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COVER DESIGN: THE GARDEN IN FULL BLOOM  
*Photograph by Jessie Tarbox Beals*

FRONTISPIECE: A NEW OLD-FASHIONED GARDEN

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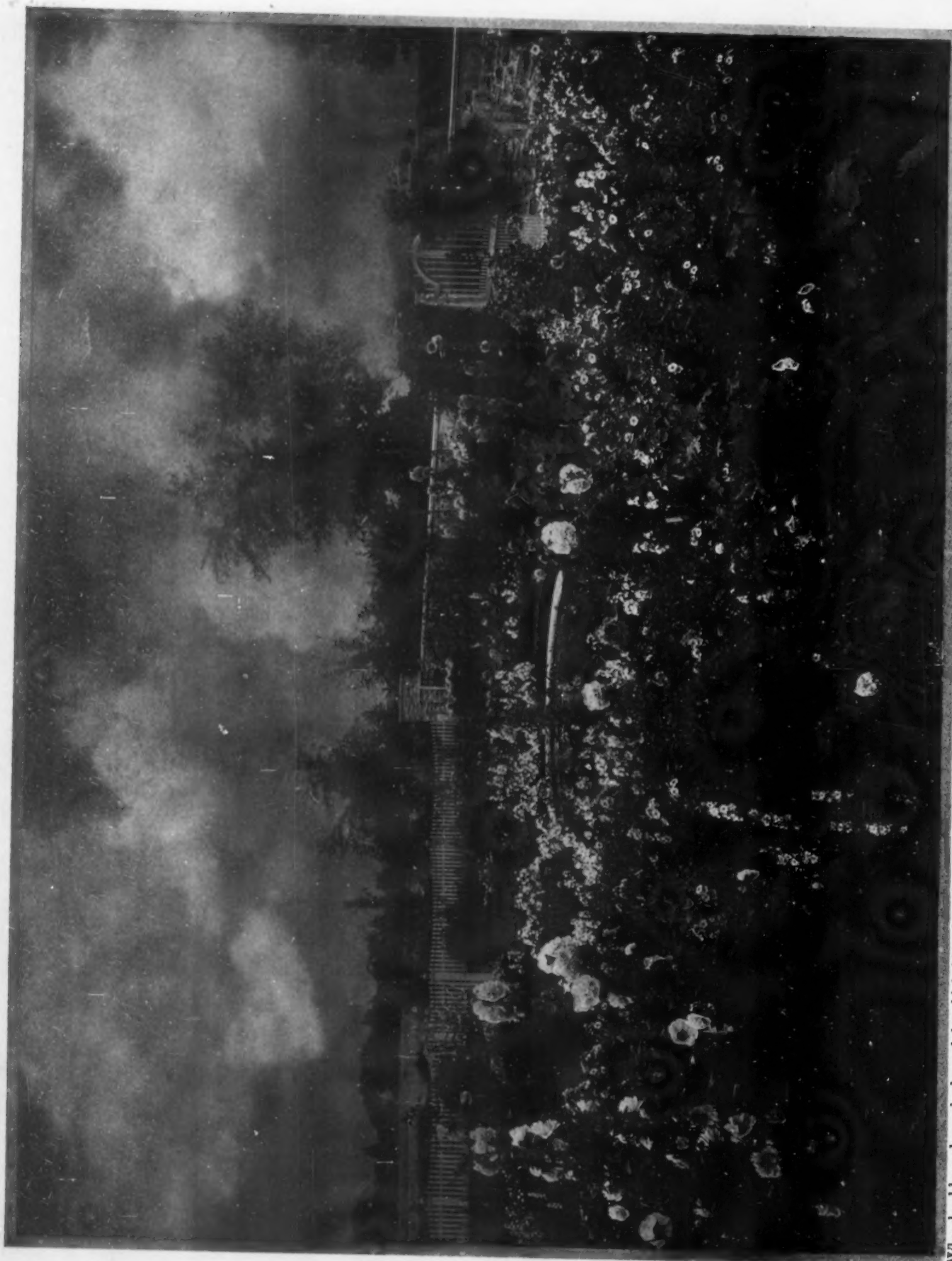
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Why should we decry the loss of the old-fashioned garden? There must be a beginning to everything, and we may be able to make the garden that will be the cherished old garden of another generation. This is an example of a new old-fashioned garden of but two years' planting





## A Garden of Yesterday

BY EDITH LIVINGSTON SMITH

Photographs by Ella M. Boulton and others

WHEN Now walks down the lane of Long Ago and sees there a little girl who is a woman to-day, there steals over the memory a sense of the unreality of the changes and chances of time which weigh events in the scale of importance. It is as easy for recollection to say "it is" as for actuality to say "it was;" one has but to turn the bend in the road of twisted years and there is the flower from which the faded fragrance steals, there is the music from which the silence trembles, there is the child-happiness of unresponsibility in which the idleness of old age finds its image—and its dream of peace.

When Now walks down the lane of Long Ago a woman's hands reach out eagerly to clutch the childish fingers which were hers, her heart encompasses the doubts and fears of a wistful, wondering, opening consciousness—a woman's understanding bridges the years.

If you go with me, you must shut the lower half of the double door of the big white house—Grandmother's house—for she calls "Shut the door, childie, and don't forget the garden gate," so we must do what she asks.

"Yes, Grandmother," you must answer, not just "Yes'm" as you may to the school-teacher.

It is only a step to the garden gate. The latch lifts easily. Whitewashed picket fences are nicer than painted ones, aren't they?

Why?

Because Grandmother's fence is whitewashed and the house too, shingle on shingle; she won't have it painted.

Now turn and wave your hand to Grandmother, for she is looking to see if you really shut the gate—that's so the chickens won't get in.

"Keep in the shade, child," she calls.

(Yes, there were shadows in Grandmother's garden; how strange!)

You must take a long breath because the minute you shut the gate and think where you are, you can smell it all at once—the



It is only a step to the garden gate swinging in the whitewashed, picket fence, and it leads you into a garden of delight

box that edges the paths, the phlox and the hollyhocks, the larkspur and four o'clocks, the bachelor buttons and ten weeks' stock; the sweet peas and candy-tuft, and mignonette and sweet geranium (it needs a very long breath); the lavender and heliotrope, and poppies and forget-me-nots; the pansies and nasturtiums and sunflowers, and all the other blossoms—wealth of green and color; mixed with the drowsy hum of insects—borne on the clear note of a bird, shut in by the overflowing sense of sunlight and tree-tops and the under-tenderness of Summer's growth.

You mustn't go down the middle path first, for that one comes last. No, don't go to your wrong hand side. When I was much littler than I am now I learned my right hand from my wrong one by the paths in the garden. On the wrong side are all the things to eat—peas and beans and corn and such things that are nice—for dinner, but not when one just comes on a visit to the garden.

Over here? Yes, there are some things to eat, but in with the flowers, currant bushes and pear trees that have to be propped

up with long sticks because they are going to have so many pears; and peach trees and plum trees—just a few—and the flowers that like to be shady grow underneath them.

Hear how the bumble bees bumble around the ever blooming roses and the lilies. Did you ever see lilies so much taller than little girls? They can look right over the fence. Great big red ones and white ones that smell most as sweet as roses, and the tiger ones with freckles like mine.

If you were a fairy, would you rather dance here or under the poppy umbrellas?

I beg your pardon, but if you want to see the place where they meet in the moonlight (there are other places too—out under the big trees by the front gate, where the roots of the trees grow, right out of the ground to make houses for paper dolls, is one, and down in the glen)—but if you want to see their most favorite place, it is down the middle garden path. Yes, let us go.

Here, you see the box stops edging the paths and the bushes



The path stops at the trellis and beyond are just trees and grass and flowers, growing in disarray, unhedged by borders

do it instead. Those are peony bushes and bleeding heart—the peonies are all gone now like most of the roses and the lilies-of-the-valley by the fence—and here is the trellis that makes a bridge over the path for the grapes to grow over. You can sit here on the benches under the trellis if you want to. I often do when the grapes are ripe.

"You never saw so many old-fashioned flowers?" Do you like new-fashioned best? What kind are they?—"You don't"—Oh! I am glad, for Grandmother and Mother and I all like this kind and there is such a lot of them. Now, the big path stops this side of the trellis and it gets little with just trees and grass on each side of it. Your skirts are long. I am so sorry—it takes the dew such a long time to dry. Mine don't touch the grass, you see.

Now *this* is where the fairies come. See the cobwebs on the grass? That's what people call them, but they are really the table covers of the fairies when they have supper out here in the garden at night. The trees grow closer and closer here. When little girls are alone they always run down this bit of the path.

"Why?"

I don't know exactly, but—I think I'll take your hand, please—to show you the way.

No, go slow again. The sun sifters through the trees just like the flour does through the sifter when Grandmother makes sponge cake. See how long and soft the grass is here, and the path stops being a path and is just an open space—now it's a path again and where it turns—guess?

"You cannot?"

A big tree and a seat made of twisted wood. Isn't *that* the loveliest place to play house? Here is where Grandmother and Grandfather used to sit. Grandmother told me so.

Hark! Do you hear singing? It's the brook right down at the bottom of this little hill. Grandmother said that the brook sang all their words to music as if it was a song when she and Grandfather were lovers.

Do you know what a lover is? It's Grandfathers and Grandmothers and Fathers and Mothers before there is any you.

But lovers don't fade like the roses, Grandmother says. They keep on gathering all the sweetness of love into all the years just like the bees do honey—Oh! I can't explain. You ask Grandmother—little girls never can explain, but they *know*, because they feel it all inside.

"Some day, dear child, you will understand these things and life," Grandmother says. "Oh, Grandmother, I know," I say. "That is, I know the outside of it all. It is just like the breath of the garden, that is all of it; even if little girls don't know the name of each flower, they can understand the sweetness is all of them. Isn't that like life?"

"Yes, philosopher," Grandmother says. "It is like a garden with the roses and the thorns, the sun and the shadows the springtime and the dead, dead leaves, the lilacs and the bitter-sweet; but a child knows not of thorns and shadows, and bitter-sweet climbs too high over your head."

Grandmother likes riddles. Most generally I can't guess them.

When we go back I'll pick you some flowers and we'll get some blackberries to eat. I know how to make a basket out of grape leaves and little sticks, and trumpet creeper trumps hold quite a number if you put the little berries in them. Here—*Here*—we are! Don't you love it? *Don't You?* You must say you do. Isn't that the dearest, runaway brook? Doesn't it sound



Beneath the tall hollyhocks with their various hues, are the hiding places of the fairies





The foxgloves waved their stately heads above the child, even the lilies leaned over her

cool when it splashes over the rocks? And you can learn all about geography—I mean islands and isthmuses and peninsulas—when you go in paddling.

What a pity! I forgot your skirts were so long. Would you get them wet? Perhaps you would.

Oh, thank you. Are you sure it is polite?—You really wouldn't mind if I went in paddling alone?—Yes, I always do—

Is it as late as that? We must go back. I wish we had brought some cookies. Perhaps we can find some early pears. You can never guess why, when I'm in Grandmother's dining-room I think of the garden most always.

Flowers on the table? Yes, but not that—sometimes it's currants, sometimes it's pears stewed in molasses—or early it's strawberries and now it's blackberries—and sometimes I have to come out and get three peach leaves to put in the milk that Grandmother is heating for the custard.

Then on Sundays I think of the garden. Sundays is when Grandfather, who is dead, has his blossoms. We come out here and pick the very best flowers we can find and we take them in the house where Grandmother fills the tin crosses half full of moss and water, and then we put the flowers in those until they look like rainbow crosses. Then we go to church—early. Partly because Harry Clay—that's the white horse—goes slowly (he's old like Grandmother), but the second "because" is that we have to go to the burying-ground first. That's where people get planted before they grow to Heaven.

We stop on the road and put the reins through a hole in the post—but Harry Clay would stand all right if we didn't—he likes standing best, you know.

Our little dead yard is near to the road with an evergreen hedge about it. Grandmother squeezes in through a hole in the hedge and I squeeze in easier after her. Then she puts the

crosses on the graves. There are others besides Grandfather's, but she kneels down by his and so I do too, and I say "Our Father" and "Now I lay me down to sleep" to myself, but I get through before Grandmother does. When she is ready we go back to the wagon and drive a little way further to church. Grandmother ties Harry Clay again, under a shed this time, and while the bell rings just a little, we walk up a path and go in to church.

I always wear a very stiff white dress and a white hat and I have one a Roman sash. That is a sash that is of many colors like Joseph's coat in the Bible was. I don't think it's pretty. Other little girls have them all pink or blue or all red. Every Sunday I say to Grandmother: "Grandmother, must I wear my Roman sash?" and every Sunday I wear it.

Church is long. I like the music—the birds and the locusts sing outside—the fans flutter—I get a little sleepy and I'm afraid I'll drop my five cents. Yes, I do love God and I try to be good—I wish my Roman sash was all pink!

Then church gets over and we go out. Grandmother talks to ladies and then we go home.

Now we'll get the big bunch of flowers.

You hold them, please, while I get the berries. Oh! here are some plums on the ground. Grandmother doesn't mind if we shake the tree a little.

Now we must shut the gate again. Down that little path is where the cows come up from the road at night. The cows made that path, but I think the fairies helped.

Won't you come into the house? Up there is where I sleep at night, and I can hear the crickets cricketing out here. Those green shutters belong to the parlor. The parlor has a carpet with big rings on it that you can play marbles in on rainy days.



In the shaded corners of the garden and under the fruit trees, the flowers that like the shade grow in profusion

I help Grandmother dust the parlor in the mornings. There is a weather thing with a little man and woman, and the lady goes in the house when it rains and the man comes out, for it's politer

(Continued on page 80)



There is a charm about this garden, much of which is obtained from the use of fruit trees and small fruits instead of the generally seen flowers and shrubs

## The Utility Garden

SELECTING THOSE VARIETIES OF PLANTS THAT COMBINE USEFUL FRUITS WITH BEAUTY OF FLOWER OR FOLIAGE—THE GARDEN THAT SATISFIES THE APPETITE AS WELL AS THE EYES

BY PARKER THAYER BARNES

Photographs by Nathan R. Graves, Chas. Jones, and others

EDITOR'S NOTE.—Most people have some peculiar prejudice in favor of a certain type of garden. This may be influenced by personal tastes or by the exigencies of location. But the fact remains that there are different kinds of gardens to choose from as well as there are different styles of architecture. The purpose of this series is to show what types are available. This article describes the garden of a man who wishes edible results for his garden work. It will be followed by other types in subsequent issues.

**T**HE kind of a garden to have has, no doubt, been a problem which has presented itself to many a would-be gardener, and the inability to see a way clear in which to indulge in this

pastime has, doubtless, resulted in aspirations dwindling to abortive attempts at flower gardening. Shrubs, perennials and annuals are delightful plants to grow if one has the time to devote to their culture, but to keep a flower garden in first-class shape requires a great amount of time and labor, and the individual species are, at best, in bloom for only a few weeks, while most shrubs and perennials bear flowers for only a couple of weeks, being for the

balance of the year just green; but they must still be cultivated, fertilized, pruned and mulched.

For real joy I believe that a fruit and vegetable garden is the thing, because it can be made to combine beauty with utility. The fruit trees flower before the frost has really gone, and there are no flowering shrubs which can surpass them for beauty of bloom. The flowering of the fruit trees is closely followed by the fruiting of strawberries in late May or early June, according to the locality. By the middle of June cherries are ripe, and raspberries are ready to pick early in July. These are followed by currants, goose-

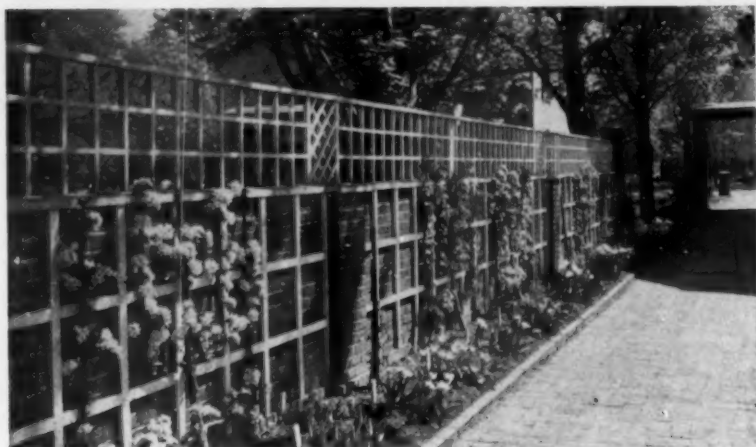


Perhaps you have not noticed the attractive bloom of the blackberries



Peach trees adapt themselves readily to training in the espalier form





An American garden where apple trees are being trained against simple lattice. The effect is charming and the method has many advantages



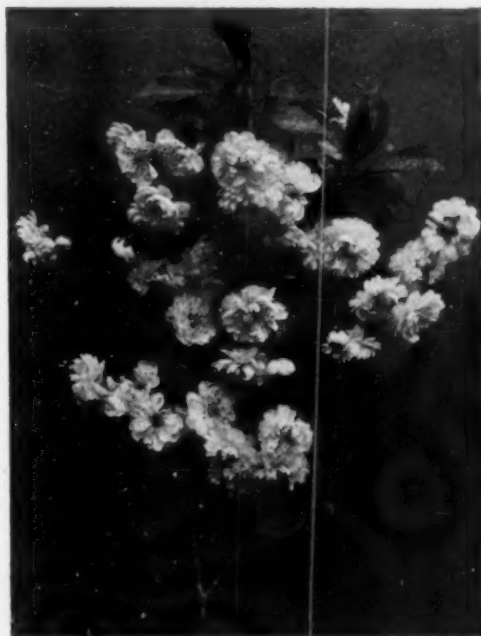
What would have been a bare wall here is graced by fruit trees. The face of this stone is strung with stout wire for training the trees

berries and blackberries. The early varieties of peaches are ripe in August and so are a few early varieties of apples, and a succession is maintained until the heavy frosts of fall arrive.

The fruit garden is a source of anticipation all summer long, and the realization will equal or exceed the anticipation. As soon as the flowers drop, the fruits commence to form. You can walk daily through the garden, watching the fruits swell, growing larger and larger; then they begin to take on color, and finally they are ready to eat—big, highly colored strawberries and peaches that fairly melt in the mouth. This can all be accomplished with a minimum of labor and it does not require a vast amount of knowledge to be successful.

A fruit garden is just as permanent as any plantation of trees and shrubs, and more permanent than most herbaceous gardens, for it does not require the occasional digging up and separating of the plants as is necessary with the iris and the peony, for instance, and it can be made just as attractive if care is taken in planting it.

Growing fruits on small suburban lots may seem impossible, for one is accustomed to think of their being produced by large trees. It is entirely possible, however, for one can purchase miniature forms which will produce bigger, better flavored, and more highly colored fruit than is usually produced in commercial orchards. These dwarf trees can be grown in much less space than the larger kinds and they are so amenable to pruning and training that they can be grown in almost any conceivable form. Exceedingly attractive displays can be



There are few shrubs more beautiful in blossom than the flowering cherry

made by training them in fan, espalier, or any of the flat forms against buildings or fences, or over porches, arbors or trellises. They can be trained low on trellises to form hedges or to screen unsightly objects; in fact, their use about a small garden is almost unlimited to the gardener who has creative imagination. Apples, pears, peaches, plums and cherries can all be had in dwarf forms.

The foliage of the grape is as good as any of the ornamental vines grown about the house when one is planting for landscape effects alone; the leaves are large and the beautiful green is always attractive. In the late spring and early summer the grapes bear an abundant quantity of inconspicuous flowers, but their existence is heralded by their very fragrant odor. The grape makes an excellent vine for training over porches, arbors and summer-houses or the many pergolas which have been neglected in that no vines have been planted over them. A pergola without a covering of vines is not attractive;

it always seems out of place. No better vine for covering pergolas can be found than the grape. The dwarf fruit trees should be set about ten feet apart each way when grown in bush forms,

but when planted against buildings they can be set closer together, the distance depending upon the method of pruning. The double-U shaped dwarf trees—which in many ways is the best form to grow on trellises against buildings—should be set four feet apart so as to allow one foot between each cane. Strawberries may be grown in matted rows or in hills of individual plants. I prefer the latter way. In this case the plants are set eighteen inches apart.

A good trellis on which



Upon the pergola at the back of the garden grapevines are trained, and the vegetables in regular array seem as attractive as the arrangement of a formal garden



An interesting group of fruit trees and dwarf fruit trees in a corner of a lawn



These rows of fruit trees will form a well shaded orchard during the summer and fall

to train fruit trees is made with iron posts set about ten feet apart, and on these wires are strung about nine inches apart. The height of the trellis will depend somewhat upon the form in which the trees are trained. It ought not to be less than six feet. This form of trellis is much better than one made of wood, as parts of the wooden trellises will need replacing in a few years. The trellises should be built before planting the fruit trees and the trees should be planted close up to the wire.

The straight lines of some formal gardens and the regularity of all, have been popular with many people from the earliest days of gardening. Indeed, the trouble of those striving to uplift gardening has been to prevent the formal garden from running into a riot of regular arrangement. Due to this, the bedding plants and the rows of Mother Carey's Chickens find less favor to-day. But there may be a combination of this regularity, espe-

cially where it exists for a sensible reason and a true purpose, as in the vegetable garden. There is much of beauty in the foliage of beet, lettuce, carrot and countless other vegetables. A careful selection can show these productions to best advantage. Sometimes an arrangement is made according to height; sometimes, according to kind. There is a great variety, giving a chance for personal taste.

One man gained attractiveness by putting his higher crops at the back of the garden. Corn formed the background for pole beans, then bush beans, peas, etc. Another gardener introduced a visitor to his formal garden. Where the pergola usually overlooks a formal arrangement of flowers, he had a pergola covered with thriving grapevines. But, in place of the flowers, the path in the center looked upon regular rows of crisp, fresh vegetables, tomatoes trained on trellises, and the graceful foliage of the pea-vines growing on upright supports. To him, it far surpassed any formal garden in the accepted sense of the word he had ever beheld.

One very attractive vegetable and fruit garden which I have visited several times is arranged in this way. The vegetable garden is divided up into several parts by walks, and between the walks and vegetables are trellises six or eight feet high on which dwarf fruit trees are trained. In other parts of this same garden there are walks bordered with dwarf fruit trees in bush form under which annual flowering plants are grown. These annuals could be very well supplemented by strawberries for the first few years after the planting of the fruit trees, as several crops could

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The great advantage of dwarf trained fruits is that one can employ them to good effect in the smallest space, as with this cherry tree



The surface of this stone wall affords sufficient room to train a row of sturdy peach trees. What is more, this method produces fine fruit



# A Common Sense Explanation of Fertilizers

BY CLAUDE H. MILLER

**M**OST books on fertilizers are Greek to the amateur gardener. From them we gain the impression that all plant growth is made up of three chemical elements, nitrogen, phosphorous and potash, and that before we can hope for success in our gardens we must exercise certain functions somewhere between the duties of the prescription clerk in a drug store and the cook who puts together the ingredients for a batch of bread or cake. As a matter of fact plants take from the soil about a dozen elements. The reason that the triumvirate, nitrogen, potash and phosphorous, are so often mentioned is because they are the ones in which as a rule a poor soil is deficient. Consequently they must be supplied artificially to obtain maximum yields. They are the ingredients of a complete or "balanced" fertilizer. In the books, we see big formulae devoted to the humble potato that make us feel that what we heretofore regarded as a simple tuber as a matter of fact requires as much care in feeding as a growing baby. We may think we "know beans," but after reading a treatise on "the soil requirements of the leguminoids," our favorite Saturday night dish becomes a composite photograph of the corner drug store dumped in a ten acre lot.



You as a gardener in a small way need to know but little about fertilizers from a scientific standpoint. If you go to your farmer neighbor who always has the earliest sweet corn and the ripest, soundest tomatoes and ask him about nitrates and sulphates, he will consider that you are delving in educational mysteries that have no part in his life. All he knows is that to have a good garden, he must use lots of well rotted manure, and failing in that, to make up the shortage with fertilizer.

## STABLE MANURES

The difference between success or failure in our garden depends upon a great many things beside soil fertility. Some of these are sufficient rainfall, physical condition of the soil, the kind of seed we plant—both as to its germinating qualities and the proper variety—whether we have planted at the proper time, the care we give the seedlings after they appear, and the extent to which we wage war upon their natural enemies, the weeds and the bugs. But more than anything else a successful garden is dependent upon a good soil. It is the *sine qua non* of the whole affair, the major premise, the foundation stone upon which we shall build our structure. No amount of weeding or rainfall or good seeds or government bulletins or neighborly advice will take the place of this.

Practically no garden spots are rich enough in themselves. Something must be added. "Well, then," you ask, "what shall I add?" You may feel that unless you employ the services of an agricultural expert, you are rushing in where angels fear to tread. You need have no misgivings on this score. If you can get it, the thing to add is stable manure. "How much?" Just as much as you can get conveniently—and then some. If you keep a horse, the best practice is to haul the accumulation out on the garden every few days during the fall and winter, so that when the rains come, the soluble salts which it contains will be washed into the ground and not run off into the drain or sewer where they will do no good. During the growing season this cannot be done. In that case, the manure pile should be turned over about once in two weeks to hasten decomposition and to prevent it from overheating—which is technically called "burning." The white spots we often see in stable manure are due to burning, and in such cases practically all the plant food has been destroyed.

As horse manure is naturally dry, it will ferment rapidly unless it is kept worked up. By rapid fermentation it loses its most valuable fertilizing element, nitrogen, which is converted into ammonium carbonate, a volatile gas. In addition to working over the pile, our manure pit should have a roof to keep off the rains, or better still waterproof sides and bottom of concrete to hold the moisture. Cow manure according to analysis is less valuable than horse manure, but it ferments more slowly, and under the ordinary conditions of neglect that exist on the average farm will probably be just as desirable if it can be bought. Pig manure is in the same class as cow manure owing to the diversity of feed that pigs get. The two that are the most valuable are sheep and poultry manure. Where possible these should be mixed with stable manure, as the excess straw in the bedding used will act as an absorbent and hold in the soluble chemicals.

The beginner should appreciate one essential fact: that any manure is superior in most cases to a commercial fertilizer because in addition to the chemicals it contains it also is largely made up of humus. This is simply vegetable fiber of some sort. Rotted straw or leaf mold is largely humus. The chief function of humus is to improve the texture of the soil. A heavy clay may be rich enough in itself to grow a garden successfully, but it must also be friable or workable, and not compact like putty. When we consider that the delicate hair-like rootlets of a growing plant must work their way through the soil and seek out the elements that go to make plant growth, we can easily see how much better the chances of success are in a loose crumbly soil than in one that is packed or so "clayey" that it is either water-soaked or sun-baked on the surface so that it will shed water like a tin roof instead of permitting it to soak into the ground. This naturally leads also into a discussion of cultivation, which is beyond the province of this article. The point is that manure is preferable to fertilizer because it contains humus. The book farmer will dispute this and tell you that with a fertilizer we can know exactly how much nitrogen or potash we are adding, but with stable manure it is all guesswork. He is right in this, but he assumes that we know in advance just how much we should add. I regretfully dispute this contention.



We are now brought up to the subject of artificial fertilization. First of all we must ascertain whether our garden needs lime.

## ARTIFICIAL FERTILIZERS

It is an important element in the successful growing of crops. The principal function of lime is to correct acidity or to "sweeten" or make alkaline an acid soil. We can easily tell whether our gardens are acid by procuring a piece of litmus paper from the druggist. Litmus paper has the peculiar property in the presence of an acid of turning a pinkish red. In alkaline or neutral solutions it turns or remains blue. The practical test is made in this way. Stick a spade into the ground and work a slot into the top soil. Then moisten a piece of the litmus paper with clean water and press it against the side of the hole. If the paper turns pink your soil is slightly acid and needs some lime—say a bag of air-slaked lime to each square rod. This is better applied in the fall and plowed or spaded in when you make the garden in the spring. Lime also acts the same as humus and not only improves the texture of the soil, but also makes available the elements of plant growth and unlocks the fertility of the soil. This fact has long been recognized by farmers in the saying "lime makes the father rich and

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When the hardy perennials show poverty of blossoms the annuals supplement their bloom with a rich profusion. Sweet alyssum is good in following the hardy primroses on the borders of the garden path

## Annuals, the Garden Reinforcements

TESTED VARIETIES THAT SUPPORT THE PERENNIALS IN MAINTAINING BLOOMS FROM SPRING TILL FALL—SUGGESTIONS FOR COLOR SCHEMES AND ARRANGEMENT

BY ADELINE THAYER THOMSON

Photographs by the author

**T**HE garden fashioned entirely of perennials has limitations. To be truly satisfying, a blossom plot must yield an unbroken succession of harmonious color effects, from early spring until frost. Where perennials are used exclusively, accomplishing such a result is almost impossible, at least, in the small garden—and most of our gardens are small. It is not that the flowering scope of the hardy plant is limited, for this class boasts an endless variety with such widely differing flowering periods that one may easily have hardy plants in flower throughout the spring and fall. The difficulty lies alone in the fact that the blossoming season of the average perennial seldom exceeds three weeks, and numbers of the choicest varieties remain in flower but a few days, with the inevitable result that bare, uninteresting patches, devoid of blossoming color, are everywhere in evidence. To be sure, one *may* work out an unbroken flowering succession with hardy plants, but the rich profusion of blossoming color, constituting the garden beautiful, may be only partially acquired.

The simple adjustment of the matter is to use certain annuals in combination with the most unruly of the perennials. Such, at

least, has been my own experience. My garden luxuriates now in glowing color at all times during the growing season, whereas, when hardy plants were used exclusively, lapses of only a half-hearted display were recurring frequently. The following annuals not only aid greatly in perfecting an unbroken succession of bloom in the hardy garden, but they will fill every nook and cranny within it with beauty.

A treasure to succeed the early flowering, hardy, edging plants, primroses, hepaticas, forget-me-not, etc., is the sweet alyssum. If seeds of this plant are scattered thickly among the mentioned perennials, dense heads of snow-white bloom will take the place of the hardy flowers as their usefulness ceases. The seeds should be sown early in March to accomplish

a perfect succession. Garden paths bordered with alyssum are exceedingly effective. A constant sheet of bloom is yielded by this annual until frost appears.

