. They are not so easy to operate, or as satisfactory in results. Write today for complete information.

The IDEAL POWER LAWN MOWER CO.

403 Kalamazoo Street,
LANSING, MICHIGAN
U. S. A.



REOLDS
MAKES
VELVETY
LAWNS
LATEST INVENTION

ected and drained out in the fall, it is not necessary to put it far below the surface of the garden, and, in fact, it can be laid along the top of the ground, but it will then be in the way of the lawn mower and so forth.

OVERHEAD SPRINKLING SYSTEM OF IRRIGATION—Watering by hose, while effective, is still not as thorough and nowhere near as easy as watering with a regular irrigating system. The best system for ordinary purposes is that known as the Skinner or "over-head" system. The pipes are placed fifty feet apart, and the nozzles which distribute the water four feet apart on the pipe. The latter cost only five cents apiece. For a large garden a combination strainer and turning handle, which costs a dollar and seventy-five cents or more, according to size, is convenient; but it is not necessary for small gardens with a supply of city water. Where water is supplied from a gravity tank the fall must be sufficient to product fifteen pounds or more of pressure at the nozzles. (See accompanying tables for pressures at varying heights.) The brass spray nozzles throw a stream, under thirty to fifty pounds pressure, to a distance of twenty-five feet. The nozzle-line pipes are placed upon supports from a foot to six feet or more about the ground, and may be desirable; upon these supports they may be revolved from side to side, each pipe thus covering a strip fifty feet wide.

It is best to irrigate on a cloudy day or in the afternoon, but with the overhead sprinkling system I have never been able to see any bad results even when water was applied in bright sunshine. Water should not be applied until the soil begins to get dry, and then it should be given a thorough soaking, such as would result from a good, thorough rain. It is well to cultivate as soon as possible after irrigating, in order that the water applied will last as long as possible. Irrigation is also a protection against frost, either for sprinkling hardy plants early in the morning after they have been touched, or for protecting more tender things by keeping the water spray turned on continually during the night until after danger of frost is over in the morning.

Give Nature a Boost

Your lawn, your flowers and shrubs, your vegetables and fruit trees, all need plant food. Use natural fertilizer. It is best. And use it now to get your soil ready for spring planting.

SHEEP WIZARD MANURE



is all natural plant food and humus that makes better soil and better crops. It's **NATURE'S BEST FERTILIZER**. No Weeds—No Waste—No Refuse. 4.00 for large barrel. Freight prepaid east of Omaha. Ask for our practical booklet on **Fertilizing**, with special quantity prices and freight rates.

The Pulverized Manure Co.
25 Union Stock Yards, Chicago
Sold by Garden Supply Houses Everywhere



The Stephenson System of Underground Refuse Disposal

keeps your garbage out of sight in the ground, away from the cats, dogs and the typhoid-fly. Opens with the foot. Hands do not touch it.

"Thousands in Use"

Underground Garbage and Refuse Receivers

A fireproof and sanitary disposal for oily waste and refuse in your garage. Our Underground Earth Closet means freedom from contaminated water supply.

Sold direct. Send for catalogue In use ten years. It pays to look us up **C. H. STEPHENSON, Mfr.** 40 Farrar St. Lynn, Mass.



Uses of Concrete and of Iron Pipe

THERE are a great many opportunities about the average place for advantageously using concrete. It can be adapted for a variety of uses from filling holes in trees and making foundations, to making garden vases, a stone step, a root cellar, or a coldframe. The ingredients are cheap, and what you make out of it is practically indestructible. You can easily learn to do the work yourself in odd half hours.

The ingredients required (they will keep indefinitely, until you are ready to use them, if stored in a dry place), are Portland cement, which comes in paper bags of 95 pounds net—clean, coarse builders' sand and medium-sized gravel, crushed stone or clean, hard cinders.

All the tools required are a tight floor, platform or large box in which to mix, a square-pointed shovel and a hoe, with which to handle and mix the material; a peck or larger measure for measuring, and a couple of pails to carry water, or fresh cement in, if it has to be poured into forms.

In making the concrete, these materials are mixed together in varying proportions, according to the requirements of the work to be done. The more cement used in proportion to the other things used, the stronger the concrete.

Medium Mixture—For Ordinary work, such as walls, walks, curbs, small foundations, etc., use 1 part Portland cement, 2½ sand and 5 gravel, by bulk.

For thin walls, posts, troughs, or any materials which must be strong and impervious, use 1 part cement, 2 sand and 4 gravel. For abutments, foundations, retaining walls and other use where bulk rather than great strength is the object, use 1 cement, 3 sand and 6 gravel.

In making walks care must be taken to have the foundations firm, well drained and even before the top is laid down. Except in good stiff soil a foundation layer of broken stone or very coarse gravel is desirable, if not actually necessary. For a hard, smooth surface, or to finish off gutters or curbs, mix thirty shovelfuls sharp sand to a bag of cement (or about three shovelfuls to each ten pounds of cement), and apply before the base has hardened.

Carefully measure out the gravel, sand and cement and shovel them over once or twice to get the cement fairly well distributed before applying the water. Add the latter gradually, working over quickly, until the mass is of an even consistency and thin enough to pour, or spread, and put into place at once. If the wet concrete is allowed to make its initial "set" it should not be used.

Forms—For constructing walls of buildings, and for many other purposes "forms" are used. They may be readily constructed from ordinary boards, free from rough splinters or knotholes. For heavy work plank are better, as they do not give so readily. In either case brace all forms thoroughly, so that they will not bulge under the pressure of the wet concrete, which should be tamped down firmly into place. It should set for a day or more, and then the forms should be carefully removed. If the concrete is to be subjected to use or strain at once, the forms should be left for a longer period. Protect fresh concrete from possible freezing.

In connection with the use of concrete, or even without it, the use of gas or water-pipe, either new or second-hand (which may be bought very cheaply) offers many possibilities in the way of repair or construction. You can order the pipe cut to any desired length, so that by the use of "split fittings," which are now made for a great variety of purposes, you can put up iron work that does not have to be water



Willow Furniture

Never before have our stocks been as comprehensive as they are this season. The new models are built on beautiful lines and the *prices are very moderate.*

Stool,	No. 1001	- - - - -	\$3.00
Side Chair,	No. 1002	- - - - -	7.00
Arm Chair,	No. 1003	- - - - -	9.00
Table,	No. 1004	- - - - -	11.00
Sofa,	No. 1005	- - - - -	19.00

The above prices do not include cushions, for which an additional charge is made dependent on character of material used.

Illustrated Booklet sent upon Request.

McGibbon & Co.

3 West 37th Street

(Just off Fifth Ave.)

NEW YORK

Let our book help you in the selection of your
Lighting Fixtures
You will find it a cyclopedia of the most appropriate and most efficient lighting fixtures for every room, in town or country home. And our moderate prices will pleasantly surprise you. Please request our Lighting Fixture Catalog No. 84H65. It will be mailed to you free.
Sears, Roebuck and Co.
Chicago

ROSE ARBOR SEAT
A GARDEN is never quite complete without attractive, comfortable furniture.
We design and make a great variety of Old English Garden Furniture, Chairs, Seats, Tables, Trellises, Arbors, Pergolas, Houses and Gates.
Send for complete catalog, mentioning this medium.
NORTH SHORE FERNERIES CO.
BEVERLY, MASS.
New York Showroom: Craftman Building, East 39th Street

THE CENTURY FOR APRIL

IS A

Modern Art Number

AND CONTAINS SEVEN SHORT STORIES

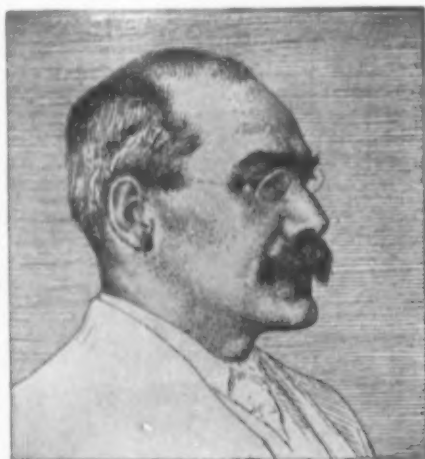
including

"The Dog Harvey"

by

Rudyard Kipling

a great story with a touch of
the supernatural.



DO YOU UNDERSTAND THE ART OF TO-DAY AND OF TO-MORROW?

This elaborate and beautiful MODERN ART NUMBER will explain it clearly and fairly for the first time. This number contains five art papers with more than 50 pictures (2 in full colors): I—"Is our Art Distinctively American?", John W. Alexander, President National Academy of Design; II—"The Painting of To-day," Edwin H. Blashfield, President Society of Mural Painters; III—"The Painting of To-morrow," Ernest L. Blumenschein; IV—"The Point of View of the 'Moderns,'" Walter Pach; and V—"The Ancestry of Cubism," Jay Hambidge and Gove Hambidge.

Begin to subscribe with this great April number, containing many other important features besides the above.

THE
CENTURY
Co.
Union Square,
New York

Enclosed find \$4 for special subscription, including the Feb., March, April, and a full year from May (15 months at the price of 12 months).

H. & G. A.

tight, with no other tool than a monkey wrench. Even when regular threaded couplings are used, two medium-sized Stilson wrenches will be all the tools required, and they will last a lifetime. For trellises, supports, columns of all kinds, posts or arches in place of wood, gateways, bars, fences, railings, etc., pipe is practically indestructible and when painted a suitable color makes a very neat appearance.

Tree Repair

THE injuries to trees are usually abrasions on the bark or broken limbs or splints in the crotches of trunks or branches.

The implements needed for ordinary tree surgery are a good pocketknife, a mallet and chisel, a sharp saw and a can of coal tar or heavy linseed oil or lead paint. Cement for making concrete will be necessary in cases where large cavities exist.

In cases of wounds or broken limbs the first thing to do is to cut back to sound wood or sound bark. Make all the surfaces clean and dry; in cases of limb or branch, unless quite large, cut them off quite close to the trunk. The wound should then be wiped off, clean and dry, and painted over thoroughly.

Splits should be prevented or repaired by tying the parts up temporarily with a rope or chain, which may be twisted up with a stick or iron bar, to get them close together; then drill a hole through each branch, measure the distance, and have a bolt made at the blacksmith's jointed in the middle, and with a large washer at each end.

Decayed cavities, either at the base of the trunk or at large limbs resulting from wounds formerly neglected, should be dug out and all semi-rotted wood chiseled back to clean, hard wood; paint this over, and if the cavity is large, fill it with cement, being sure that no rotten or decayed spot is left underneath it.

Plant Fruit Trees

APPLES and peaches may be grown on any good garden soil. Good drainage is absolutely necessary. Holes for planting fruit trees may be prepared in the same way as those described for shrubs.

CULTIVATION—Because the fruit trees and small fruits, such as currants and grapes, will stand almost any amount of abuse, without being actually killed, they are frequently neglected. In order to obtain satisfactory results they must be properly cultivated. The cultivation can be very shallow and can be done very rapidly with a wheelhoe or rake, or with a harrow on a larger scale. Where more than a few bushes or trees are kept, it is a good plan to sow some cover crop in August or early in September, which will not only save cultivation but will also give the ground protection through the winter, and will furnish humus to spade or plow under in the spring.

House lighting is a hundred years or more behind every other science. **THE LIGHTING BOOK** tells you how to make your lighting economical, efficient and decorative.

THE LIGHTING BOOK

By F. LAURENT GODINEZ

Illustrated, \$1.25 net

It is a great misfortune to thousands it could not have been written and published fifty years ago.—"Boston Transcript."

Artificial light as it is used to-day is a serious menace to the eyesight of our nation. Indeed the lighting of our public places and frequently of our homes is dangerous to our health, because of the ruinous effect on the eyes.

