MAY - - - - 1912

COVER DESIGN: HELICHRYSUMS
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FRONTISPIECE: A GARDEN ENTRANCE
Photograph by Ella M. Boult

A BEGINNER'S EXPERIENCE WITH BEEKEEPING 11
By D. Everett Lyon, Ph.D.

WHAT TO PLANT FOR THE FALL GARDEN 14
By D. R. Edson

HOMES THAT ARCHITECTS HAVE BUILT FOR THEMSELVES—VI 17
The House of Mr. Lawrence Visscher Boyd, Germantown, Pa.
By Mabel Tuke Priestman

THE RIGHT PLACE FOR THE GARDEN ARCH 20
By Grace Tabor

A BETTER ROOM FOR THE CHILDREN 22
By Hettie Rhoda Meade

THE USEFUL COLUMBINE 24
By E. C. Ritchie

THE EVOLUTION OF THE TOMATO 25
By Adolph Kruhm

RECLAIMING OLD HOUSES 27
By Charles Edward Hooper

A GARDEN OF ANNUALS 30
By H. S. Adams

THE NATURALIZING OF A CITY MAN 33

IMPROVING THE FLOWER VARIETIES 35
By F. F. Rockwell

A GARDEN LIVING-ROOM 38
By James M. Hull

THE HOME OF MR. GEORGE H. CALVERT, HAMPTON TOWNSHIP, PA. .. 40

INSIDE THE HOUSE 42
A Casement Window Device — Reducing Water Pressure
The Piazza Tea Wagon and Table

GARDEN SUGGESTIONS AND QUERIES 44
Summer Blooming Bulbs — Early Spraying
Two Handy Contrivances

EDITORIAL 46

VOLUME XXI. NUMBER 5.

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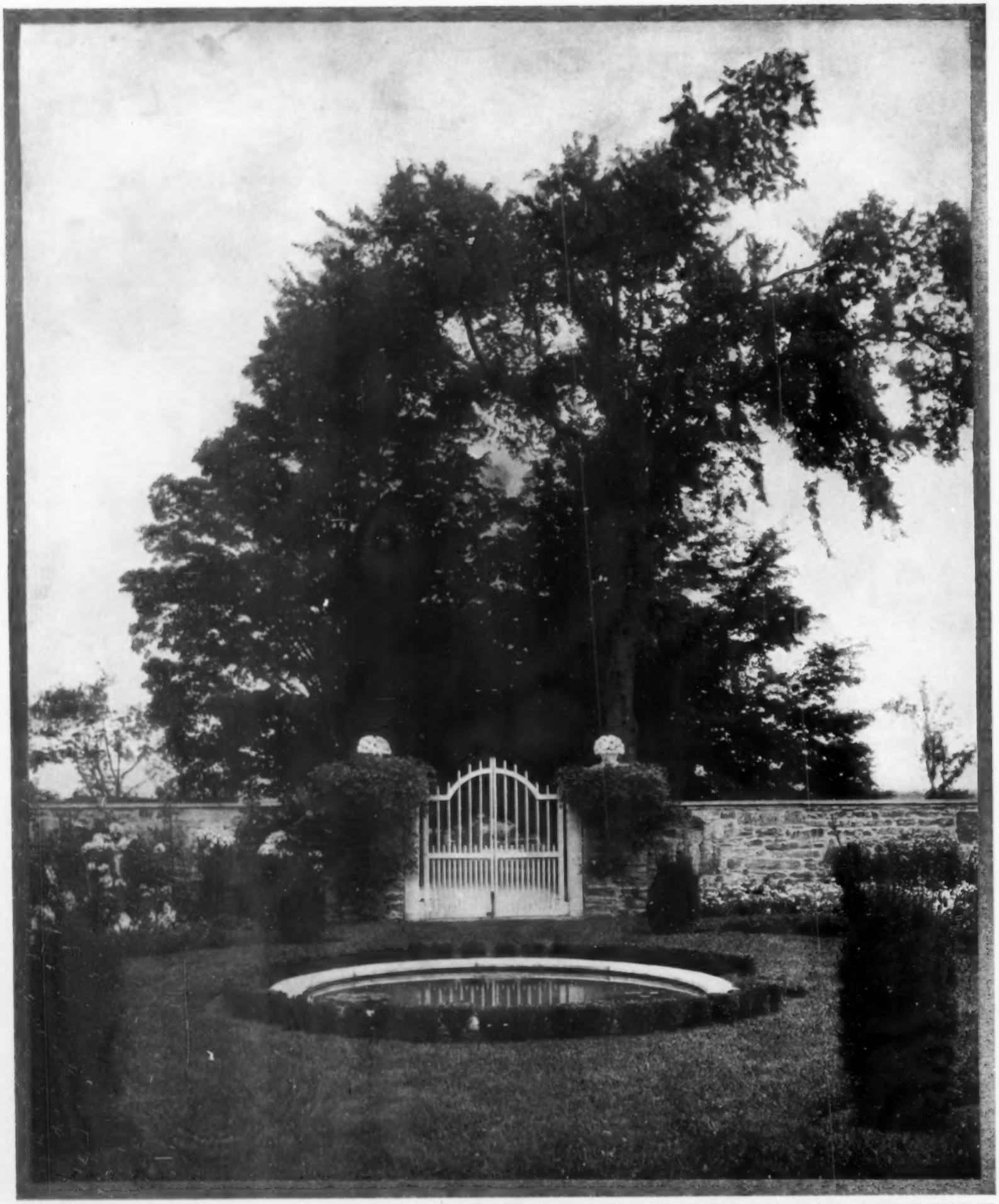
HENRY H. SAYLOR, EDITOR.

McBRIDE, NAST & CO., 31 EAST 17th STREET, UNION SQUARE, NORTH NEW YORK CITY

Robert M. McBride, President; Condé Nast, Vice-President; Robert F. MacClelland, Secretary; Henry H. Saylor, Treasurer. Published Monthly. 25 cents per Copy. $3.00 per Year. For Foreign Postage, add $1.00; Canadian, 50c. Entered as Second-class matter at the Post-office, New York, N. Y.



THE GARDEN ENTRANCE ON THE ESTATE OF MR. LAWRENCE PERKINS, POMFRET, CONNECTICUT

House & Garden

REGISTERED IN U. S. PATENT OFFICE

VOLUME XXI | May, 1912 | NUMBER 5

The swarming cloud of bees collected upon a small branch and soon were a great mass of squirming bodies, crowded one on top of another

A Beginner's Experience With Beekeeping

BY D. EVERETT LYON, PH.D.

Photographs by the Author and Ella M. Boult

IN common with others similarly circumstanced, I had not been long in my new suburban home before I found myself almost unconsciously beginning to observe the many phases of plant, insect, and animal life with which the countryside abounds.

This observation was not that of an advanced student of nature, but rather made up of merely casual glances.

Among the first things that attracted my attention was the marvelous energy and activity of a mass of honey bees that made the air resonant with their song as they cheerfully gathered the nectar from a gorgeous basswood tree that lured them to the golden sweets of its abundant bloom. With lightning speed the bees rushed through the bloom of what I afterward learned was a favorite

The branch is broken off and the bees are gently shaken on the ground

The lower frame contains the brood cells, and above are the collecting boxes

Where the grass is rank and tangled, a cloth will prevent the bees from being scattered

A few puffs of smoke at the entrance to the hive will subdue the bees and enable one to handle them with impunity

source of supply, for if there is any one blossom that the bees love above another it is the blossom of the basswood, in quest of which they have been known to go as far as eight miles.

After being fascinated for an hour or more I returned to my home and spent the rest of the day in reading several books on bees and beekeeping, and was simply amazed to find that in addition to being invaluable as cross fertilizers of fruit blossoms, they could be made exceedingly profitable to their owners in the remarkably large crops of honey they would produce.

My reading seemed to open before me a vista of new possibilities. Though I had reaped splendid returns from my garden of which I was pardonably proud, I had looked about for some other profitable hobby that would take but little of my time, and had thought of chicken raising, and even stock raising, but after careful consideration I decided against both, the former being too messy in the necessary work, and the latter a little too extensive for the limited ground that surrounded the house in which I lived. Beekeeping remained, and the idea appealed to me.

The super containing the collecting boxes for the honey is set above the box which contains worker cells

I learned that little space was required for a few hives, and that beekeeping was a possible success even in the hands of a novice. Bees are, according to statistics, the most profitable live stock that can be kept, as, unlike all other stock, they do not require constant feeding and attention, but gather their nectar from the bloom that others than myself have raised. I retired that night with the avowed purpose of "taking a flier in bees" even though my apiary should only boast the modest number of two hives as a beginning.

With the bee fever in advanced stage I began to look about and discovered one dealer who offered to supply an entire and very complete outfit. It consisted of one hive filled with bees, with all of the storage chambers ready for work, and another hive empty but otherwise complete, to hive the swarm that was sure to and which actually did come out in June.

Then there was the smoker with which to subdue the bees for handling. This was an ingenious and interesting little tin device to which was attached a bellows and in the furnace of which dried leaves or pieces of rotten wood were to be burned to secure the necessary smoke to render the bees tractable, and prevent my being stung. It certainly produced smoke in ample quantities.

A pair of bee gloves, a veil, a tool with which to pry out the frames and a special trap to enable me to take out the honey without disturbing the bees completed the outfit, and the cost of the entire plant was but the small sum of $30, which, by the way, the bees more than paid back in honey that season.

A well-filled frame with bees clinging to the comb

The hives were double walled ones with a packing of chaff between the outer and inner walls to keep the bees cool in summer and reduce the tendency to swarming. This acted in winter as a perfect protection from the cold and enabled me to winter the swarm out of door without fear of loss.

When the hives arrived by express the swarm was confined in the hive by a frame covered with wire cloth that was nailed to both top and bottom of it.

Donning the bee gloves and veil, and with the smoker going merrily, but with many misgivings and considerable timidity, I prepared to take off the screens and liberate the bees, first putting the hive bottom-board in place.

Fortunately I had secured the well-known Italian bees noted for their remarkable gentleness, and this fact rendered the work exceedingly easy, as it was but the work of a moment to puff a little smoke down among them through the screen and with a large screw driver to pry off the screen.

Not a single bee ventured to sting, and I afterward learned that their great buzzing was not a sign of anger but rather a plea for liberty that they might hie themselves away to the fields in quest of the fruit bloom. The trees were now in full blossom, as the bees were bought the early part of May. Incidentally this is the best time of the year in which to make a start.

The hive was set out on the lawn in the rear of the lot on which my dwelling stood, but I was assured that any favorable location in an orchard, or even out in the sun would be satisfactory, if I were careful not to place them where they would be too close to the house or the stable—fifty feet away will be a good average.

When placed upon its bottom-board, the hive was tiered up with three of the storage chambers that accompanied it and let severely alone in order that the bees might readjust their housekeeping, which on account of their enforced detention in the hive had become more or less demoralized.

By morning everything was normal, and with sentinels posted at the hive entrance, and with bees going and coming, the incoming ones laden with pollen and honey, things were working as nicely as though the colony had not taken a 100-mile journey by express.

The hive proper was nearly square, made of clear white pine nicely painted white, and on the upper inside ends of it was nailed an iron cleat from which hung the brood frames, ten of which filled the hive.

These frames were made self-spacing by a device on the ends so that when placed their combs would be just the right distance apart. They were about 19 inches long and about 10 inches deep; each was filled with a perfect comb of the previous season's building in the hands of their former owner, and in the cells of these combs was brood in all stages of development from the tiny white egg a day old, on through the more advanced larvae or brood, that looked like so many big grub worms, to the brood that was capped over and ready to hatch.

One of the brood frames as it appears while the bees are building their brood cells

There was a liberal allowance of cells capped and filled with ripe honey, with a sprinkling here and there of cells filled with pollen which the adult bees mix with honey as a food for the growing grubs, and this condition was characteristic of the entire ten frames with possibly the exception of the frames at the sides of the hive. These two frames showed a preponderance of honey rather than brood and pollen.

The outside appearance of the hive was similar to that of a square box well put together and nicely painted, with a separable bottom board and lid. All of the parts of the empty hive to be used for hiving prospective swarms were interchangeable with the other.

The storage chambers were only about half the depth of the hive body proper, and hanging from its inside end cleats were holding-frames in which were placed little wooden sections or boxes 4 x 5 inches. These had little strips of wax in the tops of each to tempt the bees to work in them. As soon as each of these little boxes was filled with a nice comb of honey it was removed, and other empty boxes were placed in the same spaces to fill the vacancy made by the removal of the completed ones.

The super is removed and with a soft brush the bees are swept off for examining the frames

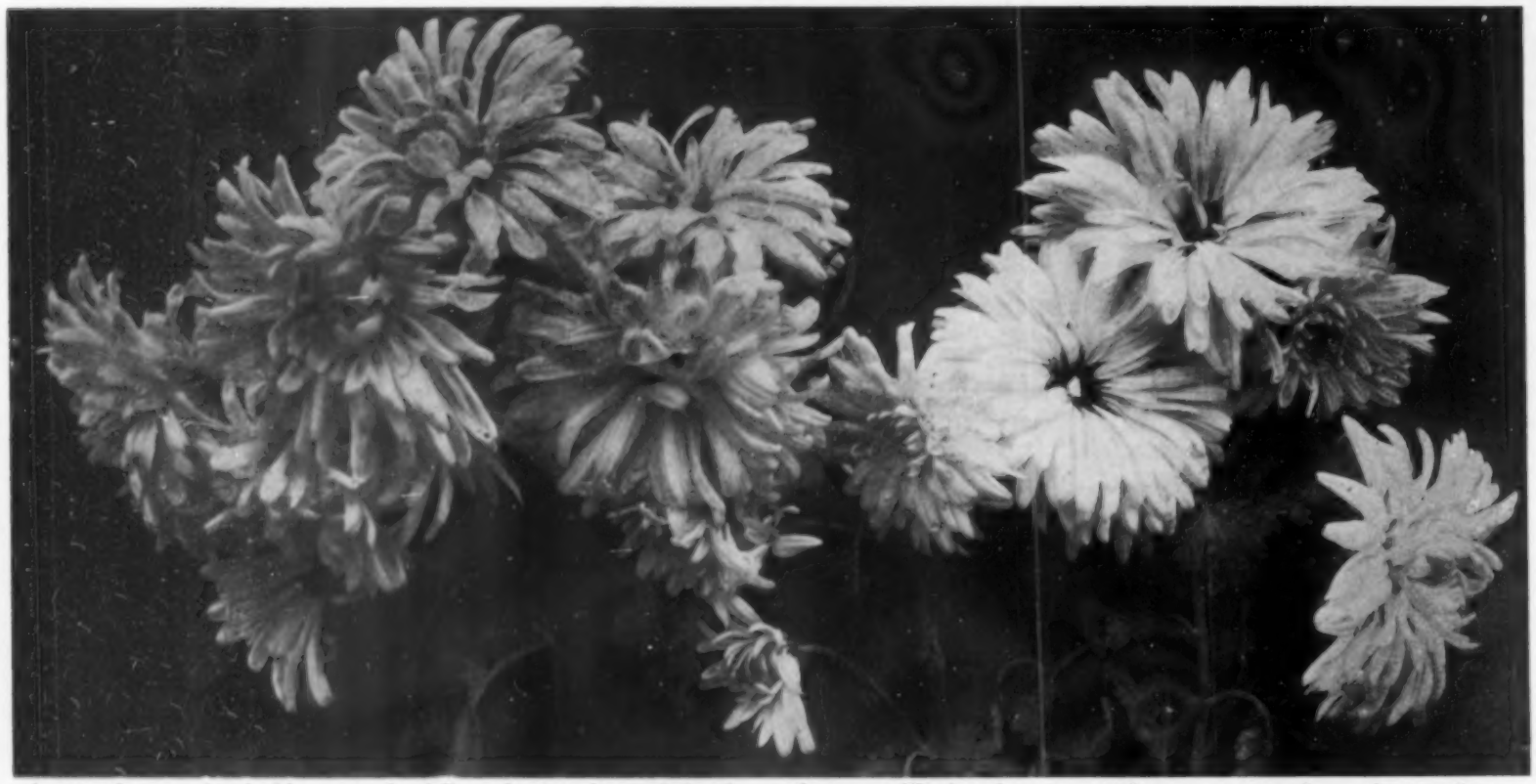
When the storage chambers were in place the lid of the hive was placed on top of the whole and the bees left to themselves to carry on their work.

Occasionally (every few days) I would lift up the lid and, puffing a little smoke down to quiet the swarm, I would peep in, to see how they were getting along, as I was quite anxious to produce a crop of honey. About June 20th I was rewarded to find that almost all the chambers were full of honey that almost uniformly weighed a pound for each box.

I noticed that for several days many of the bees were in the habit of clustering about the entrance of the hive, and in fact a great ball of them about the size of a large cocoanut persisted in staying out there over night. Upon referring to the beekeeping books I learned that this was their method of notifying me that they were about to swarm, and I must confess that I was greatly excited at the prospect, for up to this time I had never seen a swarm come out, and I read everything on the subject of properly

(*Continued on page* 68)

The beekeeper's outfit includes the veil fastened to his hat, the gloves, and the smoker. This view shows a spacing of the frames



Among the most hardy blooms in the fall garden are those of the chrysanthemum. To-day there is an infinite variety to choose from and many combinations of brilliant colors

What to Plant for the Fall Garden

YOU MAY BE MOST SUCCESSFUL WITH YOUR FALL GARDEN IF YOU PREPARE FOR IT NOW—THE IMPROVED AUTUMN FLOWERS OF BEST COLOR, FORM, AND HARDINESS—HOW TO CARE FOR THEM

BY D. R. EDSON

Photographs by Nathan R. Graves

The improved cosmos, Lady Lenox, is an earlier sort

WHY is it that most people take it for granted that the fall aspect of the grounds and garden must be a melancholy one? That all things must be dead or sere and decaying? Now what a mistake this is. In reality the fall is one blaze of vigorous color until frost, and if we are thoughtful now, we may find that our fall garden is the most beautiful of all our planting year. Most of the finest summer flowers are gone, but salvias, cosmos and dahlias are here for the early autumn days, and there are other hardy and beautiful blooms that flaunt their colors in the very face of frost.