June is the banner month among the perennials, and little or no help is actually needed to enhance the display. Delphiniums, iris, oriental poppies, foxgloves, spice pinks, columbines, Madonna lilies, Shasta daisies, pyrethrums, sweet-williams, garden



White asters and snapdragon may be crowded in almost anywhere among the perennials



heliotrope and many other hardy favorites dance throughout the garden in a mad whirl of delight. Their glory is brief, however, and they must soon be cut back to the ground. The introduction to their midst of the old fashioned bachelor button—the blue variety among the delphiniums and the white with the garden heliotrope and oriental poppies—will not only prove pleasing in the color scheme, but when the perennials are spent, the annuals will flourish on and fill the bare places. The bachelor button, too, gives excellent service planted with German iris. Seeds sown in the early fall will mature plants strong enough to winter safely and be in readiness to break into lusty bloom at the close of the iris season. Grasshoppers, too, often disfigure the leaves of the iris; the planting of the bachelor button, I find, hides such unsightliness as well as continues the flower display. Seeds sown in early March (in the open) will mature blossoms for combination with delphiniums and heliotrope the last of June. Seed pods must be kept picked if a succession of flowers continues until frost.

To continue the red color scheme begun by the flaming lobelia, *monarda didyma*, lychnis, tiger lily and oriental poppy, the giant red zinnias and scarlet salvia will give splendid satisfaction. It is better, however, to raise these annuals in a hot bed, or if this is not at one's disposal, in flats seeded early in February. The seedlings should be transplanted to flower pots out in the open when the weather becomes settled, and then held in reserve until the perennials to be supplanted have finished blooming. The rank growth of the perennials will hamper the success of the seedlings if their seed is planted in

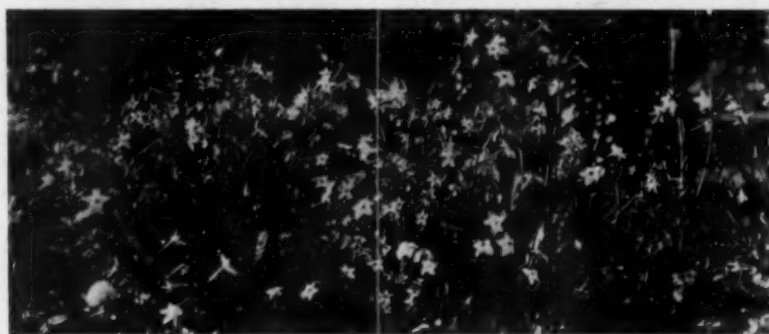
the open garden. Just here I may say that I find the paper flower pots (retailing for about sixty cents a hundred) far more satisfactory than the earthen ones, for the patent fastening at the side enables one to slip out the plant and earth, without disturbing the roots, and thus avoids shock and possible harm.

The pink variety of the annual larkspur is useful with pyrethrum, mullein pink, and the *Physostegia*. Through heat and drought this plant may be depended on to bring forth its delicate blossoms without stint, and, indeed, until cut down by very severe frosts. The blue variety also I use among the blue platycodon and delphiniums in connection with the bachelor buttons.

Pink and white Shirley poppies, though possessing a short flowering period, are useful plants to follow in the train of the Canterbury bells, Shasta daisies, and English and Spanish iris. These annuals are charming, too, among the perennial phlox, brightening such plantings during July before the phlox comes

into flower and then giving way in August to the rich harvest of the phlox. To follow the flowering succession of the phlox, I fill in from the "reserve force" quantities of zinnias—of the delicate light pink shades—not the *magentas*. This planting is always wonderfully satisfactory, for the zinnia is a prolific bloomer and the light pink varieties are very beautiful.

The double variety of the French marigolds, filled in among Japanese iris, after their flowering season is over, brings a new beauty into the garden that is strikingly effective the rest of the season. The prolific spear-like foliage of the iris seems not only to enhance the beauty of the annual, but subdues (Continued on page 52)



The pure white nicotiana is valuable to fill all bare places in the garden



The annual larkspur, especially the pink variety, is well used to succeed pyrethrum and *physostegia*, and may be depended upon to survive unfavorable weather conditions



Bachelor's buttons look well among the delphiniums and iris, and continue the bloom when these have ceased to flower



There was a joy in the open air life, a freedom from restraint and conventionality, that made the simplest tasks seem well worth the doing and sent me early into the fields, full of enthusiasm and energy

## Adventures With an Apple Orchard

BY JOHN ANTHONY

Photographs by the author

*NOTE.—This is the second and concluding chapter in the adventures of John Anthony, a city man who made a success of apple growing on an old New England farm. The first article appeared in the March number and told of the good results of the introduction of new ideas in orcharding.*

WHEN I returned from the summer school at Hope College I was bubbling over with enthusiasm and had energy to burn. I wanted to pull up the potatoes, treat them to a dose of formalin and start them over again. I begged for ribbon to tie around the best ears of corn that they might be saved for seed. I was about to compute the rations of the cows in terms of proteins and carbohydrates until I found that they were eating only the grass of the pasture. Then I transferred my attention to the horses. I examined them for splints, for founder and a number of other things that I didn't even know the name of.

But apple picking was upon us, and I settled down to work, the hardest work that I had ever known, but the most fun that has ever crossed my path.

I fired such a multitude of questions at Mr. West about packing apples in boxes, and told him so much of my plans for doing it in the future, that he was willing to quiet me at any price. When I had talked him dumb and partly deaf on the subject, he suggested that I go ahead with it this year and not wait until I was alone on the place. I didn't wait an hour after this, and letters were sent scurrying around the country in pursuit of information. I didn't know where to get a packer. I hadn't the faintest notion of where to find a box maker and only the vaguest idea of the accessories needed to put into the box.

Lithographs must be found for the ends of the boxes. These latter were finally ordered from Oregon, manufactured in San Francisco and shipped across the continent by express. But they reached me on time. I ran short of corrugated caps and of layer boards, and at one time had a lot of them coming by freight from New York, a duplicate lot lost on the road to the north, and a third consignment hurrying to me by express. Despite these efforts, packed boxes piled up on us while we were waiting for the arrival of corrugated caps before putting on the covers. This can all be charged up to experience, and to the conservatism of northern New England apple growers who keep their information to themselves. From Massachusetts and Connecticut came answers to every question, answers filled with information. From the Champlain Valley came no replies, even from the men who talk the loudest (in public) of brotherly love.

I watched tender, early apples emptied into the gathering barrels from the picking baskets, poured with an attempt at care, yet poured, one apple falling on another and each collision meaning an additional bruise. I saw apples picked up from the ground, carelessly examined for injuries and then added to the contents of the barrels. Later I saw the contents of these barrels poured upon an unpadded sorting bench, again pawed (this exactly describes the operation) over and finally emptied from



a basket into the shipping barrel. And right then *I knew that I was safe*. The city man had won out. Mr. West had spent the best years of his life in caring for his apple trees, and now, at the last moment, he was throwing away a large proportion of their return.

In justice to Mr. West I wish to say that his ideals had been formed from conditions existing within his limited horizon. The apple buyers who came to buy his crop, the neighbors who never trimmed or sprayed their trees and shook the fruit to the ground, these were the people with whom he talked and from whom he formed his ideals. His life had been too hard to make real the world of books, a world in which I had so largely lived. From his inner consciousness he had evolved and on his own initiative put into practice many improvements that kept him head and shoulders above anyone else in the neighborhood. But my ideals had been picked up from reading about the most advanced growers in the country.

A couple of rainy days intervened and gave me a chance to make two changes. I padded that sorting bench with hay—padded it until it was soft as a mattress and covered it with a new strip of carpet. Then I got hold of the picking baskets and took them into the house. I asked the girls how to cut gunny sacks on the bias and how to sew them together so as to make them hang right, for those baskets must be lined. They took pity on my masculine

helplessness and showed me how by doing it. In return there were many trips between the woodpile and the woodbox, so many that I can think with equanimity of my wiles.

Mr. West had begun the season by playing hookey, and he had enjoyed it. When his daughters suggested that he take them to the State Fair, he refused, re-considered, and accepted. It was a great day for me, for I was left in charge of the picking gang.

"Boys, we will leave every apple that falls to the ground right where it is, and you will hand your baskets to me. No pouring of apples to-day."

Every apple that was gathered that day I placed in the barrels by hand. When night came I had a feeling of extreme virtue, but, oh, what a backache! It was weeks later, in the packing house, that I learned the value of that day's work. One of those barrels of pound sweets (a green apple that shows every bruise) came to me at the end of a day when I had been wading through a discouraging lot of mangled apples. Hard, winter varieties had been so roughly handled that every other apple showed a bad bruise. I had been throwing away, throwing away, all day long, when the barrels of sweets came to the table. I didn't even

dare to let them roll from barrel to bench, so perfect and free from bruise were they. Weeks afterward I saw some of them in a distant city and still they retained their unmarred condition. The man that pours a basket of apples in my orchard next year has got to be able to lick me.

But right here I want to put in another warning. It isn't the whole game to pick and pack apples with care. I put up some barrels of Emperor Alexander—packed them right in the orchard myself, and knew that not a single specimen was bruised, knew that the middle of the barrel was as good as the top, knew that it was an "honest" pack. When these barrels were sent to the commission man I wrote and told him of the fact. And we received the lowest price of the season for those barrels! True, the head of the house wrote to tell of the condition of the market and to promise to find a sale for apples packed as those had been, but Hiram chuckled. Honesty is the foundation of

this business, without which the whole edifice will collapse, but the foundation isn't the completed edifice.

My box packer had come, the young University man whom I had met at Hope College was with me and we began the work which I so fondly hope is to take my apples to all parts of the world. Does this sound chimerical? This first year I had orders to ship them to England and to the West Indies. I had orders from Florida and from Canada, from Dakota and from Maine. I think



An orchard of fruit trees had grown up around the house, and this was the scene of long hours of serious toil when the apples began to ripen

it is a dream that will come true and be fully realized.

We decided to pack in two grades, fancy and number one. The first named was to contain apples uniformly colored, regular in shape and without blemish; the last named was to contain apples that fell just below this in some one requirement. Apples for neither grade must be below a certain size. Andrews selected specimens that met these requirements to show Mann and me. Then we began the sorting for the boxes. It was a test of firmness of purpose, a test that continued day after day, that held despite the comments of men who had grown gray in the business. It was the most discouraging work that I have ever done, and at the same time the most inspiring. Discouraging because so few apples could be admitted to the higher grade, inspiring because of the standard which we lived up to and because of its reaction on everyone about the place. At first it was impossible to get the pickers to use care in their work. If I spent my time in the orchard and stood over them they would use some care, but I had to be in the packing house—had to be there every minute of the day. Andrews and Mann were working with me, heart and soul, but Mr. West could overawe them. I never knew at

what moment he would come into our workshop and send out some apples in my boxes that would break up the work of a season. When I was on guard the thing wouldn't happen; besides, my services were needed at the sorting bench.

As the days went by and the pickers saw our persistent rejection of bruised apples, the certainty with which they found their way to the cider pile, they began to improve. Occasionally we had one of them to help us in the packing house. Our choice always fell on the most careful worker. Rivalry for this distinction began among them. Apples were no longer spilled into the barrels. The baskets were lowered and the contents poured with care. After dinner the packing house force met the pickers at games. An *esprit de corps* came into existence.

One day we closed up work in the packing house for an afternoon to help in the orchard. The friendly rivalry was on hand. The old hands thought that the fellows from the packing house were not to be seriously considered as pickers. Later they changed their minds, for we steadily filled more barrels than they did, filled them with cleaner picked, better apples. But they can never know the wallop that we really gave them. Only Andrews and Mann and I know that. With the regular run of apples coming to the sorting bench, Mann and I had hard work to keep Andrews supplied with apples for his boxes. When the barrels which we had picked that afternoon came to us, I kept them both on the jump all day. Andrews packing boxes and Mann facing and packing barrels. With our work in the orchard, one sorter could keep two packers busy. Under the old style, two sorters were kept busy grading for one box packer! Figure out for yourself the saving in that one item. And a saving utterly without taking account of the larger one of better quality fruit to ship.

Next year this higher ideal can be enforced from start to finish. Mr. West's presence on the place forbade it this season. He thought that he was in favor of it. He thought that if he told the boys to pick only perfect apples and didn't let them see him pick up windfalls and drop them into the baskets that they would fulfil his spoken words instead of his secret wishes. And right here lies the secret of the whole matter. Have the wish for it in your heart and show it by word and deed. Let no doubt exist in the

mind of a single person on the place that you mean to have every wormy apple thrown away, that you will not ship a defective one, that to gather it is a waste of time—and you will find the boys will help you out.

Every evening the packing house was swept out and left clean for the next day's work. Apart from its immediate effect, this one action had a far-reaching one. The boys cleaned their shoes before they came into our workshop, they learned to expectorate outside, instead of inside, their language improved and there was a distinct moral improvement in every one of them. One was literally gayed off the place because of a moral lapse. And all this came from mere hints, from an example that did nothing more than suggest it. How I did wish to scrub that floor! But I just couldn't do it this year. It would have come too close home to Mr. West, and that I couldn't do.

Maybe you think that this has little to do with packing and selling apples. It has everything to do with it. One day the local banker came to the place. I didn't know who he was, nor that his friend was the representative of a big mercantile agency. They watched us and saw the standards that we kept up to, saw us throw away, throw away apples that failed in some slight particular to come up to the standard which we had set for ourselves. I told you earlier that I had orders to ship apples abroad. This is one of the reasons

that gave rise to that demand.

Do you find anything in your city life that is half as good as this? I worked sixteen hours a day. Before the boys were up in the morning I was at the packing house getting things in order so that the work could go on smoothly. After the others had gone to bed I was banging away at the keys of my typewriter, keeping up the correspondence that was becoming a decided item in my day's work. But at the end of the season I had a grip on that business. I had learned how to pick, to pack and to sell. I had learned that I could inspire every man on the place and turn him to my ways. Applications for next year began, because

the boys wanted to work on a farm that was jumping ahead as this one had done in a single season. There was no one to thwart me in my wish to work, in my wish to do the very best that I knew how. And that is why hope and faith came back to me.



Lone trees scattered about on the rocky hills defied the summer winds and storms



The pastures stretched away to the eastward, hundreds of acres of rolling, sunny open where we breathed deep the spirit of the out-of-doors



# An Experimental Year in a Flower Garden

WHAT WAS LEARNED ABOUT COLOR ARRANGEMENT AND PLANNING A GARDEN—  
THE DIFFERENCE BETWEEN THE PRINTED DESCRIPTIONS AND THE ACTUAL RESULTS

TO live in a garden has, for years, seemed to me the acme of earthly bliss. The garden of my dreams has always been enclosed, not so much to shut out, as to shut in, for I would share the pleasures of my garden with all who love its contents. My little imperfect one of to-day may be a preparation for, or foretaste of, the joy that will be mine when my dream comes true.

It was in the years when a city flat was my home and a public park my garden, that I began to study the care of plants and to choose the ones—which varied but slightly from year to year—that I deemed essential for the smallest beginning. The opportunity for demonstrating my "book knowledge" came, when, two years ago in August, we came into possession of a house and a 37' 6" x 150' lot in Oak Park, a suburb of Chicago. The lawn in

front and a few feet from the house in the back was in fair condition; the rest was bare earth and wild grass sod, over which were scattered dilapidated barrels, lime, sand and minor building debris. I began at once to reduce some of my garden ideas into concrete form and soon had a plan on paper which I have been working out and which has, on the whole, thus far been satisfactory. By the fifteenth of October the portions assigned to the service garden, as well as the shrubbery and flower border, had been spread with manure and spaded and the shrubs and a few bulbs planted. The soil is light sandy loam, easily worked. My actual experience in flower growing had been so meager that I confined myself to old, easily-grown plants and shrubs, with a few additional ones I had seen blooming in parks.

I have drawn for greater clearness the plan of the border, the numbers on it corresponding to the appended list. I wanted, first of all, of course, plenty of green to serve as a background for the flowers. By consulting the plan, three sumacs will be found in the southeast corner, with one elder in front. Had I then this year's experience, these two shrubs would have continued clear across the garden. The dark green of the sumac and lighter tones of the elder with their luxuriance of growth make them desirable, aside from the beautiful bloom of the latter in the spring and the brilliancy of the former in the autumn. The syringa coming next along the fence is all that could be desired, but the five Persian lilacs—three purple and two white, beautiful in blossoming time—are to me undesirable as a background



The dark green tropical foliage of the sumac made an excellent background for the blossoms in the border

BY M. VIRGINIA ARFORD

Photographs by Mary H. Northend and Thos. Marr

double flowering almonds, pink and white, were covered with small rose-like flowers. The three Van Houtts spiraeas flowered even last year, and this spring were a mass of white. When these shrubs were planted and well mulched, I waited for spring. However, with the coming of the first catalogue in February, my gardening in a sense, as well as its difficulties, began. There were difficulties of selection, for all seemed so desirable. What to leave out became a problem and the list was revised many times. In the end, as with the shrubs, I chose the reliable, common flowers to which were added a few perennials, highly recommended by those practical writers whom I have come to regard as authorities.

Not having the necessary space to put the colors in separate beds, I worked out a color scheme for the annuals along the north, which on paper looked very attractive, and in my ignorance I assumed that labor, which I was willing to give freely, was all that was required to transform the brown seed into the tints of my color box. As will be seen I have simply separated the three primaries, red, blue and yellow, by secondaries, except in the uniting of blue and yellow, which would, of course, result in green. These two primaries make a natural and pleasing contrast, and not too strong, when white predominates where they merge. I have made yellow in the corner the pivotal color, with the warm reds in scarlet and cardinal at one end and carmines and pinks at the other. Violet—a product of pink (red) and blue—is placed between these two primaries. Again, yellow combined with scar-

shrub, particularly the white. The foliage is small and thin. The Jap snowball has yet to prove itself more desirable than the old it has all but superseded. Had I known enough to have placed these foreign plants in front of sturdier growth, their meagerness would not have been so apparent and the impression more favorable. In front of the lilacs, the three Rugosa roses are satisfactory with clean, fresh-looking foliage—the older dark and rich and the newer flower producing branches of a warm, tender, spring-like green.

Running from the sumac north across the lot are two high bush cranberries, only one of which has bloomed and no berries formed last year, and few this year, possibly because it is not sufficiently well established. Nor has the Betchel's crab blossomed, though growing; but the two



The beauties of foxgloves and Canterbury bells were revealed to me for the first time, and I intend to have these interesting old flowers a permanent feature of my garden

let yields orange, which I have used sparingly in calendulas for the lower and zinnias for the higher. Orange zinnias are words which may bring a shudder to many, but mine are by no means vivid. Nature has subdued them largely with browns until they have become a warm rich color. The inner edge of the whole border is broken in smooth curves and edged with sweet alyssum.

It is with regret that I must add that my living border so carefully planned was not as harmonious as the one made with paint and paper. The trouble was that I did not understand the seedsman's color nomenclature. For instance, coral red snapdragons became magenta; white phlox with blue eye became carmine with white eye; pink phlox were a homely cold color and the verbenas, so very luxuriant in growth and bloom, went quite astray in the shrubbery where I was glad to let them lose themselves. Perhaps the greatest disappointment of this year was occasioned by the dwarf petunias—Snowstorm, white with a yellow throat, and Rosy Morn, which, as its name implies, is a pale pink. The white has not only a mere suggestion of greenish yellow throat, but a streak here and there of the objectionable magenta and an occasional touch on the edge like a drop from an over-full brush. The Rosy Morn is pink, but a deep strong color, not at all pleasing.



- 1, Sumac; 2, Elder; 3, Syringa; 4, Persian Lilac; 5, White Persian Lilac; 6, Jap Snowball; 7, Rugosa Rose; 8, Boltonia; 9, Betchels Crab; 10, Highbush Cranberry; 11, Van Houtts Spiraea; 12, Flowering Almond; 13, Persian Yellow Rose; 14, Deutzia; 15, Achillea "pearl"; 16, Pyrethrum uliginosum; 17, Gypsophila; 18, Yucca; 19, Honeysuckle; 20, Prairie Queen; 21, Baltimore Belle; 22, Peonies; 23, Lily; 24, Funkia Lily; 25, Weigella; 26, Hollyhocks.

This plan shows a border arranged for color effect.

At times, when I am tired, I feel discouraged when I see, after all my care and work, that my border is after all but a "jumble" of color. How am I to prevent next year a duplicate of this year's failures? The original conception of this annual border included a hedge of sweet peas at the back next the walk. These proved an early failure, because of cut worms. I pulled them up and planted pink and white cosmos. Later, digging with a stick around a dahlia where several sprouts had been cut off, the dullness of my implement prevented deep digging, and near the surface I discovered a worm, perhaps an inch and a half long, grayish in color, not unlike the dry surface dust. This was a cut worm, and the place to look for it is within two or three inches of the surface.

By the first week in July my border began blooming nicely, and from that time until frost, notwithstanding the clashing in places, I could not this first summer remove even one blooming plant whatever its color—it was a never-ending source of pleasure. Flowers past their prime were pinched off that no strength need go to maturing seed. When the asters began blooming, the border was indeed a wealth of color. The branching asters were all that could be desired, so large and fine as frequently to be mistaken for chrysanthemums.

(Continued on page 66)



# Shrubs with Year Round Beauty



Climbing Bittersweet  
(*Celastrus scandens*)

SOME OF THE DECIDUOUS SHRUBS THAT ARE BEAUTIFUL FOR THE VARIOUS COLORS OF THEIR FRUITS—PLANTS WHICH HELP TO MAKE BRIGHT THE FALL AND WINTER

BY FLORENCE BECKWITH

Photographs by Nathan R. Graves

Black Alder  
(*Ilex verticillatus*)



IN planting the home grounds, the majority of people pay very little attention to selecting shrubs and vines for winter effects. Apparently they are content with a few weeks of foliage and bloom, with no thought of the months of dreariness which follow, a dreariness which might easily be relieved by the planting of shrubs which produce bright-colored berries in the late fall and winter. Many shrubs are really more ornamental in fruit than when in flower, and a suitable selection will brighten a lawn or garden in a surprising manner. A single bush with scarlet berries will light up the whole landscape, gleaming brightly in the dreary, rainy days of November and showing gorgeously against the snows of December. One admirable characteristic which some shrubs and vines possess is that of being so brilliantly effective in winter. With a background of evergreens, or when planted in shrubbery with others which retain their foliage until late in the season, the brilliancy of the bright-berried shrubs is enhanced by the contrast, and when planted in masses they produce a truly gorgeous effect.

A shrub which is highly ornamental in the fall and early winter is the *Euonymus*, variously known as the strawberry tree, spindle tree, burning bush and wahoo. The brilliantly colored, peculiarly shaped fruit covers the shrub in the greatest profusion and makes it one of the finest for ornamental purposes. The color of the fruit varies in different species; in some it is deep red, in others rose or pink, crimson, scarlet, and cream, and there is a white variety. The capsules open in the fall like those of the bittersweet, displaying bright orange and scarlet arils hanging on slender threads. The fruit usually re-

mains on the branches until late fall or early winter. In some species the leaves turn a purplish red in autumn, lending additional beauty to the shrub. Some species attain almost the height of trees, but most of them are classed as shrubs. Altogether, the *Euonymus* is one of the handsomest ornamental shrubs we have.

The black alder, *Ilex verticillatus*, is a valuable but much neglected native shrub. In the summer it is so absolutely unob-

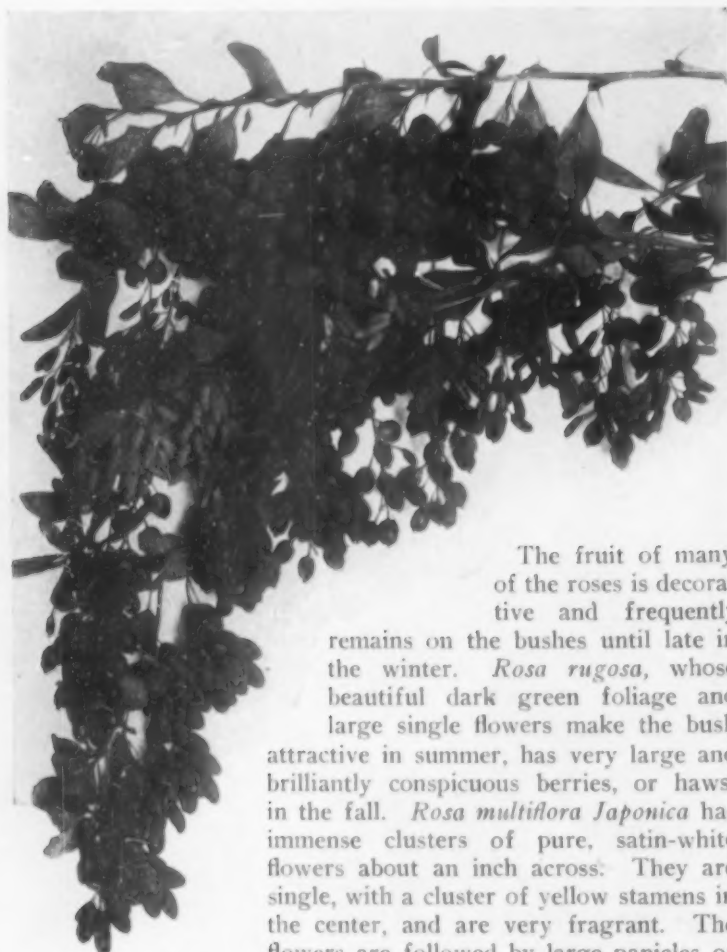
trusive that one scarcely notices it; but when the leaves drop, the scarlet berries which crowd the branches glow with dazzling color, producing a wonderfully showy effect. The berries remain on the branches until late winter. If the leaves were only evergreen, the ilex would far surpass the holly as a decorative shrub. As it is, it is well worthy of cultivation and most nurserymen catalogue it, some under the name of *Prinos*. Naturally it grows in rather wet soil, but it accommodates itself very well to less favorable situations. In decorations the black alder berries can be used with the leaves of the holly with fine effect.

The high-bush cranberry, *Viburnum Opulus*, is another native shrub seldom seen in cultivation, but in every way deserving of attention. It has fine broad foliage which takes on bright tints in autumn; the flat cymes of white blossoms render the bush at-

tractive in spring, and the clusters of brilliant scarlet fruit which begin to color in July and remain on the branches all winter make the shrub very ornamental. The fruit is edible and highly esteemed by many, so the shrub is both useful and ornamental. Although the cranberry grows naturally in moist ground, it succeeds well in any location.



The *Berberis Thunbergii* is considered by many to be one of the most perfect shrubs; not only on account of its easy growth, but because of its delightful foliage and wonderfully colored berries



The number of different kinds of barberry is exceedingly large

The fruit of many of the roses is decorative and frequently remains on the bushes until late in the winter. *Rosa rugosa*, whose beautiful dark green foliage and large single flowers make the bush attractive in summer, has very large and brilliantly conspicuous berries, or haws, in the fall. *Rosa multiflora Japonica* has immense clusters of pure, satin-white flowers about an inch across. They are single, with a cluster of yellow stamens in the center, and are very fragrant. The flowers are followed by large panicles of bright fruit, very showy and beautiful, especially when seen in contrast with the snows of winter.

That old favorite, the snowberry, *Symphoricarpos racemosus*, makes a pleasing addition to the landscape with its snow-white berries growing on the ends of the drooping branches and lasting well into the winter. The shrub has many good qualities, as it will grow in any soil, fill in corners and spaces where few plants will flourish, and is excellent for planting under trees and on dry gravelly banks. The leaves fall early and the berries make the prettiest show if the bush is planted in front of evergreens, or shrubs which retain their foliage late in the season.

The barberry, or berberis, makes one of the most beautiful specimen shrubs, and should be in even the smallest collection. The bushes vary in height from two to six feet, and the different species offer a great variety in leaf, flower and fruit. The showy orange or yellow flowers in May or June are succeeded by bright-colored fruit, which, though small, is produced in such profusion as to cover the branches and make it one of the

most ornamental shrubs in cultivation. *Berberis vulgaris*, the common barberry, is the species most generally cultivated. It bears a profusion of fruit which remains on the branches until the new leaves start in the spring.

*Berberis Thunbergii*, or Thunberg's barberry, a Japanese species, has been pronounced the "finest shrub." Its growth is very symmetrical and the bush seldom needs to be trimmed. The foliage changes to a beautiful coppery red in the fall, remaining a mass of crimson and gold for weeks, and the bright coral-red berries are persistent on the bush all winter. This species is dwarf in habit and especially adapted for low, ornamental hedges.

The purple-leaved barberry has rich purple foliage and scarlet fruit. It is a beautiful shrub and largely used for contrast with plants of light colored foliage. Some species bear dark purple fruit and are desirable for contrast and variety.

The great profusion of fruit often weighs the slender, drooping branches of the barberries to the ground, and tends to make them extremely ornamental. They are equally desirable for growing in masses, in front of taller shrubbery, as single specimens on the lawn, or as an ornamental hedge. The fruit is acid but agreeable, and makes delicious preserves and jelly.

The climbing bittersweet, *Celastrus scandens*, one of our native vines, grows very commonly over the old rail fences and stone walls along our roadsides, but it is never fully appreciated until seen in the winter festooned among the branches of an evergreen tree. Its glossy foliage makes it a presentable vine at all times, but when the clustered berries, golden yellow



The peculiar creased berries of *Euonymus Europaeus* shade from dark purple to a bright scarlet and last long after the leaves have fallen



The high-bush cranberry (*Viburnum opulus*) is another brilliant red-berried shrub that has the additional value of having edible fruit

in color, round and smooth at first, open and display the bright scarlet arils within, it truly becomes an object of beauty. The berries retain their form and bright color all through the winter, and swinging, swaying from the branches of the evergreen, the vine carries our hearts by storm and wins for itself a permanent place in our regard. It is not particular as to soil or location, flourishing anywhere and everywhere if given half a chance. It needs no training nor pruning; left alone it will show its own true grace.

I have named only a few of the shrubs which would tend to make the outlook from our windows brighter during the late fall and winter months. More might be mentioned and among them some whose brightly colored bark



would add to the attractiveness of our lawns and gardens, and cheat winter of half of its dreariness.

A word may be of service here about cultural direction. It is the general rule to plant evergreen varieties of shrubs and trees in the spring. Roses, being tender plants, are planted in the last of March or the first part of April, as a consistent practice. So, although fall planting of shrubs may be advocated, there are special cases when it is not only more advisable to plant in the spring, but it becomes necessary to do it at that time. If the ground has not been properly prepared, or has not had thorough cultivation, fall planting should never be resorted to. Most of us are suddenly seized with the enthusiasm for gardening, and so, to make up for the past dull years, feel that a prime necessity is haste, in order to accomplish as much as possible in as short a time as possible. If, for any of these reasons, we are just beginning to plant, and are anxious to employ the shrubs described in this article, it would be a great mistake to wait until fall, simply because the majority of authorities recommend that time. Anything may be planted in the spring with good results, and with considerably less danger of injury from the cold than at any other time.