THE LIGHTING BOOK tells how to subdue the dangerous brilliancy of harsh, white lights, giving repose and comfort in the home at small expense and with simple equipment.

McBRIDE, NAST & CO., Publishers

New York

In writing to advertisers please mention HOUSE & GARDEN.



Instead of an ordinary room add a conservatory to your home. It will be a constant delight the year around and the entire house will be constantly permeated with the cheer and life that only sunshine and growing things can bring.

KING Channel Bar Greenhouses

and conservatories are the result of years of experience in building for professional growers. They possess great strength without heavy, shadow casting supports, are easily heated and have a wonderful ventilating system. That's why they are so productive. They are artistic because this type of construction lends itself to the curves and graceful sweeping lines which are so necessary to the architect.

No matter what size greenhouse you want, or how much you can afford to spend upon one, there is a "KING" that will just meet your requirements. We build inexpensive portable greenhouses and the largest greenhouses in the world is a King.

Write today for Bulletin No. 43 and let us put you in touch with some King owners. Tell us what you have in mind, and we will gladly furnish designs.

KING CONSTRUCTION COMPANY

261 Kings Road, North Tonawanda
NEW YORK

All the Sunlight all day Houses

BY THE AUTHOR OF THE \$10,000 PRIZE NOVEL

Traumerei

By LEONA DALRYMPLE

Author of "Diane of the Green Van"

Which was the best of 500 manuscripts submitted in the Reilly and Britton Novel Contest.

A stirring romance woven around a Stradivarius violin, an adventurous young American, and a beautiful Italian girl. It is full of melody, charm, and excitement. Illustrated by C. F. Peters. 12mo. Postage, 12 cents.

McBride, Nast & Co., New York

SPRAYING AND PRUNING—In the growing of fruits, both the small fruits and the tree fruits, to give protection from both diseases and insects, is perhaps the most important part of the work. This is done most effectually by the means of sprays, and you should make yourself familiar with the things which are likely to cause trouble and their remedies. As soon as you find anything which appears to be wrong you should immediately ascertain what is wrong and begin the fight against it without a day's delay. Proper pruning is also very important. Cutting back the plants at the time of setting has already been spoken of. The fruit trees, apple, plum, pear and so forth, are now trained to what is called the open head or vase form, which consists in cutting them back, cutting off the main leader quite low to the ground, when they are planted out a year later, and inducing a lateral or spreading open growth of the lateral branches as a result. If pruning is done properly from the beginning, very little will have to be done each season, except trimming enough to keep the young growing trees in shape with a pocket knife. For larger trees, all broken limbs or those which cross, or where growth has become too crowded through neglect, should be cut off, always being careful to make a clean cut with a sharp pruning knife or saw.

Grafting and Budding

IT is often of advantage to have more than one kind of fruit growing on a tree or to substitute for an unsatisfactory variety one that is better liked. This can be done by grafting if the stock plant is in good healthy condition. "Budding" is a similar operation, except that in place of the scion or twig used in grafting, a single "bud," with a small slice of bark and little or no wood attached, is used. Commercially either budding or grafting is used mostly to propagate varieties that either will not come true from seed or are weak growing sorts on their own roots.

Unless one has had experience it is much better to get some one who knows how to do the work; but as that is not always possible, and, furthermore, as there is a great deal of fun to be had in doing the thing for oneself, here are brief directions: The scion or cutting is made from a new, live branch, usually not larger than a lead pencil in diameter, having two or three buds on it. They should be taken in winter or in very early spring while growth is perfectly dormant, and may be stored in sand in the cellar, or any cold place, or buried in the ground until wanted. If allowed to shrivel they are useless. The graft should be made before the trees start in to active growth in the spring.

The stock should be clean and healthy; if changing over a grown tree, such as a plum, apple or pear, upon which some other variety is wanted, the 'cleft graft' is used. Cut off square the tops of healthy, young limbs, which are preferably two



No. 21, Bluebird No. 25, Woodpecker No. 23, Wren

"Back to Nature Movement among the Birds" Birds Prefer RUSTIC Houses

Your choice for \$1.25. The three of either group for \$3.50. Parcel Post, prepaid, except outside of fourth zone add 10 per cent. to amount of your order.

THE CRESCENT CO. "Birdville" TOMS RIVER, N. J.



No. 11 No. 12 No. 13



ONE OF HUNDRED BEST BOOKS OF THE YEAR Selected by the New York Times Committee

By JOSIAH C. WEDGWOOD
Staffordshire Pottery
and Its History

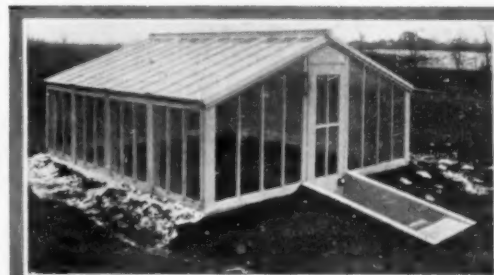
In this book the grandson of the "Prince of Potters" tells the real story of Staffordshire ware, tracing its history from the earliest references to the present day, and showing its development from a home to a factory business. Illustrated.

Invaluable to collectors and pottery students and interesting to students of history and sociology.

—N. Y. Times.

\$3.25 net; postage 16c.

McBRIDE, NAST & COMPANY
Publishers New York



Make Your Garden Everlasting!

Use Sunlight Double Glass Sash on this inexpensive, ready-made greenhouse.

The sash serve either on hot-beds or cold frames, or on the greenhouse, according to the season and the plants you want to grow.

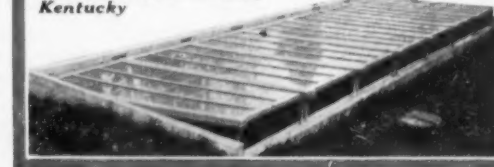
The greenhouse is so made that the sash are readily removable when wanted for other work.

As the sash are double glazed sash they need no nets or shutters and are complete, profitable and long lived.

Get our catalogue. It is free. If Prof. Hersey's booklet on hot-beds and cold frames, or the use of an inexpensive greenhouse is wanted, send 4 cents in stamps.

Sunlight Double Glass Sash Co.

E. Broadway, Louisville,
Kentucky



In the April SCRIBNER

The first article by Theodore Roosevelt

on his experiences as

A Hunter-Naturalist in the Brazilian Wilderness

Up the Paraguay.—It gives an account of the first stages of his journey up the Paraguay River, impressions of the bird and animal life, of the picturesque country, of the river teeming with fish, among them schools of the ravenous man-eating piranha, and of the people. It is permeated by the author's inimitable qualities of enthusiasm, of observation, and vivid description.

Abundant illustrations from photographs by KERMIT ROOSEVELT and other members of the expedition.

Another of George E. Woodberry's brilliant, poetic African articles:

"On the Mat"

is an analysis, a revelation of the religion, the *soul*, the very spirit of the desert and its people.

Artist and Public

by Kenyon Cox

This distinguished artist sums up the Cubists and the whole "shock-your-grandmother" school.

The Fair in the Cow Country

by W. Herbert Dunton

Illustrated by the Author. Bronco busting, cow-girls, cow-punchers, ropers, are all in vivid and hilarious excitement and the competition of a typical Western fair.

\$3.00 a year

CHARLES SCRIBNER'S SONS, NEW YORK

A SUMPTUOUS BOOK FOR CONNOISSEURS

A HISTORY OF ENGLISH GLASS PAINTING

BY MAURICE DRAKE

The author, representing the third generation of a family of glass-painters, records the best tradition in connection with materials, methods and examples of an art which is just coming to be recognized at its true worth by architects, churchmen and collectors. This is a most sumptuous book in every way—beauty of typography, binding and illustrations—as well as an authoritative work on a subject of extraordinary interest. Illustrated in color. Send for free prospectus. \$12.50 net; expressage 50c.

McBRIDE, NAST CO., Publishers, Union Square, New York City

Short Stories

Worse than Married

by Henry and Alice Duer Miller

The story of a wreck and what happened to two on a small island.

Soldiers of Time

by Barry Benefield

The old clock-maker and Decoration day.

Sparks of the Wireless

by Walter S. Hiatt

The life aboard ship of the young men who send out the S. O. S. call and others. They have brought a touch of the old romance back to the sea.

Her Friend Sergeant John

by Wolcott LeClair-Beard

An army story of the Mexican border

inches or so in diameter; split this carefully across the middle and insert one (or two) of the scions, having cut them carefully to a wedge shape on one end. Success will depend upon getting the cambium or living under-bark layer of growth, in both scion and stock, held firmly together and protected from decay. Each scion must be held firmly in place and the whole wound covered over with grafting wax; in applying which, as it is sticky, the fingers should be greased with tallow. New suckers and sap growths must be kept off the stock plants, and it should be pruned back quite severely each year to throw the strength of the tree into the new growth.

Very small stock, such as seedlings one to three years old, instead of being split, are cut off diagonally, and the whip graft employed. The surfaces of stock and scion must match evenly, and a tongue is cut down in each at the center so that one may be inserted in the other, thus holding them more firmly in place. They are then bound tight with raffia or cord and waxed over.

In budding, a single healthy bud with an elliptical section of bark is used instead of a scion, and this is inserted into a T-shaped slit made in the bark of the stock tree, where it is bound tight with raffia. Budding is usually done in August or early in the spring.

Grafting Wax can be bought from your seedsman or nurseryman, or made by breaking up and thoroughly melting together four parts of rosin by weight, two of beeswax and one of tallow. When thoroughly melted pour into a pan of cold water, and as soon as it hardens work, as you would molasses candy, until the proper consistency and a light color.

Weeds

TROUBLESOME weeds that persist in gravel or earth paths and very often those on lawns or about the grounds or in pasture hay and grain crops can be controlled by spraying with herbicides. For walks, drives, tennis courts, etc., use common salt, either sprinkled on freely dry, or with a watering can at the rate of one pound to one gallon of hot water. Crude carbolic acid, one part to ten to thirty parts water, may be used as a spray, provided the mixture is kept well stirred up.

Individual weeds which can be got at without injuring other plants near them may be treated with carbolic acid pure, or if this is not effective, although it usually will be, sulphuric acid—the latter, however, should be handled very carefully and only in glass containers.

Poison ivy and other wild vines should be cut off, preferably in mid-summer, close to the ground; the main trunk and stems grubbed up, and a strong solution of caustic soda poured into the holes wherever the remnants of the vines or roots are visible.

(Continued on page 342)



Bald—Cold—Uninviting Lines of Architecture Before Any Planting Was Done

BEFORE USING MOON'S NURSERY STOCK AND AFTER

WHAT a difference a little planting makes. One season a bare, forbidding, unhappy looking place. The next, a cozy comfortable one, effectively restrained from the public and charmingly tied to its location. A little consistent planting of Moon's stock accomplished it. Not haphazard planting; but one that was carefully thought out, so that all the year there will always be the greenery of Rhododendrons and other evergreens. During other seasons, some of the plants and shrubs will give their bloom and foliage to the pic-



The same site a few years after Moon's stock was planted.

ture; and during the winter months, colored barks and bright berries add cheer to bleak, leaden skyed days.

A little well thought out planting will do wonders for the transformation of your grounds and the further adding to your happiness.

We have plants, shrubs and trees for every place and purpose. Over 2000 varieties to choose from—hundreds of acres of them. Every order is freshly dug and packed with telling care. We will gladly make suggestions for your various planting problems.

Our 1914 catalog is a decided departure—you'll appreciate its many innovations. Send for a copy.

The Wm. H. Moon Company

Makefield Place

Philadelphia Office Room "D"



Morrisville, Pa.

21 South 12th Street

SMOOTH-ON

TRADE MARK REG. U. S. PAT. OFF.