I have mentioned salvias. The scarlet salvias have always seemed to me pre-eminently autumn flowers. They afford that unstinted profusion of flowers and boldness of color which harmonize with the spirit of the season and are among the most desirable late flowers.

The original scarlet sage (*Salvia Splendens*) is still one of the best for furnishing a mass of color in the fall, although the newer Bonfire gives a more vivid effect, as it grows more compactly, and the flowers are held above the foliage more distinctly. Unless height is a desideratum, as in planting along a fence, or as a background for some lower growing flowers, I like Bonfire better.

Of late years, the flower venders always have salvias blooming in pots, ready for the garden. But for the fall garden, sowing out-of-doors, in a sheltered, sunny place, does very well. But you must wait until it is time to plant corn, for the salvia seedlings love warm weather, and without it will sulk and do nothing. Salvias are frequently used as borders for beds of taller flowers, and for this purpose the dwarf growing sort, "Zurich," is better; but it has always seemed to me that using salvias in this manner is like putting gilt and jewels on one's picture frames; it upsets the attention and creates a discord.

The dahlia is really a fall flower, too, although not at all frost proof. These flowers reach their full glory only at the end of summer. For years the dahlia enthusiasts have been working overtime. Not only have they, through their special society done much to make this worthy flower more popular, but innumerable new varieties have been developed and introduced.

Not only is there an endless number of varieties, but the *types* have grown quite numerous; the cactus, giant cactus, fancy cactus, show, decorative, fancy, peony-flowered, century, collerette, and pompon, all being quite distinct in form or marking, although there seems to be yet not a little confusion over the classification of individual sorts. That, however, does not interest me; my

botany has not had the dust blown off its top in years. I cannot advise you what sorts to plant for your fall garden—they all do well with a little care and plenty of food. Perhaps my choice would not please you at all, but personally, the cactus and peony-flowered sorts are the only ones I care for, with maybe just a few of the grotesque "collerettes" and the miniature pompons for variety. The fat, stiff, perfectly rounded "show" type always struck me as too heavy and commonplace. Yet I know many flower lovers who are quite enthusiastic over these ample blossoms. So, instead of following my example, try things out for yourself; for, after all, it is your own garden, not mine, that you want to plan.

I prefer, too, in dahlias, the solid and decided colors. I mention a few of the older sorts which have long been, and remain, my favorites. Kriemhilde is a beautiful, brilliant pink with a light center. Standard Bearer, a fine flaming scarlet. Mrs. Henry R. Wirth is similar to the above, and even better. Pius X is a splendid white, of great size. Countess of Lonsdale, another fine pink, but entirely distinct from Kriemhilde. Roland von Berlin, a fine red. J. H. Jackson, a striking dark crimson. Geisha and Riesen Edelweiss are two of the peony flowered sorts that I think everyone would like: the former is scarlet, with a golden center, and petals charmingly twisted and irregular in form; the latter, pure, shining white, and quite gigantic in size.

Dahlias are usually taken up late in the fall, kept in the cellar over winter, and then set out again, the whole clump, in the spring. Experience has taught me that for the best effect, whether flowers or mass of color, this is not an advisable method to pursue. Separate the clumps—if necessary throw half the tubers away, though you can usually find a friend glad to take them—and plant them three feet apart, if the soil is deep and rich, as it should be. Probably a number of shoots will be thrown up: ruthlessly remove all but three or four of the strongest—all but two if you want extra fine flowers. Do not wait until some sudden summer thunderstorm has laid them low before you begin to think of tying them up to stakes. I have little use for the dainty little "plant-stakes." Pieces of chestnut board, cut into inch strips, and painted dark green, will give you something not over-conspicuous, and that can be depended upon; they should be six or seven feet long.

Dahlias are not as particular about soil as they are about drainage and food supply. The former they must have or they may rot; the latter, or they will do very poorly. Strong but well decayed stable manure, spaded in as deeply as possible, will carry them through in fine shape. While dahlias will not thrive in a sodden soil, they require plenty of moisture, and unless you have them within reach of the end of the hose, give them a mulching of half rotted manure when hot weather comes on.

In the fall, after the first frosts have blackened the masses of foliage and glorious blooms, cut them down to within six or eight inches of the ground, dig them up, shake off what earth falls away readily, and store them in a *dry*, frost-proof place. I let mine ripen for a couple of weeks in the sunshine under glass, or covered on cold nights with bags, before storing permanently.

Another of the glories of the early autumn garden is the cosmos. This is an entirely different flower (although they now have, as the latest type, a cosmos dahlia). Its charm lies, I think, not in its being an *autumn* flower, but a graceful and belated summer beauty, still lingering afield after the rest have gone, and all unmindful of approaching night.

A cactus dahlia that shows the improvement over the stiffness of previous types

The cosmos was a beautiful flower before the Argus-eyed hybridizers turned their attention to it. Now we have a larger, and, what is more, an *earlier* flowering race, which will bloom well before frost even when sown out-of-doors. The new giant-flowered type I always start indoors, or in a frame, in late March or April. Lady Lenox is a marvelously beautiful flower, and he who does not plan to have at least a few plants of it to adorn his garden will be omitting something that no other flower can take the place of.

The cosmos is one of those tall growing annuals which should be beheaded when about one-third grown, to induce branching. I like to have the plants at least a foot and a half apart, to give sufficient room.

I am not so enthusiastic about asters as many of my friends are, and yet I admit no fall garden would be complete without them. Semple's Late Branching is the type usually sown for late autumn flowers, and they are very strong growing, with magnificent flowers, and strong, long stems. But the Comet, or Ostrich Feather type, has to me always seemed much more beautiful. If sown early they will bloom in August, but by selecting a favorable seed-bed, or shading until the seedlings are well started, they may be sown later, and be had in flower until frost.

Among the anemones there is a startling variety of color and form

Include the diverse colors of the California poppy in your fall garden

And while we are taking thought for the fall garden,

This variety of hardy chrysanthemum comes in rich brown, gold, and maroon

The calendulas vary as much as the dahlias and offer many beautiful sorts

let us not neglect the veranda, where flowering roses and trumpet-creepers and wistarias long since have faded. The old white Clematis (*C. Paniculata*) blooms in early fall. It is the most beautiful of all flowering vines. And fortunately its beauty does not cease with the passing of its flowers, for the graceful silken seed-vessels make a most pleasing sight, and last until the season's close.

And then there is the ever wonderful moon-flower, which is in its full glory late in the summer season. Be sure to include this in your list of fall flowers, but buy the started plants, as they require a long season in which to reach the flowering stage.

Foremost among the rear fall flowers—those which are not put to rout until actual hard freezing—I consider the hardy chrysanthemums. Practically all of these are of the small or "pompon" type. This has never seemed a disadvantage to me, for among chrysanthemums I have always preferred the graceful, beautiful sprays of small flowers to the immense stiff-necked and artificial blooms obtained by the processes of forcing and disbudding. Julia Lagravere, a deep rich garnet, and Princess of Wales, a clear flawless white, are my favorites. Together, either in the garden borders or in the house in vases, they make a striking contrast. The famous Shasta daisy is really a hardy chrysanthemum. Its improved form, Alaska, is one of the loveliest pure white flowers to be had in the garden at any season.

The hardy chrysanthemums are very easily grown, asking only a well-drained position, and a winter quilt of leaves or strawy manure, which need not be heavy.

Next to the chrysanthemums, I love the Japanese anemones—those charming fairies of the late fall garden. A number of shades are to be had, in rose and pink, but best of all I like the pure whites. Of these, Whirlwind, with its large double flowers, is probably the most popular, but personally I prefer the simplicity of the single sorts. Some flowers were never designed to be "improved" into a double form. These, too, need protection through the winter, rather more than is given the chrysanthemums. A good covering of leaves, held in place by pine boughs, is effective and not unsightly nor offensive.

Many sprout a dahlia tuber, and plant it when the seedling has grown to this size

The peony flowered dahlia, evolved from the cactus type, approaches the single dahlia

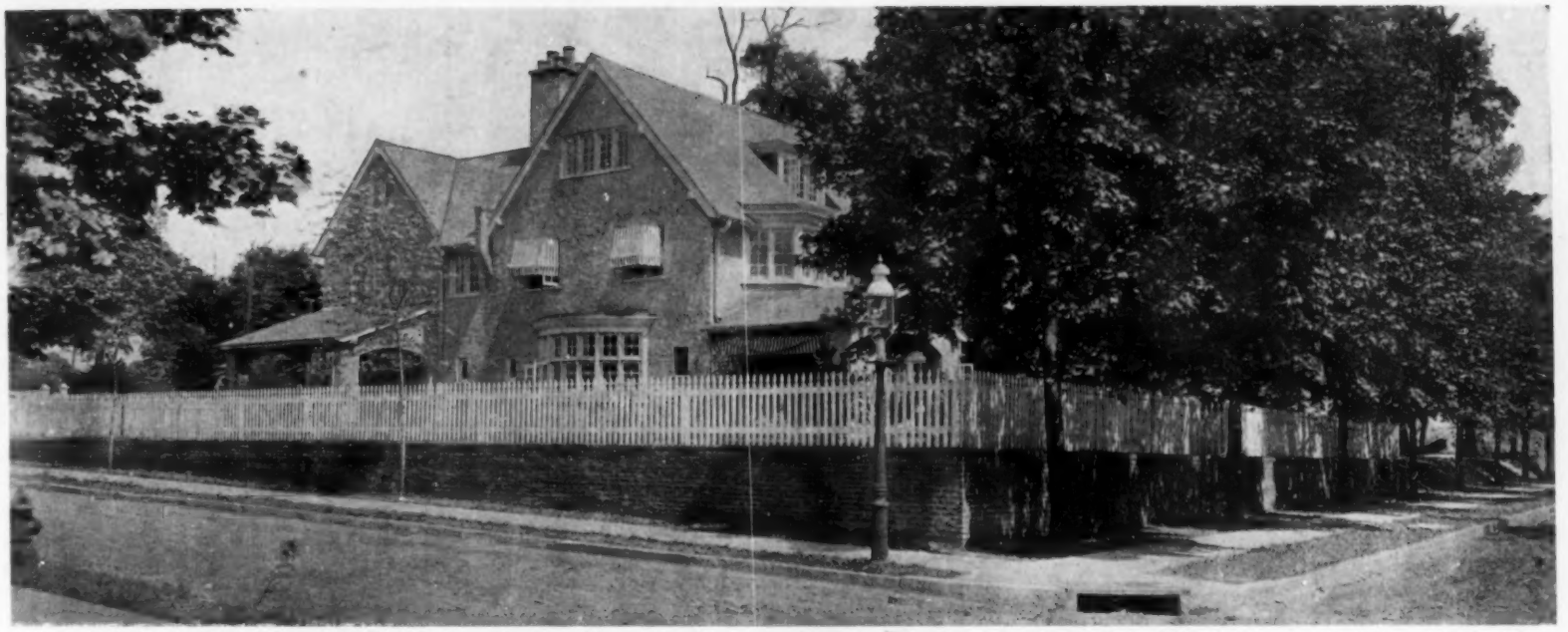
The Countess of Lonsdale is one of the most attractive of the cactus types

The hardy asters (Michaelmas daisies) should be included in every fall garden. Their simple bright faces lend a charm and cheer which would be greatly missed no matter how plentiful more pretentious flowers might be. They are, too, among the very last to succumb to winter's dread invasion.

For a late fall supply of flowers for cutting, where a variety in form and color is wanted, nothing equals the so-called "annual" pinks (*Dianthus*). The range of color and the multitude of flower-forms now available in these splendid flowers is marvelous, even in the world of flowers. Though they are commonly called annuals, and generally treated as such, they may be carried through the winter by giving good protection, and will bloom a second summer.

The types and named varieties are far

(*Continued on page 72*)



The ground on which "Crankslea" is built embodies all the requirements for a home of moderate size, placed as it is at the intersection of two streets. The house stands in the open with a southwestern exposure, and is sufficiently removed from the main street to secure privacy

Homes That Architects Have Built For Themselves

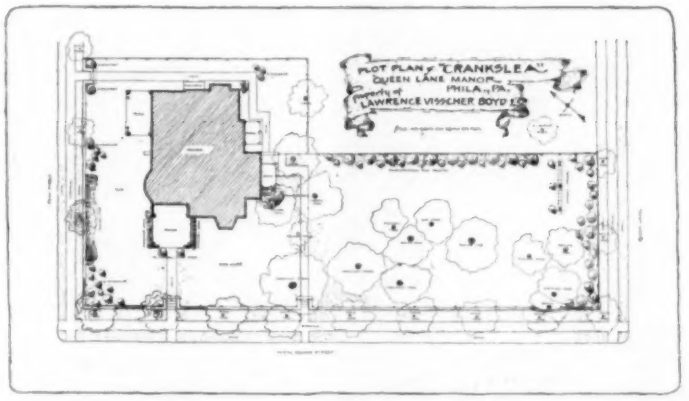
"CRANKSLEA," THE HOME OF MR. LAWRENCE VISSCHER BOYD AT GERMANTOWN, PA.

BY MABEL TUKE PRIESTMAN

Photographs by the Author

THERE is a frank simplicity about "Crankslea" that appeals to those who delight in simple and livable homes. Not only is it pleasing from an architectural point of view, but it is a real home.

The problem that confronted Mr. Boyd when he started to build a house for himself was, what to do with the "things" that he had accumulated in his travels, and which he wanted to have around him. The solving of that problem is mainly responsible for the successful planning and furnishing of Crankslea.



When asked what dominating idea the house expressed, Mr. Boyd replied: "I did not dare consider seriously any dominating style for exterior design or interior detail or arrangement, as I knew that the finished house was to contain examples of art from all parts of the globe."

It was no easy task that Mr. Boyd set himself. He was anxious not to overcrowd the house with the architect's failing, "Too much architecture," and yet he had several pet theories that he wanted to introduce. In speaking of his home he remarked, "My home was designed along very simple lines, following somewhat the modern German influence. I knew that time, planting and living in the house would bring about the quality that had been so much admired in our old, simple farmhouses of the better class. I wished to attain the feeling the Germans call 'gemütlich,' to feel at liberty to place on the exterior walls any cast or piece of faience that I especially admired. Therefore, while the house was being built, I tried the experiment of placing in the plaster of the front exterior, a beautiful Greek cast of Achilles' mother blessing her son before he went to battle. This proved successful and I allowed it to remain permanently, thus lending additional interest to the wall surface. A large cherry tree directed my imagination to its decorative uses, with the result that it now supports an arbor and forms a picturesque end to the rear balcony. When in bloom, we are completely surrounded above and on all sides with the fragrant snowy blossoms."

An up-stairs bedroom that breathes the spirit of Colonial times

The setting of Mr. Boyd's house is a particularly happy one, for it is on the edge of a wood, and yet within a block of a trolley line. The house itself stands in the open with a southwestern exposure, but is sufficiently removed from the main thoroughfare to insure privacy. "When I discovered it," Mr. Boyd said, "I felt sure that I could retain all of its natural advantages. Before building, I carefully plotted all of the existing trees and placed the house so that it would not interfere with any of the shade trees in the rear. To con-

vince myself thoroughly that the house when built would satisfy me in every respect and from every point of view, I had a carboard model made in full color with every detail shown: the fence, the trees, all were before me in miniature. I studied the model, and after making minor changes, finally arrived at a satisfactory result, though, in the matter of arches over the gateways, I found I must give them up or sacrifice some tree branches. It seemed an ideal condition to be able to build the house as it should be, in the open, and to have magnificent trees for shade in summer as well as a sunny forecourt for the cultivation of flowers. To further retain the spirit of privacy which we have all admired in the rural English home, the entire lot is surrounded by a whitewashed paling fence, about five hundred and fifty feet with borders of flowering plants inside."

The house is charming viewed from without, with its high-pitched roof lines and its rough-cast plaster walls. The rough, thick, variegated slates give touches of color revealing gray, red and purple tones in pleasing contrast to the warm cream tones of the rough walls. The window trims and cornices are ivory, and form a good setting for the brown Venetian blinds which are in every window. The porch is built on somewhat original lines, jutting out from the house, so as not to darken any of the principal rooms.

A large cherry tree supports one corner of the arbor and forms a picturesque end to the rear balcony

Planted on either side with shrubs, and with dwarf trees in choice garden pottery on either side of the entrance, it makes a delightful outdoor living-room. The back piazza is equally pleasing. Other pieces of garden pottery are tellingly placed, while a pergola alongside supports the upper balcony and forms a kind of double porch. At the extreme end of the garden is a beautiful arbor of Italian design, constructed entirely of polychrome cement, with modeled satyr heads supporting outlookers and trellis.

The three-casement bay windows of the dining-room and the bedrooms, and the circular casement bay of the

The plans show a pleasing combination to obtain all the light possible and at the same time employ an economy of window space. Although the rooms are not cut up, there are several of those interesting nooks and corners that provide a real homelike feeling

To get a comprehensive idea, a model was made in full color. By this means the necessary changes could be made before it was too late

The walls are of rough-cast in a warm tone, combining well with the gray, red, and purple of the slates; the trim is ivory

An inconspicuous tan pattern on the oatmeal wallpaper makes a good background for the fine old mahogany furniture

One of the most attractive features of the living-room is its rough plaster inglenook finished in light tan

living-room, one of the most attractive features of the house, in fact all the windows at "Crankslea" are casements opening out with interior sills of red quarry tiles.

The interior is what one would expect from the exterior, and shows the same care for detail and general effect, but the dainty, feminine touch is everywhere apparent, for Mrs. Boyd has the same love of color and appreciation of form as her husband, and they have worked together to bring about the desired results.