This is especially true in the case of shrubs valuable for



Nothing is more beautiful than the white waxy berries of the snowberry that is so valuable for its easy cultivation

their winter berries. Were we to wait until the fall, our first winter would be just as bare of cheer as it always had been, and it would mean a loss of a year and a half in the enjoyment which one gets from the brilliant colors of the berries. We might as well go ahead, then, feeling confident that planting now is the thing for us to do.

Shrubs are very easy of cultivation, and indeed have but one chief requirement, that is, soil preparation. Pre-



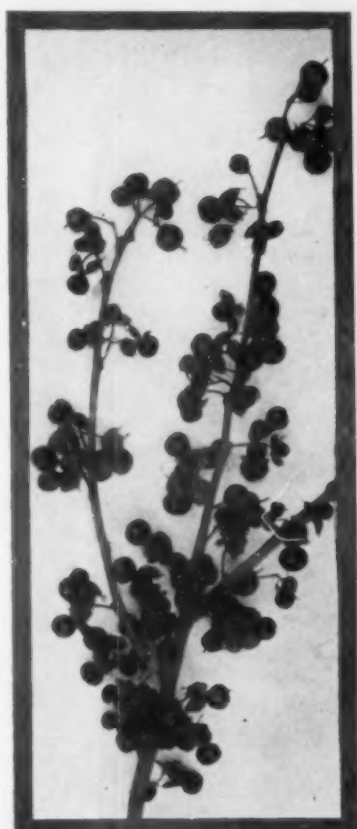
After the beautiful satiny flowers of *Rosa Multiflora* are over, large clusters of brilliant berries appear

sharp knife or pruning shears. Dig a hole at least 2 inches larger each way than the spread of the roots; then fully extend the roots, and, carefully spreading them out, lower the plant in the hole. Where the soil is very dry, it is often advisable to pour a generous supply of water in the hole, and then as the dirt is thrown in mix a little more with it. Compact the earth about the roots and well up on to the wood of the plant. Even shrubs of this kind should be well cut back at the time of planting. The beginner should overcome the reluctance most have at the ruthless clipping of apparently good branches.

As to arrangement, it is impossible in this space to make more than a cursory statement. As most of these shrubs will be used for mass planting, one is more easily apt to err in spacing them too far apart than too close together. The most beautiful effects are achieved from the close mingling of the branches. Even if you purchase more bushes than you will eventually need at the expiration of a year or so, you will save in appearance in the end by planting too many and then removing the superfluous ones that appear to be too crowded.



The common barberry should not be excluded from the list of plants desirable for their colored fruits. It is beautiful both summer and winter



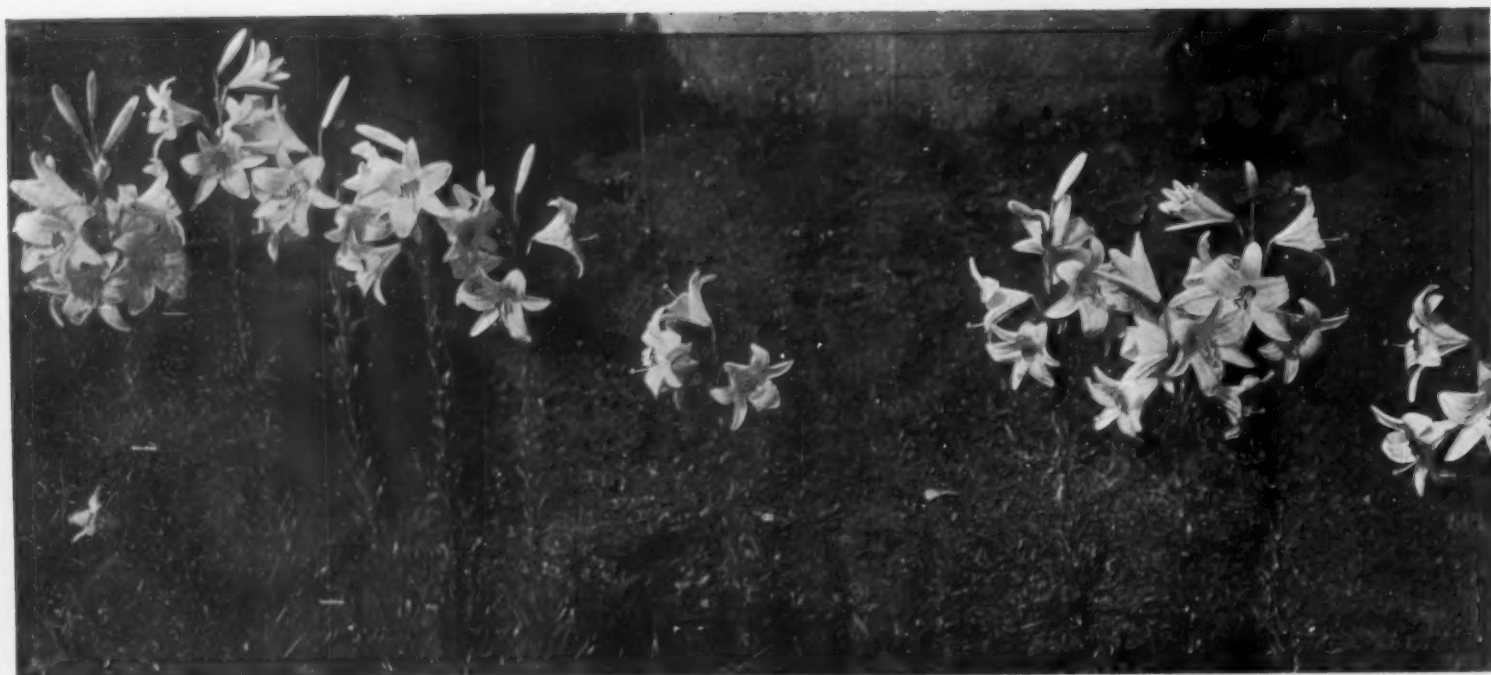
The common bittersweet of the roadside fences makes a most desirable addition to the garden

vious to the receipt of the plants from the nursery, the ground should be ploughed or thoroughly spaded. It should be gone over much in the same manner and with the same treatment that is given the corn field before seeding corn.

The matter of fertilizers is of importance, also, and the land should be made rich with plant food, taking care only that no raw manure comes in contact with the rootlets.

If you use nursery stock, as you probably will, attempt to get transplanted bushes, or, failing in this, see that the dormant stock you receive has been carefully cellared over. The roots should not be all dried out and shriveled up.

If, for any reason, the shrubs may not be put in the ground immediately, remove their canvas coverings and "heel-in" in a trench, spreading good earth over the roots, and leaving them packed up in this way until you are ready to put them in the ground. When you are ready, go over the roots carefully for any bruised filaments, and cut these off clean with a



The sandy soil could not discourage the slender stalks of the Madonna lilies from growing up as sturdy as though their roots were in loam.

## My Garden in the Sand

HOW A SMALL SAND DESERT GREW A SEASON'S SUPPLY OF VEGETABLES AND FLOWERS—WHAT CULTIVATION DID TO SAVE MOISTURE

BY GLADYS HYATT SINCLAIR

Photographs by the Author and others

WE moved in October to a rented house in a small suburb half an hour from the city. The little house stands close to the street, as do all the other houses, with grass in front and at the sides, and a wilderness of weeds behind. I had always been a flower enthusiast, so this pest-infested place received my immediate attention.

The neighbors on either side, owning their places, had let them run to sod. The man behind us had gardened for several years and then, in despair, turned his whole yard into a chicken park. "You can't raise anything on this ground," said everybody. "It is nothing but a gravel pit."

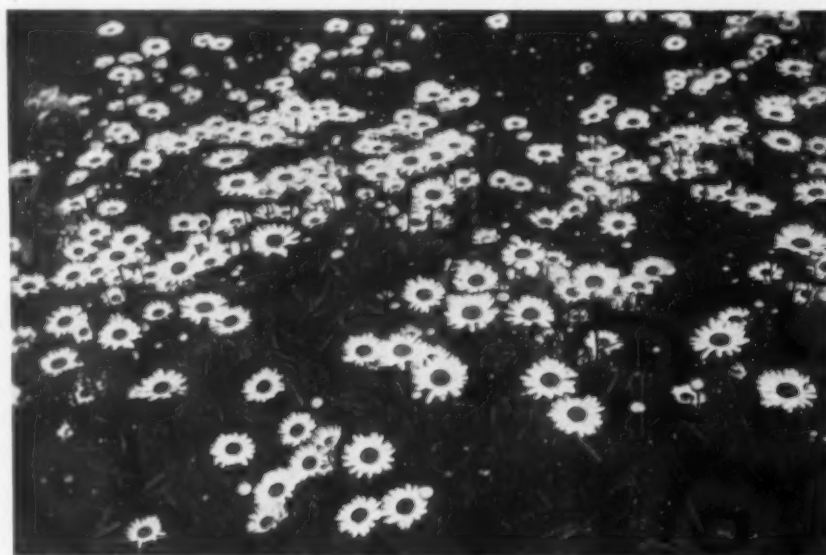
Really, it isn't much else, and when you get the stones out of gravel there is very little left. But I had a wagonload of plants, bushes and vines from my old garden, some knowledge, limitless strength and enthusiasm; so I listened—and went on.

The weedy wilderness measured fifty feet each way. A dead peach tree cumbered it, an old strawberry bed straggled

down the middle of it and two grape vines sprawled on the ground around two drunken posts. The vines had never borne.

By a lucky fluke I got a two-horse load of rotted manure from a farmer for two dollars. I cut down the peach tree, pulled and burned the weeds. Then I put all of the manure on the half of the garden to be devoted to flowers, giving the grape vines that stand there a generous share. For fifty cents I hired a boy to spade enough ground for my roses and perennials and I set them out. They all lived.

In April I pruned the grape vines the best I could, persuaded the landlady to buy a hemlock two-by-four, persuaded the Man to nail it at the tops of the reformed posts, and tied up the vines. Then I spent another fifty cents for spading, did some myself when help was not to be had, and raked stones. Stones! The stones I raked would build me a mausoleum! I could rake a border perfectly clean, go right over it again and rake out as many more. That may seem paradoxical, but the process wasn't. When I had put



The border of moonpenny daisies showed a pleasing mass effect, and hundreds of blossoms were picked from it



all the time in that I could afford I sowed my flower seeds; the last of May I planted dahlias and gladioli.

I had never made a vegetable garden, and was doubtful, all winter, as to whether I should. But the knowledge that fresh vegetables are not always to be had here as in the city market and a nervous dread of the weeds and desolation that would reign in the unworked part sent me at it. Not counting the strawberry bed, it measures twenty feet by fifty. Fifty cents ploughed and dragged it—deviled it, the Man said—and it really seemed as though the plough had left quack grass unturned while meanly hunting stones to throw up. More raking; a larger mausoleum!

The sand that was left, between stones, was so very light that I bought fifty pounds of pulverized sheep manure to use on it. I was so ignorant of vegetable growing that I had to consult neighbors or magazines to learn when to plant, how much, how far apart, etc. I sowed radishes, two short rows of lettuce and a pint of Telephone peas. I planted ten hills of Evergreen corn and, ten days later, ten more hills, with pie pumpkin seed in every other one. I planted four hills of White Spine cucumber, nine hills of Osage musk melons, twelve Dwarf Stone tomato plants, a dozen early cabbage plants and a short row of carrots. I used two large trowelfuls of the sheep manure for every hill and scattered it generously in the seed trenches, mixing it well with the earth.

We had a very wet spring, which was bad, because everything rooted close to the surface, though all grew vigorously and looked fine. "You must have bewitched the ground—it never grew things like this before—but just you wait till July," said everybody.

I waited, and I hoed. There were weeds enough, after their previous years of reveling there, to keep me going; but when they were slaughtered I kept at it. From mid-May to mid-July I was the Woman with the Hoe. I knew that with the summer drouth would come the garden's question, to be or not to be; for I had no water except in the well on the place; and pump water I would not, for flowers or vegetables either.

The radishes and lettuce came on and were crisp and delicious, the radishes of wonderful size and the only unwormy ones grown on sand around here, which I cannot account for. The hot weather hit the peas just as they were filling, and they struck then and there. We had three meals from them and pulled them up to make room for perennial seedlings—but peas were then eighty cents a peck, so we enjoyed them.

The cut worms took five of my twelve tomato plants, and I saved the rest by putting bottomless tin cans around them. The manure and hoeing must have suited their notions, for they thrived amazingly, and we had ripe tomatoes in plenty on

the table from the last of July on until early in the autumn.

The grapes were a great surprise. The way the stubby things began to eat and grow in the spring was astonishing, and they set full of bunches and brought them to luscious green and purple maturity with a fervor of gratitude for my well-meant but ignorant attentions that touched my heart—and my palate.

In June began a drouth of weeks' duration. The corn rolled and the vines drooped pitifully, but I hoed straight through and talked to them encouragingly, and the corn and melons and tomatoes grew in spite of the worst heat in twenty years and no water. Then came a big rain, two weeks of fine growth and another drouth, not so long as the first. The two weeks gave the cucumbers a splendid start, and they gave us a hundred fine long fellows for slicing before frost. In all I gathered a bushel of tomatoes, sixty ears of green corn, a half bushel of carrots, besides leaves for bouquets all summer, forty prime musk melons and ten fair cabbages—only fair, because I did not get ashes and salt on them soon enough.

My vines were not troubled with insects. I frustrated a few

tomato worms, but the green brutes that the ants make love to injured the corn in spite of tobacco tea, as they did the cosmos, sunflowers and aster roots.

Did it pay? Well, that's as you look at it. The flowers paid, of course; one grows them for satisfaction and gets it—and I got flowers for the whole neighborhood—from the beds of Madonna lilies and the wealth of moon-penny daisies alone. Besides, it is certainly solid satisfaction to bring in from one's own garden the beauty and good taste that I brought one August morning and snapped for future encouragement. Probably the time spent on the vegeta-



By the early part of August the vegetable garden was in full swing. The first planting of corn was bearing, and the second showed a good growth

bles would have earned the money to buy them if they had been buyable, fresh and good when I wanted them, which they were not. If one were doing housekeeping only it certainly would have paid, for we were using tomatoes freely when they were fifteen cents a quart at the stores, we often gave cucumbers to the neighbors while they were two for five cents, and our large melons would have cost ten cents each. One of them weighed two and a half pounds.

The work was mostly done in the early morning and after supper when it was cool and pleasant—though, through May and June the garden called and I answered when it was neither the one nor the other.

Values are relative, and whether or not gardening pays depends upon how well one likes or how much one hates gardening. In one respect it paid. I proved that one woman and one hoe, with Fertilizer for grand vizier, can grow a good garden in gravel and snap her fingers at drouth and heat.

# A Commuter's Vegetable Garden

A GARDEN TWENTY BY THIRTY FEET THAT SUPPLIED FRESH VEGETABLES UNTIL OCTOBER WITH AN AVERAGE OF BUT TWELVE MINUTES OF WORK SPENT EACH DAY

BY W. O. QUARTLEY

MANY commuters have perhaps come to the conclusion that it does not pay to raise vegetables and attend to business at the same time, but my own experience shows that both may be done successfully, and that without giving up any part of Sunday or the Saturday half-holiday. An average of a little over an hour a week, for the working season, was sufficient to raise nearly ten dollars' worth of vegetables. All the work was done before breakfast, or after seven o'clock in the evening.

It certainly is not profitable to rise before daylight and use up one's best energy in the garden, before starting the regular business of the day. But a half-hour at a time will be less tiring, and at the same time will produce satisfactory results, as the following experience shows.

The plot measured twenty by thirty feet and the cost of seeds and plants did not exceed one dollar. The vegetables planted were: lettuce, peas, potatoes, radishes, beets, onions, string beans, bush limas, carrots, chard, salsify and celery. These were sowed in twenty-foot rows running north and south, and the plot accommodated about twelve rows at a time, spaced according to the room required for each variety. Counting the late crops, which replaced the early sowings, there were



A large plot of ground is not necessary in order to raise vegetables for home use

was done by continual picking; the pods, in this way, were prevented from maturing and the bearing season lasted over fourteen weeks, instead of two or three. The plants took a partial rest in August, giving only a small yield during that time.

I effected a saving of work by planting in the following manner: A double row of peas was sowed on each side of one of the potato rows, so that when the potatoes were dug for early use, in July, the soil turned up could be thrown into a ridge along the roots of the peas, at the season when they most needed a mulch. At the same time a trench was started in which to set

(Continued on page 52)



The Long Orange carrots proved successful, and were of excellent quality and flavor

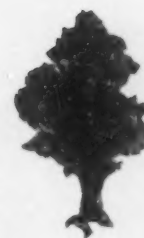
| Variety                       | Number of 20 ft. rows | Sowings      | 1st Pickings  | Length of yield                      |
|-------------------------------|-----------------------|--------------|---------------|--------------------------------------|
| Onions—White Sets             | 2                     | May 2nd w.k. | July 1st w.k. | 1 month—stored rest                  |
| Salsify—                      | 1                     | May 1st      | Dec. 1st      | till spring                          |
| Radishes—Bright breakfast     | 1                     | May 1st      | May last      | 2 weeks                              |
| Potatoes—Bovce                | 2                     | Apr. 2nd     | July 1st      | till fall                            |
| Peas—(double)                 | 2                     | May 1st      | July 1st      | 1 month                              |
| Lettuce—Big Boston            | 1                     | Apr. last    | June 3rd      | 2 weeks                              |
| Lettuce—Half Century          | 1                     | May 2nd      | July 1st      | 2 weeks                              |
| Celery—Golden, Self Bl.       | 2                     | July 3rd     | Late fall     | late fall                            |
| Carrots—Long Orange           | 1                     | June 2nd     | Aug. 3rd      | in sand for winter stored for winter |
| Beet—Columbia                 | 1                     | May 2nd      | July 3rd      | till frost                           |
| Bush Lima—Burpee's            | 1                     | May 2nd      | Aug. 2nd      | till frost                           |
| Bush Wax Bean—Golden Scimitar | 1                     | May 1st      | July 1st      | till frost                           |
| "                             | 1                     | July 2nd     | Aug. 2nd      | till frost                           |
| "                             | 1                     | July 4th     | Sept. 1st     | till frost                           |
| "                             | 1                     | Aug. 1st     | Oct. 1st      | till frost                           |



The wax beans were sowed the third week in July and picked seven weeks later



# The Naturalizing of a City Man



*Editor's Note:—The author of this narrative—begun in the December number—had refused to write the story of his experiences in going from business life to a farm. His objection was that the published account taken from his closely written diary would contain nothing of the joy and inspiration he felt in getting close to Nature, and would be merely a matter-of-fact list of happenings with their message lost. He finally consented to write it in his own way, allowing memory and imagination to lend color to those days of struggle which are now cherished recollections. He preferred to hide his identity under the disguise of another person, but the essential facts are true and full of practical information. This is the fifth installment and deals with the first rewards of the man's labors. Subsequent issues will show how the farm developed to a paying basis.*

**I**N spite of the multitude of things that occupied his attention during these busy opening weeks of spring, Mantell could not stop thinking about the amount of waste land which the plan of the farm had revealed. It bothered him incessantly, and took him off on many a solitary tramp around the place.

Finally he took Raffles away with him one afternoon to the brush-grown lot down the road. The manager of the Garden Department protested strongly that there was plenty of work to be done at home, but Mantell was in one of his streaks of bossing, and argument was useless.

They measured off in the lower part of the waste land an exact quarter acre and spent the rest of the afternoon chopping down the biggest of the scrub oaks and birches growing thereon. Some of these were large enough to trim up for stove wood, but the biggest part was just waste. Mantell soon discovered that they did not have the proper sort of tools to work with, and 'phoned in to the hardware store that night from the Squire's for a bush-hook and a brush scythe. The next day, much to Raffles' dismay, was also spent on the "crazy scheme," but it showed a good deal of progress, for the two men worked with unabated energy—Raffles because he wanted to be done with it and get back to his garden; Mantell because his imagination was fired and his blood stirred with that feeling of getting "something started," which always was like wine to him.

The good-humored Squire came down to sit on a rock and mop his broad, tanned brow and laughed at this latest wild undertaking. With coats, vests and outer shirts off, the two men toiled, dripping wet, in the hot sunshine.

"You boys certainly do love work," chaffed the Squire, feeling in his rear trousers' pocket for a dry handkerchief. "Why, I have some stout gentlemen, weighin' about 200 pounds apiece, up to the house that would just love to do that work for you, just—just for their board an' lodgin'; no washin'—ho! ho!—they wouldn't take no washin'!" boomed the Squire.

"What do you mean?" asked Mantell, pausing to wipe the sweat and dirt from his eyes.

"Mean?—why I mean my heavyweight porkers," said the Squire; "they'd root that place up till there wasn't a stump left."

At first Mantell thought he was joking, but the Squire soon convinced him that he spoke in earnest, and the upshot of the argument was that he agreed to take six of the Squire's pigs to board and feed every day, the Squire to furnish a tight fence and

the grain required. These pigs were to be turned loose on a second quarter acre of the brush lot. Mantell was still stubborn about getting the first section cleared for this season.

The following day Raffles absolutely insisted on turning all hands into the onion-bed, which was now ready for the first hand weeding—and a tedious task it was. Robert begged so hard to stay home for this great event that he was allowed to do so.

By noon Mr. Mantell and Robert were both so lame they could hardly walk back to the house, but fully a quarter of the field was done. They went at it again after dinner, and were holding out bravely, but Raffles persuaded them to knock off and work on the "reclamation project," as the brush lot had come to be called, to get some of the stiffness out of their joints.

The following day they went at the onions again, and stuck to it all day long, with the result that that night saw the job finished—and their few friends who planted onions barely had them above ground yet.

Every hour that could be spared from the garden and greenhouse work was put into the work on the new field—not a very large one, but it was causing more talk than any other field in the neighborhood. The enterprises of the Mantell Company certainly added to the gaiety of the natives, if not to that of nations.

The days slid by rapidly enough, and the Squire's potatoes were in almost a week before Mantell—owing to the delays he had been put to in getting his field for corn and potatoes

plowed and ready—could even begin planting.

Mantell had done another thing to set the tongues awagging at the village store—right in the middle of the busiest season he had not only taken a day off himself, to travel the long journey that lay between Priestley Junction and the State Experiment Station, but he had taken his "hired man" with him. They invited the Squire, but he was too busy to take a whole day "away on a lark" just then, he said. That trip cost the company just \$7.39 from a sorely depleted treasury, but Mantell always felt afterward that it was one of the best investments he ever made. They not only gathered up many points of information that were of immediate use to them, but received a stimulation and a re-establishment of his faith in agriculture which gave a new impulse to the whole undertaking, and their work was already keyed up far beyond the average.

One of the results of his visit was that their potatoes were put

(Continued on page 59)



The waste land in the brush lot worried Mantell until he and Raffles had cleared it