IRON CEMENT No 7

WATER-PROOFS, DUST-PROOFS,
OIL-PROOFS AND WEAR-PROOFS
ALL CLASSES OF

CONCRETE WORK

Makes the concrete floors of your stable, barn or garage, water-proof, wear-proof and oil-proof. Withstands the heavy tread of horses and vehicles. Prevents dust and increases the wear of concrete surfaces.

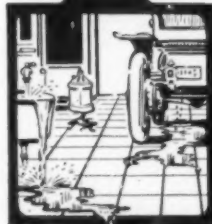
Unequalled on Carriage Washing Floors, Manure Pits, Cisterns and Septic Tanks, Cow Barn and Dairy House Floors, Silos, Water-troughs, Dipping Vats, Ice Houses, Fountains, Duck Ponds, Swimming Pools, etc. Will permanently stop leaks in concrete or brick walls and is used extensively for water-proofing Tree Cavities.

Smooth-on Iron Cement No. 7 is used in and around country homes, out-buildings or wherever a hard, dense thoroughly water-proof surface is required. It is a hydraulic, chemical iron cement, sold in powdered form and applied alone or in combination with Portland Cement.

You should know more about this valuable Cement and its uses. Smooth-on Instruction Book No. 7 will be sent upon request.

SMOOTH-ON MFG. CO.

572 Communipaw Ave., Jersey City, N. J.



House and Porch Plants from Their Native Home

Palms, ferns and most foliage and decorative plants are native to tropical and semi-tropical countries. Many of the most desirable can be propagated to advantage only under the climatic conditions under which they were originally found. These splendid house and porch plants may be enjoyed in almost every part of the world, however, when a few simple rules are observed in taking care of them. They have no rivals as decorative plants and yield a world of pleasure.

Palms and Ferns are at Home in the Royal Palm Nurseries

Palms are a leading specialty at these great international supply nurseries; ferns are given scarcely less attention, and tropical foliage and decorative plants are grown in vast numbers and endless variety. Here these plants are at their best. We know how to grow them right from our thirty-odd years of experience, by our methods they are given unusual beauty and vigor, and our shipping system is so satisfactory that this class of plants has carried the fame of Royal Palm Nurseries to every clime.

Get Some of these fine plants—they will Surprise and Please You

Surprise you, first, by their size and strength and, second, by the splendid condition in which they reach you. And they will be a source of continual pleasure, growing with vigor from the time you plant them. In many sections they can be left outdoors until away into the fall.

Royal Palm Nurseries' Catalog describes fully all the good Palms and Cycads, Ferns and Selaginellas, and Tropical Foliage and Decorative Plants. The book tells the best kinds for every purpose and gives much other helpful information. Free—write for it.

Reasoner Bros.

Benedict Avenue

ONECO, FLORIDA

THE LATEST WORD ON A VITAL SUBJECT
Perfect Health for Women and Children

By **ELIZABETH SLOAN CHESSER**

Authority states that one-fifth of the babies die of preventable diseases before they reach the age of five years. In this book the way to perfect health is shown to women, both for themselves and their children. The book is one that must command attention from every thoughtful person. **\$1.35 net; postage, 12c.**

McBRIDE, NAST & CO., Publishers, Union Square, New York City

A NEW AND EASY METHOD
**A RATIONAL
 SYSTEM OF
 HOME EXERCISE**

By **PERCIVAL G. MASTERS**

Describes exercises for health rather than for mere strength. It shows the part the spine and its nerves play in the health of the body, and the exercises are without apparatus and occupy but a few minutes daily. *Illustrated.* 12mo. **\$1.00 net; postage, 8c.**



"Do You Know Vanity Fair?"

Once, long ago, people had leisure enough to read separate magazines of the Stage, and of Art, and of Outdoor Sports, and of Humor and of Literature. Nowadays, when nobody has time for anything like that, you will find Vanity Fair is six magazines in one.

It is a review of everything new and good on the Stage and in Music and Opera;

It is an illustrated newspaper of all Amateur Sports—Golf, Tennis, Polo, Racing, Yachting and Football;

Also a timely review of the tendencies in Literature, and in the fiction of the day;

It is a journal of the best in Art, giving much space to the work of our younger artists;

A fashion magazine presenting the best Paris and New York styles;

Above all else, Vanity Fair is a cheerful magazine, presenting certain tendencies of American life, good-naturedly and entertainingly.

SIX numbers of Vanity Fair from April to September (regular price 25 cents each) will be sent for \$1 if you mail this coupon now. As the supply of the April number is limited, send the coupon at once.

VANITY FAIR, 449 Fourth Ave., New York
 For the \$1 enclosed send me Vanity Fair for six months
 as advertised in House and Garden for April.

Name.....
 Street.....
 City.....
 State.....

In writing to advertisers please mention HOUSE & GARDEN.

(Continued from page 340)

Weeds in lawns, pastures and grain crops can also be controlled by spraying; among those susceptible to the sprays are mustard, dandelion, ox-eyed daisy, red-topped thistle, carrots, parsnip, elder, rag weed and most broad-leaved succulent-rooted weeds. In lawns, spray two or three days before cutting and do not mow again until two or three days after spraying. Rain will interfere with the effect of the spray and it may have to be repeated. Meadows should be sprayed just before the grass begins heading up. With grain crops the first spraying should be made before the bloom begins to show and again if new leaves begin to develop. Where only one spray can be applied it is best to give it just before the crop covers the land. The two most satisfactory solutions for spraying are as follows: Salt solution—common salt, 150 pounds; water, 50 gallons, covering half an acre to an acre. Iron sulphate solution—copperas (iron sulphate), 100 pounds; water, 52 gallons, will cover one-half to one acre.

Insects and Diseases

INSECTS attacking plants, in the garden, in the orchard or in the house, are of two types: those which live by chewing and those which suck the plant juices. It is very evident, therefore, that the punishment must be made to fit the criminal.

The three methods of combating insects are: first, to keep them away altogether, by *mechanical* protection; second, to poison them by poisoning the food they eat; third, to destroy them or drive them off by some contact poison or corrosive which will be effective without being taken into the mouth and stomach.

Insects will give you a great deal of trouble, or little, according as you prepare or neglect to prepare to get ready for them. Most of the common pests can be controlled if taken in time—the hour when you first notice them. To be able to do this you should have a supply of the most needed insecticides and fungicides on hand. This is now easy to do, for all the things in the following list can now be bought ready prepared in small packages that will keep. A single package will in most cases last for more than one season, so the expense of sufficient protection is very slight compared to the injury done for want of it.

Here is what your insect arsenal should contain:

A compressed air sprayer, a powder gun or bellows. One package of each of the following: Kerosene emulsion, tobacco dust, nicotine extract, arsenate of lead, paris green, hellebore, lime sulphur, bordeaux mixture.

Tobacco dust should be strong and made for the purpose; it is about three cents a pound in bulk. For dusting around on the ground about plants set out in the green house or coldframes and for dusting under the leaves of plants; it is especially effective.

(Continued on page 344)



A Near-the-Residence Greenhouse

BEING sisters, it does seem like rather the natural thing to locate the greenhouse near the garden. But how much more pleasurable if the indoor garden can be close to your home where you can reach it handily during disagreeable weather. If ever a greenhouse is cheering and comforting, it is when nature is in one of her topsy-turvy moods; or is gripping things in her icy clasp.

The boiler for this all-year garden is in the cellar of the residence, which is a good arrangement.

We are continually being asked "what can we grow in a

house this size?" What can't you grow, would be more easily answered. If you were fortunate enough to have been brought up in the country and had a grandmother or Aunt Jane whose bay window was filled with flowers from geraniums to lilies—you can well imagine what can be accomplished in a glassed-in garden like this, where room is plenty and conditions are ideal.

Frankly now; for what can you spend your money and get so continuously delightful a return as from one of these charming little houses? There is only one answer.

U-BAR GREENHOUSES PIERSON U-BAR CO

ONE MADISON AVE. NEW YORK.
CANADIAN OFFICE, 10 PHILLIPS PLACE, MONTREAL

Kentucky Thorobred Blue Grass Seed

Direct from the heart of the Blue Grass region where it is produced in its highest perfection. Every lot tested for purity, germination and rugged growing power by the Kentucky Agricultural Experiment Station and shipped in sealed bags.

This seed is the yield of Elmendorf, Castleton, Walnut Hall, Hamberg Place and Woodburn, five of the greatest farms in Central Kentucky. It will give you the most beautiful and vigorous lawn that can be grown. Order to-day.

Prices by Parcel Post Prepaid.

35c. per lb.; 3 lbs. for \$1.00 (Enough to seed 900 to 1,200 sq. ft.) \$4.00 per bushel (14 lbs.)

Special prices on quantity orders.

Central Kentucky Blue Grass Seed Company
121 Cheapside, Lexington, Ky.

Tasteful Mural Effects

Add beauty, charm and distinctiveness to your home. Give to it an air of cultured refinement by having your walls finished in the latest offerings of

Fab-Rik-O-Na Woven Wall Coverings

An almost unlimited variety of beautiful tones, shades and designs afford unique color scheme. Unequalled in rich simplicity and durability. When in New York, visit our exhibit at the Craftsman Home Builders Permanent Exposition, 6 East 39th Street.

H. B. WIGGIN'S SONS CO.
218 Arch Street Bloomfield, N. J.

Send for Booklet
"Art and Utility in Decoration"
And Samples

GALLOWAY POTTERY

Will Add Enduring Charm to your Garden and Make it a source of Continual Delight. Even the Smallest Garden is Incomplete without a Bird Bath, Sun-dial or Gazing Globe. These and other Charming Bits are Illustrated in our Catalogue which also offers a wide Choice of Flower Pots, Boxes, Vases, Benches and Garden Furniture of all Kinds. Galloway Pottery combines the Essential Qualities of Beauty and Durability with Reasonable Prices. SEND FOR CATALOGUE

GALLOWAY TERRA COTTA CO.
3218 WALNUT ST. PHILADELPHIA, PA.

Vapor Heating

MOLINE SYSTEM

If you are in any way interested in a new heating system and are looking for something good at a reasonable price (not competitive), write for our catalog.

The Moline System is the modern, scientific and practical method of successfully handling this most important of all building problems.

Write us the moment you start figuring on that new building—or even before. It will pay you—may help your architect.

Your inquiry will bring catalog, testimonials of users and blueprints—showing use in dwellings, apartments, schools, churches, public buildings, as desired.

MOLINE VACUUM-VAPOR HEATING CO.

Cut Out and Mail Dept. F
Moline, Ill.

Gentlemen: I am building a _____

Residence—Store—School—Church _____

about _____ dimensions in feet _____ with about _____

rooms. Please forward complete information.

Name _____

Address _____

City _____ State _____

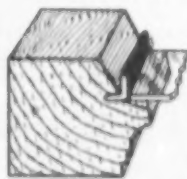
PERFECT HEAT AT THE LOWEST PRICE

A Garden of Small Fruits for \$10

You can have an abundance of fruits for years to come for \$10, consisting of the following varieties: Strawberry, Raspberry, Blackberry, Dewberry, Currants, Gooseberry, Grapes. For complete and simple instructions how to plan this little garden, read *MAKING A GARDEN OF SMALL FRUITS*. By F. F. Rockwell, author of *Home Vegetable Gardening*, etc. Illustrated. 50 cents net. Postage, 5 cents.

McBride, Nast & Co., New York

The Most Modern Window Construction in the World



Ready to Glaze



Glazed

DON'T use putty! Putty is not lasting and sooner or later will crack and fall off. Use the

RACINE PUTTYLESS WINDOW

The windows come to you glazed with lead strips ready for use; are dustproof, will not rattle and last a lifetime. Racine Puttyless Windows are the most simple and strongest window construction you can possibly have.

Free descriptive circular on request.
Send us the name of your dealer.