The unique vestibule with its arched ceiling is well lighted and most inviting. At night an electric light gleams from a Quessele globe in a bronze griffin vase conveniently placed on a carved teakwood table opposite the front door; a few interesting spots of color are introduced in the Japanese block prints and Kakemono and Moorish plaques. Plants are placed on the quarry-tiled window sill and provide a supply to exchange with those in the living-rooms. The clear green tinted antique glass doors give an unusual effect, and are wisely not screened by curtains.

There is a feeling of space engendered by light walls and mirrors, so that the rooms seem larger than they really are. A door leading to the pantry simulates a window frame. Filled with small panes of mirror it gives a charming vista from the living-room, and eliminates the usual unsightly pantry door. The wall-paper in the hall living-room is one of the serviceable Eltonbury fibres in café-au-lait color, and makes an excellent background for pictures and ornaments. The inglenook is finished in rough plaster, colored the same shade as the paper. The red bricks of the hearth, laid herringbone, are deepened by a bath of linseed oil. Above the brick fireplace is a niche backed with blue and copper Moravian tiles, and planned to hold the plaster bust of the unknown girl from the Louvre. On either side of the inglenook are small windows, one of Belgian stained glass, while the door-window over the bookcase contains ancient Chinese temple gates, carved in red and gold lacquer. The staircase rising out of the living-room is a feature of interest. The balustrade is original, mortised through an extended support at each tread finished off with round-head brass screws. The living-room is furnished in fumed oak furniture with brown leather seats and cushions, with an old gate table of sturdy oak. Some rare old rugs repeat the colors in the room.

The dining-room is separated from the living-room by a portière. The same neutral wall tones are apparent, though the paper is a figured one made specially for Mr. Boyd, from his own design. It is an inconspicuous pattern in brown, on a paler shade of oatmeal paper. The furniture consists of beautiful old mahogany heirlooms that are much prized, the Sheraton sideboard is a specially good one and its beauty is enhanced by an old mirror being placed above it. Some antique silver and old china make a very complete Colonial dining-room. The deep bay window with curtains of cream madras and blue raw silk is its last detail.

Throughout the house the same care for appropriate complete-

(*Continued on page 60*)

The hall and living-room are not separated, which gives a spacious, well-lighted effect

An up-stairs sitting-room provides delightful privacy that may not always be had in the ground floor living-room

The Right Place for the Garden Arch

THERE IS A CHARM THAT OLD-FASHIONED GARDENS OBTAINED FROM THE PROPER USE OF ARCHES AND ARBORS—PRESENT DAY POSSIBILITIES TO GET BEST RESULTS

BY GRACE TABOR

Photographs by the Author and others

OUR gardens generally seem curiously lacking in that charming structure, the garden arch—especially recently-made gardens. Just why this is so I have never been able to make up my mind; they were frequent enough in old gardens, and their beauty is self-evident. Why do we have so few now? Can it be a part of the general self-consciousness that has pervaded building of every kind among us, for the last forty years or so? Having no "practical purpose"—unless used as a grape trellis—an arch gives its builder possibly a guilty sense of folly, when someone demands in an unsympathetic tone, "What's that thing for?" For it is an exceedingly difficult matter to explain to the man who will put such a query, what it is for. It takes imagination to want an arch, imagination to build it, and imagination to enjoy it—and imagination eludes explanations.

The arch should always lead to or from some distinctive portion of the garden, with a suggestive prospect beyond

Of course an arch may, through being unhappily placed in the garden, fail absolutely in its purpose of interesting and pleasing, but this is the fault of the gardener's judgment, and not in the least an argument against the structure in itself. It is only an argument against thrusting it down haphazard—which means that it is an argument in favor of the carefully thought out general plan which we can never successfully do without.

There seems at first glance very little reason for the use of isolated arches anywhere, for primarily it appears that an arch should afford support for something. But the custom that has prevailed from time immemorial of erecting arches of triumph, gives a precedent—wide though it seems from the mark—for an arch that is not a support, provided that it is beautiful in itself, and that it is set in right relation in the garden plan. Therefore, without going into its significance as an isolated structure, nor attempting an analysis of its value or of its influence as an object of frequent consideration, we may say that it is then its own excuse for being—which is excuse enough. So we are brought to the question of what positions an arch may occupy in the garden—or in the grounds.

The first proposition which appeals to me as a sound basis for a beginning is a negative—or at least is expressed in a negative. An arch should never stand between two similar spots or two spots similarly treated, such as at the centre of a garden, for instance. The positive end of this statement is that an arch should always lead into, or out from, some distinctive portion of the garden, with either a diminishing or a widening prospect beyond it—never sameness.

In the garden shown in the upper illustration on this page, the wooden arch in the foreground leads to a walk that is obviously the entrance into a distinctively set apart rectangle—a cunningly

The approach to this arch is excellent, but the view through and beyond it is lacking in attractiveness

A succession of arches should serve to connect sections of the garden which have different characteristics

contrived gem of some sort, hidden away entirely and come upon as a surprise. Coming towards this spot from the opposite direction the other arch on the farther side leads in with the same sense of ceremonial approach — and I do not believe that anyone, strolling through this garden onto this walk, from anywhere, could fail to feel a thrill of pleasant curiosity and real anticipation at sight of either structure.

An almost perfect garden design that leads the eye to a pleasant vista and at the same time connects distinctive garden sections

Don't you wish you could see now what is off to the right, behind the trim spruce hedge? But even the hollyhocks are railed out and may only stretch up their heads as high as ever they can and peep over its tantalizing demureness. Are you not certain it is something lovely—some secluded bit too precious to be revealed without due preparation? Expectancy is keyed to its tip-toes by such an arrangement and a shrine of rare beauty must lie at hand to satisfy it. If this is not the case, if the trip up the steps and through under the arch to the opening in the middle of the hedge, does not bring an exclamation of delight and surprise, then the whole arrangement is a failure! Worse than that, it is an aggravation and an offence.

Of course the approach to this particular spot would be distinctive even if the arches were omitted, and a certain expectancy would hover about the steps and the general planting arrangement—but the structures dignify it all, and one passes beneath their span with a certain sense of definitely entering a precinct set apart. In other words, there is a psychological effect in an arch — indeed, what is there in which there is not?

There is too much sameness in the border on both sides of this arch to make it really effective

Although it always seems hard to condemn anything from an old New England garden, we must see that the arch shown in the lower left-hand corner of this page well illustrates the negative side of this proposition, so far as one may judge from a picture. And in this instance we may judge perfectly from the picture, for it shows plainly the very thing that we shall see condemns it. This arch does not afford a transition from anything to anything else. The scheme demands something to complete it. Perhaps in the old days when the arch was built, it did not lack—perhaps it is time that has robbed it of this completeness, even while it has mellowed it and added charm to its surroundings. However that may be, there is a fault in the sameness of the treatment before and beyond the arch. The boxwood border and the flowers are carried right along, and there is no difference after the arch is passed. This border and the flowers should stop—should end at the arch either on one side of it or on the other, and a different treatment of the walk margin be substituted. The arch itself, spanning such a walk, which gives a rising and narrowing prospect through it from below, is delightful, but the walk approaching from the foreground with exactly the same border treatment, robs the thing of all snap—of any force or climax.

Cover the lower part of the picture up to the foot of the structure itself, if you do not believe it, and see how much more effective it is, as a picture. Im-

(*Continued on page* 49)

These spruce poles with hop-vines over them would form effective arches if properly situated

Two little plaster figures that are really companions for the child

A Better Room for the Children

SOME NEW SUGGESTIONS TO MAKE THE CHILD'S ROOM PLEASANT—PICTURES AND CASTS THAT ARE EDUCATIONAL AND BEAUTIFUL AS WELL—WHAT THE FIELD OF JAPANESE PRINTS OFFERS

BY HETTIE RHODA MEADE

Photographs by Herbert E. Lawson

"Some things stay and let you play, Others get up and run away"

NOWHERE better than in the nursery can that which will delight as well as educate be combined. The things by which a child is surrounded in his childhood, objects, thoughts, and people, leave their indelible impression upon his consciousness. How important it is, then, that the children's room receive our earnest attention. How often all the cast-off pictures, ornaments and furniture are put into the children's room and the children have had to take the leftovers.

Instead of making the children's room the "catch-all" of the house, let us remember that it can be made a very delightful schoolroom where we may collect those things which will unconsciously tend towards developing in the child a love for the beautiful. At a very early age the child can begin his or her acquaintance with the things which will tend toward cultivation. The best of pictures, books, toys, furniture of correct proportions, groups of objects of harmonious colors should find their way into this room that can be a fairy-land of delight to the child and a retreat of real pleasure to the parents.

The spirit of Stevenson's Child's Verses is in this cast entitled "The Wind"

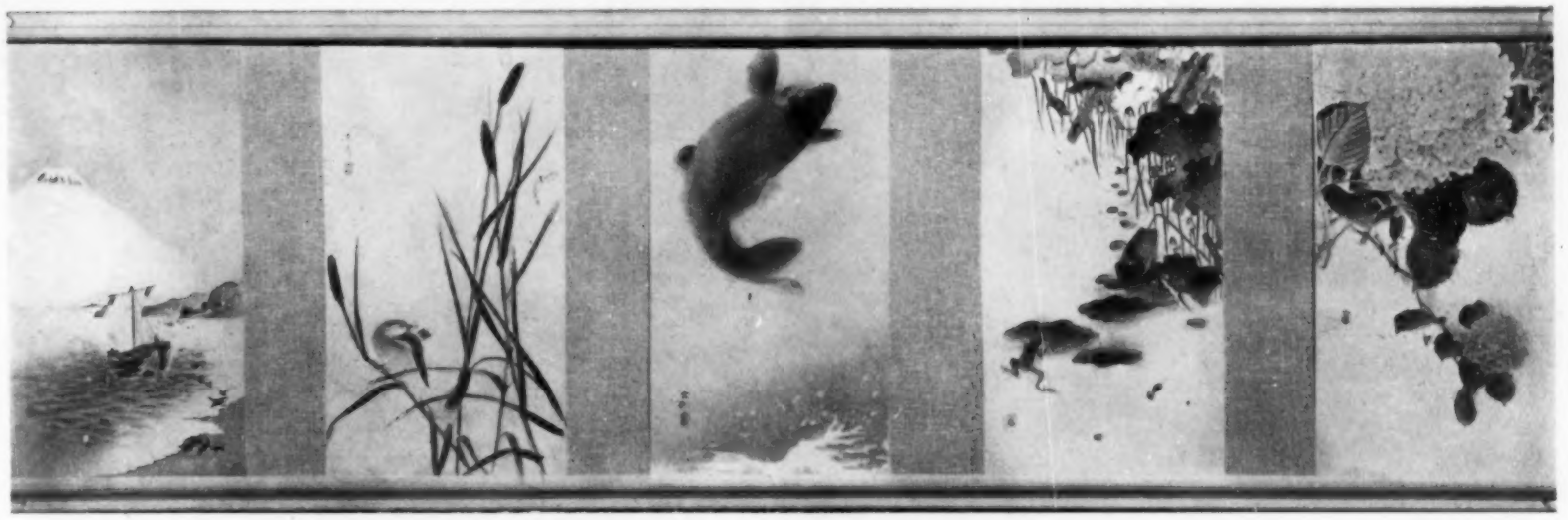
Of late years, so many delightful things have been created for the child's room that a few can be spoken of here.

Some of the artists in clay modeling have modeled reliefs and statuettes of child-life that are simply radiant with the spirit of childhood, be it in thoughtful, happy or mischievous mood. One of these statuettes is called The Chums, and represents a little coat and cap clad fellow hugging to himself a Teddy Bear. Every aspect of the little statuette is delightful, it is so true to life. Another is called Bashful Boy, and, indeed, to face the embarrassments of life does seem altogether too much for him. Miss Betty is the statue of a little girl with her doll hanging at her side. The Student suggests a man of stern aspect and hoary beard; it is a little fellow going grudgingly to school. None of these small figures is more than six inches high, and no child could fail to love them. While they could not be handled safely by a small child, the mother can weave stories around these delightful little people that would make veritable playmates of them, and at the same time their fine art would be making its impression upon the mind of the small owner.

Bas-reliefs illustrating some of Robert Louis Stevenson's delightful Child's Garden of Verses have also been modeled by these artists of child-life. The Wind shows a little breeze-kissed girl, wondering at the mystery of the ever-blowing breezes, and illustrates the lines from the poem of that name. These plaster casts are valuable for acquainting the little folk, almost from babyhood, with these poems that will delight them all their lives.

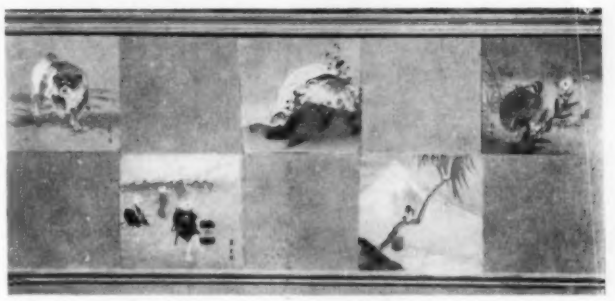
Another suggestion for the decoration of the child's room is the use of inexpensive Japanese prints in a frieze arrangement around the room. Two styles of prints that can be

The love of animals that is so strong in children is heartily appealed to by some of the Japanese prints that show the animals in a very lifelike and realistic manner



Friezes may be arranged according to color, and there is a great variety of tones from which to choose. These prints all predominate in blue tints

very successfully used in such an arrangement are shown in the illustrations. The panel prints measure approximately 7 x 13 inches; the square prints, about 9 x 12 inches. No child could fail to appreciate these prints of animals, birds, flowers, fish, and all manner of creeping things, so true to life are they drawn. They are full of the spirit of the field, the woods and the waters. Aside from their vitality and charm of drawing, the colors of these prints are very beautiful. A large number come in soft grays and browns, as in the illustration showing the two prints of monkeys, one swinging from a branch of bamboo, the other studiously examining a bee. All of these prints, the mice, the badger, and the owl, and many other subjects, are in soft gray colorings, and can be harmoniously arranged on a gray wall-paper of indefinite stripe, or grass cloth effect.



The square prints may be arranged in various patterns on the frieze

A dado arrangement where the prints are grouped together according to subject

Other prints are mostly blue in their coloring, as the prints in the illustration showing the carp, the frog amongst the lotus leaves, the Japanese junk, Fuji, and so on. Other subjects have a good deal of pink in them, others delicate tans and browns, so whatever color one chooses to have the nursery, a harmonizing frieze can be chosen and arranged to suit the owner's taste. If the child for whom the room is being decorated is a very little boy or girl, the prints, instead of being arranged as a frieze, can be arranged as a dado, thus enabling the wee boy or girl to see at closer range the friends of barnyard, and wood, and stream.

In any case it will be better to arrange the prints under glass to prevent them from being soiled or flyspecked. A glass of light quality may be used in lengths that will

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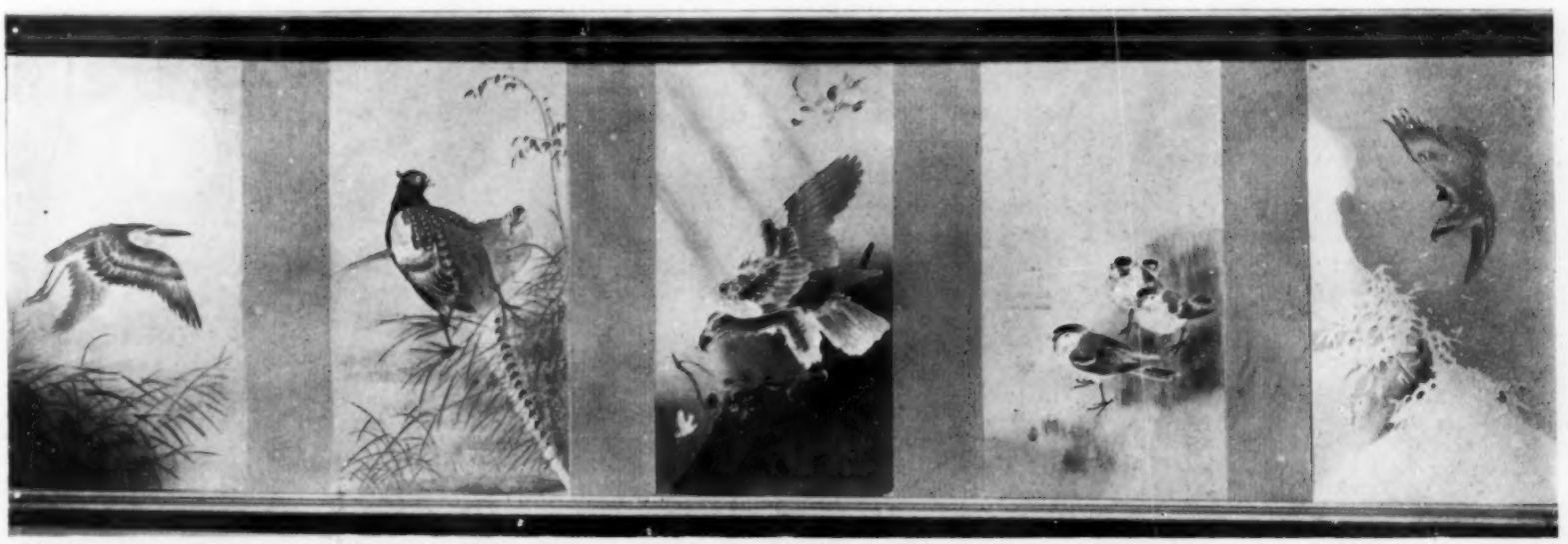

The Japanese pictures are so full of life that they form a natural theme for interesting nature stories that are a continuous delight as well as instruction to small children

The Useful Columbine

A PLANT THAT GIVES SERVICE ALL OVER THE GARDEN IN SUN OR SHADE, BAD SOIL OR GOOD—THE GREAT NUMBER OF INTERESTING VARIETIES

BY E. C. RITCHIE

Photographs by the Author

COLUMBINES have solved a very difficult problem for me, and I feel sure that there must be others who have similar problems and might be helped by my experience, so I venture to set it forth.