# HOUSE & GARDEN'S GARDENING GUIDE - 1912

| VEGETABLE                               | VARIETIES                                                                                   | DISTANCE<br>APART<br>IN ROWS | ROWS<br>APART | SEEDS OR<br>PLANTS FOR<br>50 FT. ROW | DEPTH<br>(IN.) | NO. DAYS<br>TO<br>MATURE | REMARKS                                                                                                                                                                     |
|-----------------------------------------|---------------------------------------------------------------------------------------------|------------------------------|---------------|--------------------------------------|----------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FIRST PLANTING—APRIL 1ST TO APRIL 15TH. |                                                                                             |                              |               |                                      |                |                          |                                                                                                                                                                             |
| ASPARAGUS P                             | Palmetto; Giant Argenteuil                                                                  | 1 ft.                        | 3 ft.         | 50                                   | 4              | 1 yr.                    | Trench deeply, and put in well rotted manure, covered with three or four inches of soil, before planting. P.                                                                |
| BET                                     | Crosby's Egyptian; Eclipse; Early Model                                                     | 3-5 in.                      | 12-15 in.     | 1 oz.                                | 1              | 60-75                    | Sow extra thick, as they will not germinate as well as in warm weather.                                                                                                     |
| BROCCOLI P                              | Early White French                                                                          | 1 1/2 ft.                    | 2 ft.         | 35                                   |                | 50-90                    | Set out when there is prospect of two or three days fairly mild weather, so that the young plants may get established; after that they will stand quite severe freezing. P. |
| CABBAGE P                               | Early Wakefield; Glory of Enkhuizen; Copenhagen Market                                      | 1 1/2 ft.                    | 2 ft.         | 35                                   |                | 60-90                    | See broccoli. P.                                                                                                                                                            |
| CARROT                                  | Chantenay; Danvers Half-long                                                                | 3-4 in.                      | 12 in.        | 1/2 oz.                              | 1/2            | 60-80                    | Sow in as light dry soil as possible, being sure not to cover deep.                                                                                                         |
| CELERY                                  | Winter Queen; Boston Market                                                                 | 2-3 in.                      | 12 in.        | 1/2 oz.                              | 1/2            | 125-150                  | In seedbed for transplanting later. Thin out before plants get tall.                                                                                                        |
| ENDIVE                                  | Giant Fringed                                                                               | 12 in.                       | 12 in.        | 1/2 oz.                              | 1/2            | 75-100                   | In seedbed. Better as a fall vegetable, but may be grown in early spring. Requires blanching.                                                                               |
| KOHLRABI                                | White Vienna                                                                                | 6-8 in.                      | 18 in.        | 1/2 oz.                              | 1/2            | 65-85                    | Thin out as soon as possible and use while young and tender, not over two inches in diameter. P.                                                                            |
| LETTUCE P                               | Mignonette; Grand Rapids; Wayhead                                                           | 12 in.                       | 12-18 in.     | 50                                   | 1/2            | 40-75                    | See broccoli. P.                                                                                                                                                            |
| LEK                                     | American Flag                                                                               | 3-4 in.                      | 15 in.        | 1/2 oz.                              | 1/2            | 120-150                  | Sow in seedbed and transplant for best results.                                                                                                                             |
| ONION                                   | White Queen (earliest); Prizefighter; Danvers; Southport Red Globe; Southampton White Globe | 2-3 in.                      | 12-15 in.     | 1/2 oz.                              | 1/2            | 120-175                  | Sow as early as possible. Do not thin out until well along.                                                                                                                 |
| PARSLEY                                 | Emerald                                                                                     | 4-6 in.                      | 1 ft.         | 1/2 oz.                              | 1/2            | 90-110                   | Soak the seed in lukewarm water several hours before planting.                                                                                                              |
| PEAS (Smooth)                           | Best Extra Early; Alaska; Clipper                                                           | 2-4 in.                      | 3 ft.         | 1 pt.                                | 1-2            | 30-65                    | Use only a few of the earliest sorts. The early "wrinkled" peas, which are only a few days later, are much better in quality.                                               |
| RADISH                                  | Rapid Red; Crimson Globe                                                                    | 2-3 in.                      | 1 ft.         | 1/2 oz.                              | 1/2            | 25-50                    | Sow little, sow often. They do well as a "catch crop" between rows of beets, lettuce, etc.                                                                                  |
| SPINACH                                 | Victoria; New Zealand                                                                       | 8-12 in.                     | 18 in.        | 1/2 oz.                              | 1              | 60-75                    | "New Zealand" should be given more room than other sorts, and like Swiss chard, yields crop after crop from the same roots.                                                 |
| TURNIP                                  | Early White Milan; Petrowski                                                                | 4-6 in.                      | 15 in.        | 1/2 oz.                              | 1/2            | 60-75                    | Sow very thinly as germination is usually strong, and plants grow rapidly.                                                                                                  |
| SECOND PLANTING—APRIL 15TH TO MAY 1ST.  |                                                                                             |                              |               |                                      |                |                          |                                                                                                                                                                             |
| BET P                                   | Crosby's Egyptian; Early Model; Eclipse                                                     | 4-6 in.                      | 12-15 in.     | 100-150                              |                | 40-60                    | Be careful not to let the roots get dry while setting out, and set them in firmly. P.                                                                                       |
| CABBAGE P                               | Albhead; Early Summer; Succession                                                           | 1 1/2 ft.                    | 2 ft.         | 35                                   |                | 70-100                   | Will require a little more room than the earliest sorts. P.                                                                                                                 |
| CARROT                                  | Snowball; Best Early                                                                        | 1 1/2 ft.                    | 2 ft.         | 35                                   |                | 50-80                    | Not as hardy as cabbage. Wait until after hard frosts. P.                                                                                                                   |
| CAULIFLOWER P                           | Mignonette; Grand Rapids; Wayhead                                                           | 12 in.                       | 12-15 in.     | 50                                   | 1/2-3/4        | 60-100                   | Sow either in seedbed, or in rows to be thinned out.                                                                                                                        |
| LETTUCE P                               | Big Boston; New York                                                                        | 12 in.                       | 12-15 in.     | 50                                   |                | 40-85                    | Give more room than for early varieties. P.                                                                                                                                 |
| ONION (Seedlings) P                     | Ailsa Craig; Prizefighter; Gigantic Gibraltar                                               | 4 in.                        | 12-15 in.     | 150                                  | 1/2-1          | 90-150                   | Cut tops back a third to a half and roots two-thirds when setting out. P.                                                                                                   |
| PARSNIP                                 | Improved Hollow Crown                                                                       | 3-5 in.                      | 12-15 in.     | 1/2 oz.                              | 1/2            | 100-150                  | Sow quite thinly. If the soil is shallow transplant deeply before planting.                                                                                                 |
| PEAS (Wrinkled)                         | Grass; Early Morn; Thomas Laxton                                                            | 3-4 in.                      | 15-18 in.     | 1 pt.                                | 2-3            | 60-75                    | If soil is wet and cold, an early start may be had by covering with sand or sandy soil.                                                                                     |
| POTATOES (Early)                        | Borae; Irish Cobbler; Noroton Beauty                                                        | 13 in.                       | 28 in.        | 1 pt.                                | 3-4            | 60-90                    | Sprout four weeks in full sunlight before planting, and cut to good sized pieces with two eyes.                                                                             |
| RADISH                                  | Rapid Red; Crimson Globe                                                                    | 2-3 in.                      | 1 ft.         | 1/2 oz.                              | 1/2            | 25-50                    | A good dressing of land plaster worked into the soil will add to quality and color.                                                                                         |
| SALSIFY                                 | Mammoth Sandwich Island                                                                     | 8-12 in.                     | 15-18 in.     | 3/4 oz.                              | 1-2            | 125-150                  | Plant as for parsnip.                                                                                                                                                       |
| SWISS CHARD                             | Lucullus                                                                                    | 8-12 in.                     | 15-18 in.     | 3/4 oz.                              | 1-2            | 50-60                    | Sow more thinly than beets. Do not cut too close when gathering.                                                                                                            |
| THIRD PLANTING—MAY 1ST TO MAY 15TH.     |                                                                                             |                              |               |                                      |                |                          |                                                                                                                                                                             |
| BEANS (Earliest)                        | Stringless Green Pod; Bountiful; Early Red Valentine                                        | 3-4 in.                      | 18 in.        | 1 pt.                                | 1-2            | 45-75                    | Plant in lightest, driest soil available.                                                                                                                                   |
| BEANS (Wax)                             | Rustproof Golden Wax; Wardwell's Kidney Wax; White Wax                                      | 3-5 in.                      | 18-24 in.     | 1 pt.                                | 1-2            | 50-85                    | Plant about ten days later than above.                                                                                                                                      |
| BET                                     | Eclipse; Crimson Globe; Columbia                                                            | 4-6 in.                      | 12-15 in.     | 1 oz.                                | 1-2            | 75-90                    | See that seeds are well firmed into soil, especially if latter is at all dry.                                                                                               |
| CARROT                                  | Danvers; Half-long; Coreless                                                                | 2-4 in.                      | 12-15 in.     | 1/2 oz.                              | 1/2            | 60-90                    | Sow rather thinly to avoid too much thinning out.                                                                                                                           |
| CAULIFLOWER P                           | Dry Weather                                                                                 | 2 ft.                        | 2-3 ft.       | 25                                   | 1/2            | 100-140                  | Plant if possible where water can be given when heads are forming. P.                                                                                                       |
| CORN                                    | Golden Bantam; Peep o' Day; Extra Early Crosby                                              | 3 ft.                        | 3-4 ft.       | 1/2 pt.                              | 2              | 60-80                    | If possible in sheltered position where late frosty winds may be kept off.                                                                                                  |
| CUCUMBER                                | Davis Perfect; Vickery's Forcing; Fordhook Famous                                           | 4 ft.                        | 4 ft.         | 1/2 oz.                              | 1/2            | 60-75                    | Rise a hill slightly for extra drainage and if soil is too damp mix with sand. Thin out to three or four plants.                                                            |
| LETTUCE                                 | New York; Deacon; Salamander; Iceberg                                                       | 8-12 in.                     | 12-15 in.     | 1/2 oz.                              | 1/2            | 70-90                    | If sown in permanent rows, give at least fifteen inches. Thin to about eight and remove alternate heads as they begin to mature.                                            |
| PEAS                                    | Boston Unrivalled; Strategem                                                                | 3-4 ft.                      | 4 ft.         | 1 pt.                                | 3/4            | 70-80                    | Sow in "double rows" (about 8 inches apart) and put in brush before they begin to run.                                                                                      |
| POTATOES (Main crop)                    | Green Mountain; Vermont Gold Coin; Uncle Sam                                                | 12-15 in.                    | 2 1/2-3 ft.   | 1/2 pt.                              | 4-5            | 75-100                   | Bottom of furrow should be fine and loose. Do not let manure or fertilizer come in contact with seed pieces.                                                                |
| PUMPKIN                                 | Quaker Pie; Large Cheese                                                                    | 6-8 ft.                      | 6-8 ft.       | 1/2 oz.                              | 1              | 100-130                  | If space is limited plant where they can run out over the grass.                                                                                                            |
| RADISH                                  | Iceberg; Charters                                                                           | 2-3 in.                      | 1 ft.         | 1/2 oz.                              | 1/2            | 25-50                    | See above.                                                                                                                                                                  |
| SQUASH (Ear. sum.)                      | Scalloped Bush; Fordhook Bush; Delicata                                                     | 3-6 ft.                      | 4-6 ft.       | 1/2 oz.                              | 1/2-1          | 60-75                    | Enrich hills with old manure. Thin out to two or three plants.                                                                                                              |
| TOMATO P                                | Chalka Early Jewell; Bonny Best; Early Earliana                                             | 8-4 ft.                      | 4-5 ft.       | 15-20                                |                | 40-60                    | Set in warm, sheltered position. Stake up as soon as possible. Keep suckers cut off.                                                                                        |
| FOURTH PLANTING—MAY 15TH TO JUNE 1ST.   |                                                                                             |                              |               |                                      |                |                          |                                                                                                                                                                             |
| BEANS (Wax)                             | Rustproof Golden Wax; Wardwell's Kidney Wax; White Wax                                      | 3-4 in.                      | 18-24 in.     | 1 pt.                                | 1-2            | 55-80                    | Make several succession plantings: a very short row of beans will yield enough for a family.                                                                                |
| BEANS (Pole)                            | Burpee's Stringless Greenpod; Sunshin e Wax; Worcester Improved                             | 4 ft.                        | 4 ft.         | 1/2 pt.                              | 1-2            | 65-100                   | Put in supports when planting and thin out to three or four to a hill.                                                                                                      |
| BEANS (Lima)                            | Burpee's Improved; Henderson's Bush; Dyer's Bush                                            | 4-6 in.                      | 18-24 in.     | 1 pt.                                | 1-2            | 60-90                    | Plant eye down, when there is prospect of several days of fair weather.                                                                                                     |
| BEANS (Pole, Lima)                      | Early Leviathan; Giant Peddler                                                              | 4-6 in.                      | 4-5 ft.       | 1/2 pt.                              | 1-2            | 70-90                    | Thin to two or three plants. Give assistance in getting them to take hold of supports.                                                                                      |
| BET                                     | Detroit Dark Red; Crimson Globe                                                             | 4 ft.                        | 12-15 in.     | 1 oz.                                | 2-3            | 75-90                    | Plant deeper than early sowing. Firm well.                                                                                                                                  |
| BROCCOLI                                | Early White French                                                                          | 3-3 ft.                      | 2-3 ft.       | 35                                   | 1/2            | 100-140                  | In seedbed for early fall crop. Cut back leaves when transplanting or plant in hills and thin to one plant.                                                                 |
| BRUSSELS SPTS.                          | Dalkeith Daniah Prize                                                                       | 1 1/2 ft.                    | 2 ft.         | 35                                   | 1/2            | 100-140                  | Same as above.                                                                                                                                                              |
| CABBAGE (Late)                          | Perfection Drumhead Savoy; Danish Roundhead; Danish Round Red                               | 1 1/2-2 ft.                  | 2-3 ft.       | 35-25                                | 1/2            | 120-180                  | Same as above.                                                                                                                                                              |
| CARROT                                  | Danvers; Coreless; Oxheart                                                                  | 2-4 in.                      | 12-15 in.     | 1/2 oz.                              | 1/2            | 60-90                    | Have seedbed very fine. Firm well.                                                                                                                                          |
| CAULIFLOWER                             | Dry Weather; Large Late Algiers                                                             | 2 ft.                        | 2-3 ft.       | 25                                   | 1/2            | 100-140                  | See broccoli above.                                                                                                                                                         |
| CORN                                    | White Evergreen; Country Gentleman; Seymour's Sweet Orange; Black Mexican                   | 4 ft.                        | 4 ft.         | 1/2 pt.                              | 4              | 80-100                   | Plant quite deep. Thin to three or four stalks to hill. Cultivate very often. Give water in dry weather.                                                                    |
| EGG PLANT P                             | Black Beauty                                                                                | 3 ft.                        | 2 1/2 ft.     | 25                                   | 25             | 40-60                    | If hot dry weather, shade seedbed.                                                                                                                                          |
| LETTUCE                                 | New York; Deacon; Salamander; Iceberg                                                       | 8-12 in.                     | 12-15 in.     | 1/2 oz.                              | 1/2            | 70-90                    | Make hill rich with old manure, and mix in wood ashes, and sand if soil is heavy.                                                                                           |
| MELON (Musky)                           | Emerald Gem; Nettle Gem; Henderson Bush; Monarch                                            | 4-6 ft.                      | 4-6 ft.       | 1/2 oz.                              | 1/2-1          | 90-130                   | As for musk melon. Protect both from beetles when small.                                                                                                                    |
| MELON (Water)                           | Cole's Early; Halbert Honey; Ice Cream                                                      | 6-8 ft.                      | 6-8 ft.       | 1/2 oz.                              | 1/2-1          | 100-125                  | Thin to two or three in a hill. Protect from bugs or the crop is lost.                                                                                                      |
| PEAS                                    | Gradus; Early                                                                               | 3-4 ft.                      | 4 ft.         | 1 pt.                                | 3-4            | 70-80                    | Same as egg plant.                                                                                                                                                          |
| PEPPER P                                | Early Neapolitan; Ruby King; Chinese Giant                                                  | 2 ft.                        | 2 1/2 ft.     | 25                                   | 1              | 40-60                    | Thin to two or three in a hill. Protect from bugs or the crop is lost.                                                                                                      |
| SQUASH (Winter)                         | Hubbard; Delicata; Delicious; Blue Hubbard                                                  | 6-8 ft.                      | 6-8 ft.       | 1/2 oz.                              | 1              | 60-75                    | Keep well trained up and all suckers off.                                                                                                                                   |
| TOMATO                                  | Dwarf Giant; Stone; Matchless                                                               | 3-4 ft.                      | 4-5 ft.       | 15-20                                |                | 40-60                    |                                                                                                                                                                             |

P = Plants started early under glass or in seed-bed.





# System in the Vegetable and Flower Garden



**I**T is only natural that with the recurrent springtide we should make resolutions to have a more productive vegetable garden, a more beautiful flower garden, than ever before. The resolutions come easily enough—as easily as the flowers that bloom in the spring—and have just about as much to do with the case. It is not so much knowing more about what to do, as getting more done, that will make this year's gardening an improvement over last year's.

In other words, it is only by getting the garden work so systematized that a little time will show a big result, that we can go ahead of previous years' records. Many persons have but a few hours during the week—possibly only Saturday afternoons—that can be devoted to work of this sort. It is just such time-pressed gardeners that the information contained in this article is arranged to assist.

Then, let us analyze the problem—taking it for granted that you are a busy person with no time to waste over technicalities.

In the first place, plants must be given the proper conditions under which to grow. If plants are to grow their best or bloom their prettiest, they must have plenty of plant food. Further, they must have it supplied in such a way that they can take it up and use it. In order that they may use it, it must be in what the soil doctors call “available” forms, and there must also be a certain amount of moisture along with it, because plants take all their nourishment in the form of soups, and very weak soups at that. It takes, on an average, 400 pounds of water to furnish the plant food for the building of one pound of dry plant matter.

Not to go farther into plant physiology, experience demonstrates that a finely pulverized, deeply worked soil produces the best growth, and is the most retentive of moisture.

The garden, or the flower beds, should be spaded up and overturned to the bottom—that is, down to the subsoil, readily distinguished by its color and texture which are different from those of the long worked loam at the surface. This will usually be, in old soil, two spade depths deep. If not, a little subsoil should be turned up each year, thus gradually deepening the loam. In vegetable gardens of any size, it will be both cheaper and better to have the ground plowed rather than spaded.

The flower borders, which are—or should be—pretty well filled up with hardy perennials, of course cannot be worked so deeply, on account of the masses of roots. This does not mean

that the usual surface scratching—much less thorough than an active family hen would furnish—is all that can be done for them. Firmly

established plants will not be at all injured by quite severe pruning of the surface roots, and the deeper and finer the soil can be worked, the better will the border stand the long continued siege of a dry summer.

A few dollars invested in a load or two of finely broken up, thoroughly rotted manure will give you more vegetable and flower garden success than can be obtained from all the wonderful novelties and new varieties catalogued if you attempt to get along without suitably prepared soil. When I began gardening I thought the variety was everything. Well, it is not. It is only one of the fine points of the game. The big things are to get your soil in proper shape, and then to keep it thoroughly cultivated.

Work into your garden and flower beds all the manure you can obtain. Get it down below the surface, thoroughly mixed with the soil where the roots can find it in midsummer when the surface inch or two of soil is nothing but fine dry dust.

Even the borders should have their share of the manure pile, worked into the surface with a fork early in the spring. To be sure, the perennials will live and grow without it, but what small and scattered flowers one usually sees!

Do not judge from all this that I have no use for fertilizers. They have their function, and a very important one, as a supplement to the manure pile. They sometimes have to be used in place of it, but get the manure if you can. If used without manure, 200 to 225 lbs. on a garden 50 x 100 feet will not be too much. If manure is used, 100 lbs. will be ample. All fertilizers should be put on after the ground is plowed or spaded, and raked or harrowed in.

When the initial operations of turning over and enriching the soil have been carried out as thoroughly as possible, but not before, attention should be turned to sowing and planting. It is a good plan so to arrange the garden that only the portion of it required for immediate use need be finished off at one time. If the piece is plowed it is only practical, of course, to do it all at one time. Then harrow it all down in good shape, but rake over only enough of it to make room for the first instalment of seeds and plants. When ready for the second planting, rake off a second strip, etc.

BY F. F. ROCKWELL

Photographs by N. R. Graves



This final raking off should leave the surface of the seed bed as fine and level as possible. The importance of doing this thoroughly is very great, for without such a finely prepared seed bed many seeds will come up poorly and unevenly, if at all. The thing to look out for in planting is to get the plants in firmly enough.

The Vegetable Garden Guide, on pages 32 and 33, is arranged for the busy man or woman. As soon as your ground is ready—and ready it should be made just as soon as the ground is dry enough to work in the spring—go ahead with your planting.

The dates suggested are for average regions in the latitude of New York. If you live farther north, or if the spring is usually late, you will have to delay the beginning of operations correspondingly. If, on the other hand, you can get a start before April first, so much the better.

While the vegetables are to be planted or sown in the groups suggested in the table, so that if desired the work can be carried on in a few hours' work one day every week or two, the simplest way of considering their culture is to take together the sorts that need similar treatment.

These groups are three: the root crops, such as beets and carrots; the leaf crops, such as cabbage and lettuce; the fruit crops, such as melons and tomatoes.

**THE ROOT CROPS:** Beet, leek, potatoes, carrot, onion, salsify, kohlrabi, parsnip, radish, turnip. All these, with the exception of potatoes, should be sown very early in shallow drills. As the radishes mature very quickly, the best way to handle these is to sow a row or two every week in the seed bed, or some handy corner near the house. The quality is best only for a short time after they are large enough to eat.

The soil for all root crops should be rich and finely worked, in order that the edible portions may develop quickly and be smooth and even—in poor or half prepared soil they are likely to be stringy or misshapen.

Extra early potatoes may be had by starting the cut pieces in flats of medium coarse sand, during March. When setting out, if the sprouts are short they can be covered over without harm. Simply sprouting the seed in full sunlight, before cutting, will give them an early start.

All root crops should be thinned out to the proper distances as soon as well started, the work done preferably on a cloudy day or late afternoon.

**THE LEAF CROPS:** With the leaf crops are considered those of which the stalk or the flower heads form the edible portion, such as celery and cauliflower. This group includes asparagus, cauliflower, kale, rhubarb, Brussels sprouts, brocolli, celery, lettuce, spinach, cabbage, endive, parsley.

All of these plants like a deep strong soil, and their quality depends very largely upon growing them rapidly, with no check

at any stage of development. They are all great nitrogen consumers, and therefore should be manured liberally. If the ground in which they are planted is not already very rich, apply manure in the hill—a forkful of barnyard manure, or a handful of cottonseed meal and bone meal mixed. Chicken manure is also good, but must be thoroughly mixed with the soil or it will burn the plants.

For early use, most of these crops are started under glass and later transplanted into final position. As soon as established after planting, a light dressing of nitrate of soda will help them greatly. It should be sprinkled on very thinly, care being taken that none of it lodges upon the leaves, and worked into the soil.

Cabbage, cauliflower, etc., are often hilled up in cultivating, but on most soils this is work wasted. They should not be grown where similar crops, or turnips, have been grown just before, and all are benefited by an application of lime to the soil—as long before planting as possible.

Celery can be grown perfectly well in any home garden where it is possible to give water during very dry weather. When setting out the plants be sure not to set them

so deeply that dirt gets into the heart of the stalks. Give frequent level cultivation until the middle of August, and then the earth must be drawn up about the stalks to blanch them; or boards or tiles may be used for the same purpose. Never work in the celery while it is wet.

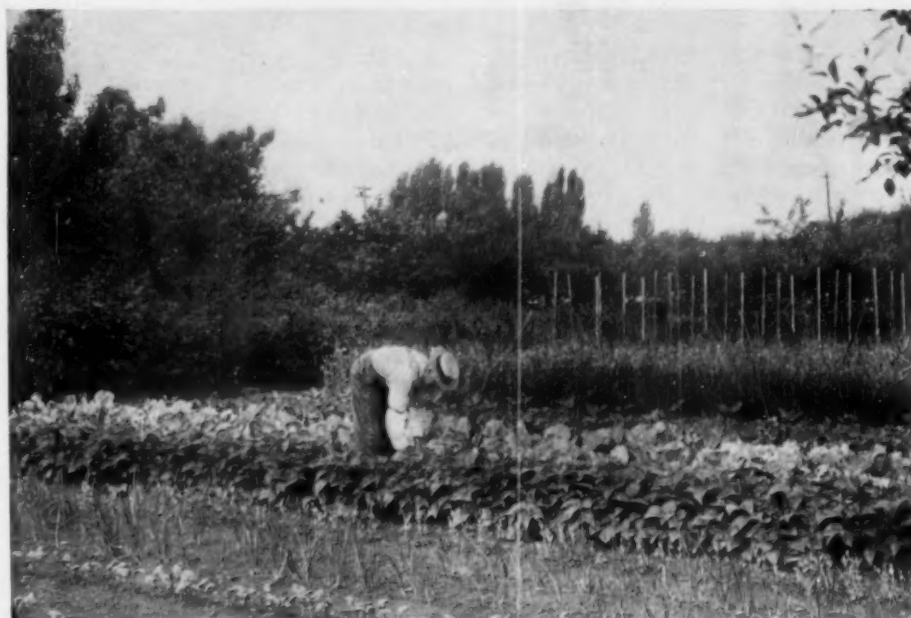
**THE FRUIT CROPS:** These are the vegetables of which the seeds, or the seed-containing fruits, form the edible portion, as beans, dwarf, pole and lima; corn, cucumber, eggplant, melons, okra, peas, peppers, pump-

kins, squash, tomatoes, and other equally well-known species.

All of these plants, with the exception of peas, differ from most of those in the other groups in their affinity for warm weather, and while earliness cannot be overurged in regard to the former, nothing at all can be gained by attempting to sow or set out these plants until all danger of frost is over and the ground thoroughly warmed up.

Another thing in which they differ is that the soil should not be made too rich, especially with manure or fertilizers high in nitrogen, such as fresh barnyard manure. Under such conditions there is sometimes a tendency to make too much vine and foliage to the detriment of the fruits.

If there is any variation in the garden soil, use the heaviest of it for the leaf crops, the lightest and sandiest for the fruit crops—with the exception of late peas. The fruit plants require more room than the others for development, and are planted for the most part in hills rather than in drills or continuous rows. For best results these hills should be especially prepared by digging out the soil to a depth of eight to ten inches and a foot and a half square, and working into the bottom soil a good forkful or two of well-rotted, old manure. Half a quart of cot-



One should be on the lookout for garden pests just as soon as the plants come up; it saves disappointment later

tonseed meal mixed in at the same time will prove a valuable addition. For the earliest plantings the hills should be raised an inch or so above the surface, to insure thorough drainage. The earliest results are, of course, to be had, however, by starting the plants under glass; and setting out after all danger of frosts is past.

With all the vine fruits—melons, squashes, etc.—and also egg-plants, the insect pests are a serious consideration. Among these enemies the striped beetle, squash bug, squash borer and flea beetle are the worst. Remedies are more numerous than effective, but for the home garden, where only a few hills will be required, an easy and sure way of fighting them all is to provide bottomless boxes, large enough to cover the hills, and covered with mosquito netting or light protecting cloth. In this way the vines will be kept immune until they begin to run, and if they are lost after that, it will be because you neglect to keep a watchful eye on them.

The smallest of places affords opportunity for a satisfactory flower garden, and the flower garden is not nearly so expensive a luxury as generally supposed. In fact, to the home that has once planned and cared for one, it is no longer a luxury, but becomes a necessity.

Almost all of the annuals and perennials described in the accompanying table can be bought in five or ten cent packets, and are easily grown; even those which are better started under glass need cause little trouble, as six or eight different kinds may be started in a single box, say 13 x 18 inches. This should be about two inches deep, with an inch or so of rough material in the bottom to insure perfect drainage. Cover this to within half an inch of the top with fine sifted soil, made light by mixing with it sifted chip-dirt or leaf mold, and sand. Give a thorough water-

ing the day before sowing, mark off with a match or pencil-point rows about two inches across, sow the seed evenly, one row of each sort, and just barely cover the seed from sight. Keep the box covered with a pane of glass until the seeds sprout, to retain the moisture, and put it in a warm place. If it should get dry before the seeds come up, let the soil soak up water from the bottom by placing it in the sink or bathtub and putting in enough water to come half way up the sides of the box; or water with a fine spray through a cloth to prevent washing up the seeds. The soaking process is, however, very much better.

For sowing seed in the open, make up a seed bed in a sunny sheltered position. It should be three or four feet wide, as many feet long as necessary, and elevated several inches above the level of the soil. Unless the soil where you make this bed is very light and fine, it will be well to sift and mix up enough to cover the surface of the bed two inches deep. In case you have some old windows lying about, place a narrow board on edge along each side of the bed, the right distance apart, and thus improvise a coldframe which will enable you to begin operations a couple of weeks sooner than otherwise.

Mark off the rows three or four inches apart, and sow and cover as when using flats, having given the bed a good wetting down the day previous. If the seeds seem to come up too thickly, do not hesitate to thin out as soon as needed; a dozen good plants will give more satisfaction than a hundred poor straggling ones.

When they are large enough to transplant, try to select a cloudy day, and give the seed bed a thorough watering several hours before taking the plants up.

The most effective way of using a limited number of plants is  
(Continued on page 55)

## The Value of Ivy

SOME OF THE POINTS OF FAVOR THAT THE ENGLISH IVY HOLDS BEYOND OTHER VINES—THE FALLACY OF ITS INJURING WALL SURFACES

BY HAROLD DONALDSON EBERLEIN

Photographs by N. R. Graves and others

PAGAN and Christian, both alike, have ever revered the ivy. In ancient Bacchic revel, at Yuletide in the church, entwined with bay and holly, it matters not, its grasp upon men's fond attachment is the same. Whether we be pagan enough to attribute personality to plants and flowers, pagan enough to cherish all the legendary conceits and symbolism belonging to them, or whether we be so superior and enlightened, as we fondly flatter ourselves, that we value them merely for their native grace, we cannot escape from the firm and steadfast claim the ivy makes on our regard. It winds its tendrils round our hearts and subdues us, all unconscious of its working, to its spell, that potent spell that all plants, each in its particular way, cast upon us.

English ivy is a term of various interpretations, it might be said, a term much abused. A great deal of the English ivy is Irish and the Irish ivy is all African. Then there is the Asiatic ivy and it not infrequently is called English. Thus it will



The leaves of the English ivy are generally three to five-lobed

be seen that "English" ivy means ordinarily "just plain" ivy. In some books about fifty species of ivy altogether are catalogued, but as a matter of fact the classification may be reduced to two, or at the most, three. There is first, in this condensed grouping, the European or English ivy (*Hedera helix*), a plant embracing a great number of sub-varieties of widely divergent forms and colors of leafage. Its tendency, however, is always toward a three to five-lobed leaf form when climbing and a regular ovate form when flowering or fruiting. Next there is a closely allied form, the Irish ivy, really African ivy (*Hedera Canariensis*). This is the common large-leaved climbing sort. It also has some variation in leafage, but not as much as *Hedera helix*, from which its leaves differ in being larger, of a rich deep green color and a persistent tendency to the five-lobed form. Asiatic ivy (*Hedera Colchica*) displays some further variations, but as we are not so much concerned with it there is no need to enter here into its discussion.



It should be borne in mind that the flowering and fruiting branches of the ivy exhibit a character and leaf form different from the rest of the plants. While the ivy is climbing or creeping its leaves are more or less lobed and it produces plentiful clasping or modified roots, by means of which it attaches itself tightly to the surface of the wall. When the vine has reached a certain development bushy, spur-like branches that droop over are produced. The leaves become modified in form, growing narrower and less lobed. In due season clusters of small yellow-greenish flowers form at the ends of the branches, followed later by black berries.

Ivy may be cultivated as a bush or tree, for which purpose it is usual to select the fruiting, branch-like growth. This method of training ivy might advantageously be practised much more than it is, especially with some of the variegated forms of *Hedera helix*. Some of the variegated ivies are white, yellowish-green or a deep orange-yellow. In planting English ivy, and that means any of the kinds that bear the name of English ivy in the mouths of an indiscriminating public, it is well to remember that young ivy plants, like other young and tender things, need a little thoughtful consideration from time to time until they get a good start in life when they may be left to look after themselves. A rich soil is by no means necessary, although the plant will not disdain the nutriment that may be present in the garden earth. The ivy does need moisture, however, and when young should not be allowed to go thirsty or be exposed to the heat of the sun. The north and east sides of buildings are ordinarily chosen for English ivy, but if sufficiently shielded in its early stages of growth it will do well also on the west and south.

And now we come to the consideration of ivy from the architectural point of view. To begin with, we should rid ourselves of the foolish prejudice that exists in some quarters against having ivy growing over the walls of a house. There is no damage to be feared so long as the shoots do not penetrate the wall by any cracks or apertures made by displaced stones or bricks. If the walls are sound the ivy covering is distinctly beneficial, for it promotes dryness and warmth and minimizes the corrosive action of the atmosphere. The chief objection urged against planting English ivy is that it takes too long to grow. We Americans are too impatient; we want everything in a hurry and we are nearly always unwilling to wait long enough to allow things to attain perfection. Consequently we plant am-



The greatest value of the ivy is in its rich green color when other leaves have fallen

pelopsis or Virginia creeper or something that will spring up with the same alacrity as Jack's marvelous beanstalk. Ampelopsis and Virginia creeper both have their proper places and their several excellences, but there are walls where no amount of gorgeous flaming color in the fall or tender green in early spring can make up for the satisfaction of having the solid, friendly leaf to cheer us through the bleak days of winter. With English ivy we have a restful, satisfying mass of sturdy green instead of a tangled gray mat of dead twigs covering our walls in the dreary months when we crave a bit of vivid color out-of-doors. The dull subdued gray light that we have so much of during December, January and February in our latitude is just the medium to act as a foil for color, and realizing this wise gardeners are coming more and more to plant barberry and other berry-bearing or evergreen shrubs for winter coloring. For this same object nothing is more valuable than a good wall of ivy in the background. Even without the introduction of any other hues its wholesome green against the

snow gives a contrast that is always pleasant and lessens any appearance of bleakness that might exist. No plant more than ivy will soften and modify the outline of a building large or small. A good building it will grace and an unsightly one it will redeem, as far as redemption may be possible.

It not only affords a smooth unbroken mantle of green for the surface of a wall, but also covers up sharp, uncompromisingly hard edges by its branching, bushy growth, a habit of growth that other vines have not to the same extent. By this very characteristic it tones down angles and helps to blend the building to which it clings with the surrounding face of nature. Because ivy covers the walls of a house there is no reason that it should have an unkempt appearance. On an old Breton château I once noted how carefully the vines had been trimmed away from a panel of carved adornment over the door. In this wise the ivy growth had been made to throw an architectural feature into greater relief than would have been possible in any other manner. Instead of obscuring the features of a building, by judicious training a vine may be made to set them off to better advantage than if the face of the walls were kept vine-free.

The decorative possibilities of ivy are almost unlimited, and a little consideration on the part of the house owner will surely suggest some way in which these vines can be used.



The nearly round leaves above are borne on the fruiting or flowering branches

# The Perennial Garden From Seed

THE STARS OF THE HARDY GARDEN—HOW  
YOU CAN GROW THEM ALL FROM SEED AND  
JUST WHEN TO PLANT TO GET RESULTS

BY ELIZABETH HERRICK

Photographs by N. R. Graves, Chas. Jones and others



Phlox should be the last plant omitted from the hardy garden

EVERY new householder, contemplating his bare grounds, feels the necessity of exterior decoration to counterbalance the greater or less elaborateness within; but not every new householder, when the cost of the house is settled, finds his pocketbook deep enough to begin at once the permanent planting that goes so far toward making the home grounds an artistic picture to the passerby and a source of perennial pleasure to the owner and to his family. Either one falls back on annuals, or he buys a few shrubs of the soft Holland stock, almost sure to winter-kill in our more rigorous climate, and tries to persuade himself that the outdoor decoration

is complete without any further additions.

It has long seemed strange to me that, with the hardy, herbaceous garden and its wonderful succession of bloom practically within the reach of all, so many should solve their outdoor problem inadequately or should live garden-less until they feel themselves financially able to call in the landscape architect and the nurseryman.

Five or six dollars judiciously expended for seeds, an equal amount for fertilizer, five dollars for a coldframe, and two and a half for a day's labor, if one is averse to the task of spading the border, are all-sufficient, so far as expense goes, for the creation of a garden picture as perfect within its outlines as any whose scale of measurement is by the acre rather than the foot. As to the actual planning and planting, no border is so successful as that with a personal record. To be really a part of the home and to express the home-life and tastes of the owner is as much the end of the garden as to be decorative. Such a border is not that which springs by the magic of the nurseryman's day into mature life, but a growth, repre-

senting, it may be, the work and the pleasure of years. If the home-gardener, in his first essay, sin against the color-combinations dear just now to the heart of the expert, he is more than likely, if the fault is glaring, to recognize and amend it himself. One of the prettiest small gardens I have ever seen—the work of the owner—is one in which a chance planting of pink and rose pyrethrums in close proximity to a mass of scarlet oriental poppies gave place the next season to the feathery plumes of white spiraeas, a color contrast in entire and orthodox harmony. The same gardener began with a border constructed on straight lines; now his border sweeps out into the lawn in flowery promontories and recedes from it in little bays, in the curve of which blue flowers are at their best, deepening the hint of distance. He has planted mallows, foxgloves by the hundred, blue monkshood and hardy asters under a group of trees, bringing to his own yard a delightful bit of woodland. Experience has taught him, as it will teach others, that the strong-growing, shrubby plants, hibiscus, spiraeas, bocconias and boltonias, buddleias and Desmodiums afford an excellent background; that the dwarf bluebells, the heucheras



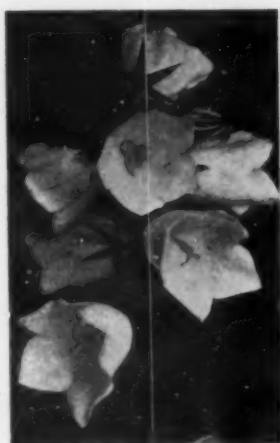
Delphinium formosum looks well with chrysanthemums

(coral bells), sedums, grass pinks and English daisies border the lawn charmingly; that the snowy white of the great Japan irises and the brilliant crimson-scarlet of the old bee balm (*Monarda didyma splendens*) are at their clearest against a background of deep blue hybrid delphiniums; that blue, as a peacemaker among warring colors, is almost as good as white; that pinks and pale yellows associate more harmoniously than the permissible orange and scarlet, and that the well-arranged border may be as cheerful in April and October as it is in June or July. The householder who creates his own



The hardy border is seldom achieved in a year and is just as successful when grown from seed





*Campanula persicifolia* is one of the best of its family



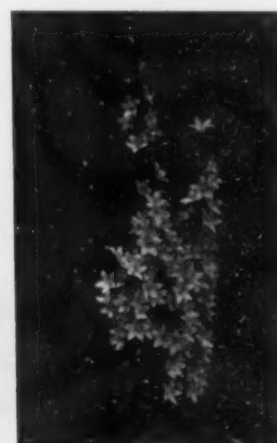
Gaillardias have splendid bloom in late summer or autumn



Of the pentstemons try the scarlet *Barbatula Torreyi*



*Bocconia cordata*, the plume poppy, is for background effects



*Pyramidalis* is the tallest form of campanula, and very desirable

home-environment insensibly educates himself into a color critic of the highest order. He understands and appreciates the wonderful combinations of nature; he knows exactly wherein X's garden is a success and Y's, laid out by a landscapist of equal note, is a failure; the one artist had grasped the key, or, better, struck the note of his patron's home, the other had imitated his own past triumphs on larger estates and failed totally to interpret Y's.