Racine Puttyless Window Co.
1207 N. Main St. Racine, Wisconsin

(Continued from page 342)

ive as a preventative where the plants are likely to be infested by plant lice, or cucumber beetles, squash bugs, etc. Can be used in practically any quantity directly on the foliage without injury.

Nicotine Extract—This comes in various patented, commercial preparations which usually contain some oils besides the nicotine, making a more protective emulsion; if used thoroughly and in time they are very effective. One part of the preparation is usually diluted with twenty to forty parts water. Always follow directions on containers carefully.

Arsenate of Lead—Comes usually in a thick, creamy paste and can be diluted with water and sprayed. Or the powdered materials for making—only two—may be bought. Has the advantage over Paris green that it will not injure the foliage and will stay on much longer. Should be sprayed on several hours before a rain, to give it time to set, when it will not wash off.

Paris Green—A standard insecticide for many purposes. Can be used either in a spray or dry, but should be diluted in the former case with water and in the second with plaster of Paris. It sometimes is used pure on potatoes, but must be blown on with a machine made for the purpose, in such small amounts that it cannot be seen.

Bordeaux Mixture—The standard preventative for blights and fungous diseases. Dilute according to directions and spray thoroughly. Arsenate of lead or Paris green may be added and sprayed on at the same time. Where it is desirable not to discolor the foliage such as on ornamental plants, or ripening fruit, use ammoniacal copper carbonate solution instead of Bordeaux. (See Home-Made Sprays for directions for making it.)

Lime Sulphur Wash—Is used as a winter spray for San Jose and in a much weaker solution as a summer spray for rust. Arsenate of lead or Paris green may be used with it.

Hellebore—Is used for currant worms or in other places where it is not desirable to use Paris green. It is dusted on dry or sprayed.

Kerosene Emulsion—This is a very safe and effective insecticide for sucking insects, such as plant lice and aphids, mealy bugs, cabbage worms, young squash bugs, and so forth, and scale. (See Home-made Sprays.)

Kerosene Emulsion—Thoroughly dissolve ½ lb. strong soap in a quart or so of hot water. Add this to 1 gal. water and 2 gals. kerosene,—or in these proportions. (For small amounts use 2 cubic inches soap, 1 pt. water and 1 qt. kerosene.) Place in pail or tub and churn or pump until a thick, lathery cream results. This is the "stock" solution. In using, dilute with 5 to 15 parts water—on dormant

(Continued on page 346)



It Pays to Pay Us to Care for Your Trees

In the first place trees are an asset, they give an increased money value to your property. No one denies that.

While you are taking care of your other assets, why neglect your tree assets?

On the other hand if it pays to care for your trees at all, it pays to have them cared for right.

The mere pruning and spraying of them is not all there is to it, not by a good deal. Just how much there is to it and just how important that much is; we tell plainly enough in our booklet called—*"Trees the Care They Should Have."* It both tells plainly and shows plainly.

Send for this booklet.

Munson Whitaker Co. Forest Engineers

Boston	New York
623 Tremont Bldg.	473 Fourth Ave.
Pittsburgh	Chicago
903 Arrot Bldg.	573 Commercial Bank Bldg.



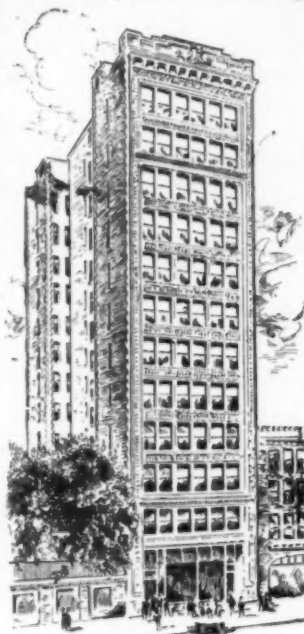
This is the way our
DWARF TREES BEAR
DWARF APPLE TREES
DWARF PEAR TREES
DWARF PLUM TREES
DWARF CHERRY TREES
DWARF PEACH TREES

Also all Standards Fruit Trees Catalogue Free
THE VAN DUSEN NURSERIES

W. L. McKAY, Prop. Box D, Geneva, N. Y.

Before You Build or Decorate—

visit *The Craftsman Homebuilders' Exposition (Permanent)* in the *Craftsman Building*—just off Fifth Ave., on 38th and



39th Streets, in the heart of the most famous shopping section of America. Here you will find four floors devoted to complete "life-size" exhibits of the materials you should choose to ensure permanent beauty and comfort in your home. There are no admission fees or charges of any kind. The exhibits are grouped as follows:

"Building Materials for the New Home" (EIGHTH FLOOR)

showing "Tapestry Brick" and faience, Denison inter-locking hollow tile, complete fireplaces with improved appliances, a Van Guilder hollow-wall fireproof house, metal lath, Ruberoid roofing, Johns-Manville asbestos shingles, and a new sanitary flooring.

"Home Decoration and Model Rooms" (SEVENTH FLOOR)

showing completely furnished model rooms, decorated with the famous Fabrikona wall covering—with Dutch Boy lead and oils—with Sanitas, Flatlan, etc.—and a "working" Brunswick-Balke billiard room, a Macey model library, a model bedroom, reproductions of classic ceilings and mantels, Morgan doors to match any style of furnishing, and beautiful copper and bronze wares from the leading craft shops.

"Home Equipment for Home Comfort" (SIXTH FLOOR)

showing a model kitchen and model laundry in operation, Western Electric household helps, Battle Creek electric light baths, Pyrene fire extinguishers, Richardson boilers, Leonard refrigerators, Meilink wall safes, the unique Rector gas heating system, Humphrey automatic heaters—and (on the 5th floor), the "Eye-Comfort Lighting Shop," with its beautiful showroom and model rooms showing the new indirect lighting.

"The Home Garden and Grounds" (FIFTH FLOOR)

showing Lord & Burnham greenhouse, hot beds and cold frames—Hodgson portable houses, play house and poultry house—charming English garden benches and rose arbors—a complete Hartmann-Sanders pergola—Dodson bird houses—miniature models of country houses and grounds—Fairbanks-Morse water-supply systems—and all the garden needs, from seeds and lawn mowers to fences and bay trees.

And finally, make yourself at home in the Clubrooms and Rest Rooms for men and women (entirely free to visitors), on the 11th floor, and lunch or dine in the Craftsman Restaurant on the top floor—one of the show-places of New York.

"The Homelovers' Headquarters, in The Shopping Centre of America"

THE
Craftsman Homebuilders' Exposition
CRAFTSMAN BUILDING
38th and 39th Streets, East of Fifth Avenue
NEW YORK



BOBBINK & ATKINS

World's Choicest Nursery and Greenhouse Products
SPRING PLANTING

In our 300 Acres of highly cultivated Nursery Land we are growing Nursery Products for everybody and suitable for all parts of the country. We shall be glad to have intending purchasers visit our Nursery and inspect the quality of stock we grow, or submit their list of wants for Spring Planting.

The following plants for Outdoor Planting, Interior and Exterior Decorations are among our specialties:

ROSES. We have several hundred thousand Rose Plants that will bloom this year. Order at once to avoid disappointment.

ORNAMENTAL SHADE TREES and FLOWERING SHRUBS. Many thousands can be seen growing in our Nursery.

HARDY OLD-FASHIONED FLOWERS, PEONIES and IRIS. Several acres of our Nursery are exclusively devoted to their culture.

HEDGE PLANTS. We grow a large quantity of California Privet, Berberis and other Hedge Plants.

EVERGREENS, CONIFERS and PINES. Many acres of our Nursery are planted with them. All are balled and burlapped and have a splendid root system.

OUR WONDERFUL NEW HYBRID GIANT FLOWERING MARSHMALLOW. Everybody should be interested in this hardy, new, old-fashioned Flower. It is perfectly hardy and will grow everywhere.

OUR NEW ILLUSTRATED GENERAL CATALOG No. 40 describes the above. VISITORS take Erie Railroad to Carlton Hill, second stop on Main Line, 3 minutes walk to Nursery.

OUR LANDSCAPE DEPARTMENT PLAN AND PLANT GROUNDS AND GARDENS EVERYWHERE WITH OUR "WORLD'S CHOICEST NURSERY PRODUCTS"

Nurserymen, Florists and Planters : Rutherford, New Jersey

RHODODENDRONS, KALMIAS and other Large Leaved Evergreens. We are growing in large quantities.

BOXWOOD. We grow thousands of plants in many shapes and sizes.

HARDY TRAILING and CLIMBING VINES. We grow them for every place and purpose.

BAYTREES, PALMS and other plants for conservatories, interior and exterior decorations.

TRAINED, DWARF and ORDINARY FRUIT TREES and SMALL FRUITS. We grow these for Fruit Gardens and Orchards.

PLANT TUBS, WINDOW BOXES, ENGLISH GARDEN FURNITURE and RUSTIC WORK. We manufacture all shapes and sizes.

Evergreen Trees

There is nothing more beautiful or decorative about the country home than the Evergreen. It is attractive both summer and winter, and is always admired.

We make a specialty of strong, healthy nursery stock and can furnish all varieties of

Trees, Plants and Shrubs

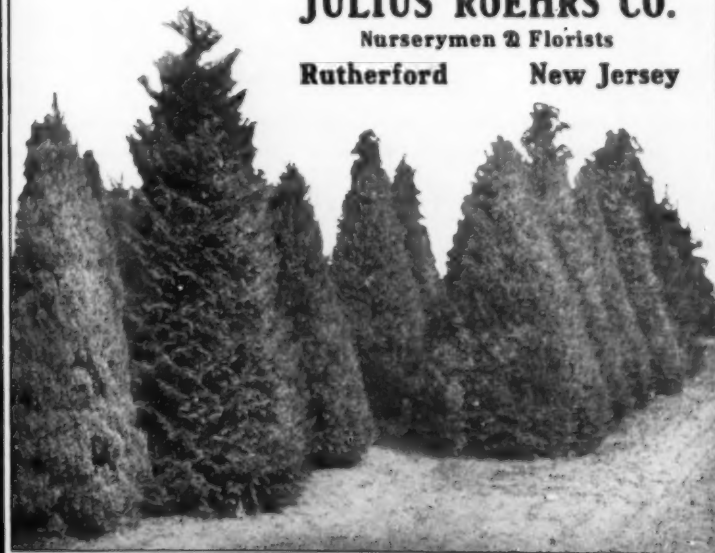
Visit our nurseries, where we have at all times a most interesting display, or send for booklet on Hardy Trees and Shrubs, Greenhouse Plants and Orchids.

JULIUS ROEHRS CO.

Nurserymen & Florists

Rutherford

New Jersey



NOW READY

The Small House Number

THE HOUSE BEAUTIFUL

The pioneer among magazines devoted to the home. It is now in position to offer its best service to architects, to those who build or expect to build, to those who live in rented houses or apartments, to all garden-lovers, and to people with all sorts of hobbies.

No two issues are alike. Each number has its special features, and regular subscribers are those who are most benefited by its pages.

Among the special features for April are:

Planning the Small House, Furnishing the Small House, Wayside Cottages of Touraine, The Lodge by the Entrance Gate, A Studio Cottage at Washington's Crossing, New Jersey, The Building of Onondaga Lodge, Plumbing at Its Best, The Latest Phases of Silhouette Making, A Group of Needlework Pictures on the Hudson, and many others.

Six Months for One Dollar

The yearly subscription price is \$3.00. But to introduce THE HOUSE BEAUTIFUL to new readers, we will send you THE HOUSE BEAUTIFUL for six months for \$1.00, beginning with the current issue, and also make you a present of THE HOUSE BEAUTIFUL Portfolio of Interior Decoration. The Portfolio is a collection of color plates picturing and describing rooms which are unusually successful in their decoration and furnishing.

SEND THIS COUPON TO-DAY

THE HOUSE BEAUTIFUL,
432 Fourth Avenue,
New York City, N. Y.