My hardy garden is a border seven feet wide running around the four sides of a rectangular terrace 30 feet by 70 feet. The slope on the upper side is planted with purple-leaved plum and hazelnut trees, and although these are kept clipped, they overhang the border considerably and also take much nourishment out of a soil already heavy and badly drained.

Columbines are particularly suitable for use in borders and edgings, where they acceptably fill the gap between plants of low and high growth

I have experimented with the border at the foot of these trees for seven years and have found columbines to be the only flower meeting my requirements for the fore part of it. There are several plants which thrive and blossom at the back of the border where height is permissible. I have Japanese lilies, foxgloves and Japanese anemones there now, but the height limit for the fore part is two feet. Bloom is most needed and appreciated in this garden during the interval between the blooming of the spring bulbs and the June bloom of the rose garden and that of the annuals in the box garden, so I have considered only the May blooming perennials.

In ground that is shaded or impoverished by trees, columbines often do well

Columbines have, to my mind, many virtues. Their colors are most varied, yet harmonious, the foliage comes early in the spring, is interesting because of the different forms, and lasts well after the plants have flowered. Their blooming period is longer than that of any other perennial of their height and season. They succeed in either dry or wet seasons. They are not subject to diseases nor to the attacks of insects. They are graceful for cutting, and need no staking in summer and no protection in winter. In fact, they lack only perfume among the floral virtues.

I began my collection of columbines by buying plants; *chrysantha, flabellata nana alba, glandulosa,* and *caerulea* were the varieties. A number of the plants were not true to name and later I bought seed of the hybrid varieties. This germinated poorly, but by saving the seed from only the best plants I now have a collection of columbines which bloom for two months. The *vulgaris, glandulosa* and *canadensis* bloom earlier than the rest, and *chrysantha,* of which there is now a white variety, decidedly later.

In my experience the best time to sow the seed is immediately after it has ripened, when nearly every seed germinates, and the young plants attain sufficient size to stand the winter in the seed bed without protection. They will bloom a little the following spring and inferior varieties can be discarded. In the autumn, I transplant to my border, where many of the plants live and bloom profusely for

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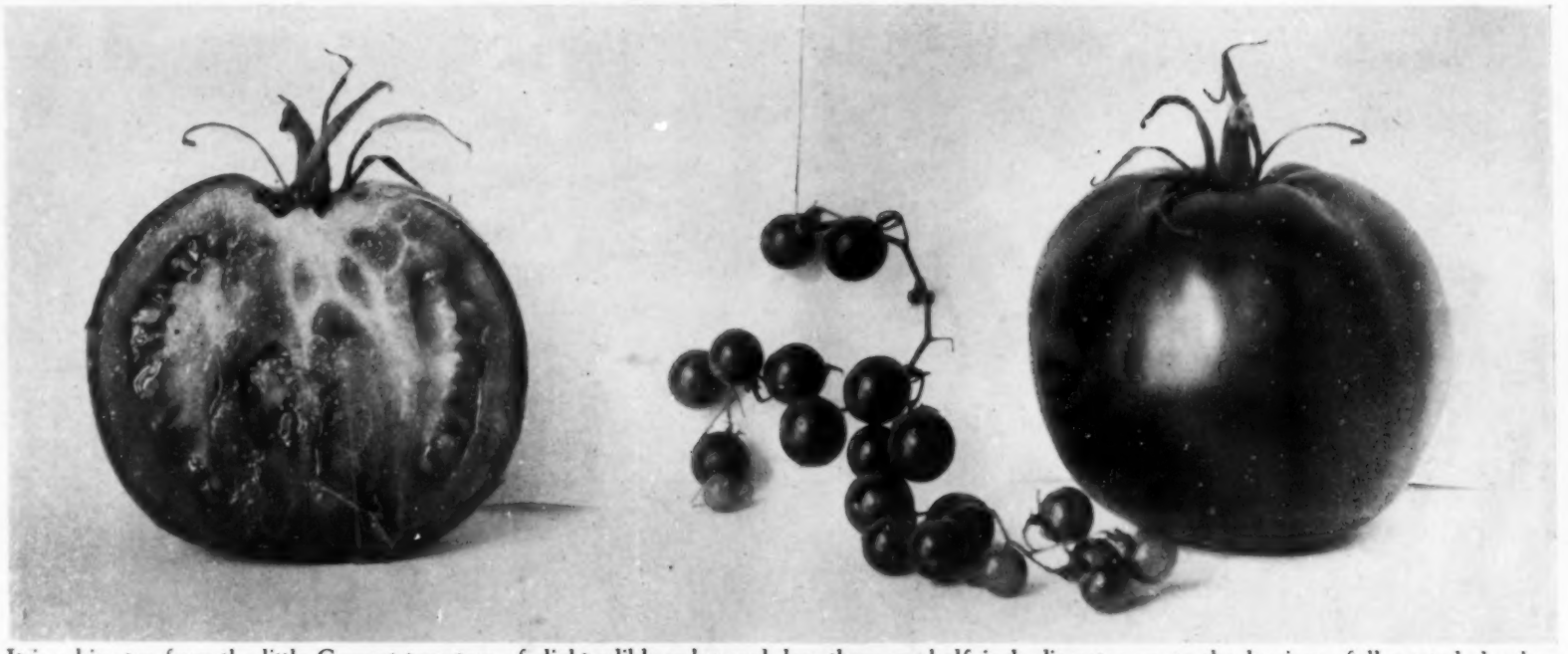
The foliage is attractive as well as the blossoms, and presents considerable variety



It is a big step from the little Currant tomatoes of slight edible value and less than one-half inch diameter up to the luscious, full-meated development of the present, the Modern Globe variety

The Evolution of the Tomato

THE DIFFERENT STAGES IN DEVELOPMENT FROM THE CURRANT VARIETY TO THE ALMOST PERFECT FRUIT OF TO-DAY—THE CHARACTERISTICS OF THE VARIOUS UNCOMMON SORTS

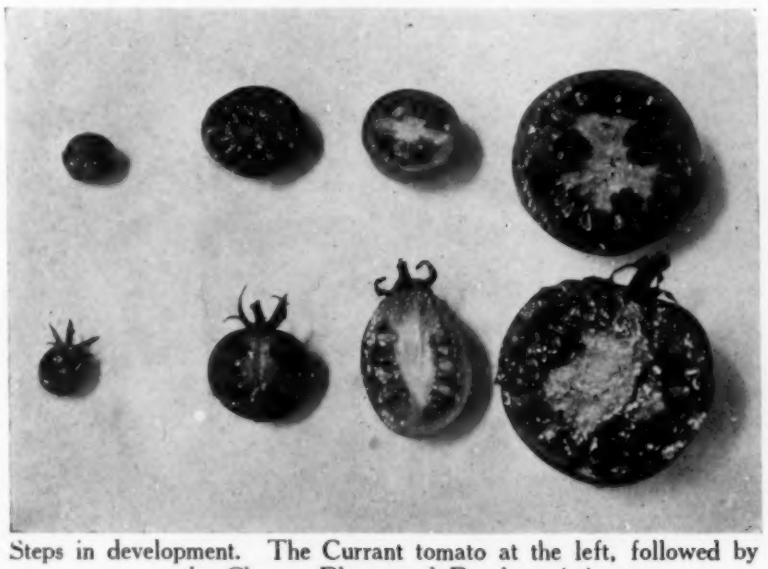
BY ADOLPH KRUHM

Photographs by the Author

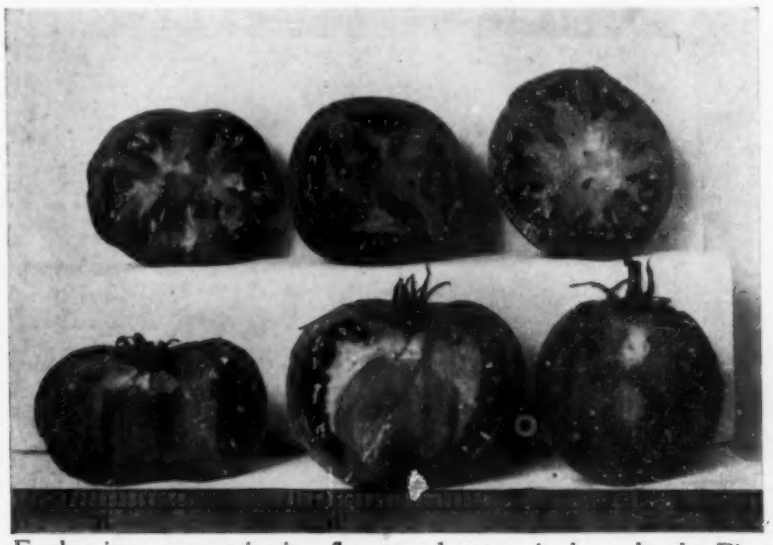
THE original tomato must evidently have possessed two characteristics which were very instrumental in bringing the race up to its present standard of perfection. One was the abundance of pollen found on the large clusters of blossoms, the other was the ideal shape of the small fruits. To follow step by step the changes the tomato had to undergo before it became what it is to-day, will prove interesting. Let us study for a few moments the noteworthy characteristics of those sorts which we may consider ancestors of the large tomatoes of to-day.

The smallest tomato in cultivation at present is the Currant variety, so called because a cluster of it is not unlike a cluster of currants. It is a thrifty sort with many slender branches on which are borne in greatest abundance branching clusters of fifteen to thirty red fruits not more than half an inch in diameter. These tiny "berries" contain no meat except that found in the core in which the seeds are imbedded. Watery fluid and a tough skin make up the rest of the "fruit," which is of decided tomato flavor. The currant tomato is of no practical use except to experiment with the abundance of pollen found in flowers and the ideal shape of the small fruits.

From the Currant tomato to the Cherry tomato is but a very small step, but the evolution is remarkable. Strong branches carry many fruits, averaging one inch in diameter, in clusters of five to ten. The core has become larger and the outer walls



Steps in development. The Currant tomato at the left, followed by the Cherry, Plum, and Peach varieties



Further improvement in size, flavor, and texture is shown by the Pin-Cushion, Standard, and Modern Globe varieties

are thicker—enough flesh is now in the fruit to make it useful for preserving. Cherry tomatoes are of more acid flavor than Currant tomatoes.

The next improvement or upward move in tomatoes we find represented in the Plum tomato, so called because it has the shape of that fruit, being elongated from stem to blossom end. Plum tomatoes are nearly one-half as large again as the Cherry variety; they are nearly one-third solid meat, formed by enlargement of the core. Fruits are either red or yellow, according to variety, and are borne in clusters of three to five

In the Peach tomato, the largest and last of the odd sorts, we have the connecting link between the above earliest efforts of Nature and the improved tomato of modern times. In size it resembles some of our extra early tomatoes of standard size, averaging nearly two inches in diameter. It is nearly round, with but a slight depression at stem and blossom end and an indication of ribs while green. Between the ribs, the center core joins the outer walls with from three to five flesh layers, the first time in the evolution where this becomes a fact. In sorts previously described, only thin skins are found, never more than two, sometimes none at all. The outer walls of the Peach tomato are not thicker than those of a Plum tomato, but the center core has spread, measuring nearly an inch in diameter each way. From this meaty core extend the forerunners to perfection in the form of fleshy partitions, one-eighth inch thick, joining the outer walls of the fruit, which now shows a completely reconstructed interior. Considering their size, the Peach tomatoes are among the most solid tomatoes in cultivation. Were it not for their rather indifferent, mild flavor, they might be grown extensively. As it is, the fuzzy skin (like that of a peach) and the poor quality, completely counteract the advance step in size made by this sort in the evolution of the family.

The Cherry tomato follows the Currant in the evolution, but is nearly twice as large

From the Peach tomato to the old-fashioned Pin-cushion tomato we used to grow years ago as a curiosity and in memory of past ages, is but another step. The outer walls became thicker, the core greatly spread and became a fleshy heart. More fleshy partitions joined the outer walls with the heart, the continuous broadening of which caused some seed cavities to appear in its center. Such was the stage of tomato evolution in this country some sixty years ago, when the first "smooth" tomatoes entered the field. Smooth means free of ribs and a clear skin without defects. Slowly but surely the race progressed. After the importance of the tomato as a food article became recognized, growers gave serious and concentrated attention to its perfecting. First they worked on smoothness by selection; next they evolved size by intensive cultivation. The reduction of number and size of seed cells was worked on seriously. Then they encouraged the original tendency of the tomato to be round and worked for fruits deep through from stem to blossom end. A number of years ago,

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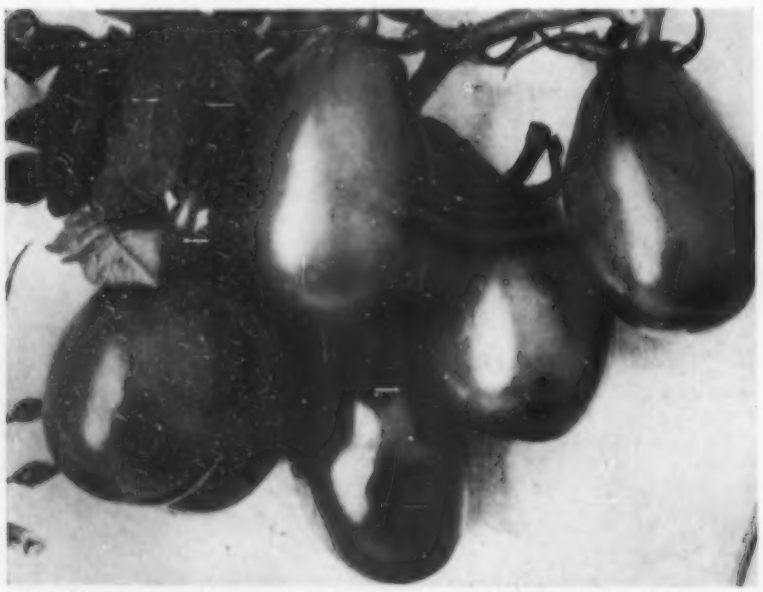
The Globe is a hybrid form, which, while retaining the large size of the Standard, is more elongated



The Plum tomato is nearly half as large again as the Cherry, and its fruit may be red or yellow, according to variety

The Peach form is nearly two inches in diameter, and is quite solid in texture. Its skin is covered with peach-like down

Reclaiming Old Houses

BY CHARLES EDWARD HOOPER

Photographs by the Author

EDITOR'S NOTE.—*So many people are seeking the old house as the ideal country home that the subject bears much more than a cursory treatment. Mr. Hooper's wide experience in dealing with the problems of remodeling old homes makes him especially fitted to give the practical instruction necessary to make the undertaking the delightful success that it is in so few cases. For the first time the whole subject will be fully developed. This article deals with the choice of a house, and tells what one should know before purchasing—what is good and bad and the tests for determining a satisfactory site and building. The next issue will treat of just what to do with a practical example.*

FOR one who has an atom of poetry in his soul, there is a tremendous fascination in the antique. With some it may be but a passing interest, as when one is brought in contact with some interesting specimen of the handicraft of earlier days. Others become worshipers at the shrine—purposely seeking and even collecting from simple pleasure. At all events, for a number of years past there are many who have taken up old places and made homes of them. For the most part this experiment has destroyed the character of the subject, at times even bordering on the criminal. Few have kept the feeling of the old thing, though the failures have not always been from want of inclination or lack of trying. With these last it simply is a question of not understanding the subject—of groping in the dark for something which is plain enough if one looks in the right direction. Ten to one, the first thing that the average person thinks of upon becoming the owner of an old house is the addition of a piazza, and, ten to one, this feature is not a part of the style to which he would tack it. It is simply a clash between two demands and conditions of living—the result is unavoidable.

A good apple orchard is no mean consideration—it has beauty as well as utility

Now let us take up the subject at the beginning in a matter-of-fact way and proceed through the natural channels to a definite conclusion: First catch your fish. One knows in a general way from the history just about what he may expect to find in various parts of the country. Naturally one does not look for relics of 1650 in a country that was a howling wilderness at that time—this is a thing to be remembered. We are, unfortunately, slaves to a certain mistaken notion that everything that may be called old, dates from "The Landing of the Pilgrims and Sixteen Twenty." Of all our helpless pioneers, they have been saddled with the most of the impossibles. There is enough of household furniture and utensils purported to have come over in the Mayflower to have sunk several modern navies, while they who have pinned their ancestry to this little band would make it imperative to have adopted all the foundlings in England in bearing out such facts. Having been rationalized in the knowledge of conditions, one may cease to expect impossibilities and accept things as they are. Really they are sufficient as they stand.

A view on the Connecticut River that shows a desirable distance from the highway

Among the best things to consult after your history are the government charts which are drawn on a scale of an inch to the mile and are quite reliable and complete. These show contours of the land, giving elevations, roads and even houses when it is possible. Of course these charts as yet do not cover the whole of the country, but there is much that *is* covered, and in such cases the chart is valuable. Then there are the newspaper advertisements and the catalogues of several agents that make a specialty of farm property. But whatever selection you may make, be sure that it is practical—that is, does it cover your requirements as to accessibility in its nearness to public conveyance and in elapsed time from your business to and from it? Even if it be a summer problem, which is more than likely, it must be understood that week-end trips are tiresome at the best, and one does not care to spend all his time on the road.

Then there is the locality itself. Is it healthy? What are its inhabitants? Has it any public nuisance or insect pests? What of supplies and their prices?—the local store probably offers some minor articles, or it may be good to be absolutely relied on. Very likely, however, one must get things from the outside—can such be gotten with ease? Your postal service—what of that? Then there is fuel, an all-important problem. Also the taxes: is it a high or low rate, and if it be high, is it offset by the valuation? Is there any sane appeal in case of unfair valuation and taxation? What of climatic conditions, of prevailing winds; do you get any benefit from the latter? The roads are rather important factors—you should understand what you are getting in this direction.