There are, therefore, other reasons beside the consideration of cost which should induce the new householder to plan and plant his own grounds. I do not say his work will be better done than the work of the professional, but that it may be as well done, and that the doing it will be of immense profit to him both physically and mentally. And the actual labor involved is greater in anticipation than in execution, for the time of waiting for the seedlings to mature and the border to "find itself" is more tedious to the imagination than it is in experience. The average householder will find that little plants grow more quickly than he expected.

It is not, perhaps, generally known that many perennial plants bloom from seed the first season. This is the case if the same seed be sown indoors in shallow boxes or in a hotbed in December or January, and most others from seed sown outdoors in August or early September of the preceding year. The latter plants will, of course, be larger and the blooms better. But the householder who has neglected sowing until March or April, need not despair of bloom. I had in September plants of *salvia farinacea* (a very pretty, blue-flowered perennial) two feet high and in full bloom

from seed sown in a coldframe as late as May. Delphiniums, too, grew from seed sown in the open ground as soon as it was in a dry and workable condition, flowered during their first summer, and the majority of gardeners, amateur and professional, will agree that no hardy plants produce lovelier garden effects than the improved hybrids of this perennial. Seeds of the named English hybrids may now be obtained from American seedsmen for the trifling cost of fifteen cents per retail packet. Among the most beautiful of the named sorts are Lizzie, azure-blue with creamy yellow eye; Duke of Connaught, a hybrid of splendid form, and of a brilliant, almost gentian blue in shade; Rembrandt, sky-blue and lavender, with silver sheen, and the King of Delphiniums, a very vigorous grower, with immense dark blue flowers on tall strong spikes. This last variety sports considerably, but as its hybrids are more beautiful, even, than the parent variety, I consider its sportive character rather a recommendation than a defect. Of all the larkspurs, however, none is more beautiful to me than the improved *formosum*—a variety long known and, in my opinion, never excelled. In my garden, individual blooms of the *formosum*, grown from seed procured in Germany, have measured over two and one-half inches in breadth, rivaling the largest of the English hybrids. The color of the *formosum* is, I think, the finest and most brilliant blue in the floral family; the texture of the flowers is of unusual firmness, and the brilliant petals are overlaid with a glistening silver sheen like a light frost. A large white eye—more properly, white eyes—edged with blue and long wrinkled spurs, reminding one of purplish-blue

(Continued on page 55)



The white columbine, *nivea grandiflora*, grows quickly



Don't miss the beauty of the pyrethrum daisies in your garden



Heuchera's red flowers last from spring until the fall



Most forms of dianthus are suitable; the one shown here is *Hedderwigi*



Perhaps you know crimson-eye hibiscus as marsh-mallow

# Remaking a Small Lawn

HOW GOOD RESULTS MAY BE OBTAINED—THE CHOICE OF SEED AND THE PROPER WAY TO TEST IT—THE VALUE OF MANURE IN LAWN MAKING

BY L. J. DOOGUE

**D**URING the fall everyone with a piece of grass imagines that the salvation of that bit of green is dependent on the amount of manure that he puts on it. If you should tell him that the manure that he puts on his grass is a detriment instead of a help he will wither you with a look of scorn. Everybody does it, so it must be right.

Manure is an essential in making a good soil upon which to grow grass, but there is always a chance of getting too much of a good thing, particularly when applied in the form of top dressing in the fall. This sounds like heresy, but it is a fact nevertheless. Haven't the best lawns been produced by manure top dressings? No, they haven't, but they have been made possible by liberal mixtures of manure in the soil and afterwards being treated with commercial fertilizers as dressings. Have you ever looked at some of these supposedly beautiful lawns that have had their quota of manure regularly? I mean, have you walked upon them and examined the texture of the grasses that composed them? If you have made such an examination you were doubtless surprised to find that instead of a fine crop of grass the charming appearance that so entranced when viewed from a distance was a bad mixture of weeds and grass, with the weeds predominating. If you don't believe this make a close inspection of some of the noted lawns you know and be convinced of the truth of this statement.

If the soil is in good condition—that is, if it has depth and received a proper preparation as to enriching and subsoiling when made—it will be unnecessary to apply anything to keep it in condition for many years.

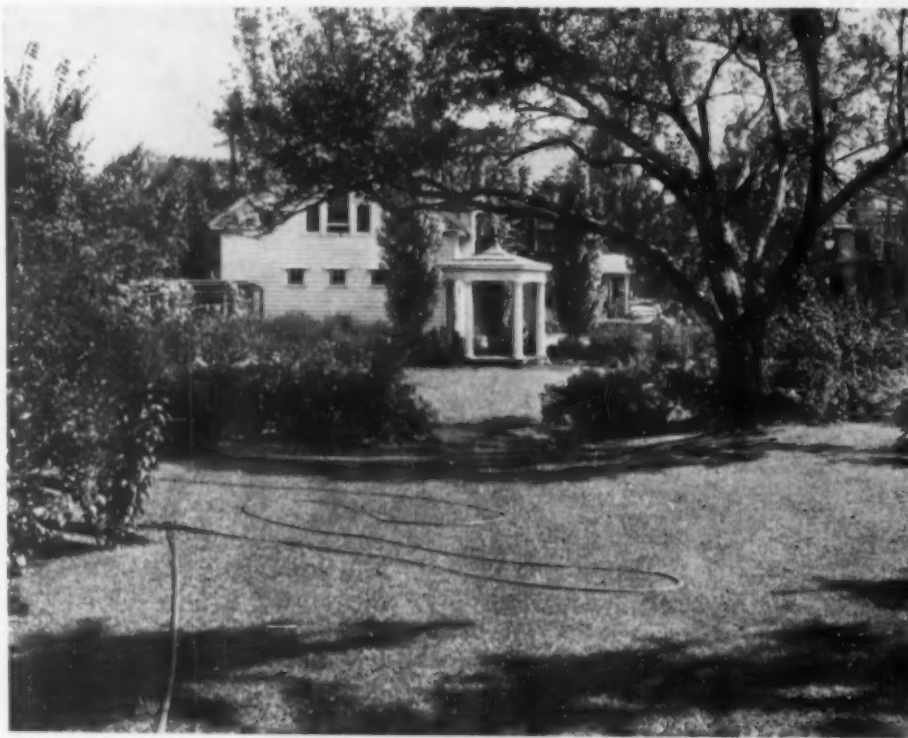
If anything, use spring top dressings and with their aid satisfactory results can be brought about. In the case of a small lawn and a person insisting on using manure I should say give a liquid dressing in the spring instead of the fall. Steep manure in a barrel and apply with a watering pot. Sheep manure has the advantage of being less weedy than horse or cow manure. Years ago it was possible to get sheep manure in a pure state without also buying a little of everything ground up in it. The really most efficient lawn dressing is Canada hard wood ashes spread over the lawn in the spring. This should be bought under an agreement as to the percentage of potash in it, otherwise you are apt to get anything from three to one-half of

one per cent., and more likely the latter than the former. Ashes such as these are not worth using. They should run from seven to eight per cent. to get the results you are looking for. Spread them on the ground until it has a decidedly gray appearance, and even should you put it on heavier no lasting damage will result. Apply it to the grass when rain is expected. Put on dry grass it will burn it badly. Bone meal, 500 pounds to the acre, is excellent. Nitrate of soda spread broadcast about 100 pounds to the acre and repeated two or three times will enliven things materially and be more beneficial than if a large amount was put on at one time.

When a lawn has run out no amount of top dressing will bring it back to its first condition, but very much may be done for it to keep it looking well for years to come.

Where it is not desired to run a plough through the ground take a fork and loosen up the top, put in a dressing of bone meal and ashes, roll it down heavily and in a month or so put in the grass seed. Doing it this way loosens up the ground sufficiently to let the good of the fertilizers work into the soil. Besides this general top dressing, dig out at intervals places about a foot

square, and just as deep, and into them pack well-rotted manure, covering it with sod on top. This sort of combination treatment, with frequent waterings and rolling will do much to rejuvenate the soil without resorting to a wholesale digging up. This may seem like a contradiction to what I said about using manure, but it is not, for the conditions are not the same. Here the manure is put into the earth where, as it is supposed to be well rotted, it could do but little injury as far as weeds were concerned. This treatment is particularly effective in small patches such as are found about city homes and which are



One essential to the success of a lawn is plentiful watering. A mere sprinkling is insufficient, especially during dry weather

usually covered every winter with manure. A follow-up treatment—that is, doing a little of this each year—will in time find the soil in as good condition as if it had been entirely remade. A remade patch of grass can be kept in thriving condition for very many years by an occasional spring dressing and plenty of water and rolling.

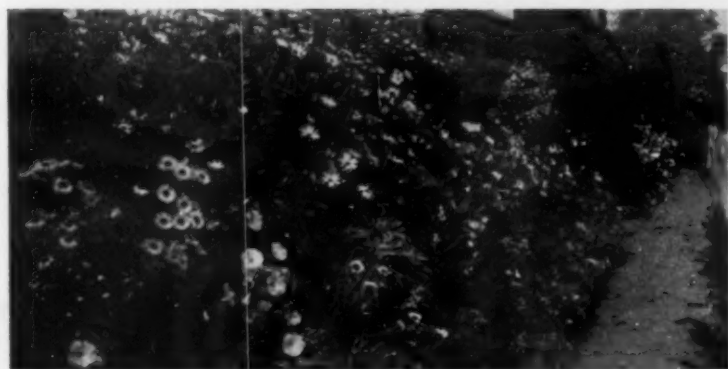
Good grass seed is essential to the making of successful lawns, so before buying any look into the matter carefully and do not

(Continued on page 53)





English gardens often demonstrate how much can be done within a limited area. A large proportion of this little yard is turf, but it has been rendered attractive by mass effects around it



Narrow borders are made strikingly pleasing by filling them with masses of luxuriant plants



The entrance from the garden is almost converted into an outdoor living room

### ENGLISH DOORYARD GARDENS



Climbing plants as well as those used for edging are effectively massed near the house



The charm of the doorway is greatly enhanced by clematis vines



There is a look of age about the thatched doorway which we cannot duplicate



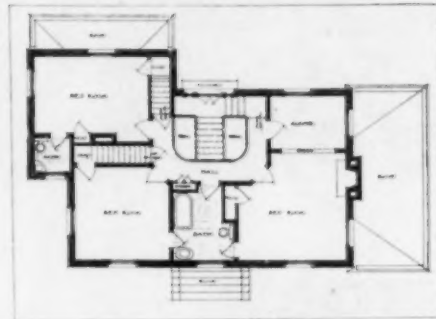
There is a sense of dignity and simplicity about this stucco house that comes from its rectilinear lines and plain, broad windows. Color is obtained by the use of the inlay brick panels



The kitchen department is very well planned

THE HOME OF  
MR. CHARLES COY  
CRANFORD, N. J.

*Hollingsworth & Bragdon  
Architects*



One bathroom opens on the hall and two bedrooms



The living-room adjoins a side porch used as a loggia, as it has no outside entrance

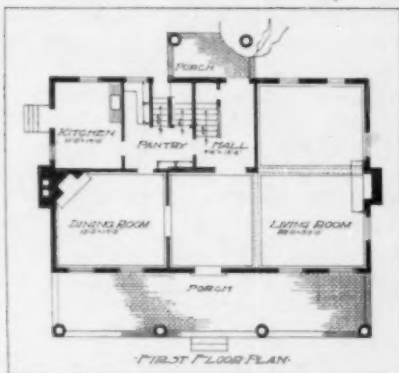


A fireplace in the dining room is an appreciated factor for happiness on dull, chill mornings





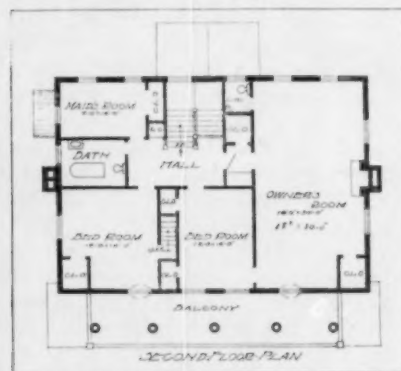
Mr. Graham's house is at the top of a steep slope and is well planned to take advantage of a fine view



The living-room occupies one-half of the first floor



The bedrooms all open on a balcony that extends across the house front



The owner's bedroom is almost as spacious as the living-room



The living-room has an outlook in three directions and is lighted by six windows and a doorway

THE HOME OF MR. JOHN W. GRAHAM, SPOKANE, WASHINGTON



## 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*

### Living-room Decorations

A FORMAL living-room was seen in a made-over country house in Connecticut, where it had been necessary to keep the color scheme as light as possible, owing to the fact that the house was so situated that this room had sunlight for only a part of the day. The walls were covered with a two-tone striped paper, which was almost white, but having just a suggestion of yellow in it. The wood trim was of simple design painted ivory white, but its treatment was worthy of more than passing notice, as the ivory paint had first been allowed to dry and then some thin burnt umber was brushed over the surface and quickly wiped off again, only leaving what had caught in the rough surface of the paint, except in the deep crevices of the moldings, where it was allowed to remain and gave a nice tone to the woodwork, which resembled the deep ivory tone one sees in plaster casts.

The furniture was simple models in mahogany after a design by Adam, with caned seats and backs, and a gray rug was on the floor.

The decorations had played their part to a nicety and had brought light and cheerfulness into a room which needed both of these qualities. As this light color scheme was found to be too cold for winter time, it was decided to add a warm rich color note, which was accomplished by replacing the summer rug with one of a deep rose-pink, with just a hint of violet in the color, and hanging long over-curtains of English cretonne, with a valance, at the windows. These curtains showed large bunches of red roses, tied together with blue ribbon, on a cream ground. It would have been impossible to cover a large area with a fabric having such a bold design, but the neutral walls and woodwork supplied restful spaces for the eye and made a frame for the strong color in the draperies. Small pads of rose-pink material covered the seats of the chairs and helped to transform this living-room into an inviting winter retreat.

In a recently completed house on Long Island the owner was her own decorator

and planned and furnished a combination living-room and library that was both beautiful, dignified and homelike. As this was an all-the-year-round house and the living-room would be the most important one on the ground floor, it was deemed wise to delve a little deeper into the decorative problem than mere paper and paint, and at the same time keep the decorations within a reasonable appropriation.

To add to the constructive quality of the room, a window-seat was built into the long window at one end of the room, plain bookshelves were fitted into the corner between the mantel and the door leading to the brick-paved terrace, and a low wainscoting was built around the room by nailing a flat molding to the wall parallel to the baseboard and about three feet above it. The intervening space was divided into oblong panels by means of flat boards extending from the baseboard to the molding above. The rough cast plaster in the panels was tinted a dark brown, to match the rich, dark brown stain of all of

the wood trim, including the window-seat and built-in shelves.

A peacock-blue and yellow color scheme was decided upon, as this room received floods of light on account of its southwestern exposure. The space above the wainscoting was tinted a peacock-blue, which color was repeated in the rugs, draperies and upholstery of the window-seat.

The furniture consisted of a long table, a gate-legged table, a high-backed settee and some chairs, all of dark brown oak with caned seats and backs and reproduced after Old English models.

The long over-curtains of cretonne showed brilliantly plumed birds on an écru ground and neutralized the blue of the walls, and this effect was further carried out in the yellow silk Empire lampshades and the brass candlesticks which stood on the mantel.

### Lamp Brackets for Plants

WHEN window space is limited, or where one hates to mar polished sills by placing pots upon them (invariably the result sooner or later) let her go to a hardware store and purchase some of the old-time swinging brackets used to hold kerosene lamps against side walls.

These are merely rings that turn this way and that—sometimes double hinged—from hinges securely fastened in the casings, and into the rings flower pots fit beautifully. Two of them on either side of a window, one above the other, filled with blooming plants or drooping ferns, make a most artistic arrangement, and as they may be turned to catch the changing rays of light, the plants develop more symmetrically than house-plants usually do. Besides, the brackets permit the placing of plants in sunny bay windows where box seats have been built in below and pots upon the sills would be greatly in the way.

### Making a Window into a Closet

OFTENTIMES there is a scarcity of closet room and an overabundance of window space in a dining-room. Both of these conditions may be improved by



Hinged lamp brackets fastened to the casings are excellent for plants



the insertion of a squat cupboard in the sill of one of the windows, unless the window is set so nearly flush with the wall as to allow insufficient depth. If the sill is deep enough to allow of drawers, they will be very convenient for table linen. A well-filled rose bowl on top, with the light of the upper window behind, removes any appearance of awkwardness. If the sill be narrow, the little cupboard will best be used for cups and saucers, or with glass doors as a glass closet.

### Mahogany Pieces for the Library

**P**RACTICALLY all of the mahogany furniture now manufactured is copied from Colonial pieces, or at least shows the influence of the craze for antiques, and there are few examples of distinctly modern design. Among these few, however, are some useful pieces for the library in the shape of book and magazine stands that are simple in character and correspond satisfactorily with mahogany desks and tables, whether the latter are genuine antiques or only copies.

The most elaborate of these pieces is the book-wagon, built on the plan of the useful tea-wagon, with two rows of V-shaped shelves, one above the other, each holding eighteen or twenty books. A pair of wheels in front and a handle at the back make it possible to roll the wagon from one part of the room to the other with very little effort, and for the person who likes to have the newest books at hand, or volumes of reference within easy reach, it is a most serviceable piece of furniture. It is made either in plain mahogany, or with inlaid lines if it is to correspond with Chippendale furnishings.

Small tables holding only six or eight books each have square tops and pedestal bases made on slender, severe lines. Set into the top are thin partition boards of mahogany about eight inches high, that divide it into sections, one for each book. On some of the tables the partition pieces are of uniform height and straight across the top; on others the pieces have curved tops, and the one in the center is higher than the others, with a small oblong opening cut in it, to serve as a handle when moving the table about.

Magazine stands are made on the same plan, and have three partitions that increase in height from front to back, providing sections for magazines of three different sizes. Both book and magazine stands are fitted with a single small drawer, presumably for cards or memorandum pads.

A smaller book rack, for use on the library table, is a cleverly designed duplicate in miniature of the revolving book-case. It has a square base, on which the case, which holds only about a dozen books, revolves, and as the whole thing is not more than twelve inches square it is particularly serviceable on a library table where space is limited.

Still another small stand for use on the table is a V-shaped shelf 18 inches long with inch-square supports of inlaid mahogany, making a piece that is light in weight and decidedly graceful in appearance.

It has a decided practical value, for its shape makes it very convenient.



The bed box is ideal for cramped quarters, for many things can go inside it

### The Useful Bed Box

**T**HE "bed box" reminds one of the old-fashioned trundle-bed, and a boon to humanity it is. Even in rooms where

one has plenty of space a bed box is desirable, for it may be made of cedar wood and serve another purpose than that of a mammoth bureau drawer. For cramped quarters in any house, and especially for the summer cottage, bed boxes will be found almost indispensable. Those shown in the stores are built on simple lines, and are mounted on four solid wooden wheels which revolve on wooden pivots fastened to the case with flat bolts. The matting covered ones, trimmed with split bamboo, are very suggestive of the cool of the country house, while the cedar chest suggests immunity from moths and ants at all times of the year. They both look well.

In making a bed box, or in buying, be sure the cover is a tight and dust-proof fit. At least two-thirds of the cover should be hung on a hinge, the remaining portion being fixed so that it need not be pulled out the full width from under the bed in order to remove the contents. Matting covered boxes,

edged with bamboo, with brass corners, can be bought for \$6.75.

### Curtains for Small Windows

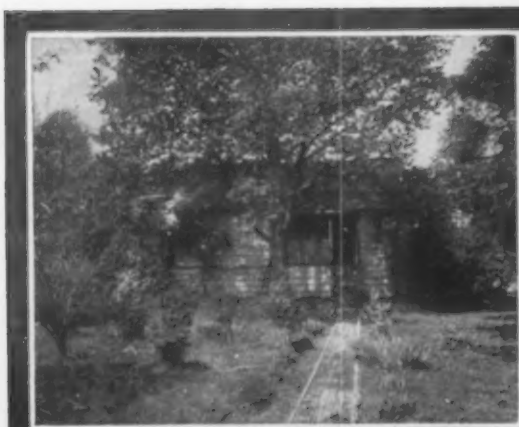
**T**HE windows in the upper floor of an old farmhouse remodeled for use as a summer home were unusually small in size, and the question of how to curtain them resolved itself into a rather serious problem. The bedrooms on that floor were done in chintz, but curtains of this material seemed quite impracticable on account of their shutting out both light and air, until the owner hit upon the scheme of putting the curtains around the windows instead of over them.

Fortunately the rooms were of good height, with a space of about eighteen inches between the tops of the windows and the ceilings. The plan for the curtains was to have a valance of gay colored chintz across the top of each window, with the material hanging in straight folds at either side. The curtain rods, instead of being fastened to the top of the window frame as is usual, were attached to the wall a foot above the frame, and were fourteen inches longer than the windows were wide. When the valances were put on they reached just to the tops of the windows, and the curtains, hanging in straight folds from the ends of the rods, fell just over the frame of the windows, hiding the woodwork, so that the effect was the same as if they had been put on in the regulation way.

The small windows with their many panes of glass were quite effective in their draperies of chintz.



Attic windows may be made to appear normal size by hanging curtains in this fashion



## Garden Suggestions and Queries



Conducted by  
F. F. ROCKWELL.

*The Editor will be glad to answer subscribers' queries pertaining to individual problems connected with the gardens and grounds. When a direct personal reply is desired please inclose a self-addressed stamped envelope*

### April

**AS** the current issue of HOUSE & GARDEN goes to press, the outlook for a more normal summer than we have had for several years is very encouraging. At least there is plenty of moisture in the ground, and every indication of an early spring.

With this in mind, do not let a single opportunity slip by you. Be ready to take every advantage of the first few days of planting weather.

First of all, see that you have completed every arrangement you can to enrich your soil in the garden, flower beds and borders. Nothing is better as a base than old, well-rotted manure. It is the surest crop grower of them all. Get all you can of it, and spade it into the ground wherever you have things growing as early in the spring as possible.

Secondly, get all the hardy things in at the very earliest possible date. In the vegetable garden this will include those things mentioned in the first planting group of the garden-making article on page 33. Also, sow under glass—if not already done—tomato, egg-plant and peppers, and on sod or in paper pots, corn, cucumber, melons, early squash and lima beans.

Third, attend to all moving or dividing that is to be done. Many of the hardy and herbaceous perennials are greatly benefited by being taken up, the clumps divided and replanted. Any of this work which was not done in the fall can be attended to now. Also the moving of vines, shrubs, or trees, before they begin to leaf out. In moving these latter, take up as large a ball of earth as possible, and keep it intact.

Fourth, there is pruning of various sorts to attend to, especially of blackberry, dewberry or raspberry canes, and of hardy perpetual roses. (Teas and other tender roses are better left until after growth starts). If fruit trees have not yet been pruned, it is not yet too late to do it if you act at once. Pruning and spraying will work wonders, even the first season, with trees that have been bearing the poorest of fruit for a long or short period of time.

### Fertilizer

**IT** is from twenty-five to fifty per cent. cheaper to buy the components of your fertilizers. You are sure of getting the very best, and you can vary your formula to suit special needs, or use the different ingredients separately: for instance, a light dressing of nitrate of soda on the lawn, the first thing in spring, will induce a quick, luxuriant green growth, due to the available nitrogen; or if the grape vines or rose bushes do not seem inclined to ripen up, as they should toward fall, the potash furnished in a light dressing of muriate of potash will greatly benefit them—perhaps save the next season's delicious fruit or abundance of bloom.

### Care of the Frames

**THIS** month is the most critical of all in growing on the small stuff in frames, for not only the frost by night, but also the sun by day, must be guarded against. If the sash happen to be left on tight on some spring morning, the sun may quickly run the temperature up to way above the hundred mark, and do serious



A convenient way to make the drills and sow seed is by the use of a board in this manner

damage to the plants therein. Great care must also be taken to water freely and frequently, to prevent flats and pots from drying out. While almost any plant will stand a great deal of neglect and abuse without succumbing to it, every such setback means that the chances of bringing it to a perfect development are correspondingly lessened.

Another thing to watch out for is the green plant lice which, if allowed to get a start, quickly work havoc on these warm days. At the first sign of one, spray with some remedy or some liquid form of nicotine, or fumigate with one of the prepared nicotine papers. Either can be accomplished in a few moments, and may save all your plants from practical destruction.

Heretofore we have used square pieces of sod, cut out of good thick turf upon which to start seeds of melons, cucumbers, corn, lima beans, etc., as they do not stand transplanting very well. This year we are using instead square paper pots, which can be purchased in the flat at a very low price. They are just the thing we've been looking for, and will, I believe, not only prove better than the sods, being much more convenient to handle, but should make it possible for those who do not have access to sod that may be dug up, to start all these things early. There will no longer be any excuse for the gardener who does not have sweet corn early in July, and melons long before danger of early frosts, which so frequently get a good part of the crop.

### In the Flower Garden

**AREN'T** you going to have a really beautiful flower garden this year? Last summer—in spite of all the drought—weren't you struck here and there, as you traveled about, with some startlingly simple but attractive effect that you inwardly resolved to duplicate this year? Let me tell you a little trick or two that won't cost you many pennies.

In the first place, most flower seeds are very small, some as fine as grains of salt. What chance do you suppose such seeds will have, planted in a garden where the surface of the soil has probably dried for



several days in the wind and sun, raked over with a hand rake, the lightest touch of which would make a furrow four times too deep for them, and then abandoned to the mercy of beating suns and rains, and a struggle, if they have been sown broadcast, with weeds. Instead of taking this hit-or-miss course, why not nail or screw a 6 ft. long piece of scantling, 2 x 4" or any old size, about 18" above the sill, in a sheltered spot on the south side of the house, and set a 6' board 6" or more wide, up edgewise, parallel to it, about 2½ ft. out. Get two ten-foot pieces of 1 x 2" pine (this is all you will have to buy) and make a 6 x 4 foot frame. Tack over this an old sheet or any piece of light cloth. This will serve as a protection against beating rain, too hot sun, and late cold nights, and with a carefully prepared seedbed of light soil, practically assure the success of your flower seed plantings. It would be, perhaps, two hours' work. Don't you think it would be worth while?

In the rose garden, take your pruning shears, grit your teeth, and cut them down. It may seem to you that you are ruining your bushes, but where you have hybrid teas to deal with—and they are far and away the best garden rose—the best blossoms can be had only by what, to the beginner, would seem very severe pruning. Leave not more than four to eight eyes on a cane, and always cut above an outside eye, so that the bush may develop in open form.

The teas will not need such close pruning. Do not cut them until growth starts. The climbers are best pruned soon after the flowering season.

This month is the best time of the year, in the northern state, for planting roses. For the details, see the rose article in the March HOUSE & GARDEN.

While you are at the cutting business, and after picking all the rose thorns out of your fingers, go over the shrubs—that is, such as flower on this season's growth. Those which flower on growth made last year should, of course, be left until after they bloom. Aim to keep the bushes open and spreading, and symmetrical in outline, and as far as possible cut out the old growth to make room for the newer.

### In the Fruit Garden

**N**OW is the time to make new plantings of small fruits and berries, and of nursery stock—fruits and shrubs. The earlier it can be done the better, for practically all these things will stand late frosts, but are set back by being moved after they have "started."

### Pointers on Sowing

**M**OISTURE, warmth and air are the three things necessary to make live seeds sprout and begin to grow; and these (with light above the soil surface) must all be supplied if success is to crown one's efforts.

By selecting or by making a sheltered

place, the matter of warmth is, if not controlled, at least utilized to the greatest advantage, so that early sowings and plantings may be carried out at least a week sooner than otherwise. If a spot cannot be found that is protected from northwest winds by buildings or a wall, then a hedge of privet, or of some thick-growing, closely planted evergreens, or, for the vegetable garden, even a plain board fence, may be put in as a shelter, that will pay for itself several times over in a few years.

Air is one of the most important factors in turning "raw" plant food into forms that the plant can eat. Cultivation—the breaking up, stirring about, pulverizing and aeration of the soil—is essential to the growth of plants, especially in their early stages.

Except in the very driest of seasons there should be moisture enough in the soil to germinate and successfully start into growth any seeds planted before the middle of June or first of July, without artificial aid. That is, provided the moisture in the soil has been saved there by proper treatment of the soil, or rather the soil surface. Every time a crust is allowed to form, moisture begins to escape from the soil; hence the necessity of going over all exposed surfaces in both the flower and vegetable garden frequently enough to keep the surface fine, dusty and dry.

In the sowing of vegetables, "drills" refers to the method of growing the plants in continuous rows, the plants being only far enough apart to make room for each other. Carrots and beets are grown in this way. In rows they are usually spaced at even distances, so that the soil can be worked between them with a hoe or by hand, while the space between the rows can be cultivated with a horse-hoe or wheel-hoe—the way in which cabbage or peppers are planted.

Hills are put three to eight feet apart each way, and usually several plants grown in each hill, as with corn or cucumbers. One advantage of the hill system, especially in gardens that are not very rich, is that they may easily be given special preparation in the way of drainage, digging and fertilizing, thus encouraging a rapid and luxuriant growth.