DATE _____

GENTLEMEN—Send me your Portfolio of Interior Decoration and The House Beautiful for six months, beginning _____

Yours very truly,

Name _____ Address _____

H G-4

WORTH WHILE FICTION

"We congratulate the author on the production of a piece of fiction worth several hundred of the erotic tales that are all too plentiful now."

—*Boston Transcript.*

The Heart of Sally Temple

By RUPERT SARGENT HOLLAND

The impersonation of Lady Pamela Vaucrain by a pretty actress of Drury Lane furnishes the basis of this piquant and humorous novel of 18th century London. Sally is an audacious heroine, but her audacity only intensifies the essential sweetness of her character, and she carries the reader with her from the first chapter to the last.

\$1.25 net; postage 12 cents.

McBRIDE, NAST & CO., Publishers, Union Square, New York City



In writing to advertisers please mention HOUSE & GARDEN.

(Continued from page 344)

growth, 5 to 7; for most purposes 10; and for light work 15.

Bordeaux Mixture—(5-5-50 formula). Dissolve copper sulphate (crystals) in water at the rate of 1 lb. to 1 gal. This should be done the day before, or at least several hours before, the Bordeaux is wanted for use. Suspend the sulphate crystals in a cloth or old bag just below the surface of the water. Then slake the same amount of lime in a tub or tight box, adding the water a little at a time, until the whole attains the consistency of thick milk. (When necessary, add water to this mixture if it is kept long; never let it dry out.) When ready to spray, pour the stock copper sulphate solution into the tank in the proportion of 1 gal. to every 10 of spray required. Add water to amount required. They add stock lime solution, first diluting about one-half with water and straining.

For small amount, use 1 tablespoonful copper sulphate; 1½ of lime and 1 gal. of water.

Poison Bran Mash—Used for cutworms; to 25 lbs. bran, middlings or coarse flour, add ½ lb. Paris green, and mix thoroughly; then add ½ to 1 pt. molasses, or brown sugar, and enough water to make a mash thick enough to spread. Scatter in small quantities where cutworms give trouble. For small amount, use 1 qt. bran, 1 tablespoonful of molasses, 1 teaspoonful of Paris green.

Cultural Directions

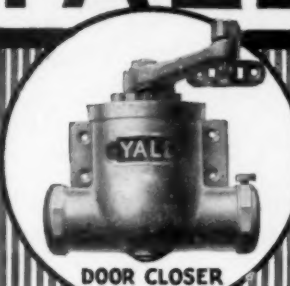
ASPARAGUS prefers a sandy, well-drained, early soil. Make trenches 3 or 4 feet apart and 16 to 20 inches deep. Tramp in 6 or 8 inches of well-rotted manure; cover with 6 or 8 inches of good garden soil, and on this set 1 or 2 year-old crowns, being careful to spread the roots out evenly. Fill in, leaving the roots some 6 inches below the surface. In the fall, clear off all tops and weeds and apply a good coating of manure. Apply nitrate of soda in spring and give light cultivations. A few stalks for use may be cut second spring. (Asparagus beetle and A. "rust.")

Beans—Well-drained, rather light soil. Plenty of potash—wood ashes good. Hill slightly. Never work when foliage is wet. Plant limas on edge, with eye down, when there is no prospect of immediate rain. Pole sorts on prepared hills.

Beets—For continuous supply of good quality plant seed and set out plants early in April; plant again about May 1st and June 1st. Make last large enough to allow for winter supply. May be planted as late as July 1st, if medium early variety and seed is well firmed in soil. (Scab.)

Brussels Sprouts—Extra fine. Very hardy. Splendid to succeed fall crop of cauliflower, as frost does not injure. Sow outside in June, and transplant. If tops of stalks are nipped out when sprouts have formed, latter will grow larger and more even in size. (Root-maggot; cabbage worm; club-foot.)

YALE



DOOR CLOSER

Locks
Builders' Hardware
Chain Blocks

YALE & TOWNE MFG. CO.
9 EAST 40th STREET
NEW YORK



WILLOWCRAFT

meets the instant approval of those who know good furniture. The beautiful designs, splendid workmanship and great durability have made Willowcraft the leading willow furniture of America. Our booklet of 165 attractive Willowcraft designs is free.

Willowcraft Shops

Box C North Cambridge, Mass.



Ornamental Fences of The Better Sort

If you have in mind a fence made of absolutely high grade materials throughout—one having all the earmarks of careful workmanship, then we would like to get in touch with you.

For iron or wire fences or gateways of the better sort, based on the same specifications and workmanship no one can beat us out on price.

Send for our new 1914 catalog and tell us something about what kind of fence or gateway you need and we will gladly make suggestions to meet your particular needs.

American Fence Construction Co.

100 Church Street, New York

7 Editions of LADDIE 302,500 Copies

By Gene Straton-Porter

1st—August, 1913.....	150,000	5th—October, 1913.....	21,000
2nd—August, 1913.....	27,500	6th—December, 1913.....	23,500
3rd—September, 1913.....	25,000	7th—January, 1914.....	26,500
4th—September, 1913.....	29,000		
			302,500

More than 28,000 have been sold in England, Australia and Canada

Such a sale means something—

It means that for a majority of American readers, this book has by far the most interesting background because it deals with simple-hearted, decent, self-respecting people who are the backbone of our life to-day.

Illustrated; Cloth, net \$1.35; Leather boxed, net \$1.75

DOUBLEDAY, PAGE & COMPANY

GARDEN CITY, NEW YORK

N. B. Mrs. Porter's books, "Freckles", "A Girl of the Limberlost", "The Harvester", "At the Foot of the Rainbow," and "Laddie" have sold more than 2,000,000 copies.

The Little Riding School

Conducted by MRS. VICTOR GRIMWOOD

at

124-130 West 56th Street
NEW YORK

Rates
on
Application

Large Arena
Excellent Horses,
Skilled and Efficient Instructors,
Commodious
Stabling, Comfortable Dressing
Rooms :::::

Telephone—Columbus 6595
6596

SUMMER BRANCH TUXEDO PARK, N. J.

BOOKLET FREE

"BATH ROOMS OF CHARACTER"

THE TRENTON POTTERIES COMPANY

The Largest Manufacturers of Sanitary Pottery in the U. S. A.

TRENTON, N. J.

NEW PÆONY DAHLIA "John Wanamaker"

Newest, Handsomest, Best

Cut Blooms sold at \$3.00 per doz.

New Color, New Form, New Habit of Growth. To be introduced in 1915. Send for information how you can get a "John Wanamaker" in May, 1914.

Our new catalogue entitled "The World's Best Dahlias" showing a natural color production of the Dahlia "John Wanamaker," and accurately describing this wonderful new creation, by pen and photographs

FREE!

Copiously illustrated with new Photo Engravings. The leading Dahlia Catalogue.

PEACOCK DAHLIA FARMS

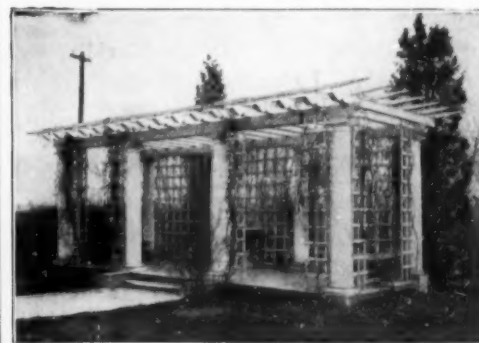
Berlin, New Jersey

HARTMANN-SANDERS CO.

Exclusive Manufacturers of

Koll's Patent Lock Joint Stave Column

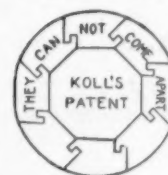
SUITABLE FOR PERGOLAS, PORCHES OR INTERIOR USE



We have issued A VERY INTERESTING CATALOGUE ON

"PERGOLAS" and Garden Accessories

showing a series of new designs—can be had on request.



Catalogue "P-28"—for Pergolas and Columns for Pergolas
Catalogue "P-40"—for Exterior and Interior Wood Columns

Main Office and Factory
ELSTON and WEBSTER AVES.
CHICAGO, ILL.

Pacific Coast Factory
A. J. Koll Plg. Co., Los Angeles, Cal.
Eastern Office
1123 Broadway, New York, N. Y.



Roses! Roses! Roses!

Is your Collection up-to-date?

We will send you for \$10.00, express charges prepaid to any address, 12 of our new Hybrid-Tea Roses to include one plant each of Mrs. Geo. Shawyer, the finest pink; Sunburst, the King of yellows; Mrs. Andrew Carnegie, the Gold Medal seedling of Karl Druschki and Madam Edouard Herriott. The color of this latter variety is the most marvellous combination of flaming copper with salmon-pink shadings. A decided novelty, not alone in variety, but color. To take advantage of this special offer tear off the attached coupon and return to me:

CHARLES H. TOTTY

NOVELTIES IN ROSES, CARNATIONS
and CHRYSANTHEMUMS

Madison New Jersey

Name _____
Address _____
Express Office _____
Enclosed find _____



Old Time Hardy Garden Plants

DO you want some of the really old-timey-flower plants such as were the joy of our grandmothers? Plants having good husky roots and with a first season's bloom promise? Then we have what you want. Every one of the ones we will sell you have stood the supreme test of this rugged New England climate of ours. There's not the least doubt about their being hardy.

While you are ordering these plants why not include a few flowering shrubs and a tree or two.

By spending a moderate amount each year, it is surprising how charming your grounds can be made and how your pocket book never feels the tug.

Send for our catalog and booklet and let's get this common sense buying plan started—you and I.

The Bay State Nurseries

676 Adams Street
North Abington, Mass.



Protection for Lawns and Gardens

A strong, lasting and attractive

Anchor Post Fence

would secure your garden from invasion.

Anchor Post Fences are not the ordinary kind—they are fences of heavy galvanized netting erected on Anchor Posts—posts which won't sag or get out of line, and are galvanized both above and below ground to prevent rust. Anchor Posts erected over twenty years ago are still in good condition.

In addition to fences and iron railings and gates of every kind we make tennis court, chicken-run and kennel-yard enclosures.

Catalogues for the asking

Anchor Post Iron Works

11 Cortlandt St. (11th Floor) New York



Farr's Hardy Phloxes

Phloxes are, next to the Peonies and Irises, the most beautiful hardy plants we have. Planted in large masses for bold color effects in landscaping they have no equal at their season of bloom, which is in mid-summer and autumn. No flower has been more wonderfully improved of late years and the immense size and perfect form of the new varieties will be a revelation to those who have heretofore seen only the old-fashioned kinds.

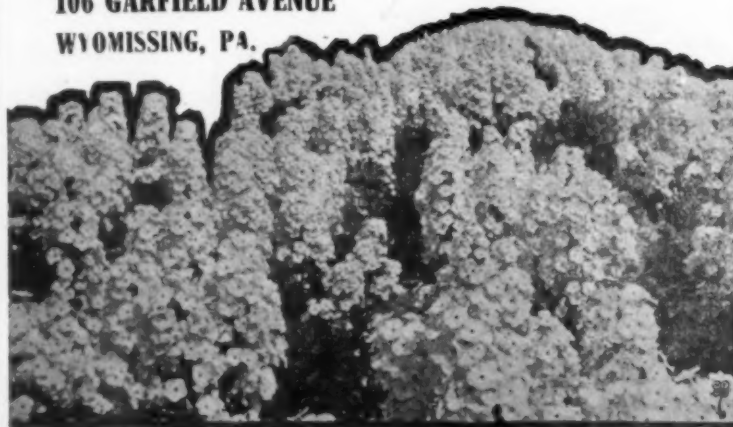
Their wide range of intensely brilliant colors includes almost every shade from purest white to delicate flesh; soft pink to deep blood-red, crimson, purple and amaranth. There are large, white, star-shaped centers, surrounded by rings of strong color, and flowers of soft delicate shades, with vivid scarlet or crimson eye, and petals with rays of color in various shades.