What is the immediate neighborhood and what its neighbors—are they desirable or otherwise—will they respect your property when you are away? It might be well to know. At all events get what elbow room you can—you will need it. At the same time consider that the care of several acres, other than woodland,

A Southern Maine house which is worth the time of examination for remodeling

occasions some expense. Your lot should be above the road level and rather drain onto it than receive drainage from it. Old houses, as a general rule, had their living-room facing the street, and unless there be a chance easily to arrange the plan to accommodate a good rearward view, your being below the road or too near to it might be a serious objection. Our forefathers had little time to sit about and view the beauties of Nature, and it is very likely that their taste leaned but slightly in such a direction. This nearness to the road is very apt to be a menace, owing to its lack of privacy under most conditions. It is rather a hard problem to handle successfully at times, and should be considered and solved, in outline at least, during the first survey.

Such a building as this has possibilities for making a livable and attractive home

One thing on which the possibilities of the place largely hinge is the outlook. We who have time to take up with the problem at all will demand this. Now what is the character of your view? Is it unobstructable, *i. e.*, can future developments destroy it? If the view is locally obstructed—that is, on the land itself, one can nearly always remedy it, but the outside obstruction is beyond this.

The general character of the surface of the plot is a thing to be noted well at the start. On this too, in a measure, depends the vital question of water supply and drainage. A local elevation or an easy slope is perhaps preferable to level ground, although the latter is reasonably safe from the menace of drainage from outside sources. It is better that your lot should drain into your neighbor's than his into yours. The local hollow is bad in many ways: everything flows into it; it is naturally damp and, being more or less cut off from the winds, is open to the invasion of frosts. The too steep grade, however, is a thing to be avoided on general principles, as there is a tendency to washouts in all your surface contours—gardens, grass plots, drives, walks and the like and, further, the climb involved in some approaches becomes a hardship, and if one calculates to remove to such property later in life, the objection is doubled.

Another thing as regards land contours is the general objection to high land in the immediate vicinity in any other direction than the north. Land sloping toward the south or southeast is, under ordinary conditions, the best that can be had. Of course locality has much to do with this as well as the direction of prevailing winds, and as these last play a very important part in the summer problem, they should be borne in mind. Although local conditions may vary with different localities, the location and influence of the sun is the same wherever one may go. With this to consider it is natural that the living-room of the house should be so located as to avoid the hot sun of a summer afternoon, and hence the outlook is best toward the east or southeast. Now of course it is hardly to be expected that one will find an example that embodies *all* the choicest points of the ideal condition, but the vital things should be insisted upon; one may perhaps jockey a little with the rest.

Water supply and drainage should be considered together, while in practice they should be kept apart. The ordinary water supply of the country is the dug well, and this should be as far from your ultimate drainage as is possible. It must cast a suspicious eye, too, on the barnyard, pig-pen and the outhouse, and if located near these should by all means be well above them in grade. It is hard to determine without actually tearing everything to pieces just what direction the underground strata pitches. Therefore it is safer to give any source of contamination a wide berth. In cautioning the water supply to avoid the drainage, we are regulating the latter to its proper place, yet here it might be well to consider that your neighbor has a water supply and to consider this in your general rough solution of the problem.

Do you intend to do a little gardening, the presence of good soil and a fairly level garden plot are important.

Outside of a rather hasty first survey of the land the house itself naturally engages our immediate attention. We will assume that the exterior is fairly pleasing or suggestive of possibilities; let us then pass to the interior, as this is the key to all our troubles.

An old home at Gray, Me., that is interesting but really beyond recovery

In the first going over two things should be borne in mind: the general visible condition, and the possibilities of the general arrangement. The latter one will naturally keep in mind while determining the former. This first survey will tell you whether your house walls are plumb or nearly so and your floors level. By the swing of doors over the floor, one may tell something of this. The condition of the doors and windows and the standing finish should be investigated and, what is of considerable importance, the easy tread and accessibility of the stairs. This last is really vital inasmuch as the extra space required to make easy stairs may not be forthcoming, however much you may desire it.

Right here it may be well to introduce a few simple technicalities regarding stairs in general. The treads of a flight of stairs are the steps or horizontal members on which we tread; the risers are the vertical members between the treads. Speaking in figures, we say that the rise is so much and the tread so much; in this way we definitely define the stairs. On a large scale the height from floor to floor is called the rise and the available horizontal space the run of the flight. Modern calculation has reduced the problem of easy stairs to the following rule: the product of the rise and tread in inches should equal seventy or nearly so. It has been found by experiment that the nearer we keep to the rule, the easier the stairs. Like all rules, this one is not infallible; within it there is a happy medium, from which in either direction it is dangerous to travel far. The happy medium lies in a tread of ten inches and a rise of seven—this for the front stairs of a dwelling. If we increase the rise we decrease the tread and vice versâ. It is hardly likely that we will find, in an old house, stairs as easy as seven by ten—they are more apt to be steeper. For the front stairs it is not best that they be steeper than eight and one-half by eight and one-half. The fact that they may be much flatter than seven by ten is so improbable that one hardly need consider it.

Now supposing the stairs in question to be too steep: in their correction we must, in reducing the rise, increase the total number of risers and consequently the total number of treads and, as in all probability the depth of the treads will be increased to come anywhere near the seven by ten standard, we can see at once that the total run of the tread will be a considerable gain on the original run. Vital question: Have you the space for the extra run?

When there is a chance for a new and independent flight of stairs which will be the most used medium of inter-story communication, the question of the steep original is not so vital.

Then, too, there is the condition of the plastering. If one taps it he can determine whether or not it has broken away from the clinch. Such as may be loose will of course have to be replaced. And in the case of a large area and old-fashioned laths it is best to tear out and relath, as it is a considerable job to free the intervals in old lathing from plaster. Old plastering was generally better than ours, being made for the most part from shell lime. Their lathing in most cases was inferior, as it did not give a uniform chance for a clinch of the plastering.

Look out for the sagging or saddle-back roof—it is hard to rectify. In its settlement it has exerted a tremendous pressure against the outer walls of the house and forced them outward. If the house walls had held there would have been no settlement of the roof. This problem is so difficult as to require practically the rebuilding of the entire structure involved. Not only have the walls spread at the plate or junction of the roof, but they have probably pulled away from the second floor as well.

A stone walled and elm flanked driveway such as this is far beyond the possibilities of the man who builds a new house

Next to the true level and plumb condition of the structure is the *real* condition of the main timbers. The sill first of all: it stands to reason that if this is badly decayed, other members which have depended upon it for support have settled—the first floor timbers are affected—the settling studs and other uprights have either dragged other members with them or allowed them to follow after of their own weight. The same general result may be expected if the ends of the uprights themselves become deteriorated. Now, it may be possible that the evidences of decay are not visible, in which case a knife or some long sharp instrument should be used from both inside and out, where practical. If there be not too much settlement, lesser timbers, or to a limited extent larger timbers, may be replaced, with less expense in the case of floor timbers or girders, which are more or less independent of the outer walls. Often, too, a slight local settlement may be rectified, although the problem is rather hazardous, involving besides the first expense others which may arise from it, such as a broken plastering and sagging doors and windows.

(*Continued on page* 52)

There is a wealth of color to be found in the variant bloom of the French and African marigolds

A Garden of Annuals

THE BEST GARDEN FOR THE BEGINNER—BIG ADVANTAGES OF BLOOM THE YEAR OF PLANTING—SUGGESTIVE ARRANGEMENTS OF PLANTS

BY H. S. ADAMS

Photographs by Mary H. Northend, Jessie Tarbox Beals, Nathan R. Graves and Chas. Jones

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 made chiefly of annuals. Last month the utility garden was presented; other types will follow in subsequent issues.*

AFTER all, there is only one garden for everybody. This is the garden of annuals. Time, means, uncertain domicile and what not may stand in the way of the hardy garden, the rose garden and other charming retreats that snap their fingers at winter's chill; but who, with the desire in the heart, may not have a garden of the flowers that are of a single summer? So little as a nickel, a window box and a wholly negligible amount of labor will create something that every wandering bee will gladly deem a garden—even a delectable one.

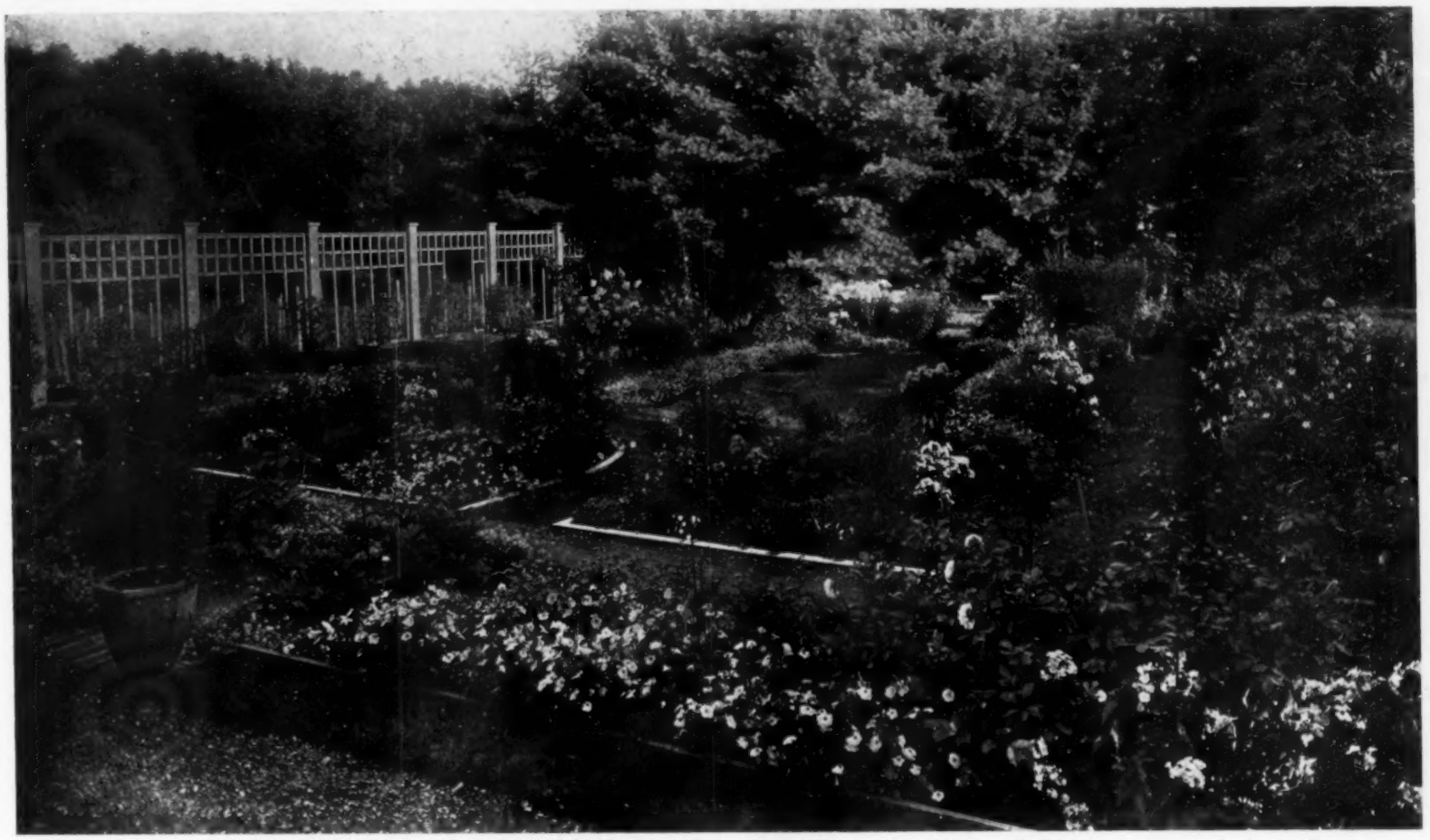
I was born and brought up, so to speak, in a garden of annuals, though much of my early flower education came in the course of frequent excursions into the old hardy gardens of the neighborhood. This was quite a matter of accident. I am rather inclined to think, however, as I look back into those years, that the garden of annuals is not only everybody's garden but the sort of garden that everybody should begin with. It is a fine school of experience in many ways—especially in the use of color in the garden.

Not that the garden of annuals needs any excuse for being; it is its own excuse, and always will be. Sometimes it is the best of all gardens and never, whether it be the sole retreat or only one of several pleasant places, does it

The dwarf nasturtium grows so easily it should not be neglected

A planting of annuals in straight beds. Nicotiana makes a wonderful background for lower growing plants. It appears best when massed

A garden could consist of asters alone; Comet is a fine variety

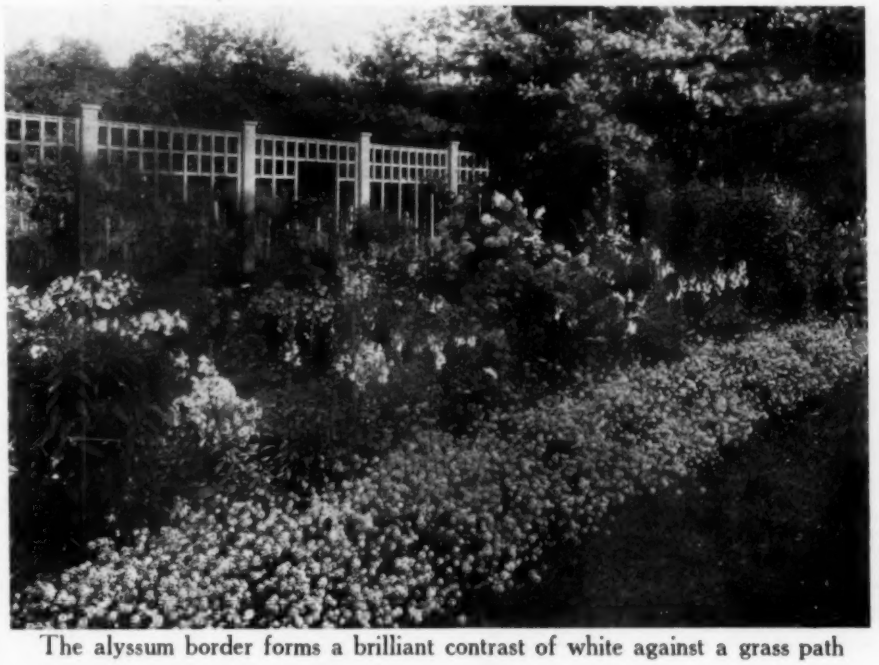


An annual garden where there are straight and irregular beds, and the favorite petunias, phlox, and alyssum appear to the best advantage

fail to offer unique joy and unique opportunity to its maker.

The best kind of a garden of annuals—that is to say, for you—is not, primarily, the kind that you like best. This is one more of those dreadful truths about gardening that take one so long to learn. First of all, unless you are lucky enough to have a place that runs the entire gamut of site advantages, you must decide what is best for the home grounds rather than yield to your precise preference. Your neighbor, perhaps, may have a great rectangular layout, while for you the only course is the utilization of both sides of the wide walk that runs down through the vegetable patch. Nor is your neighbor necessarily more fortunate. Some of the most beautiful of these transitory gardens have been along a path "as crooked as a ram's horn," or random beds close by the vegetables, or borders defining the lawn or a mass of bloom snuggling up close to the side of the house. So keep taste until the last, and then use it unsparingly.

The formal plantation of annuals is of all gardens of set pattern the least expensive and the least burdensome as to labor. Profuse bloom all summer may be assured and there is no bothersome winter protection called for. Furthermore, it may be changed completely every year. It is best when located in the rear of the house or well to one side, beyond the stretch of lawn; but if sunshine will not come to it in either place, it must go to the sunshine. Always it is well to have it at the end of a path of generous length—if not straight all the more pleasing—and either shrubbery or a hedge should frame it, or at least enough so as to give the air of a place apart. If flowers define the path to the garden let them be perennials by preference, so that the approach will not be bare spring and fall. For this bareness early and late is the one disadvantage of the garden of annuals, unless it be avoided by the pleasurable, and certainly quite pardonable, inconsistency of throwing spring bulbs and a few of the hardier bedding plants into that category.



The alyssum border forms a brilliant contrast of white against a grass path

A formal garden design should not be very intricate, unless the working out of it is left to professional hands. One of the easiest patterns is to lay out two long narrow beds some distance apart, and fill the space between with shorter beds running the other way. None of the beds should be less than four feet wide, and six is better still. Three feet is little enough to

allow for the paths, and more space will be needed if the plants used are likely to have much of an overhang. Or a square plot may be laid out in four beds in either one of two ways—with a square central bed and four L-shaped corner ones, or with the same corner beds curved on the inside to follow the lines of a circular central bed.

In the actual planting, even of a five-piece design, the possibilities are so numerous that a lifetime would be too short to begin to test the combinations on one plot of ground. Whether the grower wants form, color, fragrance, or all three, the trouble will always be what to select from the embarrassment of riches; this, too, after reaching the sensible conclusion that only the annuals that are long of bloom and tolerably compact of habit are worth while as weaving material. Beds in all of these three designs should be edged with some low-growing flower, leaving to individual preference the question as to whether the filling be a massing of one variety or a patterned array of several. When it comes to a border, either straight or entrancingly crooked, formality can be thrown to the four winds. And it may well be, save in the case of a straight border, where not infrequently formal edging, at least, is desirable. A border with any curves at all is best planted in patches of irregular shape. The same is true where a border spreads in one or more places to two or three times its width or where, instead of a border, there is a large bed of a greater or less degree of regularity.

An effective garden arrangement with a circular central bed divided in half and four curved corner beds

These patches, which it is rather pleasant to call colonies, are the saving grace of borders and unconventional beds—where it is seldom advisable to plant annuals in straight rows, unless it be for an edging. One way to use them most effectively is, working from the rear, to make precisely the same sort of irregularity that a coast line follows with its capes and bays. Other varieties are then employed to fill in the "bays" and the space between the walk, turf, and the line of "capes." In the case of a border along a meandering path, or a large bed of irregular shape, an admirable plan is to arrange the colonies something on the "crazy-quilt" order. If the colonies are of generous, but varying, size, this arrangement does not look patchy. Now and then let a plant or two from one colony stray over into the next one; this makes a good "bridge" at any time, and when the color contrast is sharp renders the picture more agreeable to the eye.