To fix hills in this way, dig them out a foot to two feet square and several inches deep. Spade into the bottom of the hole a



This is a good style of pruning shears that should be in constant use at this season

forkful or two of rotten manure, or a handful of cotton-seed meal and bone-dust or both. Be sure that the manure or fertilizer is well mixed with the soil. Then refill the hill with the fine loose earth dug out, and make it flat and level. If the soil is damp, or in a low place, make the hill slightly higher than the surrounding surface. When sowing the seeds or setting the plants, be sure that no manure or fertilizer comes in direct contact with them, or they may be so burned as to be ruined.

In flower planting the terminology is a little different. Instead of hills, drills and  
(Continued on page 66.)



To center posts are affixed sloping laths fastened with wires for an excellent support for tomato vines



# EDITORIAL



## A GARDEN LEGACY

IN another part of this magazine is an article that paints the picture of a garden that a child once played in. It was a garden that was a part of her existence and that seemed as permanent as nature itself. Probably it seemed to the child that the old house and its grounds had always been there and always would, and it naturally grew to be a part of her life. She could watch the growth of the tall foxgloves, from the tangled rubbish that winter left, could see the wonderful reawakening of the lifeless ugliness that the chill winds of March tossed about so cruelly. When June days came, the unfolded mystery of new life made its call upon her imagination and upon her senses. The garden was a wonderful treasure-house—full of the riches of the finest perfume, with the great bounty of color spilled so lavishly everywhere. Then, too, came the little comrades that were so much more satisfying than dolls and toys—the floating butterflies, the yellow-velvet cloaked bee grumbling at his business, the pert robin leaning eagerly forward in his hurried scamper or pausing, head tilted critically, before he pulled the wriggling worm from his sod home.

The garden was a rare playhouse with real and fancied inmates—the last, perhaps, as valued as the first. The strange, shadowed caverns between the close growing plants were the homes of the "little people," the fairies. On summer mornings among the long shadows and the flash of the dew, they were awfully real—indeed their tiny voices could almost be heard fading away before the full splendor of the growing day. Oh, it was all real, and all so crammed with delight.

There is no substitute for the garden in the life of a child. Some unerring instinct leads children to understand and appreciate and love it all. Nor can the good that it does be calculated, but the days spent there seem to start a growth, parallel to that of the shrubs and plants, of mind and soul and bodily health.

And you, the grown child, what would it mean now to turn in at the gate of grandmother's garden to-day? The host of memories crowding there are only dream-children, but the touch of your hand on the gatepost, you know would bring them trooping before you. You who descant against the impiety of the race, are you doing anything to make this home of yours to be cherished afterwards? Or is it only the four walls with no associations within them or about them, without a tree or shrub or plant to give it life? If that is the case, there will be no more grandmother's gardens, no more old-fashioned things for the generation coming after us, no love for old associations. The home places that are legacies will be converted into cash, because they lack memory's wealth of the imaginative experiences of childhood that would make them of greater price than money.

Forget all the other things then, and this is reason enough for your garden. It is a legacy which the donor enjoys with the legatee, and an investment that compounds its interest to you and yours the longer it lasts—an investment in a lifetime happiness.

## MUTUAL BENEFIT

IT was only a humble, little apple, probably worm-eaten, that was the cause of our learning all about the laws of gravitation. Perhaps if the farmer had sprayed the trees in Ike Newton's garden, the apple would not have fallen, and we might still be ignorant of hundreds and hundreds of things, and carelessly might walk off the roof with absolute conviction that we would be wafted softly down to earth. That is only by the way, however, and is perhaps the one exception to the rule that truth never grows out of error.

To return to Ike, greater than the good of his formulation of laws was the fact that he was one of the first to adapt experimental reasoning—to note the results of his experiences, and draw conclusions from phenomena about him rather than to get results merely from mental cogitations. Since he established this manner of thinking as the most approved method, much has been accomplished, and great results come from the most ordinary causes. In a way, we are all potential Newtons in our gardens. Perhaps there is something of just as much value to humanity that can grow out of the simple operations of our garden. At any rate, there is bound to be much that will interest those struggling as we are. Our successes have, perhaps, just the one thing that another has been trying to find out; our failures may be sufficient warning to save someone else that year which they lost us. Modesty is becoming, but in this case is out of place. Wouldn't it be much better to make public the important things in our experiences. Insignificant as they may be as isolated occurrences, as steps in the advancement of knowledge they may loom up large. The falling apple was not of much intrinsic moment, so, who knows, the fruits of your gardening labors may strike some Newton on the head and bring as astonishing a revelation.

## SKUNK FARMING

WHILE the conflict rages over the pros and cons of the "Back to Nature Movement," the paternal government works on in its mysteries aiding the man who lives in the country. Now it is working on the elimination of waste, and making rapid strides in the use of by-products. But all the previous experiments pale before the recent work of the Department, as described in a pamphlet sent out lately. Better than increasing the yield of wheat, or doubling the number of alfalfa crops, or introducing Prof. Bailey's "Drama of the Soil," is this last achievement. It is the introduction of a profitable diversion for the farmer—the breeding of the humble, roadside skunk.

Your boyhood experiences must stand vividly before you at this knowledge. Perhaps you were an innocent, well-meaning boy, and there is the touch of pique that the sober, old Government could quite outdo your harmless machinations. How much better it would have been when you induced your city cousin to catch the nice pussy that was out back of the chicken yard, if later you could have produced a government pamphlet in your defence and demonstrated that you were only starting Clarence out to be a successful farmer. Perhaps, then, the chair would not have felt so hot when you finally nerved yourself to sit down in your woodshed seclusion. But, at any rate, you did not have to officiate at the interment of Clarence's store clothes, and there was some consolation in the fact that they were almost boiling him alive in the tub, and at the same time suffocating him in the smoke from Chinese punk. Oh, it is just as well to let bygones be bygones, but what a useful thing that pamphlet would have been when you were a lad!

But to spread the glad tidings farther. "If," so says the pamphlet, "if the cost of rearing the skunks does not exceed the value of the fur the best black skins would probably allow a margin of profit." If, again, the playful creatures do not eat one another up you should make money. No courageous spirit should be checked by these possibilities, however, and should enclose the acre of ground as recommended—the pamphlet says at least one acre for every fifty skunks. To start in a small way, one might fence in that acre strawberry field next to Neighbor Brown's—leaving a break at the point his chickens usually come through the present fence—just to be polite and neighborly.



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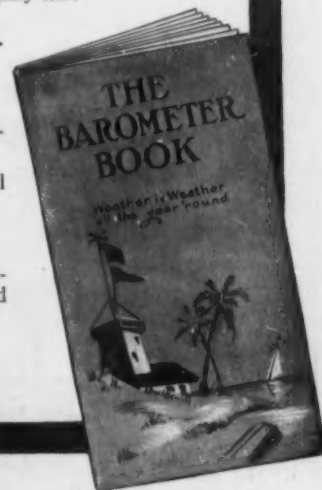
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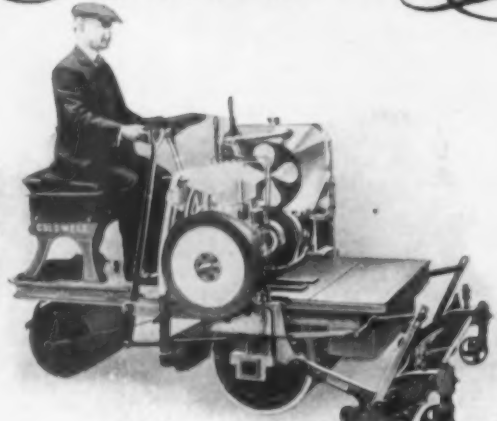
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### The Care of Hedges

WHEN a young hedge is cut into shape it is important to keep it so. There is no real need to have a general trimming every year, but it will very quickly and imperceptibly grow out of shape if it is not examined every autumn and the irregular growths cut back. As already indicated, the penalty of neglect, and allowing the top to spread, is a thinning and weakening at the bottom. A hedge kept in this way will last a great number of years; but such a hedge does not represent the average of the country. The farmer will be engaged more frequently in making good the weaknesses of old hedges, more or less worn out, than in planting and raising new ones. We may take first the case of a hedge grown on flat ground without an open ditch. Such a hedge may be growing beautifully, when one day a blight may seem to strike it in patches. Growth is almost at a standstill at these points, and soon the bushes become more or less covered with gray, mossy lichen. These weak bits will probably be found to be at low points on undulating ground, and are caused by the roots striking down into the sour, waterlogged subsoil. The only remedy in this case is proper drainage either by pipe or an open gripe. If a pipe drain is used, it must be two or three yards away from the base of the hedge, as it would soon become choked with roots if much nearer.

A condition that may be observed in any old hedge is a tall, straggling growth of the bushes, with gaps at various points and a thick covering of blackberry brambles. We will take the case of a hedge with an open gripe for an example, as a hedge on the flat may be treated on similar principles. A common mistake with such a hedge is to cut it down to such a height that it will make a good fence, and to stuff the weak points with the brushwood cut out of the hedge. The result of this is a strong growth of straight twigs from around the cut ends of the old stumps, no growth to speak of near the base, where it is required, and no growth at all at the stuffed point. A hedge that has got weak at the bottom should be cut down practically to the ground. All blackberry brambles should be rooted out as well as possible, as they are a source of weakness in a hedge. A blackberry brake will stop anything, but in a hedge the brambles grow up and lie down across the top, smothering the bushes and extending into the fields on both sides. As a result, the hedge becomes a mass of dead wood after a while, and requires renovation.

Where a gap is found in the hedge, the bush at one side is trimmed of all its branches, and cut partly through, close to the ground with an upward cut, on the side away from the gap. This cut should be sufficiently deep to allow the stem to be bent to the ground without breaking off. If the laid stem reaches across the gap and beyond the next strong bush, it may be pegged down with a strong hooked peg



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or two. A healthy stem will sprout along its whole length the following season, and the gap is soon fully furnished. The stem should be cut close to the ground, so that when laid over it may lie on the ground. If the bark is notched at the places where it touches the ground it will send out roots at those parts, and so support the new growth. If it does not lie on the ground this cannot occur, and also small dogs, pigs, etc., may be able to creep under it. Where the gap is too wide for this, a corresponding bush may be trimmed and cut at the other side of the gap, and laid in the opposite direction. If the two laid stems overlap, so much the better. If the gap is too wide to be stopped in this way, it will be necessary to replant it. In this event it must be remembered that the soil is probably more or less exhausted. The old bushes did not die out without a cause. Also the ground is probably full of the side roots of the neighborhood bushes. For this reason it will be necessary to cultivate the gap, as for a new hedge, take out all old stumps and roots and put in a sufficient dressing of manure. It is then ready for planting. The next step is to see to the roots of the hedge. All hedges on the side of a ditch are apt to get their roots stripped through the falling away of the earth from one cause or another. This has the effect of starving the hedge, allowing the wind to sway the bushes and filling the ditch. If there are rabbits or rats in the bottom of the hedge, these must be banished first. Then the side of the ditch under the hedge must be prepared to have the soil returned. If the soil is simply shovelled up and thrown up among the roots of the hedge, it will soon slip down again if there has not been a proper preparation.

Where there has not been an extraordinary loss of earth this preparation will consist in making a ledge about one foot below the base of the hedge, by cutting a notch about three inches deep along the face of the bank. Where there has been much fall it will be necessary to build up a ledge from below. Long, tough sods, a couple of feet long, nine inches broad and four inches thick, are then to be laid edgewise on the ledge, grassy side out, and beaten firmly to the bank with the back of a spade. If these sods are cut with sloping ends instead of square ones the neighboring sods will overlap and soon knit together. As the grass grows the roots will penetrate the bank, making the whole secure. After these sods are beaten in, a second layer of sods, six inches broad and four inches thick, is laid on the top of the first, extending backwards towards the roots of the hedge. This layer is to be put grassy side down, so as not to choke the hedge. The ditch is then shovelled out, and the earth thrown on top of the sods and worked in among the stumps of the hedge.



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## Annuals, the Garden Reinforcements

(Continued from page 19)

the rich golden color of its blossoms into harmony with the other plantings. The white stock and Mourning Bride planted nearby, however, will insure perfect peace.

Phlox Drummondii seeded in early April, and portulaca in June, among the sweet williams, will clothe such plantings the rest of the season with the same bright cheery effects. These annuals succeed best when sown in the open garden where they are to flower.

The white variety of nicotiana and summer cosmos are ornamental and useful plants to fill in vacancies left by tall flowering perennials—hollyhocks, delphiniums, Job's tears, coreopsis, garden heliotrope, and Madonna and Auratum lilies, etc., etc. Such seed may be sown broadcast if desired, but I find it more satisfactory to transplant the plants from pots, for in this way one is able to fill existing vacancies as needed.

The most important annuals of all, perhaps, are those which bring the whole planting scheme into a grand harmony of glowing color. This honor is imposed upon the varieties bearing white flowers and such plants cannot be used too generously. Planted singly and in masses wherever they may be crowded in, the snapdragon, Empress candytuft, petunia, aster, stock, Mourning Bride and tuberosa will be found especially worthy in bringing about this happy condition.

The perfect garden, perhaps, exists only in dreams. And yet, although the true workman is never satisfied with what he has wrought but is ever visioning new and rarer beauties to be achieved, happily, it is possible to create a garden filled with loveliness that will radiate with joy and happiness throughout the golden days when spring, summer and early autumn hold sway.



## A Commuter's Vegetable Garden

(Continued from page 30)

celery plants, where the potatoes came out. Such little labor-saving schemes are worthy of consideration by the commuter, whose every minute counts.

The whole time I spent in this garden averaged about twelve minutes per day, from early April to late August. I found that various obstacles arose to prevent working continuously, or for a regular length of time each day, but I aimed to work about a half-hour at a time, as it hardly paid to get out the tools and put on old clothes for a shorter period.

The patch was in very poor shape to begin on in April and it required some strenuous digging to get it ready. It would have been much easier if it had been ploughed and fertilized the previous fall. For cultivating I found the wheel hoe of great value, and am tempted to

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think that had the original "man with a hoe" been provided with one of these useful instruments, he might not have been held up to the world as a "brother to the ox." I fertilized the garden with stable manure and the ashes from some burned cow-pea bushes.

Aside from the value of the vegetables, the benefit of the fresh air and good exercise is of great importance to the gardener, for the bracing morning air is a veritable tonic to him and gives him a keen appetite. Likewise if his business hours are such that he can put in a half hour before dinner at night, he will soon forget his office concerns and be able to enjoy his evening meal with added zest, and the satisfaction of having on his table something that his own efforts have helped to produce. In every respect I found my commuter's garden a source of satisfaction and success and would urge others to try it.



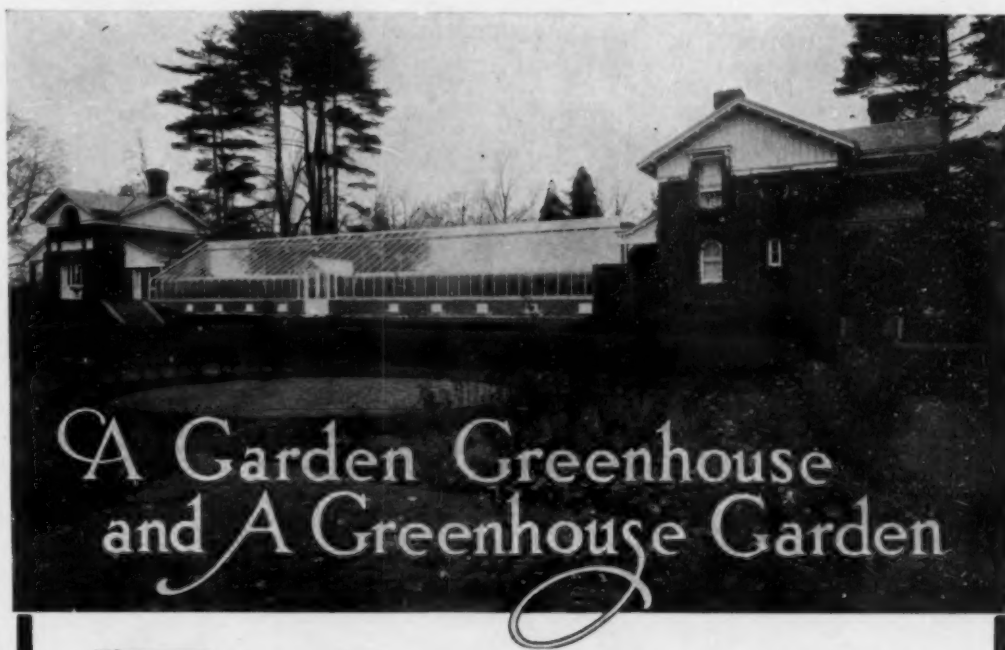
### Remaking a Small Lawn

(Continued from page 40)

place your order until you are satisfied that you are going to get the best possible value for your money. You need not be an expert on grasses, or even a partial expert, to find out certain things about grass seeds that probably always escaped your notice simply because you did not know how to go about searching them out. Judging from the literature spread about the country one might be led to believe that there were several thousand kinds of grasses adapted to lawn use, and that besides these many kinds that there were certain individuals who had the monopoly of a few other mysterious kinds known only to themselves. All this makes good advertising literature of the spellbinder type, but when the matter is sifted down, the truth will show that the list of seeds available for making a lawn is very short. When this is known it is up to the purchaser to get busy to get the first quality of these particular kinds.

Even where but a small quantity of seed is to be purchased the same precaution should be followed, and under no circumstances should seed be purchased in already prepared packages. Your need for the small sowing is proportionately the same as for the larger and the care consequently in selecting should be the same. If combinations of seed are used—Blue Grass, Red Top, bents—sow from two and one-half to three bushels to the acre.

Before sowing try the following way to administer fertilizer. Take sheep manure and subject a quantity of it to a strong heat, not hot enough to cause ignition; after this powder it very fine and mix it liberally with the seed that is to be sown. Or, instead of mixing with the seed, spread it over the ground just before the seed is put out. This treatment has a



## A Garden Greenhouse and A Greenhouse Garden



Standing at the opposite end of the sunken garden, this interesting, attractive grouping faces you. It fits in wonderfully harmoniously with the garden scheme. A very natural linking of the two gardens—the outside and the inside ones. The outside one, beautiful for but a few short months at best; the inside one, a wealth of rose blooms practically the entire year around.

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stimulating effect on the new grass and not only produces an early growth but seems to cause the grass to thicken and endure much better than that which is treated in the usual way. There is absolutely no danger of the manure hurting the young grass, but as has been said it will be directly beneficial; not only that, but the liability of a crop of weeds is overcome.

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Regardless of the seed sown it should all be tested so as to determine its exact quality.

Clean seed is absolutely necessary to get good results. Much of the seed on the market is positively dirty, with a large percentage of chaff and weeds. If care in selection is not taken this is what you are very apt to get. In the first place, seed should be bought by weight specifying the number of pounds per bushel instead of taking the bushel regardless of what the contents weigh. For instance, selected Blue Grass seed will weigh about twenty-five pounds per bushel and will be almost wholly clean seed, while the ordinary seed sold by the measure will average about eleven to thirteen pounds to the bushel. Surely there is something suggestive of wrong here. It means simply that the seed weighing twenty-five pounds to the bushel has been recleaned and all deleterious matter removed, reducing the bulk to available seed. The other seed has not been cleaned and may contain a little of everything objectionable with a bulk of chaff and a lurid assortment of weeds. You have got to pay a good price for this pure seed, but it certainly is worth it, for by its use you get results.

When about to order seed send to a number of dealers and have them send you a sample of Blue Grass (Kentucky and Canadian), Red Top, R. I. and Creeping bent and Sheep fescue. Have them mark on each envelope the name, weight per bushel and price. After receiving them make a comparison. Examine some in the palm of your hand, spread them out on paper and even use a magnifying glass. Under such a procedure it will be quickly demonstrated that all grass seeds are not alike and that even in the supposedly best there are things that are not supposed to be there. Go a little further and test for germinating possibilities. Sow the seed in pots or shallow boxes and put a label in each pot or box stating the name of the grass seed, the time of sowing, and the name of the firm from which it was received. Note the time of appearance of

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the seed in each pot and also the percentage of losses. Doing this will give a still further line on what you may expect from the samples of seed submitted. As on the success of the sowing on your grounds will depend the excellence of the turf, no effort should be spared to settle the question of what seed to use.



### System in the Vegetable and Flower Garden

(Continued from page 36)

in a border, or long narrow bed only a few feet wide. It should be wide enough, however, so that grass roots will not steal all the plant food in it. Three to five feet is the usual width; and it is a good plan to take the spade, or "edger," and cut down a foot or so all along the edges, say once a month, to cut off intruding roots of all kinds.

A good plan is to have the hardy perennials, which as a rule grow taller than the annuals, in the back part of the border, with a strip at the front for annuals.

Edgings are usually made of low-growing, free-flowering plants of a single color—although exceptions to this rule often produce very striking and attractive results. The quick-growing annuals, if sown when the beds or borders are planted, will be in flower in time to use for this purpose. Edgings are used for both beds and borders, and if judiciously chosen add very greatly to the beauty and finish of the flower gardens.

Beds for flowers are made in all sorts of shapes and sizes, and placed in all sorts of situations, but the old-fashioned sorts of carpet bed, design beds and circular beds with rows of different and contrasting colored flowers are fortunately giving place to more simple and artistic uses. Flowers used in masses are both more effective and more natural, and a little care used in planning will assure harmonious colors and succession of bloom until after frost.

If one has but a few dollars to spend for the beautifying of the grounds, it cannot be better used than in getting seeds of choice sorts of the old favorite flowers, a great many of which, in the last few years, have been very greatly improved. Care will be required in getting them safely started; many of them, after that, grow like weeds, and yield a profuse harvest of beauty and joy all summer long.



### The Perennial Garden from Seed

(Continued from page 39)

crape, add to the beauty of this variety. The plant itself, however, is not nearly so vigorous or symmetrical as the *elatum* larkspur and its hybrids. A pleasing

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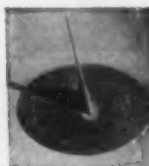
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dwarf delphinium, the *Belladonna*, has in addition to great beauty of flower—the color of the true *Belladonna* is an exquisite turquoise blue—the merit of being almost everblooming. The young seedlings begin to flower early and in favorable locations bloom continuously until hard frost.

For background effects four very desirable perennials are the old-fashioned but always beautiful hollyhock, single and double; the plume poppy, *Bocconia cordata*, with splendid foliage and tall spikes of creamy white flowers; *Boltonia latistachya* and *asteroides*, tall, erect-growing plants bearing in September and early October innumerable daisy-like flowers of pink and white; and the hardy chrysanthemums, the old pompon varieties and the new, extremely beautiful large flowered singles.

A medium tall and bushy perennial that may be had from seed is the pentstemon or beard tongue. Pentstemons, with the exception of the half-hardy variety *Sensation*, will seldom flower before the second year, but the foliage, being rich and heavy, makes a good background, during the period of waiting, for plants of dwarfer habit. The flowers of the pentstemon resemble those of the *gloxinia*. The best varieties are *Barbatus Torreyi*, brilliant scarlet; *Heterophyllus*, an azure-blue, semi-dwarf variety, and the *Pulchellus* hybrids, varying from white through rose and maroon to purple.

For background planting in a shady border or for naturalizing under trees the *digitalis*, better known under its common name of fox or fairy-folks' glove, is invaluable. In New England, unfortunately, where our winters are severe, it is almost a biennial, yet, as it readily propagates itself from seed, no garden once beautified by its presence need ever be without it. *Digitalis* blooms the second year from seed, throwing above the broad-leaved foliage tall four to six feet spikes, tapering gracefully toward the top and densely clothed with funnel-shaped flowers of pink, rose, white and purple, the interior white spotted and blotched with crimson or purple. Fifty to a hundred of these spires lifted between tree trunks against a mass-planting of crimson-eye hibiscus suggests a piece of transplanted woodland.

The crimson-eye hibiscus is an improved form of our marshmallow. Seedsmen promise that the plants shall flower the second season from seed sowing, but in my own and a neighbor's experience, it has been the third. However, the flowers are well worth waiting for. The plants, being shrub-like in character, make a good background before their year of flowering. And when the huge silky white blooms, with their centers of deep crimson, begin to unfurl, the householder has something besides the cement and shingles of his house to be proud of. From a ten-cent packet of crimson-eye hibiscus I grew twenty-four white, two pale salmon (evidently sports and very beauti-



ful) and two deep rose. These were planted in the shady portion of my border with foxgloves for June blooming, aconite for fall, and a scattering of columbines for spring in the foreground.

Of the columbines or aquilegias, there is a bewildering number of good varieties, but the beginner will do well to confine himself to the large flowered white, *nivea grandiflora*, a quick and strong grower; Rose Queen, and the blue and white Rocky Mountain columbine, *Aquilegia caerulea*. The *caerulea* hybrids and *Skinners*, a large flowered yellow, with red spurs, are also good.

A pretty, easily raised perennial is the blue flax, *Linum perenne*. This begins blooming in June, when it is a sheet of delicate blue flowers, and continues to bloom more or less freely until fall.

Seeds of *Polyanthus* or bunch primroses may be sown in January for spring and early summer flowering. The primroses are charming dwarf plants, good for edging beds or for using as undergrowth. I have used them effectively to carpet a bed of Japan iris. Like the irises, they enjoy a good deal of water during their period of flowering.

A perennial that everybody with a bit of shade wants is the forget-me-not. *Myosotis palustris semperforens* will bloom in the spring from January sowing. So also will all varieties of dianthus and the everblooming sweet-william, which flourishes under the somewhat formidable name of *Dianthus latifolius atrococcineus* Fl. Pl., a crimson-scarlet double pink borne in graceful sprays, excellent for cutting. June pinks, sown early, make large tufts of blue-green foliage and will often bloom a little the first summer, but it is in the second summer that the patient gardener has his reward in the sheet of pink, white and rosy-crimson, fragrant flowers.

A handsome perennial for late summer and autumn flowering is the gaillardia (Kelway's hybrids), very gorgeous with its rings of red, crimson and orange. The upper root of gaillardia frequently winter-kills, but the lower root almost invariably sends up from six to a dozen shoots, so that, once introduced, the gaillardia may safely be reckoned a permanent inhabitant of the garden.

Perennial phlox seed germinates readily provided—and the provision is all-important—it be sown immediately upon ripening. Therefore do not buy perennial phlox seed in the spring. In September the seed ripens, and in September or October, accordingly, the seed should be purchased and sown. The seedlings grow rapidly and bloom during their first summer.

A perennial much advertised of late is the Dropmore anchusa. It is undeniably beautiful in flower and the seeds germinate very readily. I have not, however, found it very hardy. To me a more satisfactory and really more beautiful variety is the often overlooked, certainly seldom mentioned dwarf *Anchusa barrelieri* with



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a profusion of spring blossoms as blue as the bluest spring sky. From August sown seed, the *Anchusa barrelieri* will bloom the following spring.

There is no spring-flowering perennial, however, so brilliantly showy as the oriental poppy. A large bed of it, or better, a mass planting in the border, paints a garden picture not to be forgotten. The huge, flaming blooms, with a black blotch in the center, are carried on stout stems three and sometimes four feet in height above splendid, fern-like foliage. There are now beautiful hybrids of this poppy, the most distinct of which are Blush Queen, pale pink; Princess Victoria Louise, salmon pink; and Beauty of Livermere, immense, deep blood-red. Poppy seed should be sown on finely sifted soil and barely covered. Do not allow the soil to dry out. It is best to cover the box or bed in which it is sown with a piece of thin cotton cloth or a newspaper until the little plants are up; then air and light must be given them. If the seed is sown in spring or early summer the oriental poppy will bloom the following spring. Each plant eventually forms a large clump, carrying thirty to forty flowers. A bed of scarlet oriental poppies during a spring rain certainly lightens the dreariest landscape and makes positively cheerful the most sullen and lowering day. The new householder should certainly plan for fifty or a hundred of these. Two ten-cent packets of seed will meet the demand. When oriental poppy seedlings are planted in their permanent location, they should be associated with plants that bloom later, for the foliage of the hardy poppy dies down after the plants have bloomed and does not reappear until August. I have tried various cover-plants, forget-me-nots, pentstemons, snapdragons, and phloxes. Of these I have found snapdragons and phloxes the best. If phlox is chosen, the plants should be set every few feet throughout the mass planting of poppies. If snapdragons are selected, it is better to alternate them with the poppies. Instead of setting the poppies two feet apart (to provide for future growth), allow two and a half, and in the center of these spaces plant, each spring, the little snapdragons.

Snapdragons are tender perennials, but they are very easy to raise and charming in flower. They come in a wide range of color from creamy white and yellow to salmon-orange, and from pure white, through beautiful pinks to rose, crimson, and maroon. Seeds of the tall snapdragon, *Antirrhinum major*, should be sown very early in boxes indoors. The plants begin to blossom in midsummer and flower until frost.

One of the most reliable tenants of our gardens is the great family *Campanula*. From the tallest, *pyramidalis* (chimney bell-flower), to the dwarf *Carpatia* much used for edgings, all are good. Perhaps the best of all are the *Persicifolias*, single and double, and the well-known Canterbury bell, *Campanula Media*, with its even

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handsomer variation *Calycanthemum*, cup-and-saucer. It must not be forgotten that the Canterbury bell is a biennial and that seed of it must be sown every year. It is so beautiful, however, that few who have once enjoyed it in their gardens, grudge the labor of sowing a few seeds of it every spring. The campanulas should be had, if possible, in variety, as many of them bloom at a period when little else besides spiraeas and the oriental and Iceland poppies are in bloom.

The Iceland poppy, like the crocus and scilla, is the harbinger of spring. Before the snow has entirely disappeared, the reddish-brown tufts of foliage begin to don a spring-like green and little buds, for all the world like tiny down-covered heads, begin to show. As if by magic these little heads shoot up on long, slender stems until, as by a preconcerted signal, the little caps pop off and a mass of crinkly, silky flowers of yellow, scarlet, orange and white appear, as cheerful, inspiring, and charming a sight as so many golden daffodils, and much more graceful. The Iceland poppy is hardy in most localities for about three years, but older clumps, enfeebled, perhaps, by too persistent flowering—for these little plants are great bloomers—often winter-kill. In raising Iceland poppies from seed, care must be taken to keep the soil in the seed box moist, but not wet, as in a heavy wet soil the seedlings damp off badly.

A plant little known in this country, though much grown in England, is *Mecynopsis Wallichii*, a native of the Sikkim Himalayas, and a near relative of the poppy family. It is a stately perennial, three to four feet high, bearing light blue, poppy-like flowers in July and August. If the amateur wishes something rare, he might try this and its yellow brother, *Meconopsis integrifolia*. Seed of both these varieties may be obtained from seedsmen in America.