Here at Wyomissing, where I grow acres of them, they may be seen in hundreds of varieties, including the latest novelties of the European hybridists. All are included in my book "Farr's Hardy Plant Specialties" (Fourth edition season of 1913-14), which will be sent free on request.

BERTRAND H. FARR, Wyomissing Nurseries

106 GARFIELD AVENUE

WYOMISSING, PA.





Another Grow-Up
SUBJECT 209

When the first of the greenhouse series was published, it was a surprise to many of our readers that we were able to show them a greenhouse of such a large size. In 1913 we added to our series a greenhouse of the same size as the first one, but with a different design. This new greenhouse is a most successful one. It is the largest of the series, and is a most successful one. It is the largest of the series, and is a most successful one. It is the largest of the series, and is a most successful one.



A Gate-House Link-Up
SUBJECT 210

When the first of the greenhouse series was published, it was a surprise to many of our readers that we were able to show them a greenhouse of such a large size. In 1913 we added to our series a greenhouse of the same size as the first one, but with a different design. This new greenhouse is a most successful one. It is the largest of the series, and is a most successful one. It is the largest of the series, and is a most successful one.



Send for this Unusual Greenhouse Catalog

JUST from the glimpse you get from these two pages, you can see how charming the general treatment must be and how complete is the showing of each subject considered.

One thing we think is decidedly in its favor, is that by far the greater number of subjects shown, are of modest size—say, from 33 feet long up to 100 feet. There are just enough of the larger sub-

jects to give you an idea of the scope of our work.

The text is free from any technical description, and reads along just like you and I would chat about it, if we were comfortably seated together talking things over.

If you are interested in having a greenhouse, or adding to the one you already have, you are welcome to this catalog.

U-BAR GREENHOUSES

PIERSON U-BAR CO

ONE MADISON AVE. NEW YORK

CANADIAN OFFICE: 10 PHILLIPS PLACE, MONTREAL

The GARDENER'S BEST FERTILIZER

for
Vegetables, Flowers and Lawns

A Mixture of high-grade

Nitrate of Soda
Sulphate of Ammonia
Sulphate of Potash
Peruvian Guano
Rose Growers Bone Meal
Gypsum

**BARWELL'S
AGRICULTURAL WORKS**
WAUKEGAN, ILL.

Established at Leicester, England, in 1800
Send for particulars



GALLOWAY POTTERY

Will Add Charm to Your Garden and be a Source of Continual Delight

Even the Smallest Garden is Incomplete without a Sun Dial, Gazing Globe or Bird-Font. Terraces, Porches and Cozy Nooks can be attractively furnished with Terra Cotta Tables and Benches while Artistic Flower Pots and Vases will Enhance the Beauty of your Plants

Our Catalogue which will be Sent upon request is full of Suggestions for Beautifying the Garden

GALLOWAY TERRA COTTA CO.
3218 WALNUT ST. PHILADELPHIA.

NEW PÆONY DAHLIA "John Wanamaker"

Newest, Handsomest, Best

Cut Blooms sold at \$3.00 per doz.

New Color, New Form, New Habit of Growth. To be introduced in 1915. Send for information how you can get a "John Wanamaker" in May, 1914.

Our new catalogue entitled "**The World's Best Dahlias**" showing a natural color production of the Dahlia "John Wanamaker," and accurately describing this wonderful new creation, by pen and photographs

FREE!

Copiously illustrated with new Photo Engravings. The leading Dahlia Catalogue.

PEACOCK DAHLIA FARMS

Berlin, New Jersey



Real Estate



IN THE CITY
Fieldston Riverdale-on-Hudson
242nd Street Broadway
Overlooking Van Cortlandt Park on the East and the Hudson River on the West.



On the very crest of a wooded ridge, three hundred feet in elevation—in the city—all the picturesque charm characteristic of Westchester County is to be found.
There are eighteen high-class dwellings, costing on an average of fifteen thousand dollars, on the property.
The streets and highways are asphalt bound and full city width. All city improvements have been installed. Riverdale Country School, Barnard School and others are adjacent. Frequent deliveries from city stores.
If New York can develop a fashionable suburban centre—as has been done in other large cities—Fieldston offers the only possibility.

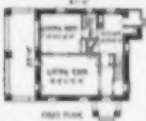
Approached by Broadway or Riverdale Avenue and convenient to subway and rapid transit lines,—no other similar development offers such facilities.
Booklet "A" sent on request.

DELAFIELD ESTATE

25 Cedar Street Telephone John 277 New York City



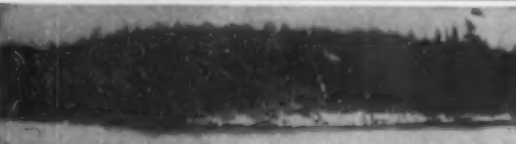
THIS BEAUTIFUL HOME of stone and frame, 9 rooms and bath, cost to build near N. Y. City, \$50,000, less elsewhere. Two complete blueprint plans and specifications for \$10. Send 25c. for portfolio of photographs and plans of 15 up-to-date homes of 6 to 14 rooms.



KILTHAU & ENGELBREKT ARCHITECTS
Box 81 B
New Rochelle, N. Y.



One-half Acre of desirable Land for summer Residence on Peaks Island in Casco Bay, Portland, with well-built Cottage, consisting of ten rooms. Modern plumbing, large living room with fire place. Comfortably furnished. Exceptionally well situated, having regular steamboat service twenty minutes from Portland. Property is increasing in value, the owner is selling simply because of lack of funds. Price is \$4,000, and must be seen to be appreciated. Address inquiries to Geo. B. Briggs, 299 Congress Street, Portland, Me.



FOR SALE: Summer cottage "Tree-Top Lodge," three rooms; porch, one additional separate room, bath house; stone fire place; swing hammock; two good beds; new cook stove; drainage sink; equipment for six people; awnings, etc. The lot is two acres, point, facing south. Double sliding windows give view of 3 1/2 mile lake. Cottage is 20 feet above water. Private road connects with government road.
Oxtongue Lake—Lake of Bays, Ontario, Canada.

L. E. LANGSTAFF
Enquire of Real Estate Bureau, "House and Garden."
31 East 17th Street, New York City



A Beautiful Home in White Plains, N. Y.

House consisting of 13 large rooms, southern and western exposure. First floor, hall, reception room, living and dining rooms, kitchen and butlers' pantry. Second floor four bedrooms, each having large closet. Third floor also has four rooms and a trunk room. Place is in excellent condition. The lot is 90 feet by 200 feet and the house stands about 60 feet back from the street on an elevation of about 4 feet above the sidewalk, with stone retaining-wall. It is planted with trees and shrubs of unusual beauty of form, giving succession of color and bloom from Spring to Autumn, and the cheer of evergreens in winter. The house is surrounded by hedge, which gives complete seclusion, making outdoor life in summer inviting and delightful. The price is \$18,000, which is low for this property.

For further information write to
Mgr. Real Estate Dept., HOUSE & GARDEN, 31 E. 17th St., or ROBERT A. KUTSCHBOCK, Room 2613 Grand Central Terminal, New York, N. Y. Telephone 8000 Murray Hill

13 Acres 'Mid the Berkshires

FOR SALE OR RENT: Colonial House, 14 rooms completely furnished, modern improvements, electric light, 2 baths, garage, barn, ice house filled, garden, 13 acres, trout stream, borders golf links and Country Club, good street car service. This grand old place being the last of the many in the Berkshires can be rented for \$900 per season or purchased at \$12,000.

Other properties for rent furnished for the summer season. Farms, estates for sale. Send for catalogue.

D. B. CORNELL CO.
GREAT BARRINGTON, MASS.



FRUIT FARM FOR SALE

Beautiful location, near State road, in summer boarding district of unrivaled market at the door for all farm produce. Fine large 16-room house, two barns, two chicken houses, 25,000 small fruits, 200 large fruits, running water to house and barn. Only three-quarters of a mile from station and Post Office. Farm must be seen to realize this unusual opportunity.
Box 108 Ferndale, N. Y.

"GRAY GABLES," OAKLAND, N. J.

30 MILES FROM NEW YORK
TO LEASE—Furnished, for the season. Seven acres on Ramapo River, Dutch Colonial house with seven sleeping rooms and three baths, large piazzas, open fire, also furnace heat, summer furniture of red and white enamel, all hard wood floors, tennis court, extensive garden, artesian well, garage and barn with chauffeur's room. Good commuting service, fine automobile roads radiating in all directions. Entire season \$1000.00. Apply for photos, etc. "Gray Gables," Room 208, 90 West Street, New York.

ARE YOU LOOKING FOR A Country Home?

Have You a Place For Sale?

If you are seeking for, or wish to dispose of, any particular kind of a place—an inexpensive rural property within reasonable distance of a city, a suburban house and plot, a summer house in the mountains or at the seashore, or a farm adapted to the raising of any special product—the Real Estate Bureau will help you without any charge for its services.
In writing state in as much detail as possible just what is required, or just what you have, and address the

MANAGER OF THE
REAL ESTATE BUREAU
HOUSE AND GARDEN
Union Square - New York



Edgemont Estate At Scarsdale Station

Out of town homes in protected surroundings
Delightful country side environment
Convenient and accessible to the city
Thirty-five minutes from Grand Central Terminal

Scarsdale Company

J. Warren Thayer, Pres.
Scarsdale New York
503 Fifth Ave.
New York City

Build For An Income

Buy a PLAN BOOK of FLAT BUILDINGS and plan an income in your old age. Our book gives you ideas from TWO FAMILY FLATS to TWELVE FAMILIES, and our price for plans is reasonable.

First Edition—Right off the Press \$.50
Also a Book for Residences25
Both for65

H. COOK & CO., 719 Ashton Bldg., Grand Rapids, Mich.



California Bungalow Book 50c.

Profusely illustrated with photos, both exterior and interior, of latest models. Floor plans and full descriptive data. Send stamps.

Standard Bldg.-Inv. Co., 1006 So. Hill St., Los Angeles, Calif.



A Typical Craftsman Home

This Coupon is Worth 50 Cents

Send us your name and address together with 50 cents and receive **The Craftsman** (a magazine for home lovers and idealists) for four months. You can't afford to miss the wonderful Garden Number, the Architectural Number, the Home Furnishing and Home Finishing Number, and the great Civic Number.

Send today and save 50 cents

Name

Street

City

THE CRAFTSMAN Dept. C, Craftsman Building, New York

In writing to advertisers please mention HOUSE & GARDEN.

New Publications of Harper & Brothers



WHAT WILL PEOPLE SAY?

By RUPERT HUGHES

A brilliant story of New York's mad dance after pleasure and wealth. Through hotels and cabarets, ballrooms and country houses, by motor and on yachts, on the backs of blooded horses, eating, drinking, making love, beautiful young girls, women who still try to be young, and the men of their gay set, follow each other in feverish haste, with no break to hold them back except the fear of "what will people say?" But the piper waits to be paid. *Illustrated. \$1.35 net.*

THE MARRYERS

By IRVING BACHELLER

This new story by the author of "Keeping Up With Lizzie" is characterized by the same humor and genial laughter at the foibles of to-day which has made the title of that book a catchword. But this time the background is Europe. *Illustrated. \$1.00 net.*

PRINCIPLES OF CORRECT DRESS

By FLORENCE HULL WINTERBOTTOM

This book is written not for to-day or to-morrow, but for all time, as the principles it embodies concern not the fashion of the moment, but the permanent rules of artistic individual dress. It contains chapters by the two greatest fashion authorities in the world—Jean Worth and Paul Poiret. The combined work of three high authorities makes this book the most absorbing and helpful on dress ever offered to women. *16mo, \$1.00 net.*

PLANNING AND FURNISHING THE HOME

By MARY J. QUINN, Instructor in Design, School of Household Science and Art, Pratt Institute

Miss Quinn goes into the good furnishing at a cost which is possible and practical for the average homemaker. This book is intended for the everyday homemaker who wants her home to be beautiful, but does not know how to go to work to bring about the result. *16mo, \$1.00 net.*

HARPER'S BOOK FOR YOUNG GARDENERS

By ALPHEUS HYATT VERRILL

This book has been prepared to show how much profit and pleasure may be obtained from simple gardens, and how to plan, arrange and care for them properly. School gardening, experimental gardening, ornamental gardening are all explained. *Fully Illustrated. \$1.50 net.*

SOUTHERN GARDEN DEPARTMENT

Conducted by JULIA LESTER DILLON

The writer of this department gladly answers inquiries from Southern readers in regard to their garden problems. Please enclose a self-addressed, stamped envelope if a prompt personal reply is desired.