At the right of this straight path hollyhocks are planted; at the left, irregular clumps of well-known annuals

The cost of a garden of annuals may be so exceedingly low that the money end will appear a negligible quantity. A few five-cent packages of flower seeds and you are through with spending money for a whole season. Nearly one hundred annuals are within the nickel limit. Most of these are desirable in one way or an-

(*Continued on page* 55)

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 sixth installment and deals with the early rewards of the man's labors. Subsequent issues will show how the farm developed to a paying basis.

THE long, warm, golden days of June brought new experiences and new delights to the adventurers who had turned their backs upon the city, and faced the problem of digging a living out of a run-down New England farm.

Two days sufficed for getting in the hay, as it dried quickly in the hot sun and could be stored almost as soon as raked

Much as they had enjoyed the days of late winter and early spring, in spite of, or perhaps because of, the multitudinous activities which kept them occupied incessantly, the opening weeks of summer revealed still greater pleasures. Although the work about the farm and with the growing crops, especially those in the ever-changing garden, kept them busy as a hive of bees, still in the long, warm evenings they found leisure for rest, and for "loafing" on the veranda. With the advent of the perennial mosquito crop, however, they found themselves driven indoors. This was put up with for a few hot evenings, and then a part of the veranda was fenced in with light pine scantlings and covered with mosquito netting, after which they lived in peace. This new "room" was decorated with a few potted plants, including several climbing parlor ivies from the greenhouse, a spare rug and a few chairs, and immediately became very popular with every member of the family.

The cultivation of the potatoes and corn Mr. Mantell attended to almost entirely himself. It was work that he enjoyed tremendously, and took great pride in. To the uninitiated, such simple farm operations as cultivating always seem a mere matter of routine. He himself had always considered them so; in fact, he knew that this might still be the case, had it not been for his discovery of what scientific methods he could apply. As it was, he took the greatest care always to set the machine so it would run just deep enough, and by means of the width-adjusting lever, kept it shaving up as close as possible to the rows without injuring them.

The result was that while the Squire laughed at him for being "cultivation crazy," his fields were kept clean, and there was practically no hand hoeing to be done in them. The Squire still used an old-fashioned cultivator, which had no "depth regulator" and which could not be adjusted in width quickly enough to enable one to alter it while in operation.

The Squire got good crops: nothing was ever allowed to be behind hand, or to go half done, on his place. But as the season wore on, he became more interested in Mantell's "new-fangled" methods of doing some things, and cultivation was one of them.

"I don't know but what that machine is a little better than mine, Henry," he puffed out one day, as Mantell got to the end of a row that widened out, and shoved the lever farther over to take up the extra space.

Mantell stopped to explain to him that he considered the depth regulator even more important, as it enabled him to obtain a dust-mulch on the surface, without danger of cutting and bruising the roots deeper down. "Why don't you get one like it?" he asked the Squire in conclusion.

"I guess I'll have to—another year," was the reply. "The old one will do this year, I reckon."

Mantell smiled as he swung back into the next row. The price of the machine was eight dollars, a year's interest on which was forty-eight cents, and the Squire had plenty of cash in the local bank that was not even drawing interest. Forty-eight cents was about the price of one-half bushel of early potatoes, and if better cultivation made any difference at all on the Squire's potato field, it would certainly make more than two pecks. But that was not Mantell's business, and knowing the Squire, he let the matter drop—though as chance would have it that was not the end of the incident.

The vegetable garden, under the skilful and interested care of Raffles, was doing splendidly. Several times a week, they had to load up the only wagon they had—which was quite inadequate for the purpose—and go to town. This task frequently fell to the mistress of the household, who seemed to develop quite a professional ability as a saleswoman. In her tan and freckles, her old-fashioned bonnet, and her "work-dress" very few of her friends would have recognized the wife of the erstwhile president of a big New York company; possibly it would have seemed that the sunny smile which greeted them belonged rather to a happy, simple country girl than to a lady of polished manners who had occupied a leading position in her "set," and was now driven by poverty to a life of hard manual labor in the backwoods of an unheard of New England town. Mrs. Mantell, however, could not have been induced to change places with any of her former and (in their own opinions) more fortunate companions. She was perfectly happy on her own account, and doubly so in the happiness of her husband and her children. Her charm, courage and personality had made the several tradespeople with whom she dealt deeply interested in the outcome of the Mantell enterprise, and they lost no opportunity of doing what they could to assist her, and of recommending her products to their customers.

No small part of the day's work was the getting ready of a load of "truck" for market. This would consist, in general, of six or eight dozen heads of lettuce, four or six dozen bunches of beets, several dozen more of radishes and carrots, a hundred pounds of cabbage and a bushel of peas. The amount of time required to gather, wash, bunch and pack these various things was quite astonishing, and had it not been for the aid which Robert and Helen were able to give would have taken a

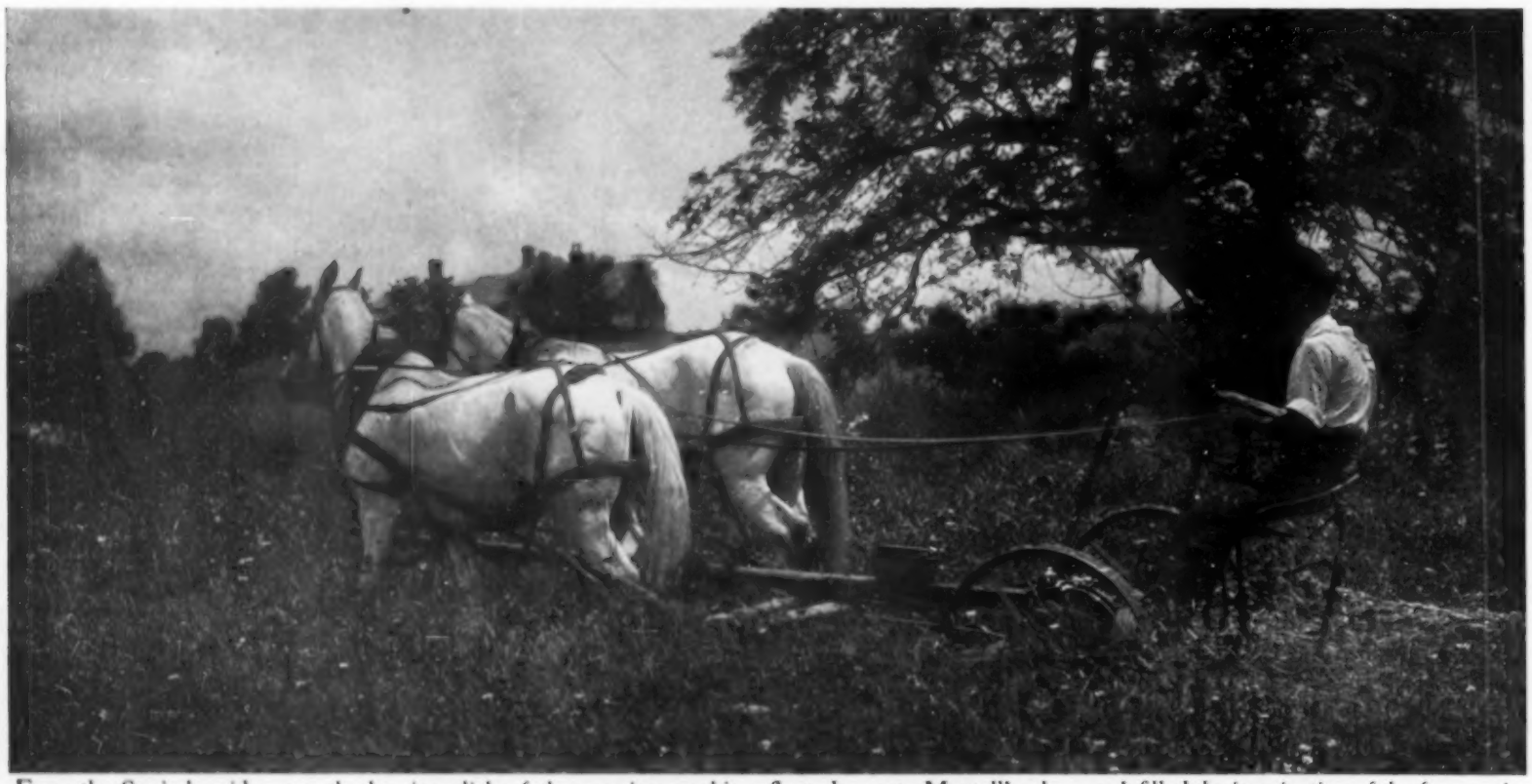
great deal of Raffles' and Mantell's time from more important but less urgent work.

As the summer wore on, and the long hot days came, the other vegetable crops began to mature quickly, and grew with a rapidity that was quite amazing. Mantell was often surprised to see the growth of various things when it chanced that other work had kept him from looking over the garden crops for a space of two or three days. And most wonderful of all was the growth that the weeds could make. In the onion bed, for instance, after their first back-breaking and knee-wearing encounter, it seemed that there could not be much trouble left—every small weed seedling had been conscientiously removed. But a two days' rain followed by a "spell" of extra hot weather had come soon after, and within two weeks the rows, though kept clean in the center by Raffles' energetic use of the wheel-hoe, were positively *green*. No wonder that the onion crop was not a favorite with many of the not over ambitious natives! At the second weeding, however, the work went much more quickly and comfortably; and how pretty the patch did look after it, when the weeds had disappeared in the drying sun, and only the slender dark green of the onion, in the straight slim rows, was to be seen. It certainly was worth the effort, and bore every promise of paying handsomely, when the crop was gathered, for all their trouble.

Beans, sweet corn, tomatoes, and summer squash came on in season, and not only added to the list of marketable things, but brought great joy to the home table, where all good things from the garden were rendered doubly delicious by the skill and care with which the head bookkeeper and chief cook prepared them. In their marketing, however, Mantell noted one thing very quickly: the prices for the first few pickings made things look almost like money from the sale of a new issue of stock; but after that it was like trying to get into a competitor's markets. Not that there was a surplus of garden stuff produced around Priestly, but the prices, based always on the city quotations, were surprisingly lower. Evidently the market gardeners supplying the larger cities had never learned to organize and keep prices on any other basis than that of the wildest cutthroat competition. It was very plain, however, that almost any pains which could be taken to procure an extra early crop would be made up for by the higher prices obtainable for the first few days' sales. And this was another of the notes put down in the little "red book" which Mantell now kept—with notes, data, and cost accounts of the various farm and garden activities—as a basis for next year's plans.

Another of the summer excitements was getting in the hay. As they had no mowing machine or horse rake, arrangements were made with the Squire to "swap work" on the haying job.

Mantell's crop of hay was very light, and ready long before the Squire's—in fact, if it had not been for the Squire's kindness in keeping a friendly eye open, and getting him to cut it in time, he would have lost a good deal of what little value it had. They struck a couple of good summer days, and finished the job in short order, as the hay was dry enough to get in almost as soon as raked. They got three good sized loads, but Mantell figured out that they had got just about one-fifth of a good crop, according to what the "literature" furnished by the United States Agricultural Department had to say about grass crops.



From the Squire's wide acres the burring click of the mowing machines floated over to Mantell's place and filled the imagination of the former city man with vivid pictures of haying time, that period of bustle and excitement which is one of the great events in the farmer's summer

Of course, under the circumstances, this was not Mantell's fault, and yet he was loath to let any of his fields produce so little during a whole season. After studying the situation over as carefully as he could he made up his mind to put in corn. The Squire thought it was too late, but Mantell finally decided to try it out. It was the first of July when they finished haying, and as most of the Squire's grass was not yet ready, he was able to spare a team for a few days. The field was plowed and thoroughly harrowed, and although very dry, worked up pretty well. They got seed from the Squire, and the use of a one-horse planter from another neighbor, and planted deep, in drills, for Mantell knew there would be no chance of maturing ears. The Squire, as usual, pretended to be entirely skeptical.

"You won't need so much fodder, anyway," he said. "There'll

(*Continued on page* 57)

The little African daisy is now a desirable addition to any garden

Improving the Flower Varieties

THE RESULT OF PLANT BREEDING TO PRODUCE BLOSSOMS BETTER IN COLOR, SIZE, OR FORM—WHAT THE GARDEN LOVER CAN DO IN THIS FIELD FOR HIMSELF—RECENT ACHIEVEMENTS

BY F. F. ROCKWELL

Photographs by Mary H. Northend, Chas. Jones, and N. R. Graves.

I SUPPOSE we are all, at times, tempted to break the tenth commandment. I admit frankly that I am; I envy some people their gardens; or, to be more correct, the time they can spend in them.

The great joy, that peaceful, comfortable but unparalleled pleasure of the true gardener is not to behold, but to create: it is a calm, but an active instead of a passive passion. Even the private gardener, who cannot feel that a single plant in all the extensive grounds is his own, gets a hundred times more happiness from his beloved gardens than does the half-appreciative owner.

And just as no true gardener would be content to take a garden ready made, so every one who has worked among flowers, and come to realize those fine distinctions which separate not only different groups and varieties, but even different plants and blooms of the same sort, inevitably comes to feel within him the urging to create or develop new sorts. Some particular form, some peculiar shade of coloring will, by the intricate and inexplicable laws of individuality, appeal especially to him, and these he will want to fix, to make his own for the future. There is also the healthy and powerful fascination of the feeling of creating something new, something heretofore undiscovered. It may not be an improvement; perhaps even "a poor thing, but mine own!" Nevertheless, it will hold your interest and affection.

There is a new "half dwarf" strain of snapdragon that should go far toward adding to the deserved popularity of this attractive flower

Thus, it seems to me, this feeling that one can put himself into harmony with the creative forces of Nature, the mystery of Evolution, is the supreme joy of gardening, at once more intellectual, more keen and more permanent than any other.

I do not mean by this to suggest that you consider making yourself a candidate for a second Burbank, but there are certain things along the lines mentioned above that you can do: things that are perfectly practical and which will give you a great amount of fun and interest.

Old-fashioned coxcomb has been developed into the long, sweeping ostrich plumes of the modern celosia

First of all, you can experiment with different varieties of the same flower, until you feel satisfied that you have found the ones which suit you best. It is hard to make a satisfactory selection of flowers from the descriptions given in a seed catalog. You may save time by paying a visit to some nursery or large greenhouse establishment, but even this is not wholly satisfactory, as the chances are that many of the things you want to see will not be "in stock," and only a part of the various things will be in bloom at one time. The only real way to get results that are certain is to test out all the sorts you can under the conditions in which you will grow them in future years, and then pick out the best and discard the others.

That is the first step, and by no means an impractical one, for the work need not all be done at once. It may be spread over as many years as one wishes, a good plan being to take one group of plants at a time. In this way you are able to make a more inclusive trial, and to compare the different sorts more definitely. I know one democratic lady who has gone through the list of annuals and half-hardy perennials alphabetically, taking as many as she could each year—but not all the varieties, of course. They were by no means the sorts most praised in the catalogs that gave her the best results.

Having taken this interesting first step, you are best prepared to proceed with the second, which is even more intensely fascinating—that is, to keep and improve your favorites until you attain the acme of beauty and strength of growth with each sort. By this time, those plants which you have singled out as being worthy a place in your selected garden will have assumed an individuality, created in you a personal interest which in the old haphazard garden you would never have dreamed possible, and it will be

The lupine is especially fine for cutting, and grows easily even in poor soil

with the keenest delight and appreciation that you watch the development of each successive generation.

Nature is full of seeming contradictions, and plant breeding is no exception to the general rule. At least a rudimentary knowledge of the principles which have been found to apply is necessary even for the amateur seeking only his or her own amusement. Otherwise, doing what may seem to be the right thing will result in failure. I will never forget the disappointment of my first attempt at plant breeding. In a lot of seedling petunias I found one of exceptional beauty and symmetry of marking, the most lovely single flower of this sort I had ever seen. It was carefully separated from all the rest, cared for faithfully, and the seed saved and planted in the innocent expectation that a hundred like it would take its place. They came up most encouragingly, and grew along like weeds. One by one they blossomed; all sorts, all colors, all kinds of markings except the one I looked for! One cutting from the parent plant would have preserved my beautiful flower, reproducing it with almost perfect exactness; all the seeds I might plant would probably never give it to me.

In other words, some flowers will "come true" from seed, but many others will not; and if one wished to save extra choice specimens of the latter it must be by means of cuttings. There is not room here for an itemized list of the two classes, but you can tell as a rule by referring to a seed catalog. If the seed of the species in question is sold mostly by *named varieties*, like mignonette, sweet peas, or alyssum, that flower probably belongs to the first class; if seeds are sold as "choice hybrids" such as verbenas or petunias, you will be pretty safe in assuming that the only way you can propagate individualized strains of these flowers is by cuttage.

You can breed new varieties of dahlias by fertilizing with the pollen of favorite kinds

New varieties are obtained in one of three ways: by development or "selection," by cross-breeding, or "hybridization," and by "sports" (mutations).

All three of these agencies of evolution are active in Nature, unassisted by man—in fact, most of the improvements in flowers, up to a comparatively recent date, were the result of accidental causes. The science of plant breeding has, however, taken great strides during the last few decades, and there is no reason why it should not prove a healthy and interesting avocation for hundreds of amateurs.

A great improvement has been attained in the tuberous begonias, especially in the Wundulata type, which has fringed edges

Improvement by selection is the easiest and the surest method of building up the personnel of your garden. This may be made to operate in two ways; that is, you may aim simply to grow extra fine specimens of types that already exist, or you may attempt to emphasize some particular feature of form, size, color or habit of growth. This work will require patience and care; but what can be imagined more interesting, more fascinating, than to see a living plant, generation after generation, following gradually your guidance and coming nearer your ideal.