The number of hardy plants that can be easily and satisfactorily grown from seed is almost legion, and the writer, no less than the gardener, needs to practise restraint. The householder has to think of individual requirements, of the desirable or perhaps necessary location of his border, of its possible length and breadth, of the need of shade plants, or of those that luxuriate in the sun, of tall perennials for the background, of dwarf plants to edge the grass; but he has a large list to choose from and if the directions usually printed on seed packets be followed with intelligence there is no reason why he should not create a setting for his home that will lift it above the ordinary.



### The Naturalizing of a City Man

(Continued from page 31)

in rows of thirty inches instead of thirty-six inches apart, and cut in larger pieces than the Squire had cut his—and

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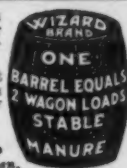
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Both quotations above are from Bulletin 95, (page 44) U.S. Dept. of Agr. (Forest Service), June 30, 1911.

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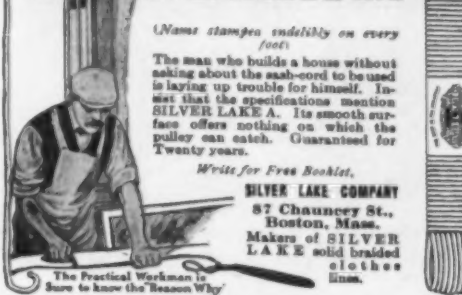
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consequently they had to buy several bushels more of seed to plant the area they had figured on. They had to plant by hand, as the only machine planter in the neighborhood was engaged for days ahead. They had, however, at Raffles' instigation, invested in a covering attachment with the cultivator they had bought; and as everybody, women folks and all, turned out to help drop the seed, leaving Mr. Mantell and Raffles free to furrow out, sow the fertilizer, run through the rows to mix it with the soil and then cover after the droppers, the work progressed rapidly, for "many hands make light work"—when they are all interested in the job.

Another result of their trip to the station was that, while the Squire had planted potatoes before they did, their corn was in fully a week before his, and the earliest of any in the neighborhood. Also it was put in deep—"so deep," said the Squire, "that it will never come up;" and on some of the Squire's low, heavy land it probably never would have. On Mantell's light, sandy loam, however, it did, and because he had tested his seed, and knew just how thick to plant it, he got almost a perfect stand, even with the high priced new sort that had tested only sixty-nine per cent. in his trial.

If Mantell's new-fangled ways of planting—he had, for instance, spread all his corn fertilizer over the ground and harrowed it in, instead of putting it in the hills—amused the Squire and his neighbors, they were still more amused at the way he started in to cultivate them. His fields of corn and of potatoes were not large, and the potato field was gone over three times and the corn field twice before there was a plant above ground in either. For this purpose they used a heavy "brush" made of straight young birch trees. At the Experiment Station they had seen a new steel harrow, with spike teeth, adjustable by levers, and with a spring tension for each row of teeth. Mantell could see that this was a great improvement over the harrows he had seen around Priestly Junction, but as the treasury would not stand the strain of getting one now, he decided to get along without any at all that season, instead of buying a cheaper one. He made it a fixed policy, when buying any machinery for the farm, to get the very best, and then take the very best care of it. Not infrequently, in his drives around the country, he had seen plows and cultivators that had been left in the field where their owners last used them, and even a mowing machine stored under a tree—and by men who had a nation-wide reputation for being thrifty!

The reclaimed quarter acre was at last ready to plow. They had spent hours of drudging toil on it—many more than Mantell had anticipated putting into it when he and Raffles staked it out. Jeremiah had promised to plow it for them, and finally turned up; but after working



two hours he gave it up as a bad job. There were not many stones, but the scrub oak stumps and roots were a hard proposition, and back went Jeremiah with still stranger tales of Mantell's craziness. So they fell back on the Squire, and he sent a man over with a yoke of "cattle," and a plow that seemed to have belonged to an era previous to that of the original "man with the hoe." They were slow—"slow as molasses in fly-time," as their driver explained—but they did the work. Mantell and Raffles were kept busy with Prince and the Squire's "stone-boat" on which the ancient plow had been conveyed over to the battlefield, carrying off stones, stumps and roots. After the best they could do with it, it still remained pretty rough-looking and the rows they furrowed out took rather sinuous courses. But there was plenty of dirt, and it was very good dirt, too.

Mantell had saved for this field the barrel of extra choice potatoes. They were cut carefully, in generous-sized pieces, and covered by hand, too, as they could not cover with the horse and cultivator in these crooked rows. Another reason was that these potatoes had been spread out in shallow boxes under the greenhouse bench for several weeks, and now had stubby green little sprouts just developing, which they wanted to be careful not to break off.

It was almost three weeks after the Squire's potatoes were planted—in fact they were already breaking through the ground—before this little patch went in. It happened to rain soon after it was planted, and they were able to get over it with the "bush" only once before the little green sprouts were pushing up through the soil, and in two weeks they had fully caught up with Mantell's earlier planting, and seemed to be making a brave effort to catch up with the Squire's. This experiment received Mantell's special care, and nothing that he could find out about the way of cultivation was neglected for them. The result was that they kept up a rapid growth from the start, and his scrub oak field soon began to be famous.

### VIII

The month of May was of course a very busy one in Raffles' Department. Not only were they busy planting and taking care of the crops in the ground, but other momentous things happened. The first bunches of radishes and the first heads of lettuce were taken to market. Great was the excitement at the offices of the company—as great as if they had been children.

The very first heads were from three of the coldframes, which Mantell had managed to empty in time to set out a few dozen of the largest lettuce plants, with radishes between. There were only three frames available for such use, the first being full of spring plants. From these, however, they marketed eight dozen lettuce at sixty cents a dozen; two dozen bunches of beets at ninety cents and nine dozen

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Outside View



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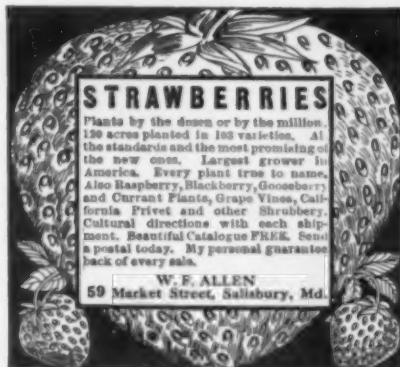
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bunches of radishes at forty cents a dozen—\$10.20 in all from the three sash. These were ready ten days before any of the outside stuff, but with this too they had the satisfaction of getting the earliest in the neighborhood. Mr. Goldman, the butcher with whom they dealt in Priestly, was glad to take all these things, and very pleasant about giving them pointers as to how to tie them up, prepare them, etc., as Raffles had had more experience in growing things than in marketing them.

Another exciting event of the May season was the "run" they had upon the greenhouse for a week previous to Decoration Day. Raffles had insisted on putting a small part of the meager sum available for greenhouse expenses into flowering plants of one sort and another, and had about 150 geraniums and small supplies of several other plants in stock. Mantell had not approved very heartily of this side line, but thought it best to let Raffles go ahead and try things out as long as he was such a ceaseless worker and seemed interested in this hobby.

Great was Mantell's surprise, upon being called in from the garden one day to attend to the needs of a lady customer—Raffles having gone over to the Squire's to return his post-hole digger—to find that practically all these fancy things had been cleaned out. For a week he had been very busy and had not happened to take any notice of things in the greenhouse. This sudden disappearance of things he was at a loss to account for, until Raffles explained to him how many purchasers they had had, and reminded him how the numerous small orders for vegetable plants had counted up.

All this set him thinking quite seriously, and upon further investigation in town, where he found out that his friend Goldman had bought ten to fifteen dozen geraniums and dozens of pansies every spring from a florist some miles distant, and sold them all without trouble from a stand at his door, Mantell decided that this end of the business was worth expanding. They could easily have disposed of several times the quantity of early vegetables they had grown under glass, and were sold out clean on cabbage, cauliflower and lettuce plants, and this all in the first season, and with a brand new business. It was very evident that another year they would have to have more "glass."

With the beginning of the marketing of the garden vegetables the financial situation was beginning to be relieved a little—they had been through pretty hard times. There had been times when, in spite of the closest economy, there had not been cash for the grocer and butcher—times when if Raffles had been drawing his full wages, they would have been in distressing poverty. As it was, Mantell's little capital was eaten up, and they owed some bills—besides \$75 to the Squire for fertilizer. At the most critical time they had let two of the four pigs go to Goldman—they had cost \$8 and brought, after about four months, \$19.60, which, needed for





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We can furnish all Herbaceous and Perennial plants for your flower gardens. Let us make you a planting plan for your place. Now is the time to arrange for spring work. Don't delay making your plans until it is time to do your planting. Write for descriptive catalogue D today.

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grain and seed, had saved the day.

On the other side of the balance sheet, however, were health and happiness unbounded for the whole family, many permanent improvements on the place, a good garden and some field crops well started, quite a nice little beginning in the way of farm machinery, and several good new friends, among them the whole-souled and open-hearted Squire, worth his weight in gold.

Mantell enjoyed the garden work immensely, and found it a labor of the head as well as of the hands. There were sharp observations to be made, conclusions to be drawn, enemies to be circumvented, labor-saving ways of doing things to be figured out. There was also a joy to be taken in the care of the field crops, in cultivating and hoeing the potatoes and corn. This was more routine work, and while not so interesting, nevertheless it left more time to drink in the unlimited sunshine, to compare the new, more natural life with the rush and worry of the old, to philosophize a bit, and above all, to turn over and study the many problems that presented themselves, and to develop plans for the coming year. Already it seemed to Mantell that he could see a hundred mistakes in everything he had done. The whole thing became a great and absorbing game to him, ever in his thoughts but never tiring. He was a great reader, and not a few dollars for which there were many other uses found their way to the office of a publishing house that made a specialty of agricultural and horticultural books. One in particular—Terry's A. B. C. of Potato Culture—proved an inspiration to him. He found in it not alone notes on the cultivation of that humble but valuable tuber, but almost a new philosophy of life, all the better because its author never dreamed of being a philosopher. Not even the Squire's big pair of grays could have dragged Mantell back to his old life again. Wealth had ceased to become a goal to him. Not but that he appreciated the comforts of life, and had every intention of winning back many more of them than they at present possessed, but money was no longer an aim in itself. Success he wanted, and meant to achieve, but there was a deeper joy in his present battle for it than he had ever discovered in his fighting in the years that were left behind.



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blooms, a total of eighty-two on one bulb. The first flowers opened on October 15th, and I had some flowers at the end of January. The treatment which has produced good results with about a hundred pots of it was as follows: As soon as the flowers are over, the pots are laid on their side, beneath the staging of a house with a temperature of 55° to 60°. About the middle of March, when the new growths begin to push from the base of the bulbs, they are shaken free of the soil and well washed in warm soapy water before being dipped in the best insecticide for mealy bug and brown scale. The roots are shortened to about an inch, and then potted in a compost consisting of two bushels of good fibrous loam broken up into pieces about the size of a walnut, one bushel of peat fibre, chopped sphagnum moss, half a peck of half-inch nodules of charcoal, half a peck of dried cow manure broken to pass through a quarter-inch sieve, one bushel of oak leaf soil, half a peck of quarter-inch bits of soft brick, and half a peck of clean silver sand. These are thoroughly mixed, and then warmed in a house for three days. The bulbs are potted singly, the largest in six-inch pots, the next size in five-inch pots and the remainder in threes in six-inch pots. The pots are filled to one-third of their depth with clean crocks, over which a layer of the rougher portions of the compost is put; the bulb is then held in position and the compost pressed firmly into the pot, the roots left on them serving to hold them firm until new roots have gained a grip of the compost. When finished the base of the bulb is just below the soil, room being left for top dressing when the pots are well filled with roots. When firming the soil round the bulbs care is taken not to injure the new rootlets which emerge from the base. All the bulbs being potted, they are placed in a house the temperature of which is kept at 55° to 60° in winter and 60° to 70° in the summer. An ordinary side stage covered with shingle or ashes is a suitable position, setting each pot on an inverted five-inch pot so that it will be convenient to dampen the shingled staging, etc., several times a day with a small watering pot. It is not advisable to syringe the calanthes unless the temperature is higher than the figures given, as if the leaves are wet in a low temperature the foliage is likely to be disfigured with black spots. Until the young growths are growing nicely, usually early in April, the plants are not watered, the soil being kept all the while on the dry side. Beyond the maintenance of the required temperature and shading there is little to be done, except removing superfluous growths, only one growth being allowed for each bulb. From the middle of June, or when the growth begins to bulb, a stimulant is given, liquid cow manure and soot water being good. A month later a top-dressing with a mixture of loam, leaf soil, cow manure and brick rubble in equal parts, and all passed through a quarter-inch sieve, may be given, after which clear water only

(Continued on page 66)

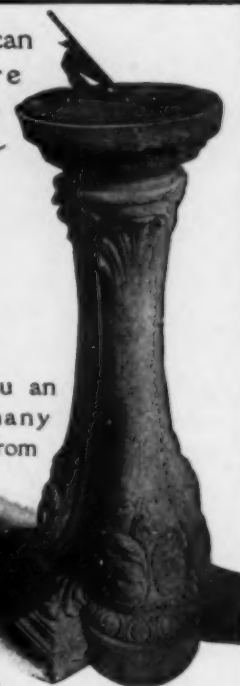
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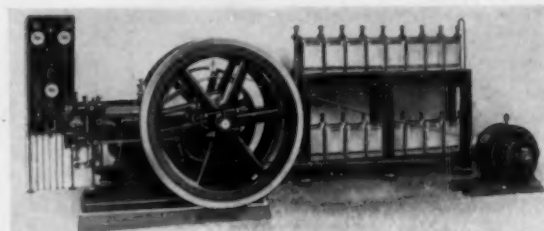
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(Continued from page 64)

should be used. When the flower spikes show the feeding may be resumed. As the day grow shorter and the sun less powerful growth is slower, until about the middle of October, when the leaves begin to sicken and fall off. Less watering is then required, and in November it may be discontinued entirely. W. R. GILBERT



## Garden Suggestions and Queries

(Continued from page 47)

rows, we have masses, borders, edgings and beds. They are, however, very nearly analogous.

Plants in the border are usually planted in single clumps (hills) several feet apart, so they can be worked between. The hardy perennials which have a tendency to spread and form a solid mat will do much better if they are kept cut down to smaller clumps, either by lifting and dividing, or by cutting part of the root growth at the end of each flowering season.

The counterpart of the drill is found in edgings, where the seed is sown thinly in a continuous shallow drill, or the small plants set close together, so that when grown they will form a long narrow ribbon of color or of bloom, in front of taller growing plants.

Flowers set out in beds are usually planted in straight rows, eight to twenty-four inches apart, so that during their early growth they may be easily cultivated and develop evenly.

For mass effects, they are either planted close together or the seed is scattered broadcast, so that the individual plants are lost sight of. Many of the half-hardy garden annuals are used most effectively in this way. It is well, when sowing seeds by this method in the open, to work up the ground as soon as possible in the spring, and let two or three crops of weed seeds sprout, and be hoed up, before the flower seeds are sown.



## An Experimental Year in a Flower Garden

(Continued from page 24)

The cosmos got a late start and gave me no little anxiety, fearing it would not bloom before frost. I had never seen them, but their beautiful, finely-cut foliage made a far better background than was possible with the peas. I read that to pinch out the top would induce earlier bloom. This I did on a number, but without noticeable results. In order to throw the strength to the top, I pinched off quantities of lower buds. These plants, four to six feet high, began blooming the fourteenth of October, and were

(Continued on page 72)



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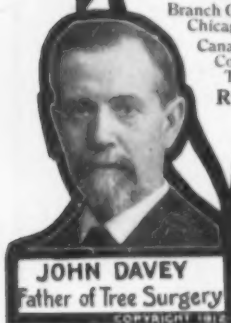
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## A Common Sense Explanation of Fertilizers

(Continued from page 17)

the son poor." In spite of this dire prophecy, liming is an excellent practice and the amateur gardener should lime his ground every two or three years, especially if it is located in a damp place where there is poor drainage.

The chief purpose of this article is to simplify if possible the subject of artificial fertilizers, phosphates, bone dust, guano and the like. Where we are unable to get sufficient manure the use of one of these is almost essential to continued success with the home vegetable garden. Until the laws of most states made it a requirement of law for the fertilizer manufacturer to print on the bag the formula of the particular fertilizer that he was selling, it left the farmer almost in the dark whether he was paying twenty or thirty dollars a ton for something that would actually make his crops grow or for something that had as little fertilizing properties as an old shoe. Experiments have shown that to obtain a maximum yield of various crops, fertilizers should be used to meet their especial requirements. That is what all the big books are written about. The small gardener need not concern himself about this, however. The kind of fertilizer for you to use is the one called "a complete fertilizer." It is simply a standard general fertilizer. A very good mixture contains 3 per cent. of nitrogen, 8 per cent. of phosphoric acid and 12 per cent. of potash. The quantity to use will depend upon how much manure you have used. Where practically no manure is available, five hundred pounds to the acre is a safe quantity. Most home gardens are considerably less than an acre in extent—which is 43,560 square feet or about 207 feet on a side. It may be calculated that 500 pounds to the acre is equivalent to three pounds to the square rod or about an ounce to the square yard. This is not an absolute rule, and nothing very serious will happen if you use a little more or a little less. It is very important to keep any kind of fertilizer away from direct contact with the roots of growing plants.

Where you do not wish to broadcast a fertilizer, but to apply it directly to the rows where the plants are to grow, the fertilizer should be worked in with a hoe around the plant and not be thrown in a heap against it. An excellent practice is this: after we have made our trenches or rows where our seeds are to be sown, sow some fertilizer along these rows and then drag a chain over it. It will be mixed with the soil and will be just where the growing plant can get at it when it sends out its rootlets.

My garden consists of about half an acre. When I started it, the plot was a piece of sod ground that twenty years before had been a corn field. When I took

(Continued on page 70)





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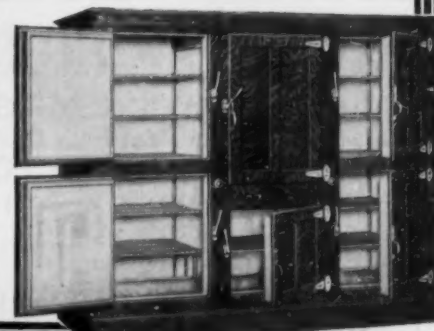
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(Continued from page 68)

hold of it, it was grown up with weeds, wire grass and blackberry briars. A litmus paper test showed that the soil was distinctly acid, a condition that I suspected in advance, as it was a heavy clay soil with poor drainage. The first step, in early October, was to cut and burn all the weeds and rubbish on it. It was then given a heavy coat of air-slaked lime—about a ton for the half acre. The soil was then thoroughly plowed and left to rot the sod through the winter. During the cold weather all the manure I had available was hauled out and spread on the ground. In the spring the garden was cross plowed and harrowed and a portion was designated to the semi field-crops, such as corn and potatoes. The balance was devoted to small garden truck, such as peas, beans, radishes, lettuce, onions, etc. Everything was planted in rows. Beds have become obsolete since the day of wheel hoes, but that is another story, as this is not an article on gardening.

I had saved about half a load of the best well rotted manure that I had and this I used to put in the lima bean hills and around the cucumbers, tomato and pepper plants or wherever I thought an extra feed was required. I also had a barrel of manure water which I used to water the plants that required watering. The potatoes and corn were given a treatment of commercial fertilizer. I used about 300 pounds to a plot, perhaps a little more than a quarter acre in extent. I also bought ten pounds of nitrate of soda which I applied in liquid form; a handful to a watering can of water to the peas and beans. This material is simply wonderful in its effect upon growing plants. It is extremely soluble in water and rich in nitrogen. As a whip to the laggards in the garden it will produce marvelous results. Then perhaps you will ask "why not use it entirely?" The answer is that it is too expensive to begin with and in the second place it contains but one of the three essential requirements in which a soil may be deficient, namely, nitrogen. We must also supply potash and phosphorus by means of stable manure or fertilizer.

Each year I top dress my garden with manure and in the spring buy a bag or two of fertilizer to help out. The result is that I always have a good garden. Perhaps my conditions are not entirely similar to other cases, but the general subject of gardening is quite similar in all cases. We must keep our gardens up to a high standard of fertility to obtain satisfactory results.

There is still another way of adding humus and nitrogen to a poor soil beside adding manure or fertilizer. It is by a process known as green manuring. It is the process by which a farmer plants a crop of clover or cow peas and plows it under. All the "leguminoids" or pod-bearing plants such as peas, beans, alfalfa,

(Continued on page 72)

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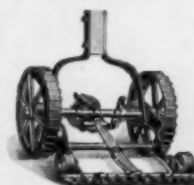
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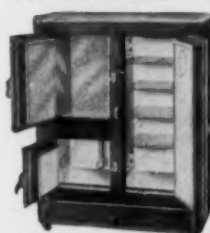


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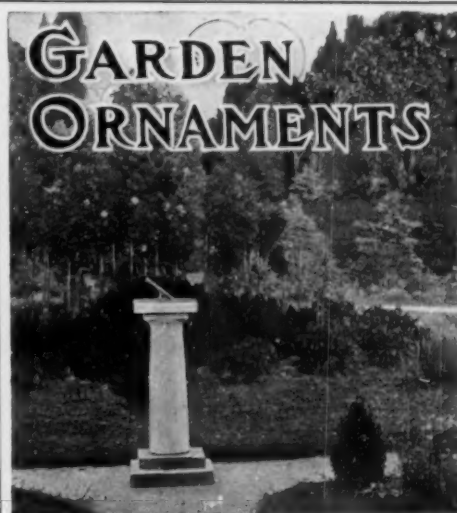
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902 Association Bldg. Chicago, Illinois

Correspondence invited

Do not fail to order one of my hanging when houses.



(Continued from page 70)

and clover leaf have the unique quality of taking nitrogen from the air by means of colonies of nitrogen fixing bacteria which live on the roots. This is useful to know in cases where we wish to bring up the fertility of a piece of ground without applying fertilizer directly. If we can obtain a good stand of clover and have it plowed under while it is still green we shall add just that much to the fertility of the soil.

The compost heap is an institution which every garden should have. It is simply a scientific garbage heap in which we store all sorts of kitchen refuse, vegetable matter and anything that will ultimately decay and furnish plant food. There are various methods of making compost heaps. The general practice is to mix the refuse with soil or sod and occasionally to add a layer of leaf mold. Another way is simply to dump the refuse into the manure pit. Needless to say a compost heap is not greatly enriched by the addition of old shoes, broken bottles, tin cans or articles of wearing apparel. Neither is it benefited by coal ashes, although wood ashes are excellent. Unless we keep it covered, it may be an incubator for flies to breed and if it is near the house, it may easily be objectionable on account of the odors that may come from it. In its place it is very little of a nuisance if kept covered with sod.

The conclusion of the whole problem of fertilizing is this: Use stable manure if you have it. There is but little danger of using too much. No one would pile it over the ground a foot deep. The danger is that you will not be able to get enough. The market price if you buy it is about two dollars for a two-horse load of well rotted manure. In the absence of sufficient manure, use some complete fertilizer.

If we intend to grow some special crop of fruit on a large scale, we should use a fertilizer to meet its special requirements. The manufacturers will not be at all backward in giving you advice about this. We can also use nitrate of soda to stimulate the growth of things that seem to be backward. We should never use fresh stable manure, as it heats in fermentation and will burn our crops. No amount of soil fertility will take the place of cultivation. In fact a rich garden only increases our fight against the weeds, as a weed is only a plant out of place after all. The richer the ground is the faster they will grow.

**An Experimental Year in the Flower Garden**

(Continued from page 66)

soon a mass of pink and white daisy-like flowers. There were hundreds of buds when frost became heavy enough to penetrate the light muslin covering. I had bought some of this cloth and torn it into lengths of one to three yards, and saved

(Continued on page 74)



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for Concrete**

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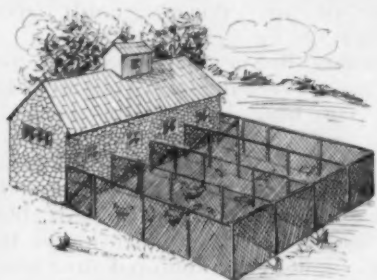


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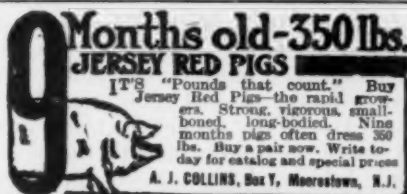
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Genuine "Standard" fixtures for the Home and for School, Office Buildings, Public Institutions, etc., are identified by the Green and Gold Label, with the exception of one brand of baths bearing the Red and Black Label, which, while of the first quality of manufacture, have a slightly thinner enameling, and thus meet the requirements of those who

demand "Standard" quality at less expense. All "Standard" fixtures, with care, will last a lifetime. And no fixture is genuine *unless it bears the guarantee label*. In order to avoid the substitution of inferior fixtures, specify "Standard" goods in writing (not verbally) and make sure that you get them.

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**W. ATLEE BURPEE & CO., Philadelphia**

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(Continued from page 72)

many of my flowers until freezing weather.

Another flower that gave us especial pleasure was the dahlia. They were beautiful not only individually, being soft pinks and yellows, but also because of their profusion. Blooming with the cosmos, vying with them, they yet ruled the garden during their period of bloom. This would have been much longer had I not too religiously followed directions in a newspaper to pinch off all buds appearing in July. There were dahlias all around me when my first blossoms came. This year there will be no dis-budding.

Among the perennials, the Iris was much enjoyed. It comes so early and lasts so long, each stalk producing so many flowers, that it has endeared itself to the family. I found that as the early hardy flowers came into bloom, each was welcomed with the promise of an increase in its present area, though it meant the encroachment upon our already too small lawn. I must confess that the first foxgloves and Canterbury bells I ever saw bloomed in my garden this spring. These old, old flowers were new to me and so interesting, particularly the foxgloves.

No flowers in my garden were so enthusiastically admired as the dahlias and cosmos. I think it was in part due to the number of plants and consequent luxuriance of the display in flowers. There should, I know, be a sufficient mass of one kind to get its full beauty. It is in this, I think, that the amateur in a small garden often fails. A few thin plants of various flowers, more or less isolated, too often form the sum of such a garden. I planted largely for color effect and in the very small spaces devoted to the several colors, I know I have a greater variety than I should. I am becoming familiar with the newer flowers and renewing my acquaintance with the old, improved almost beyond recognition, such as the petunia, snapdragon, cornflower, plummy cocks-comb and others. Next year I shall reduce the variety of annuals, having larger quantities of one kind and changing from year to year.

### The Utility Garden

(Continued from page 16)

be obtained before the fruit trees shade the ground sufficiently to render the strawberries unproductive. Even the tennis court in this particular garden was surrounded by a high wire trellis and covered with dwarf fruit trees.

When laying out the vegetable garden, plan to get all of the plants of the same family in the same section of the garden. For instance, the turnips, cabbages and other members of the cabbage family should be planted in close proximity. The following year a different family or class of vegetables can be grown on this land. It is necessary to rotate crops in this way

(Continued on page 76)



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are famous for their wonderful perfection and durability. Such lawns may be produced in this country if

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is used. No weed seeds or coarse grasses. The result of centuries of selection. Hardy and beautiful in color and texture. Send for directions—How to Seed and Keep a Beautiful English Lawn. Free.

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(Continued from page 74)

so as to avoid as much as possible trouble from plant diseases. This is particularly true of the cabbage tribe, for if grown several years in succession in the same ground the disease called club-root is liable to destroy all chances of a crop. In the vegetable garden everything should be planted in straight rows; this will facilitate cultivation. Where such things as lettuce, radishes and onions are grown in beds, it means a lot of tedious work on one's hands and knees to keep them free from weeds. Plan to get two crops of vegetables from the same piece of ground during the season. This can be done by having such late crops as late cabbage, cauliflower and winter celery follow the early potatoes and peas. Radish and lettuce seed should be sown once a week in order to supply a constant succession.

In planting the vegetable part of this garden, I would make a row across the yard about three feet from the strawberries. Half of this row I would put in asparagus and the balance in rhubarb, setting the rhubarb plants about four feet apart; the asparagus three feet. As I am very fond of corn I would allow two rows across the garden—one hundred feet—for sweet corn. I would use an early variety, such as Golden Bantam, making successive sowings, planting about thirty feet at one sowing, and making the sowings about two weeks apart. The hills of a dwarf variety, like Golden Bantam, should be about two feet apart. Two rows of peas would be none too much for me. One row across the garden—fifty feet—would be devoted to dwarf beans. I would make two sowings of these, twenty-five feet at a time. I would have another row of pole beans, making them about half lima and the other half of some variety like Kentucky Wonder. These do not come into bearing quite so early as the dwarf beans, but if the beans are kept picked they will bear until frost comes. Another row would contain ten feet of Swiss chard which will furnish a constant supply of fresh beet "greens" all summer. The balance of the row would be equally divided between beets and carrots.

A dozen tomato plants trained to stakes will furnish all the fruit a small sized family will need. Set the plants three feet apart. The balance of the row I would put to peppers two feet apart. In the next row I would put another half dozen peppers and fill it out with cabbage and cauliflower. The balance of the space I would devote to making successive sowings of radishes and lettuce. This amount of space, thirty by fifty feet, is capable of producing outside of potatoes practically all the vegetables that a family of three or four will need.

The small fruits, raspberries, blackberries, gooseberries and currants, may be grown as bushes in rows, or may be used singly just as one would place a shrub.

(Continued on page 78)





Home of Theodore Frelinghuysen  
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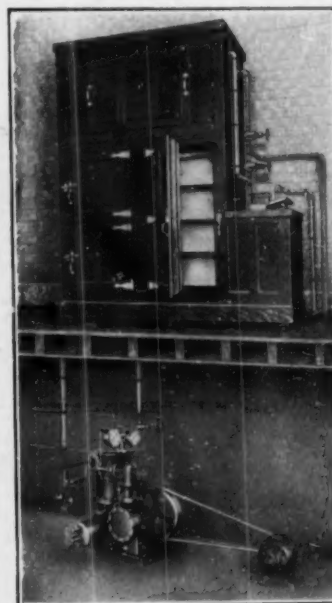
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**NATURAL GUANO COMPANY**  
Dept. 19, 301 Montgomery Avenue, Aurora, Ill.

(Continued from page 76)

Surely there are few of the purely decorative shrubs that can surpass the currant.

With these suggestions, then, let us attempt to get rid of some ancient conventions. There is no reason to think that the fruit garden need be relegated to the kitchen end of the house. Neglect for a while the fruit culturists' rigid rules for economical arrangement, and as you order your trees and bushes proceed as though they were shrubs for decorative purposes only; the cultural requirements can be complied with as necessity arises.