Solving the May Problems

WITH Lent ushered in with a snow-fall of eleven inches on February 25, icicles on the trees all over the Southland as late as March 23, although the air was as balmy as April between those dates, the spring of 1914 presents unusual problems to the garden-makers. Everything has had to wait and the spring planting of summer flowers which usually occurs in April, and often in March, has had to be delayed until it is now necessary to put in the autumn flowers also, and the rush is so great that it will be hard to find a sleeping time this month, if all that should be done is done.

Many of the baby perennials, phloxes, chrysanthemums, rudbeckias, gaillardias, and others, were killed off by the cold, and it has not been possible to separate the clumps until now that they have regained their strength and growth.

This being the third year, there are twenty clumps of hardy phlox that must be lifted soon in my garden. Averaging five new plants from each old one, I will have at least one hundred new phlox for the summer's bloom, without new expense. Most of them are white, and this pleases me, for in the midsummer days nothing is so refreshing as clusters of fragrant white blossoms that brighten the borders and lighten the corners of the shrubbery.

A dozen White Bonaffon Chrysanthemums, a like number of Alice Byron, six each of Major Bonaffon, and six of Yellow October Frost, with twelve Dr. Enguehardt, made my May contribution to last autumn's blooms. They were a gorgeous gift to the family and to the passers-by. They bloomed from October until late frost, which did not come until nearly December. Now each one of these plants is the center of a clump which must be separated to secure strong stocky plants for fall bloom this year. There are not less than four in the smallest of the clumps and as many as ten in others. From these two instances it will be readily seen how the Southern hardy borders stock themselves and can be secured with really small initial expense. Many of the perennials multiply as rapidly as do these two.

Do not mix the colors of the chrysanthemum plantings. Grouping the colors separately gives much finer effects. A long border of golden yellow against the

The Open Country Beckons!

SUMMER is upon us! The riot of sunshine and flowers has already begun, and already we are overhauling our bags and traps and country things, getting ready for that vacation trip—or better still a whole summer out in the open!

¶ The May HOUSE & GARDEN now in our hands, is filled with summer prophecy. Here is a story about Roses, another on the Color of Flowers, another on Quality Crops, and another on the Garden Theatre. These deal with the *externals* of country life—but in the matter of *actual living conditions* it remains for the next issue to get down to "brass tacks."

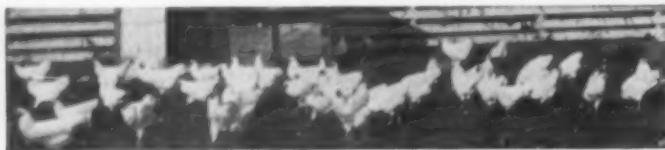
¶ The June SUMMER HOMES NUMBER is an institution with us, one of our four big numbers, and eagerly consulted by thousands of readers. To the people who are getting settled in their Summer homes, and finding out what they need to make those homes comfortable, the June HOUSE & GARDEN will be a timely guide. The direct value of the magazine is just here. It actually tells how. It doesn't simply describe things that have been done.

¶ A large majority of its readers will be guided by its suggestions in refitting their Summer homes, filling in with furniture, or remodeling for occupancy. And these people will look to the *advertising pages* to find more practical information in regard to where the things may be purchased.

¶ Do you happen to make or sell any of the things these people of means and desire will be likely to need?

Ed. Leland.

Manager of Advertising.



POULTRY DEPARTMENT

The purpose of this department is to give advice to those interested in poultry. The manager will gladly answer any troublesome questions. Address "Poultry Department" and enclose a self-addressed envelope.

Hodgson Portable Poultry Houses

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—has proved its success for 22 years. Shipped knocked down—size, 2x4 ft., 2 ft. high.



\$300

No. 0 Colony Laying House—

for 12 hens. Fitted complete with nests, fountain and feed trough. Sanitary—easily cleaned. One man can easily care for several hundred birds. Nicely painted—set up in fifteen minutes. A comfortable year-round house. In stormy weather the run may be covered, giving a protected scratching room. Size, 10x4 ft., 5 ft. high.



\$2000

WIGWARM Brooder

Hot-water and hot-air heating combined gives perfect ventilation—no danger of overheating—maintains even temperature regardless of cold outside. Used and endorsed by poultry experts and by experiment stations and such men as Dr. A. A. Brigham, Dr. N. W. Sanborn, Dr. P. T. Woods and Mr. A. F. Hunter. Size, 3x5 feet.



\$1500

Five-Section Poultry House—10x50 ft.

Sanitary, durable, up-to-date—made of red cedar, clapboarded outside, interior sheathed. Made in 10-ft. sections, each fitted with roosts, nests and fountain. Open fronts, with canvas-covered frames. You can add sections at any time. Easily erected. First section, \$75.00; additional sections, \$60.00 each.



Catalog Free

E. F. HODGSON CO.

Visit our showrooms Room 326, 116 Washington St., Boston, Mass. Craftsman Bldg., 6 East 39th St., New York

Address all correspondence to Boston

SQUAB BOOK FREE

Squabs are raised in one month; they sell for fancy prices. Send for our free Squab Book telling how a Texas judge bred 6 pigeons to 140 in one year; how a Vermont breeder 25 pairs to 800 pairs in two years. More money-making experiences. Write for prices and special offers on our famous Plymouth Rock Homers and Plymouth Rock Carneaux.

PLYMOUTH ROCK SQUAB CO., 414 Howard Street, Melrose, Mass.
Founder of the Squab Industry in America.

KENNEL DEPARTMENT



O'Linda's Roy For Sale

No. 176,368 A. K. C.

Rich golden brindle, only two years old. The best American bred Dane in America. No better breeding. Winner's prize Lancaster, Pa.; Newark N. J.; Reserve winner Boston; Third limit, Second open New York; Second limit, Second open Philadelphia. At stud until sold—fee \$20.00.

If you want a puppy or grown dog write us. Choicest imported and domestic stock for sale.

Ideal companions and guardians.

Royal Farms, Dept. H. G.

Little Silver

New Jersey

Lovable Children

The healthier and happier your children are the better men and women they will become. A Shetland Pony for a playfellow brings them health, teaches them self reliance and self control and makes them manly. Secure a pony from the Belle Meade Farm and you can be quite sure it will be a sturdy, reliable little fellow, playful as a kitten but full of good sense and quite unafraid of autos, trains or anything to be met with on the road. We have a



HERD OF 300

for you to choose from—every one well mannered and absolutely safe, many of them prize winners. We always guarantee satisfaction. Write for illustrated catalogue.

Belle Meade Farm
Markham, Va.
Box 3



Black Short Haired Cattery

Oradell, N. J.

The largest PET STOCK KENNELS in America—can supply you with SELECTED PUPPIES and HOUSE BROKEN GROWN DOGS, carefully bred DOMESTIC CATS and KITTENS—A choice litter of Russian Wolf Hounds, a few good Alredales, Cockers, Bostons and small breeds. Write for catalogue and details.

New York Office, 112 Carnegie Hall, New York

Beautiful, affectionate Irish Setter Puppies, from registered stock

WALTER McROBERTS
Richwoods Kennels Peoria, Ill.

gray green of the foliage, masses of white intermingled with the shrubbery, glowing crimsons, dainty pinks in beds and borders, deep rich maroons, and orange tones as deep as flames, make of the fall gardens pictures of unsurpassed loveliness.

A plantation of deep rose pink single chrysanthemums, on each side of the entrance steps of a gray stone State House, planted against a background of dark evergreen shrubbery, seems, as I recall it, as if a part of the sunset sky had fallen to the lawn, so vivid and beautiful was the effect. The hand of the Master Artist splashes the colors from his palette in broad masses and sweeps of rhythmic harmony of tone. We cannot follow a better example, and no flower gives better results for such plantings than the chrysanthemums.

If your garden scheme requires the planting of narrow borders, by using the dahlias with their brilliant color schemes in the background, and cutting and pinching the chrysanthemums to form masses of color on a lower level a border of rare beauty can be secured.

Another fall flower which is excellent for backgrounds is the Cosmos. It grows in poor soil, even where there is much sand, is hardy and late to bloom. I remember well how beautiful were the door-yards of a certain mill village last fall with masses of cosmos planted against the wire poultry netting that fenced in most of the yards. The ugly landscape was really glorified by the dainty foliage and bright blossoms of these plants. I had not thought them worthy of a place in my fall garden, but am including them hereafter.

Just as soon as the violets finish blooming they must be thinned out and planted anew. Do not fail to cut off the leaves when transplanting. They recuperate so much sooner and the garden looks so much neater while they are getting a new start than if the old leaves are left on to turn yellow and die.

Celery plants should be ready to put out now and cauliflower also. Both of these vegetables must have rather a shaded situation and thrive best where there is plenty of moisture, but there must also be good drainage.

Pepper plants, tomatoes and egg plants will have to be put into final positions this month. It will be necessary to protect them in the heat of the day for a few days after transplanting, but they will soon recover and rapidly come to maturity.

It will be necessary to make and keep an early start if the Sweet Peas are to be kept in bloom. They must be cut daily. Last year I had four full rows, which gave me cuttings of five hundred daily for many weeks. I hold my Garden Book responsible for the statement—my friends will bear it out. I planted them with the colors grouped separately and could easily cut a hundred each of white, pink, primrose, lavender and violet every day.

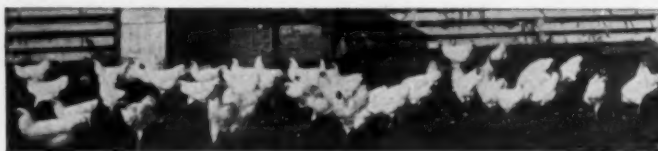
POULTRY DEPARTMENT

The Thoroughbred Fowl

AT the recent Madison Square Garden Poultry Show the jubilant exhibitor, whose splendid Single-comb White Leghorn Cockerel carried off the gold medal as the finest bird on exhibition, said that this medal gave him more satisfaction than the entire year's sales of eggs and breeding stock which it is known were well over \$25,000. The purchaser of poultry will do well to familiarize himself with the various breeds, together with their qualities. Only by careful purchasing at the start can future success be assured. There are, of course, certain important characteristics always to be looked for in purchasing stock, and by having a sharp eye for these one may soon learn to pick out birds of merit, well able to stamp their progeny with winning points.

First, then, look for the proper characteristics common to all breeds: fine carriage, short legs, bright eyes, brilliant-colored combs and wattles of fine texture, plumage abundant, bright and well-kept; beak short, stiff and strong; back of good length and reasonably broad; vitality indicated by a general air of alertness, freedom from vermin, and an unmistakable look of well-being. The general characteristics common to the "general-purpose" type (which include, American, Asiatic, Brahma, Dorking and Orpington Breeds) are: head small, with small combs and wattles; neck short, neat and tapering to the head; breast large, full, rounding and well developed; body very deep, broad and compact, well-fleshed, keel straight and long, should resemble a parallelogram in shape; flesh firm, evenly distributed and deep, especially in regions of desirable cuts, giving an indication of a tendency to fatten easily.