To use successfully the second method, hybridizing, you should have some knowledge of the relationship of the various species, and must be, or make yourself, familiar with the arrangement and functions of the sex organs of flower life—information along both of which lines you can get from any first-class book on botany. If you desire to attempt the work in an intelligent way, you cannot leave the pollination of your subjects to such chance agencies of Nature as the bees or the wind, but carry it on yourself with care and precaution.

If you keep your eyes open, as you work in this new and wonderful garden of yours, you may be fortunate enough to discover, some day, and in some unexpected place, a distinct "break" or "sport" in some member of the happy family. I have just suc-

ceeded in rooting two cuttings of Madam Salleroi geranium—the little green-and-white foliage plant—in both of which all the leaves are a pure golden white. It is possible that they will live, and the type become fixed; but albinos, in both plant and animal life, lack stamina and virility, and therefore I shall not be surprised if these prove to be weaklings, although they appear, so far, perfectly normal and healthy. But the plant breeders, even the big fellows, expect many disappointments and failures: out of hundreds of seedlings they are thankful to get one that is a real improvement. So we, who can get our reward in the fun of the thing as we go along, can afford to have patience. Such work will at least shed a new and a more illuminating light upon our gardens, sun-lit though they have been before. It will bring us into more intimate relationships, and finer appreciations.

Dahlia blossoms tied up after fertilization from another flower to produce a new type

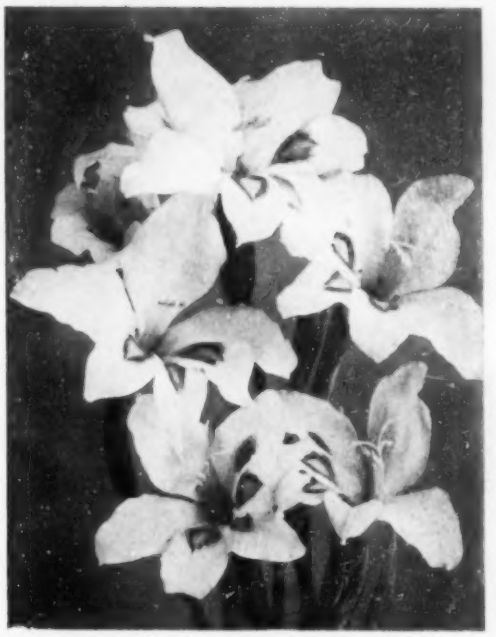
As an inspiration to you—to say nothing of the opportunities afforded of adding some of these beautiful new things to your garden—let us take a look at some of the wonderful recent achievements in the evolution of flowers.

Everyone has heard of the grand new Spencer sweet peas, with their delicate self-shadings and marvelous size, but do you know of the double or duplex Spencer? You have probably grown some of the gorgeous new hybrids and named varieties of gladioli, but have you yet seen a ruffled one? Who does not remember the advent of the Crimson Rambler—but are you aware that it has been surpassed in its own class; and that such grand roses as American Beauty, President Carnot and Kaiserin Auguste Victoria may now be had in climbing form, thus giving both decoration and bloom for cutting, on good stems?

There is no annual flower which has been developed more rapidly during recent years than the sweet pea—our grandmothers would hardly recognize some of the latest productions of the hybridizer's art. The new duplex type, especially, is different from any of its predecessors—called "duplex" rather than double because several years ago another double strain, which for several reasons proved unsatisfactory, was tried and then dropped by most seed houses. In Pearl Gray a new color has been attained. The dwarf Cupid, growing less than a foot high and over a foot across, and blooming freely, should be more extensively known, as it is available for many places where the tall sorts could not be used.

A great improvement has been achieved in tuberous begonias in the Wundulata type, with its ruffled and fringed edges, giving these beautiful flowers an additional charm. Among the fibrous rooted sorts, the new double Vernon is very striking. Begonias, especially the tuberous rooted sorts, are too infrequently seen. If you have not yet grown them, you are missing one of the best flowers in existence.

Another long-unappreciated flower is the *Antirrhinum* or snapdragon, one of the most lasting and beautiful of all flowers for use in vases. The new half-dwarf strain, growing less than two feet high, should result in making these more popular. There is also now a double strain, attractively fantastic, but I think the "singles," if one may so describe them, more beautiful, for the unique dragon's jaw formation of their flowers is part of their peculiar charm.



Every year sees new additions to the already beautiful and appreciated gladioli

Salvias are usually thought of only as red-flowered border plants. Did you know that they can be had also in an attractive rose, in yellow, white, and a new blue, with much larger flowers than the old *S. Patens?* What would be more interesting in your garden than a bed of these several sorts? And as salvias come true from seed, here is a fine chance to try a little hybridizing.

(*Continued on page* 63)

The Spencer type of sweet pea has been developed to have larger blossoms and more brilliant coloring—Pearl Gray is a new shade

As permanence was one of the chief attributes sought for in the garden, the shrubs that are hardy were chosen first, and even at the entrance tall peonies, elders, and many other bushes made a compact mass either side of the path

A Garden Living-Room

HOW ONE MAN ADDED TO HIS HOME WITHOUT BUILDING—AN OUTDOOR RETREAT THAT HAS THE BEAUTY OF SHRUB AND BLOSSOM AND THE PRIVACY OF A STUDY INDOORS

BY JAMES M. HULL

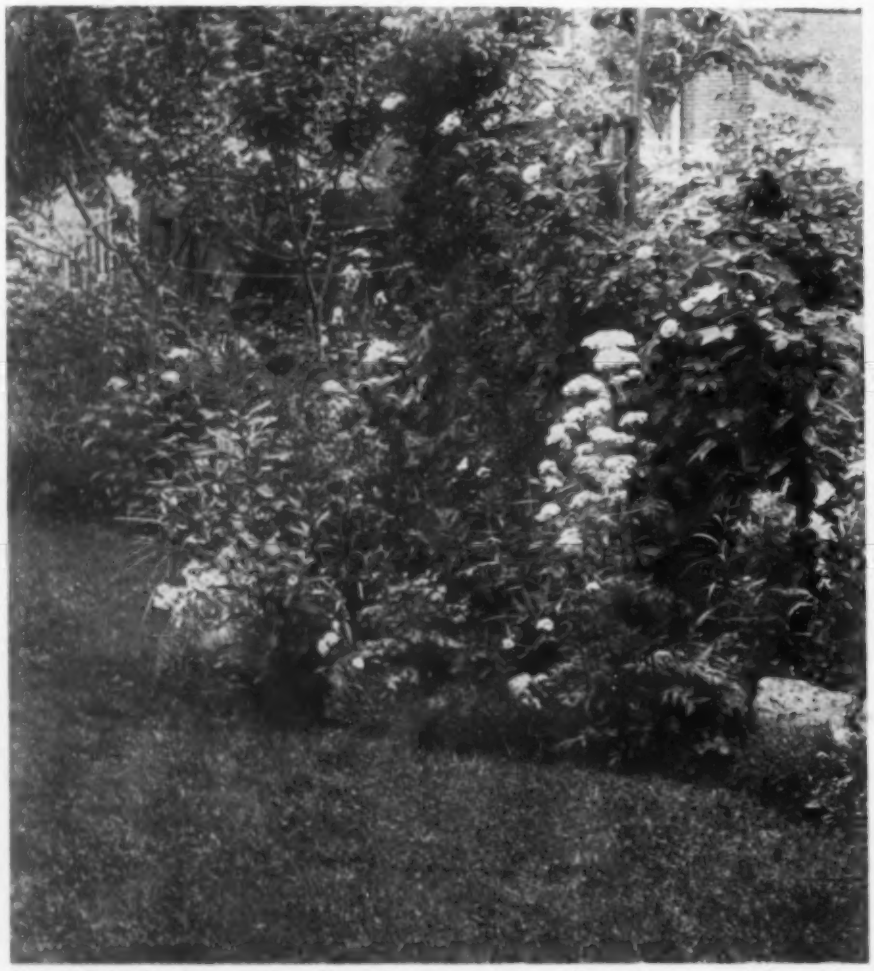
Photographs by the Author

IT has always been my desire to have a garden, not the kind where rare, tropical luxuriance abounds, or even where the finest blooms are found; simply a garden to live in, a place to enjoy the full pleasure of blossoming plants, where I might retire with as much privacy as to my study.

A few years ago my desires took active form, and we moved to a new home, so I set to work at once at making our outdoor living-room.

The available space was small, only 26 by 64 feet, but I went ahead, keeping in mind that it was to be a picturesque garden, one that was secluded, effective from all points of view, and with an abundance of flowers from early spring until frost.

I worked away at plans and eventually got results. Each year I see where I can make improvements



Around the border are placed rough stones to give a basis for moss pinks, phlox, and sweet alyssum to grow over. These blooms follow the early bulbs

and add to the completeness of the place, but I think I have succeeded in satisfying my desires.

To get the desired effect, I left the central part grass and made the sides and ends irregular. The next problem was the fence, which was very ugly; this I hid with vines, shrubs and a few trees. As I wished a permanent garden, I chose shrubs, vines and perennials, and the most hardy I could find. The first year I filled in with all the wild flowers I could gather and spent many pleasant and happy days in the woods and marsh and on the mountainside. We brought home roots of daisy, aster, goldenrod, ferns, lilies, phlox, violets and many others. These were for temporary, immediate effect, but I have retained some of them permanently, they are so effective and beautiful. The border shows all these flowers charmingly intermin-

gled with long plumes of larkspur or spear-like leaves of iris and dainty golden stars of coreopsis. With a background of climbing roses, shrubs and vines, the garden is an individual one, embellished and beautified with comparatively simple means and a few hours' work every day—chiefly in the evening.

Since the garden had been planned and planted as an outdoor living-room for the summer months, its gradual development brought up the question of permanence, artistic arrangement, harmony of color and the lengthening of the flower period.

Beginning in April and early May, I have the most hardy spring bulbs coming in bloom—tulips, narcissi and daffodils, which are good for cutting for the house. They are planted between the perennials, a little back from the edge of the border, as they are past their bloom before the others are much grown. The border is edged with small boulders, between and over which grow moss pinks, June phlox, sweet alyssum and forget-me-nots. These help to keep the edging brilliant from May to October. Next to the fence there are roses, shrubs, vines and tall plants, such as sunflowers (hardy), hardy delphiniums, hollyhocks and hardy asters; then come the smaller plants, aquilegia, Canterbury bells, heleniums in variety, iris, monarda, peonies, phlox, Oriental poppy, and valerian. The majestic lilac and blue delphinium are prominently placed, as are the clusters of Canterbury bells, in blue, white, and purple; rich red, white, and pink phlox; yellow heleniums and Oriental poppy. Violent contrast is avoided by painstaking arrangement to effect color harmony.

When early plants are through blooming I fill in vacant places with annuals. And with the help of these annuals the floral procession keeps up and on until the end of the season.

And now when the garden has matured and all the boundaries are hidden by trees, shrubs and vines, we have come unto the full enjoyment of it, spending all our spare time out-of-doors. Many evenings we have tea outside, where all is fragrance and beauty. I have never regretted the few extra hours spent in making this little garden, for as the shrubs and plants mature each season there is less work to do.

Many visitors come to enjoy it and depart with fresh inspirations, as they see the shelter and seclusion that the family are enjoying—that is what the garden was planned and planted for. We have really made an addition to our house and that without building, and what is more it has done much to contribute toward good health.

The garden living-room is a grass area, irregularly bounded by a wealth of flowers, shrubs, and trees that grow up, cutting off an unpleasant view on one side. In obtaining immediate results at the first time of planting, wild flowers were brought in from the fields. Some of these proved so desirable that they have been retained

Mr. Calvert's Hampton house is called a bungalow, but the reference is toward its informal treatment aimed to produce the maximum of comfort, and not toward the architecture

THE HOME OF MR. GEORGE H. CALVERT, HAMPTON TOWNSHIP, PA.

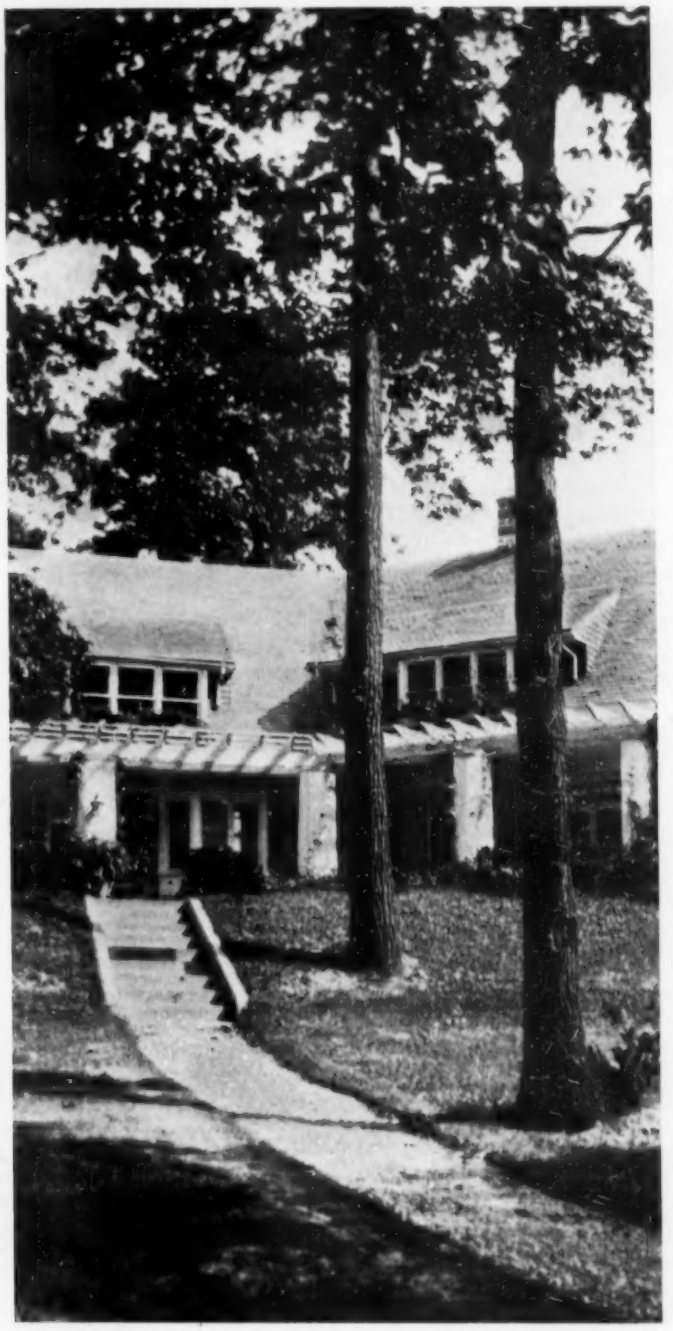
The gray stone house is set upon a woodland knoll and from the incurved front has an extended view

This house is an example of a summer home that refutes the idea that the log cabin is the only style that suits the woods

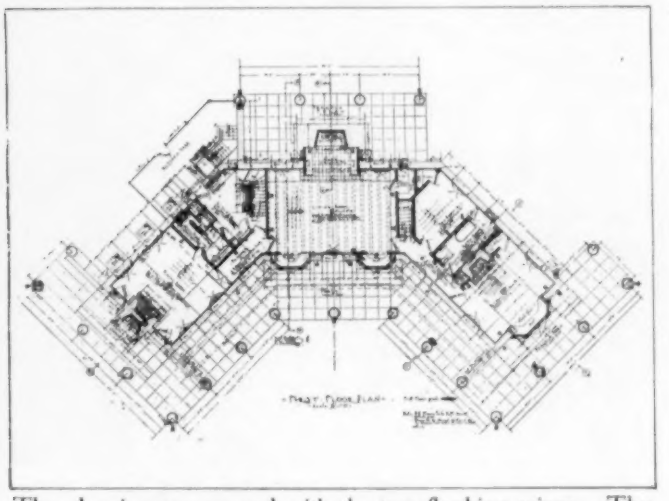
The living-room has a plain finished woodwork that gives a bold, generous effect, and invites to easy comfort

The dining-room is simply furnished and carries out the camp idea with a large, rough stone fireplace

A feature of the library is the bay window with its attractive treatment of square-paned casements



The pergola about the house is a unique feature, but calculated to give just the right amounts of shade and sunlight



The plan is very unusual with the two flanking wings. The living-room occupies the entire central portion

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.

Brightening a Somber Piazza

THE somberness of a dark piazza may be gratefully relieved by the use of willow chairs in their natural state, with cushions of bright crimson. The combination of the fresh willow and the red gives a suggestion of cheer and sunshine which cannot be evaded, no matter how gloomy the day or the individual.

The bright red cushion in the white or green enameled chair is even a little more startling than in the natural willow, but very inviting and cheering. The large flower patterns in chintz have superseded the more modest designs, and all the patterns show roses and other flowers several times enlarged from nature's dimensions. These flowered chintzes seem most appropriate trimmings for the natural willow and reed furniture, as their colorings are apt to be quite exact reproductions of nature.

For use indoors, willow and kindred furnitures are now tinted to match any color scheme of the walls, and the choice of cretonnes is so large that harmony is assured, whether the choice be in warm wistarias, mellow browns and yellows, or bright roses.

A Casement Window Device.

I HAVE in a measure solved the problem of casement windows in our house at Lawrence, Long Island. About eighteen months ago we built a sun parlor as an addition to the house, which room is about 28 x 12 feet. The casement windows swing out and are fitted with Chamberlain weather strips, making them completely weather proof. The screens are on the inside and in one piece, reinforced in the length and breadth bv metal strips.