One may proceed with the landscape features in mind and obtain beautiful results, with the added value of fruits and berries. Perhaps there is a long stretch of sunny, bare wall that needs some covering to tone down its harsh lines. A sharp corner of the house seems to cry for softening with a shrubby group. The pergola out yonder is naked of vines, and the summer-house, arbor-like in structure, has the same necessity. The corner of the porch, too, might be vine clad. If yours is to be a utility garden, you will have to give up the idea of having many beds, but there are useful plants to fill one or two.

Take the catalogue, then, and looking among the descriptions of various fruits, choose those of plum, peach, apple pear and cherry that please you most. Then treat them as though they were simply flowering shrubs. There is no reason why they can not be arranged as beautifully as the ordinary shrub, and at the same time yield you good return; nor need you violate any rules for placing them.

You may use peach trees trained against an ugly wall, if it faces south, and you will find the fruit is good and that the trees take up a minimum amount of room. Two of the photographs accompanying this article show an attractive way of using trained fruit trees. In the one at the left-hand side of page 15, the apple trees growing against the simple lattice work make a display it would be hard to obtain from other sources. In the illustration beside it, the vast, bare expanse of wall will soon be rendered beautiful by the fruit trees that are being trained upon a network of heavy wire spread before the surface of the wall.

Our general advice would be for the dwarf fruit tree. These little fellows seem to give as fine results as the old-fashioned type, and bear fruit apparently out of all proportion to their size. If the place is one of large extent, the larger apple trees can be grouped on an expansive lawn, showing wonderfully well in the spring, and making a pleasant, bordered retreat during the summer and fall when the fruit is ripening. There is always a place for shaded woodland, and the orchard might just as well supply this.

The other requirements of shrubs and vines can likewise be filled as suggested above. There is no reason why one cannot

(Continued on page 80)



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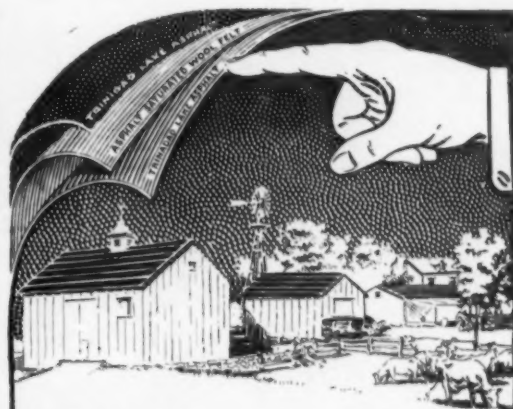
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(Continued from page 78)

place the small fruits according to the same general instructions that have been given for planting the shrubby borders, or general arrangement of shrubs; that is, of course, with certain limitations. The grape-vine is ideal for arbors and may also be trained for porches. The small fruits may often be trained up against a flat wall in much the same manner. Indeed, it is only when such treatment is used that one appreciates the beauty of the flowers of such plants as the blackberry, for instance. In general, then, the idea is to plant your garden as you have been advised, laying most stress upon shrubs, vines and trees, but substituting for the merely decorative ones those that are fruitful and beautiful as well. There is no reason why you should forego entirely the pleasures of hardy bloom in beds, but one should restrict their use as much as possible wherever berry, fruit or vegetable may be used instead.

## A Garden of Yesterday

(Continued from page 13)

for him to get wet, and there are so many other things I would like to show you. I'm sorry you can't come.

On one table there is a picture of Grandfather. Grandmother always dusts that table. She puts fresh flowers there, too, every morning in a little vase. Then she picks up the picture and kisses Grandfather and I don't talk to her.

Oh, Reader—look in my eyes—do you understand?

I am not a little girl! It has all gone—the old garden, the days of play and nights of dreaming through insect song, and Grandmother has no longer need of Grandfather's picture.

Look quickly down the lane of Long Ago if you would see a little girl running hard toward a white house with dormer windows. That is when she would leave her own home to come on one of those visits. The stage lets her down at the big gate. Then she runs past the little whispering grove, past the two horsechestnut trees that hold the hammock, past the circle where the trumpet creeper climbs high.

The little girl is almost out of breath. The door of the house opens. An old lady comes out and stands on the porch. The curls each side of her face are twilight grey and the little girl's curls are yellow in the morning of life. There is a rush into open arms—"Oh! Grandmother—I've come!"

Shut the double door very gently. Lead other little girls' feet of your guiding into the garden of a Now, that perchance, some time in the years to come they may lean out of the window of remembrance and say "Make me a child again."

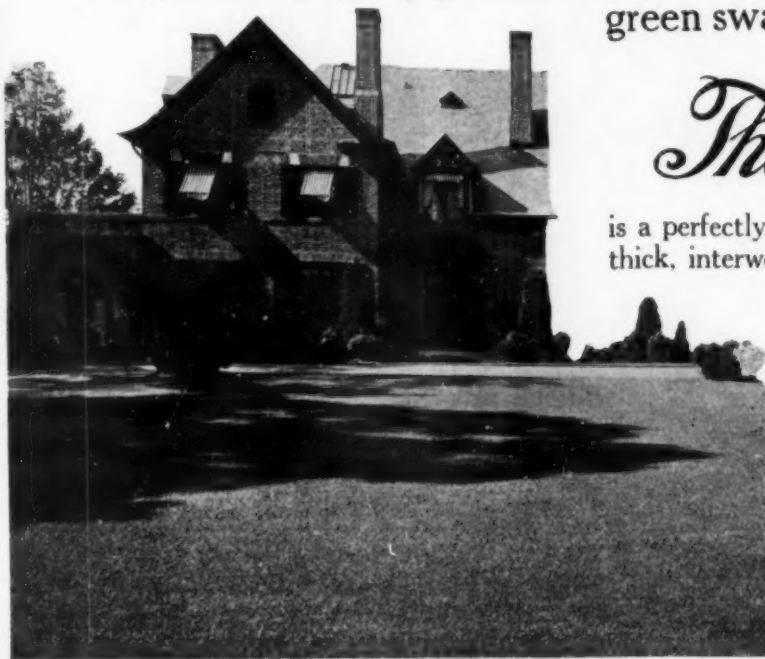
When the fragrance of the Past steals back as from a faded rose, how sweet. But if not—

Whose the reproach? Whose the garden spot, unplanted?



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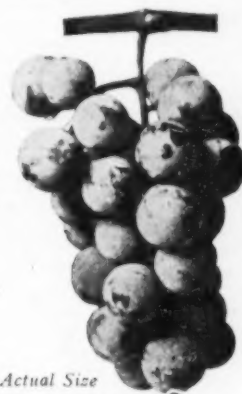
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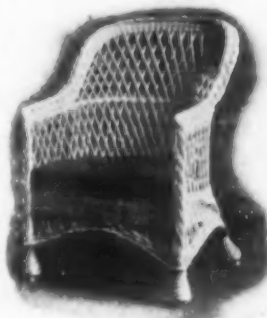
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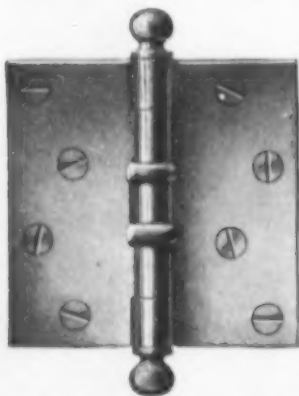
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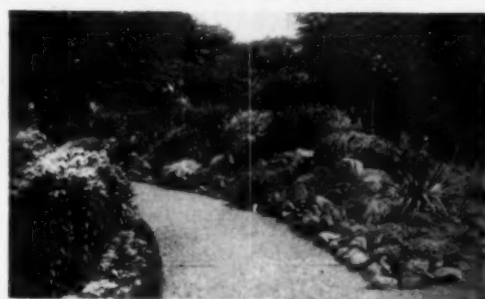
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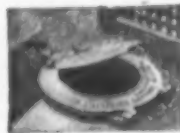
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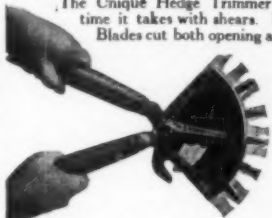
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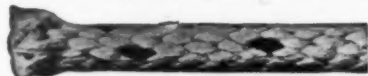
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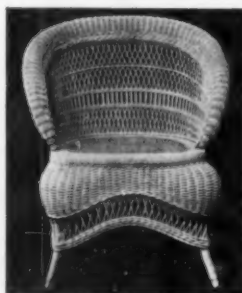
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This property is for SALE or RENT for a term of years. Repairs, which include papering and painting, will be made to suit the tenant.

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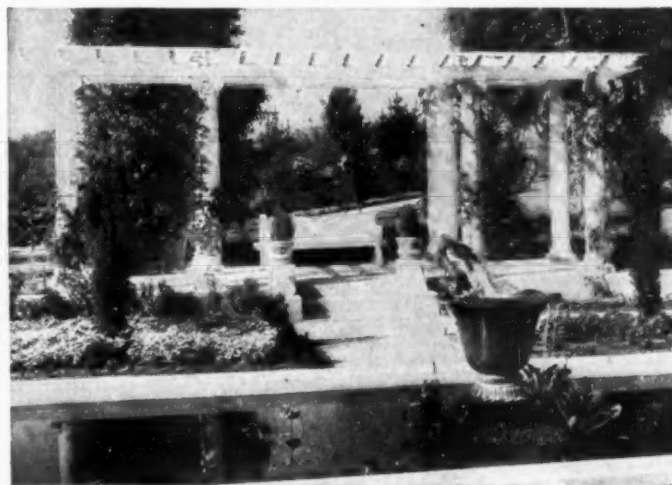
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Publishers

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Our catalog P 27 shows illustrations of pergolas, sundials, and garden furniture. It will be sent on request.



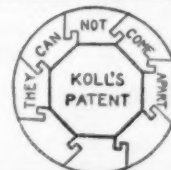
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Suitable for

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## Locks and their Uses

A lock is as strong as its bolt—but its security is entirely dependent upon how well its mechanism is protected against attack through the keyhole.

If any one of a dozen keys will open your lock, of what use is its strong bolt?

If the merest tyro and sneak thief can pick your lock in two minutes, of what use is your lock?

These are the reasons why all the ingenuity of lockmaking has led, not in the direction of stronger locks, but in the search for a mechanism which would absolutely prevent the lock from being opened by any means save its own key.

### Warded Locks

The simplest form of protecting the lock mechanism is found in the warded lock. Projections in the keyhole prevent the entrance of any key not having corresponding grooves in the key. Further projections



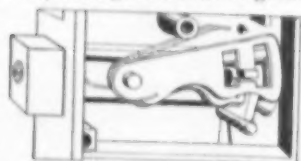
Keyways of Warded Locks

inside the lock prevent the key from turning, unless it fits exactly, but the number of variations practical in the shape of the key is so small that generally one out of every four is a duplicate.

The warded lock key of your next door neighbor is quite likely to fit one of your locks.

### Lever Tumbler Locks

Then comes the lever tumbler lock in which a greater number of key changes and much great-



Interior of a Lever Tumbler Lock

er security is obtained by using a number of flat tumblers. This type of lock is largely used for inside doors in residences, for which purpose it is well adapted. It offers satisfactory security against picking or accidental interchange of keys.

### Cylinder Locks

The first lock to offer an absolute key control and a perfectly protected mechanism was the Yale Cylinder Lock, now known as the symbol of lock security throughout the civilized world.

Each Yale Cylinder Lock requires a different key. No other can possibly open it, and no record exists where a sneak thief has succeeded in picking a Yale Cylinder Lock.

For the interior of your house, it does not matter much whether the key to the dining room will also unlock the nursery door. For that reason interior doors in most houses are fitted with a good grade of lever-tumbler lock. Care should be exer-

cised, however, not to choose too cheap a lock, as it will quickly become useless and have to be replaced.

In case it is desired to have additional security, it is always very easy to add a Yale Cylinder Night Latch to a door. This is a form of Yale Cylinder Lock in which the bolt is automatically shot, thus possessing the advantage of not requiring the insertion of the key in order to lock it.

The Yale Cylinder Night Latch, in a wide variety of forms, is also frequently added to outside doors, kitchen doors, cellar doors or any door where access to the house might be made. The Yale Cylinder is also incorporated into even the most elaborate designs for door sets,



A Yale Cylinder Night Latch

such as are used on outside entrance doors.

There are Yale Cylinder Locks for sideboard drawers and cupboards, pantries, closets, bureaus and desks, for trunks and boxes. You will always find a Yale Cylinder Lock for your purpose.

### Padlocks

The mechanism of the Yale Cylinder Lock is also found in padlock form, and many of the best automobiles are to-day completely equipped with Yale Cylinder Locks before they leave the works.

Another great advantage offered by the Yale Cylinder Lock is found in the master key. You may have any number of Yale Cylinder Locks, for each of which a different key is required by your servants, or employees, and yet you may carry one key which will open every lock.

This also does away with the necessity for carrying a huge bunch of keys, a service which is greatly appreciated by every man.

It must be remembered that lock security is exactly what the words indicate. The ordinary door may be battered in or broken from its hinges, but this is not the method pur-

sued by sneak thieves and burglars. The success of their operation depends entirely upon stealth and the absence of noise, which is sure to lead to their discovery.

This is all the more reason why it is essential to have your outer doors protected by Yale Cylinder Locks. They cannot possibly be picked or false-keyed by a sneak thief. He is apt to give up the job in disgust the moment he sees the name "Yale" on the key plate of your door. That little word is in itself almost an insurance against theft. The thief knows only too well that the one way to get by a Yale Cylinder Lock is to break down the door, and to this he never resorts.

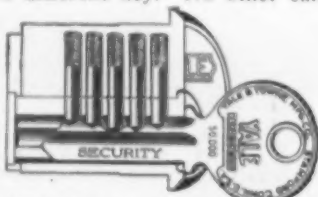
Most helpful in the selection of locks and hardware of all kinds will be our little book entitled "Yale Hardware for Your Home." We shall be glad to send you a copy free if you will send us your name.

# YALE

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A Yale Cylinder cut open to show how the key when inserted sets the pins so the bolt may be thrown



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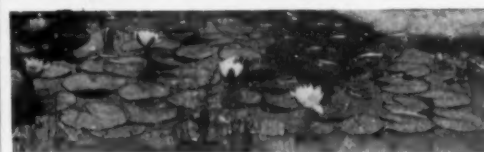
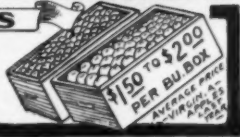
Sworn yield 250 bushels per acre. You can beat that. Why not try in 1912.

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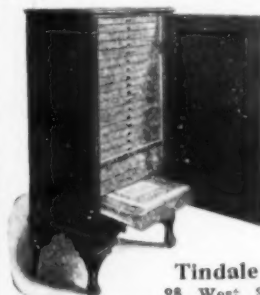
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Water-lily Specialist

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L. C. SMITH & BROS., TYPEWRITER CO.,  
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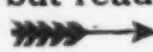
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the Millinery Number—but read  
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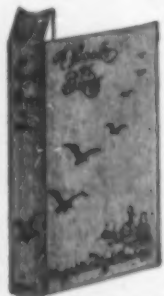
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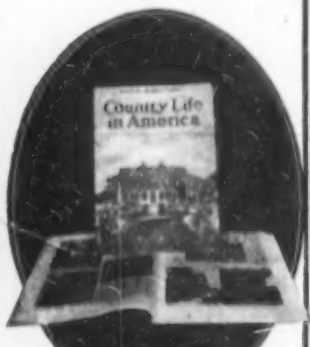
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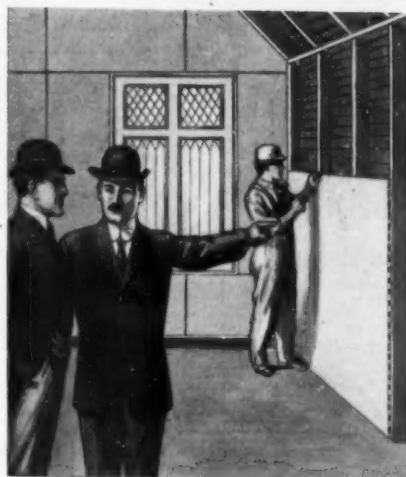
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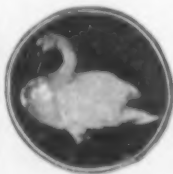
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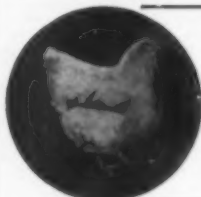
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The permanent poultry yard for a small flock should have a fence of two-inch poultry netting with boards along the bottom two feet high. No railing should be placed along the top, or the hens will fly out, as it gives them a secure support to rest upon. For the smaller breeds the fence should be six feet high. Such a fence will confine the American breeds like the Wyandottes and Plymouth Rocks, while the heavier fowls like the Langshans and Brahmas will seldom fly over a four-foot fence. On the other hand, it is often difficult to confine the light breeds like the Leghorns by a fence even six feet high. If the yard is small enough it may be entirely covered with poultry netting, but a less expensive plan is to nail cleats to the tops of the posts and extending a foot into the yard space. One or two wires or a strip of poultry netting may then be stretched on these cleats so that when the hens fly up they will be forced back into the pens. When breeds like the Houdans and the Polish, which have large topknots, are kept, there will be little need of a high fence, although these birds are of the lighter varieties; their crests prevent them from looking upward easily, so that they are not often troublesome. In the case of all breeds, much depends upon the early training. If the chickens are yarded where there are trees with low branches or other objects upon which they can easily fly, they often acquire a habit which persists as they grow to maturity, whereas birds which never become accustomed to flying, occasion little trouble in this respect at any time. Of course, the larger the yards, the less likelihood is there of the hens seeking to escape. If they have roomy yards, with an abundance of green food, they have less temptation to wander.

It is a curious fact that when a single hen escapes, she immediately finds that she wants to get back into the yard with the other birds. Some poultrymen make this easy by placing a small gate in the fence, so arranged that it will swing inward only, being closed by means of a light spring or its own weight. As the hen moves along the fence she finds a small opening and tries to get through. The pressure which she exerts causes the gate to open, and the hen finds herself back in the yard again.



## The English Setter

[This is the third of a series of articles pointing out the chief characteristics of the different breeds of dogs which are especially adapted to the country place. The first one, which appeared in the February number, dealt with the Airedale, and in the April issue the subject was the Scotch collie.]

IN selecting a dog for the country place there are three especial qualities to be sought which, unfortunately, all breeds do not possess. These are hardiness, companionability and trustworthiness, and to his credit be it said, the English setter embodies all of these good points as well as many more which close association with him will bring to light.

Primarily, setters are of course hunting dogs, and in that capacity they find their most congenial and successful occupation. But there is no reason why, with ordinary care and an occasional long run in the woods and fields, an English setter should not be absolutely healthy and a source of constant satisfaction to his owner, even though the latter may lack the opportunity or inclination to go shooting. It is not the case, as many people seem to believe, that a dog which has been trained and used for actual field work on birds is in any degree spoiled for ordinary life about the home. Among the most satisfactory and likable dogs we have ever known were setters which during the shooting season were used actively in the field, and throughout the balance of the year filled most acceptably the place of the ordinary general purpose dog. The character of a good specimen of the breed leaves little or nothing to be desired; he is full of intelligence and common sense, learns readily, has a kindly though courageous disposition that makes him an ideal dog about the place or on walks and tramps afield, and forms very strong attachments to his master and other persons with whom he may come in frequent contact. In fact, we doubt if there is any other breed that develops a stronger and truer love for man, or more quickly appreciates and repays wise, kindly treatment.

As a watchdog the English setter ranks high, and his reliability of disposition makes him a safe companion for children. There is about him nothing of that semi-treacherous meanness which makes certain other breeds so undesirable, and his general air of big-heartedness is sure to endear him to all who can recognize a good dog when they see one.

Before turning to the physical characteristics of the breed, a few remarks as to care and general treatment may not be amiss. In the first place, give your setter as regular and systematic exercise as possible. This is only fair to the dog in order to keep him in good condition and satisfy his natural fondness for plenty of wholesome work in the open air. On a large country estate this matter of exercise is

(Continued on page 66)



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and Greenhouse Products**

We invite everybody interested in improving their lawns and gardens to visit our Nursery to see our Products growing. This is the most satisfactory way to purchase. We shall gladly give our time, attention and any information desired. Our Nursery consists of 300 acres of highly cultivated land and 500,000 square feet of greenhouses and storehouses in which we are growing Nursery and Greenhouse Products for every place and purpose, the best that experience, good cultivation and our excellent facilities can produce, placing us in a position to fill orders of any size.

**RHODODENDRONS.** Many thousands of acclimated plants in Hardy English and American varieties are growing in our Nursery.

**HARDY OLD-FASHIONED PLANTS.** We grow thousands of rare, new and old-fashioned kinds. Special prices on quantities.

**ROSES.** We grow several hundred thousand that will bloom this year.

**DECIDUOUS TREES AND FLOWERING SHRUBS.** Many acres of our Nursery are planted with several hundred thousand Ornamental Shade Trees and Flowering Shrubs. It is worth while to visit us to inspect them.

**TRAINED, DWARF AND ORDINARY FRUIT TREES AND SMALL FRUITS.** We grow these for all kinds of Fruit Gardens and Orchards.

**HEDGE PLANTS.** We grow hundreds of thousands of California Privet, Berberis and other hedge plants adapted for all parts of the country.

**OUR NEW GIANT FLOWERING MARSHMALLOW.** Everybody should be interested in this Hardy New Old-Fashioned Flower. It will grow everywhere, and when in bloom is the Queen of Flowers in the garden. Blooms from the early part of July until the latter part of September.

**OUR ILLUSTRATED GENERAL CATALOGUE NO. 40,** describes our Products; is comprehensive, interesting, instructive and helpful to intending purchasers. Will be mailed free upon request.

We Plant Grounds and Gardens everywhere with our World's Choicest Nursery Products, grown in our World's Greatest Nursery.

We have a number of superintendents and gardeners registered open for appointment. Names will be given upon application.

**VISITORS,** take Erie Railroad to Carlton Hill, second stop on Main Line; 3 minutes' walk to Nursery.

**BOBBINK & ATKINS**

Nurserymen, Florists and Planters

RUTHERFORD, N. J.

**EVERGREENS, CONIFERS AND PINES.**

More than 75 acres of our Nursery are planted with handsome specimens. Our plants are worth traveling any distance to see.

**BOXWOOD AND BAY TREES.** We grow thousands of trees in many shapes and sizes.

**PALMS, DECORATIVE PLANTS FOR CONSERVATORIES,** interior and exterior decorations. Our greenhouses are full of them.

**HARDY TRAILING AND CLIMBING VINES.** We grow them for every place and purpose. Ask for special list.

**ENGLISH POT-GROWN GRAPE VINES.** For greenhouse cultivation.

**BULBS AND ROOTS.** Spring, Summer and Autumn flowering.

**LAWN GRASS SEED.** Our Rutherford Park Lawn Mixture has given satisfaction everywhere.

**PLANT TUBS, WINDOW BOXES, and GARDEN FURNITURE.** We manufacture all shapes and sizes.

**FLANT TUBS, WINDOW BOXES, and GARDEN FURNITURE.** We manufacture all shapes and sizes.



**Jonkheer  
J. L. Mock  
Rose**

**FIRST PRIZE  
International Rose Exhibition  
Paris, June, 1911**

**Jonkheer J. L. Mock**



This picture shows the International Rose Jury, in the Bagatelle Gardens, Paris, last June. This jury, composed of distinguished rose culturists from many countries, was appointed by the Prefect of the Seine. Our president, Mr. Robert Pyle, was the sole American member of the jury, an indication of the international prominence attained by The Conard & Jones Company as rose growers. Mr. Pyle stands at the left. Next to him is England's representative, and next, the German expert.

**Jonkheer J. L. Mock Rose** has been awarded two Gold Medals, one Silver Medal and other honors. A magnificent variety. Brilliant carmine, shading to imperial pink. The large, symmetrical, highly perfumed blooms are produced in great profusion and are carried on stiff, erect stems. The bush growth is vigorous and free. By all means add this rose to your collection.

**THREE SIZES—1-yr. 35c; 2-yr. 75c; 3-yr. \$1.00**  
\$5.00 orders delivered free

In any event, write for our new catalogue of "The Best Roses for America," including valuable data for rose lovers. FREE.

**THE CONARD & JONES CO.**

Box 126, West Grove, Pa.

Rose Specialists + 50 years' experience



## Use OXIDE of ZINC Paints



**PAINT IS THE  
HALL-MARK**  
of prosperity. The properly painted town looks prosperous—is prosperous. Prosperity commends itself to enterprise.

The best way to "boom" a town is to keep the buildings well painted. To paint well is to paint with

### OXIDE OF ZINC PAINT

How about your town? How about your buildings which are a part of your town?

We do not grind Oxide of Zinc in oil. A list of manufacturers of Oxide of Zinc Paints mailed on request.

**The New Jersey Zinc Co.,** National City Bank Building  
55 Wall Street, New York



At the bottom of every advertising page in most monthly periodicals there is an unobtrusive line which says in some form or other, "Please mention this magazine in writing to advertisers." It is a matter of good citizenship to grant this request. Here's how. In the first place, such mention benefits the magazine. An advertiser may get 150 replies from space used in five magazines. Thirty of them, perhaps, tell where the advertisement was read, and among these may be a majority of magazine number one. There is, however, a possibility that an equal number of answers were induced by each magazine, in which case the advertiser would no doubt use all of them again the following issue. But as magazine number one has drawn the greatest number of traceable replies, it is given the preference over the others. Let us suppose for a minute that the reader has no special wish to help along the publisher's cause. The reader has paid for his subscription; he owes the publisher nothing; and it is some little trouble to explain to the advertiser that he saw his offer of an aeroplane for \$327.62 in the *Sticky Fly Paper*.

Such a citizen of the United States is not a friend of the economic development of his country. The financial stability of the land depends on the successful and economical marketing of goods by the merchant. To tell a man that he has secured your business through advertising in a certain magazine or newspaper, is economy. It shows him the direct result of his expenditure, and enables him to continue to spend his money intelligently. And for every intelligent spender, the country is just that much better off. We can all help.

#### THE TRUTH ABOUT THE FARM

Perhaps you have been reading a story in *House and Garden* about a man who was heartily tired of city life and went to the country to become a farmer. It's a little different from any of the articles, but is very interesting, and it gives you a picture of rural life, besides showing the practical side of the undertaking. We were talking with this man a while ago, and he has now become a landed proprietor of some means and has made a great success of his work. Best of all, he simply bubbles over with enthusiasm. We are very glad that we finally induced him to write his experiences; he has given them in such a straightforward manner that he is helping a great many to get a clear idea about what this "Back to the Land" movement really means. In some of the forthcoming numbers there is a mine of information so vividly presented that you will surely want to see it.



There is another such enthusiast, John Anthony by name, who went into New England and made a go of fruit-growing. He is creating a big stir throughout the country because he has introduced business methods to apple culture with telling effect. He told his story in the March and April magazines, but we are going to hear from him again soon. The only thing we have against Anthony is, that despite his hard work—and hard it is—he is having such a thoroughly good time that he makes us very envious. Here is something from one of those letters of his—they don't come too frequently, for they make us feel as if a little bit of fresh country air had blown into the office over the dusty roofs.

"When real folks want to try farming, I will be found ready to help when I can. Only they want to be sure about it. Few folks would like the sort of work I have been luxuriating in lately. Sawing wood all day long is the easiest job we get to do. My assistant and I are keeping bachelor hall until the arrival of his wife. Meantime we keep house, cook the bulkiest meals you ever heard of, and do a full hard day's work in the orchard besides. The snow is deep and soft and wet. The sun, reflected from the snow, is more blistery than any of the Florida article. Yet—it is the only real fun that I ever ran across.

"Already we have combined the good things of the city and the country. The food is of the latter (raised on the place) but the preparation and serving is of the former. Cream we have of the sort that town folk don't know exists. Syrup that was sap in the trees but yesterday. Potatoes, beets, parsnips, eggs, cream cheese, butter, all from this ground. But I easily get garrulous."

If this itching to be back in the country comes over you, and you are downright earnest about it, write in and we'll put you in touch with John Anthony, for there is not a better man to help you.

#### MORE THAN FIVE MILLION SPADES

Would you believe that during this month that the *House and Garden* Gardening Guide went through the mails that there were over five million starting to dig gardens in the United States? With equal conservatism we can say that *House and Garden* is guiding the course of sixty thousand of that number, and they are not merely turning up angle worms, either. From the letters we read and the people we see, some of the finest gardens in the land are developed from the pages of this magazine. We want to do some proselyting and you who are succeeding should help by sending in the information you have dug up.



Blair Jaekel, author of "Windmills and Wooden Shoes," "Planning a Trip Abroad," etc., is as much at home in the saddle of the Texas broncho as he is in a publisher's office—sometimes a little more so



Here are Mr. and Mrs. Frank VerBeck riding behind their pet donkey, "Gunja," in Bermuda. Mrs. VerBeck is better known as Hanna Rion, and is the author of "Let's Make a Flower Garden" and "The Garden in the Wilderness," both charming outdoor books



Lewis Gaston Leary in the mountains of Palestine, a country which he knows as well as he knows his home town. He is following up his "The Real Palestine of To-day" with another ten-strike, "Andorra, the Hidden Republic"

# Tarvia

*Preserves Roads  
Prevents Dust~*



Connecticut Avenue Bridge, Washington, D. C. Roadway Built with Tarvia X

## The Passing of Plain Macadam

"In these days of progress it is a misdemeanor bordering closely on crime to put an old style macadam pavement on a public road."—*Chicago Tribune*.

**W**ITHIN the last ten years the character of traffic on our roads has changed completely. A large part of it is now motor traffic, and the wheels, instead of simply rolling over the road, *tear up the surface.*

The driving wheels of an automobile revolve several more times to the mile than front wheels of the same size, showing the existence of a certain amount of slip, and accounting clearly for the rapid deterioration of brittle macadam surfaces under such traffic.

Deterioration means dust. It also means frequent renewals of the surface at great expense. Obviously, the way to prevent deterioration and to lower maintenance charges

is to make the road surface proof against the shearing action of driving wheels.

This can be accomplished by the use of Tarvia, which re-enforces the surface giving it a plasticity and tenacity which will enable it to resist automobile traffic.

Tarvia was the first bituminous binder on the American market, and conforms to universal European experience. It is made in three grades—"Tarvia X" for road and pavement construction, "Tarvia A" for surfacing, "Tarvia B" for dust prevention and road preservation.

Our expert advice is at the disposal of any one interested. Illustrated booklets regarding the Tarvia treatments free on request to nearest office.

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