The "egg-type" differs from the general-purpose type in that the comb should be more developed, medium to large in size, full of blood and also of fine texture; the eye alert; body compact, very broad and deep, especially in the abdomen and fluff (giving plenty of room for the vital organs), well-fleshed but not fat; breast shallower than rear, presenting a wedge shape when seen from above; tail full and flowing with a tendency to be carried high; the male should be full of life and possessed of great courage, and the female should be very active, though docile and elusive. It is well, however, for the enthusiastic amateur to bear in mind that general characteristics don't always mean "prize winners," or he might find himself in the ignominious position of a well-known exhibitor, who amusingly recalls his first experience at a small local show (before he had much notion as to preparing birds for such occasions) when he had proudly



POULTRY DEPARTMENT

The purpose of this department is to give advice to those interested in poultry. The manager will gladly answer any troublesome questions. Address "Poultry Department" and enclose a self-addressed envelope.

Silver Campines

of Quality

1st—Cockerel 2nd—Cockerel
4th—Pullet

Stock and Eggs for Sale

Winnings at the
GREAT BOSTON SHOW

3rd—Exhibition Pen
6th—Pullet

Write for Circular

GEO. L. FISH, Wayland, Mass.



ORPINGTONS AND CAMPINES

Stock for Sale of the highest quality.

Eggs for Hatching

From Grand Matings of above varieties. Prices right. Illustrated catalog. Price list, etc., free.

C. A. KEEFER (H. & G.)
Muskegon, Mich.

Single Comb Rhode Island Reds

The result of scientific line breeding for nearly twenty years; Eggs and Stock for sale. Send for Free Mating List describing them. Geo. L. Buell, Lorain, Ohio.

SUSSEX FOWL

Speckled
Light and Red

England's offering to the American table. Mating list now ready. They lay all winter so you can have your settings at any time.

E. K. CONRAD Hackensack, N. J.



Bob White Quail, Partridges and Pheasants

Capercaillies, Black Game, Wild Turkeys, Quails, Rabbits, Deer, etc., for stocking purposes. Fancy Pheasants, Peafowl, Swans, Cranes, Storks, Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, etc., and all kinds of birds and animals.

WILLIAM J. MACKENSEN, Naturalist

Dept. Y. Pheasantry and Game Park YARDLEY, PA.



G. D. TILLEY

Naturalist

Beautiful Swans, Fancy Pheasants, Peafowl, Cranes, Storks, Ornamental Ducks and Geese, Flamingoes, Game and Cage Birds

"Everything in the bird line from
Canary to an Ostrich"

I am the oldest established and largest exclusive dealer in land and water birds in America and have on hand the most extensive stock in the United States

G. D. TILLEY, Box H, Darien, Connecticut

Greider's Fine Catalogue



and calendar of fine, pure-bred poultry for 1914. This book contains many pages of poultry facts, 70 different varieties, some shown in natural colors. All illustrated and described, tells how to make hens lay, raise and care for them, all about the Famous Greider Incubators and Brooders. Shows photo of the largest poultry farm in Penna. Prices of breeding stock and eggs for hatching and supplies within reach of all. A perfect guide to all poultry raisers. Send 10c for this noted book on poultry.

B. H. GREIDER,

Box 26

Rheems, Pa.



"Baby Chicks of Quality"

Shipped by Express

Healthy, vigorous day-old chicks hatched from a heavy egg-laying stock of

WHITE PLYMOUTH ROCKS

(The 257 Egg Strain)

Ready for immediate delivery

Saves all hatching troubles, assure three weeks earlier matured pullets meaning eggs and profit sooner

Safe delivery in good condition guaranteed
A New Catalogue Is Now Ready

One of the finest ever issued by any breeder. It tells just how "Baby Chicks of Quality" are produced, and describes every grade of stock that we have to sell, with prices. A copy is ready for you.

R. C. CALDWELL, Box 1030, Lyndon, Rose Co., Ohio



BORED?

NOT if you know Vanity Fair—it keeps you interested in everything! Is there anything stupider than a play you don't follow, an opera with whose theme you are not familiar, or (worst of all) people who talk about things—sport, literature, art, fashion—that you don't happen to be “up” in.

Vanity Fair will keep you informed. You can read it from cover to cover without being bored an instant, and better still, it will prevent your being bored for a month afterwards—it gives a new life, a new zest to almost everything you find yourself doing.

The next six numbers of Vanity Fair (regular price 25 cents each) will be sent for \$1 if you mail the coupon now. As the supply of the May number is limited, send the coupon promptly.

Vanity Fair, 449 Fourth Avenue, New York

For the \$1 enclosed send me Vanity Fair for six months beginning with the May number, in accordance with your special offer in HOUSE & GARDEN for May.

Name _____ Street _____
City _____ State _____

FOR EVERY GARDENER'S TOOL BASKET

The Gardener's Pocket Manual

By F. F. ROCKWELL

Author of “Home Vegetable Gardening” and “Gardening Indoors and Under Glass”
Bound in Water-proof and Dirt-proof Cloth. Small 12mo. 75 cents net. Postage 10 cents.

This efficient and practical little book is intended to be carried in the tool basket for reference in garden operations. It is the latest word in practical gardening books, and is designed to give the gardener definite information where and when he needs it, during the operations of digging, planting, pruning and spraying.

McBRIDE, NAST & COMPANY Publishers NEW YORK

In writing to advertisers please mention HOUSE & GARDEN.

tucked his best White Plymouth Rock pullet under his arm and made for the ring. His chagrin and discomfiture, when the judge took the treasured hen, and pulling out a black feather from under one wing, remarked “disqualified,” were overwhelming, but he also insists it was the turning point in his existence, for he made a vow then and there to have the best or none. Many who are ambitious to breed prize birds refrain from doing so, as they fear the thoroughbreds require better quarters or different care from the ordinary flock; but this notion is quite erroneous, as all sorts and kinds of fowls require proper conditions to do well, namely, clean, wind and rain-proof houses (which are well-aired but free from draughts), plenty of exercise, ample yard room, and good, sound, wholesome food and pure water.

The Thoroughbred as an Egg Producer

LAYING ability is usually inherited through the male, and the building up of a strain of layers is difficult except as the result of trap-nesting and a faithful record-keeping. As an example of this point, Mr. Young (winner at Madison Square of the best display of Single-comb White Leghorns for thirteen years) was not satisfied merely to be known as the owner of finely appearing birds, but was also ambitious to go on record as breeding fine layers; this he did by using the indispensable trap-nests, until to-day his flock contains many with yearly records of over 250 eggs.

The trap-nest has been brought to a really high state of perfection, and to-day there are many excellent trap-nests on the market largely based on the same principle. For instance, the hen on entering the nest releases the door, which is suspended by a wooden hook from the cover of the box, and when the trap is set is swung in and up against the top. The most practical of these nests are divided into compartments, a front and a rear (where the nest is), which allows the hen to leave her nest when she has laid the egg, and thus does away with the possibility of her breaking it. The hen should also have a numbered leg-band, and when released from the nest the leg number is recorded with the date in the record-book. With this keeping of records it will greatly surprise the uninitiated how many fine-looking birds are merely robbers, consuming far more food than they ever repay with eggs.

What to Do Now

WITH the approach of milder weather a sharp lookout should be kept against lice and mites in the hen houses. A thorough whitewashing with two tablespoonfuls of carbolic to every four gallons is an excellent preventive.



VOGUE

Interior Decorations of Summer Homes Number, now on sale

VOGUE, as you know, is the recognized authority on fashions. But Vogue does not confine itself to fashions by any means; it is as much an authority on house decoration as on dress.

And now that the rush of the Spring Fashion is over—and while the Summer Fashions are still in the future—Vogue finds an opportunity to present a special number containing the newest and best ideas in household decoration.

For the Interior Decorations Number—now on sale—we have procured the best new things offered by the leading furniture makers, spinners and weavers, rug makers, silversmiths, candlestick makers, and all the ingenious race of interior decorators. The demand for this Interior Decoration number is naturally great—you might do well to make sure of your copy at once.

VOGUE

443 Fourth Avenue, New York

CONDÉ NAST, Publisher

25 cents a number
Twice a month

\$4 a year
24 numbers





MODEL 1800

Mahogany Bed in Colonial Style

The posts on this bed are beautifully fluted, and those at the foot are somewhat lower than the head posts. Owing to the vast demand for this particular model, orders can be accepted only with the understanding that it may require two or three weeks for delivery.

Height at head	- - - -	60 in.	} \$34.50
Height at foot	- - - -	48 in.	
Width	- - - -	3 ft.	

Other attractive models are illustrated in an interesting booklet which will be sent free upon request.

McGIBBON & CO.

3 West 37th Street

New York



Start Your Lawn Right!

To avoid expensive resodding; to prevent ill-nourished portions of the lawn from becoming colorless and burning out under the summer sun; top dress *now*—with



One Ton

to the Acre

No matter what the character of your soil, the **CALCIUM-HUMUS BOOK "H"** tells how you can assure a splendid, vigorous growth of grass which will stand hard abuse. Tells how to purify sour soils; how to lighten clay soils; how to get better results on seashore lawns.

Write for this book "H" today. It is **FREE!**

Maryland Calcium-Humus Co.

Main Office: 806 PENN SQUARE BLDG., PHILADELPHIA, PA.

Deposit: Pope's Creek, Md.



Roses!

Roses! Roses!

Is your Collection up-to-date?

We will send you for \$10.00, express charges prepaid to any address, 12 of our new Hybrid-Tea Roses to include one plant each of Mrs. Geo. Shawyer, the finest pink; Sunburst, the King of yellows; Mrs. Andrew Carnegie, the Gold Medal seedling of Karl Druschki and Madam Edouard Herriott. The color of this latter variety is the most marvellous combination of flaming copper with salmon-pink shadings. A decided novelty, not alone in variety, but color. To take advantage of this special offer tear off the attached coupon and return to me:

CHARLES H. TOTTY

NOVELTIES IN ROSES, CARNATIONS
and CHRYSANTHEMUMS

Madison New Jersey

Name _____
Address _____
Express Office _____
Enclosed find \$ _____

ON THE PUBLIC GROUNDS AT WASHINGTON

You will find many varieties of Conard and Jones Swastika Brand Cannas. No better recommendation can be had than the adoption of these varieties by the U. S. Department of Agriculture for use on the most visited grounds around the public buildings of the Nation's Capitol.

THE CANNA IS THE PREMIER PLANT FOR DISPLAY BEDDING. Conard and Jones' Cannas have a stateliness and continuity of bloom and clear, clean foliage which have won for them the highest popularity.

MR. ANTOINE WINTZER, THE CANNA WIZARD

is our vice-president. He has developed the "Finest Cannas in the World," having trebled the variety of colors, increased the endurance of the bloom, and given bronze foliage to flowers that before only had green. He personally tests every variety three years before putting it on the market and has handled over 40,000 seedlings with remarkable results.

"THE BOOK OF THE CANNA"

is a splendid guide to the proper selection, care and cultivation of the Canna. It treats of the origin and history of the flower, describes in detail the 108 varieties we offer, including 72 of our own development, shows the winners at the exhibitions, and explains why it is we receive the approbation of such societies as the American Florists, who in National Convention at Minneapolis in 1913, gave foremost place to C. and J. Cannas over competitors. This book is free. Surely you ought to send for it—and at once—for planting time is near.

THE CONARD & JONES CO.

Growers of "The Finest Cannas in the World" and "The Best Roses for America."

Box 126

WEST GROVE
PA.