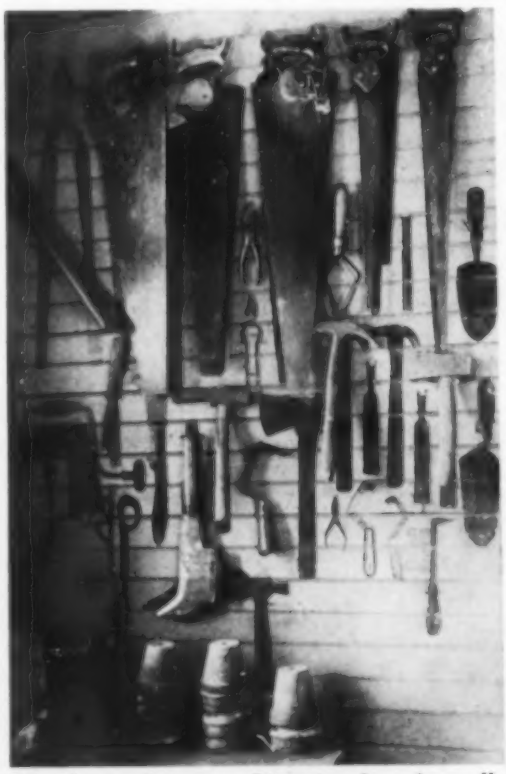
The architect, after some study of the problem, decided to have the screens work on slides, the same as the ordinary two-piece screen, and when raised they disappear into the wall between the top of the window and the ceiling of the room.

Ours is an old-fashioned house built about 150 years ago and as most of the ceilings are low, we would not secure more than about fifteen inches of head room. When the screens are raised, however, this opening of fifteen inches permits the casement windows being unlatched and opened or closed. The casement windows are opened and closed by means of a metal arm, which allows adjustment with a thumb screw.

It is no doubt possible in building a new house to allow for more space so that the screen can be raised at least two feet, which should be ample for all purposes.

The Piazza Tea Wagon and Table

THE willow tea wagon for piazza parties is preferred to finished wood, for willow is in its natural state and not subject to the changes of air and temperature to which other varnished woods in time succumb. Under the glass top should be a strip of chintz to match the chair cushions. The piazza table of willow or reed is vastly more useful if provided with a glass top to fit, under which is a mat of the chintz. Another and more original method is to have several neutral toned under pieces, and to arrange one's own decorations from nature. Flowers and leaves will press very gracefully under the weight of the glass, especially if the background is mounted on cardboard to counteract the corrugated effect of the willow work. Grasses and grains may be most effectively arranged on these neutral silk or satteen pads, and preserved by the glass for some time.



The shape of every tool is painted on the wall, so that each implement has its particular place

Keeping Track of Tools

DIFFERENT tools are frequently lost or mislaid by the workmen using them, and considerable annoyance as well as expense is the result. One of the most successful methods of lessening this inconvenience is used by the owner of a country place where several workmen are employed.

On the wall of the shed where the various implements were kept this man painted the outline of every kind of tool and at the top of each figure a spike was driven. A number was then assigned to every man employed and all the tools he used were stamped with it. After the day's work the men were required to hang the tools on the spikes over the corresponding paintings, so that a glance along the wall was sufficient to show what implement, if any, was missing, and who was responsible for it.

This is a practical plan and can be recommended where comparatively few tools are used. Where larger numbers are to be considered, it is advisable to employ a caretaker.

The Uses of Cheesecloth

WHOEVER has a cellar, a stable, a garden or a chicken house should be told the manifold virtues of cheesecloth. Frames covered first with chicken wire, then the cloth tacked tight over them, let in light and air, yet keep out dust and a modicum of cold. A three-foot running

frame at the top of a glass fronted fowl house saves expense and helps wonderfully in ventilation. Stable windows and those of cow barns should be filled with cloth-covered frames as soon as the weather is the least bit mild. Thus flies and most of the dust are barred. Thus, also, there is no sweating or steaming as with glass, nor the holding of ill odors. Cellar windows ought to have the cloth frames inside their bars or wire gauge. In the garden small tents of cheesecloth are the handiest protectors from frost and frames of the cloth and netting are better than sash for sheltering plants in hotbeds or coldframes, as they give air and save from sunburn.

Reducing Water Pressure

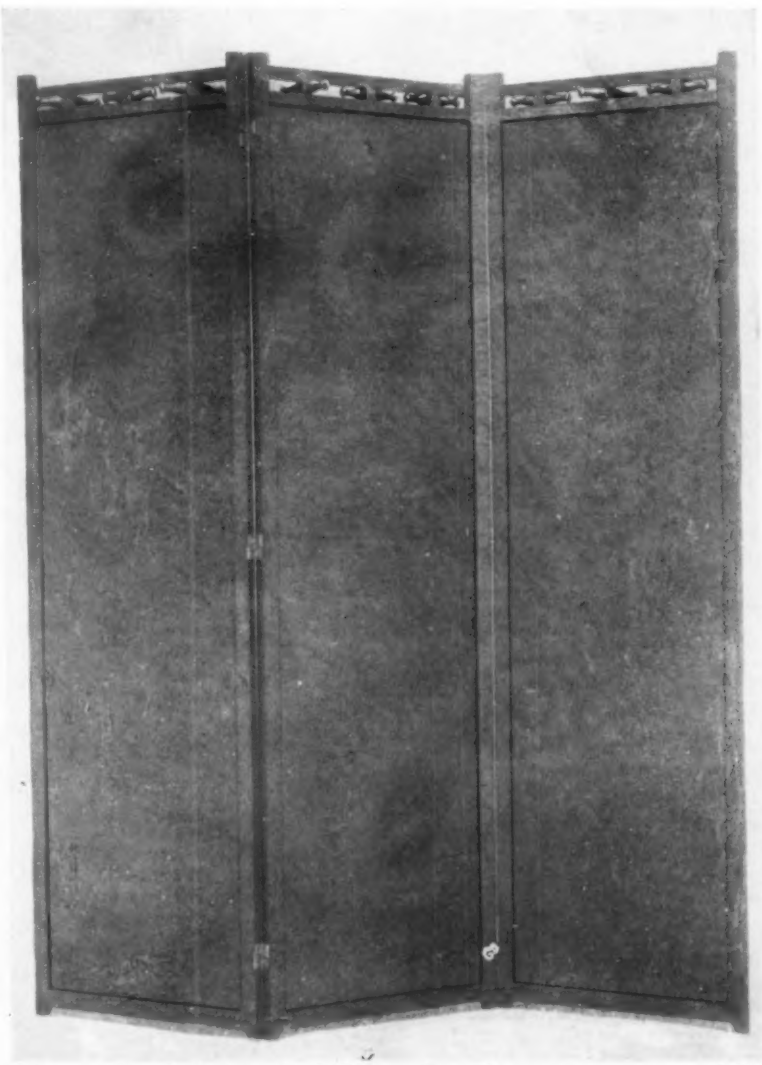
A WATER pressure reducer is coming into extensive use these days and rightly so. Its cost is small; one can be purchased for about $10 which will give good satisfaction. The ever-increasing water pressure which one now finds so universally, makes some device of this sort necessary if economy is sought after. High water pressure makes much trouble in the household. Of course the reason for the increase of pressure is usually fire protection. This is of value, but if care is not taken (and so many householders do not realize how much money can be wasted by excessive use of water) to prevent needless waste, water bills will make quite a hole in the careless householder's pocketbook. Let us now consider a typical case:

Mr. "A." had received a large water bill for the size of his house. Complaints to the company simply resulted in his learning that the meter was registering correctly. He was merely using water which must be paid for. He called in his plumber, and acting upon his advice installed a water pressure reducing valve. In only six months he reduced his water bill one-third. How is it done? The pressure reducer controlled the pressure. Before using it, if a quart measure in the kitchen was to be filled, another quart or more was wasted by high pressure, making the measure overflow. Any amount of water was thus wasted in the daily household tasks. But this was not all. High pressure makes the "ball cocks," which we all have to use in our homes, operate improperly. The valve seats are injured by being subjected to a very high pressure. Then leakage results and water runs to waste, often without the knowledge of the householder. But more than this, all piping is subjected to an undue strain, and plumber's bills are large. If the house has no tank, a large strain is also put on the kitchen range boiler.

A Screen That Acts as Wardrobe

THE unsightly clothes tree has a rival; or rather succumbs to the greater usefulness of the "wardrobe screen." Most people object to hanging their clothes away in a closet immediately on removing. It is those people, as well as the ones who have insufficient closet room, who are given to using the clothes tree. The screen which now takes the place of the tree is a practical screen for every purpose to which a screen may be put. On the face of it, it is a good, comfortable, useful-looking burlap-paneled screen, with oak or imitation mahogany frame. The screen stands over five and a half feet high with panels of generous width—about twenty inches—and is solid and substantial, although easily moved. So much for the screen, which may be used anywhere that a screen is desired. The wardrobe part is in the wood trimming at the top. Each of the panels holds three wooden pegs, as you can see in the picture, which turn at will into clothing pegs *on both sides of the screen*, making eighteen available pegs which will support a quantity of clothing—heavy weight articles at that. When not in use the pegs may be turned parallel to the top of the frame to make the proper trim. How much more sensible than stringing one's things over chairs at night; and how useful to keep hanging on the "other side" any articles which we wish to expose to the air of the room by day.

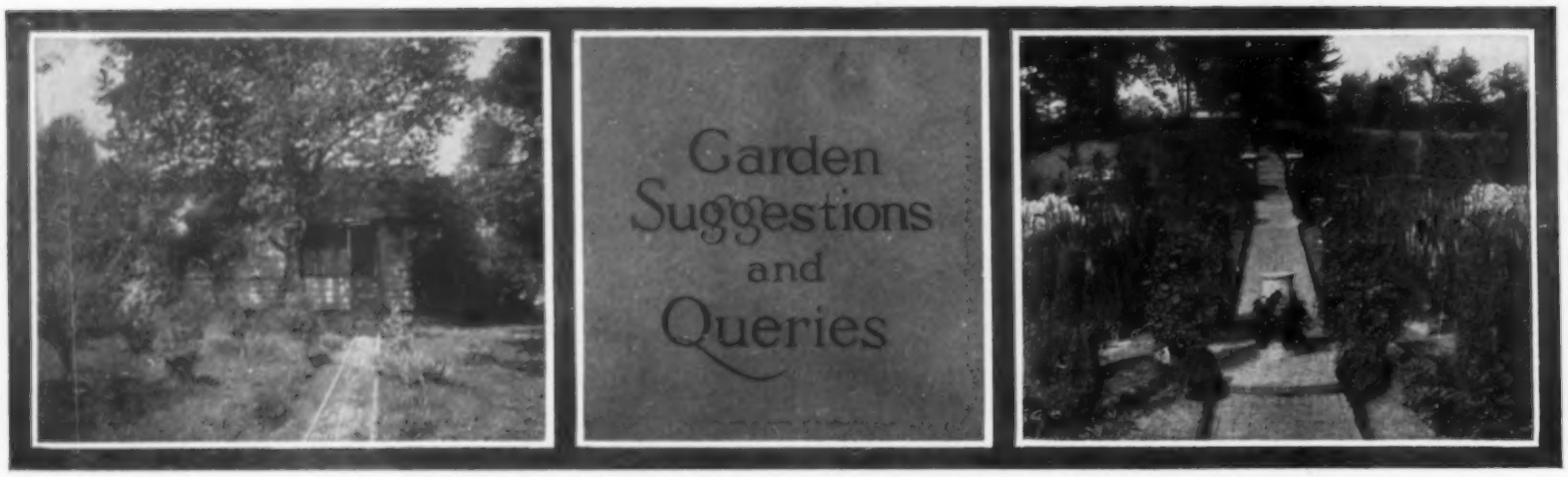
The burlap covering of this screen should of course be of such a color as to harmonize with the room where it is to be used.



The combined duties of clothes rack and screen are successfully performed by this simple contrivance which has a row of pegs along its top for hanging garments

A Carpet Suggestion

IT is sometimes a problem to know how to carpet a floor in a room where a great many colors are used, as often happens, for we cannot always have things to our liking, and get rid of all the accumulation of years, especially in an old house. Then, too, we are sometimes obliged to put up with a wall paper that is already in a house or apartment. This, of course, does not happen when we are doing the house over to suit ourselves, but when we are making the best of what is already there, a good many problems present themselves. What carpets or rugs to use when there is a heterogeneous collection of colors and objects in the room is one of these problems. A friend of mine solved the difficulty most satisfactorily by having rugs made of plain velvet or axminster carpet in the colors best suited to the needs of each room. Velvet and axminster carpets come as low as and less than a dollar a yard occasionally, up to almost any price that one cares to pay. These plain carpets may be had in very good colors, soft greens, tans, grays, browns, almost any color, in fact, that one could desire. In a room that has hangings and other furnishings of old blue, a rug of soft tan will be very satisfactory, and in the proverbial "girl's room" of pink and white, a gray-green rug will give good service, better than an old rose, and be a pleasing contrast. Another point in favor of these made-up rugs is that they may be made any size and shape that the room requires, and small strips, simply the width of the carpet, can be bound at both ends, to fill in a narrow space made by a jog in the wall, or a narrow entrance way. In fact, there are in almost every house odd corners where these small pieces can be employed.



Conducted by
F. F. Rockwell.

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

May

IT is true that May brings the flowers. It is equally true—though one does not see it mentioned in the numerous little spring poems in magazines—that May brings *weeds;* weeds by the million! They come so suddenly that even experienced gardeners sometimes are caught. And when you once get behind the work of weeding in the garden, you are likely to be chasing it all summer, without ever catching up, and with severe injury done to your garden.

So whatever else you do this month, keep the garden scrupulously clean—without a weed in sight. I never realized the importance of the weed question—how many golden garden hours are wasted by putting off the dreaded task until to-morrow, when it will only take much longer—until I attempted to grow onions on a large scale. Now we try to make our rule, as far as possible, never let a weed be seen! Here is the method used:

In these days practically every garden is planted with a seed-drill, which leaves a narrow, plain mark where the roller passes over the row. Instead of waiting for the plants to come up, before beginning operations, begin a few days after sowing—just as the first weed seeds are sprouting, if possible. Put the "disc" attachments—you are only wasting time and money if you try to get along without them—on the wheel hoe, set them at a very slight angle, and shave up just as close to the row as you can get. This will leave a slight depression each side of the row. Then examine the rows frequently, and after the seeds have sprouted, but before they get quite to the surface, you can put on the hoes, and by going very carefully, just skin under the surface of the rows themselves, not going deep enough to cut the seed sprouts, but destroying thousands of little weed seedlings which otherwise would have to be pulled one at a time by the fingers. Then put on the rakes, or hoes, whichever seems to work best, depending upon the condition of the soil, and go through between the rows, leveling down the slight ridges left by the discs. By following out such a system as this, adapting it of course to your own requirements, you will save yourself many hours of the most tedious work there is connected with the garden.

With all these precautions, however, some hand weeding will be necessary. Do not shirk it; delay only means added labor. Save every precious hour of your garden time you possibly can for work that will show results in beautiful flowers or fine vegetables, not merely wilted weeds.

The Summer Blooming Bulbs

FORTUNATELY, however, weeds need not take up all our attention this month. An important group of plants quite generally overlooked is the summer and autumn flowering bulbs that can be planted in spring. With cannas and dahlias, of course every gardener is familiar—and yet it is remarkable how seldom one sees any of the new beautiful "orchid-flowering" cannas, which are as distinct from the old foliage sorts (Indian Shot) as a rose is from a blackberry briar. New dahlias make progress more rapidly,

It is not too late to hasten the maturity of certain vegetables by forcing in pots under glass

because at present there is a dahlia craze raging—and justifiably so. Next to these, but not quite so well known, although it certainly deserves to be—is the very easily grown gladiolus, an ideal flower for cutting, as the wonderfully beautiful blossoms continue to open out one after another, for a week or more after the stalk is cut and put in water. Gladioli bulbs are now extremely reasonable in price, and as they can be kept for several years, indefinitely if one will but take the trouble to save the new bulbs produced, there is no possible excuse for the gardener who does not have a good quantity of them on hand. Certainly, after once trying a few of the many magnificent new sorts, he will never again be without them. Plant as early as possible, putting the bulbs at various depths, to prolong the flowering season. If exposed to winds or beating rains, support by light plant stakes.

Other glorious flowers not used nearly so much as they should be are the improved Japanese lilies. The best known of these, the Golden-rayed lily of Japan, *lilium Auratum*, has long been a favorite, but even this sort one finds comparatively rarely.

Speciosum, and its several forms, especially the new immense *magnificum*, are, if possible, even more beautiful than *Auratum*. The points of successful outdoor lily culture are a well-drained position, given by slightly raising the beds in a base, small stones or clinkers, and winter protection. Plant several inches deep, and as a precaution against rotting, cover the bulb in sand before filling in the soil.

One of the most showy of all bulbous plants that can be set out in spring is the montbretia. The flowers, which are borne in long spikes, are star-shaped and very large. They are quite hardy, and increase in beauty yearly.

Tuberous rooted begonias, while not strictly "bulbs," are too valuable to escape mention here. The tubers may be planted outside in May, but it is more satisfactory to get plants already started in pots, as they come into bloom much sooner.

The crinums, with their enormous

amaryllis-like flowers, and the Mexican frost flower, *Milla Biflora*, with its waxen, pure white flowers, are also easily grown, and well worth while. The shell-flower (*Tigridia*) is very popular.

Not less important than the summer bulbs, and if anything, more frequently overlooked, are the several annual climbing vines. Of course, we all have morning glories, and maybe one or two other favorites, such as the scarlet runner bean or the fancy gourds. This year surprise yourself, and some of your friends, by the effects to be had with one of the new Dolichos (hyacinth bean) "Darkness" or "Daylight," or the new variegated Japanese hop, a remarkably beautiful and quick-growing climber of the easiest culture. The cypress vine, especially the new Scarlet Ivy-leaved variety, is a graceful and quick-growing vine. *Cobea Scandens* has beautiful blue flowers, borne in the greatest profusion; the seed should be set in edgeways, and not covered deeply. The new moon-flowers are much earlier than the old type, thus making this most attractive climber available for the more northern States, even when sown outdoors. The canary bird vine (*Tropœalum*) has flowers of a rich canary yellow, very fantastic in shape, and it is easily grown from seed. Why not take an hour to make a simple trellis or two, and try some of these? The seed costs only a few cents a package.

Early Spraying

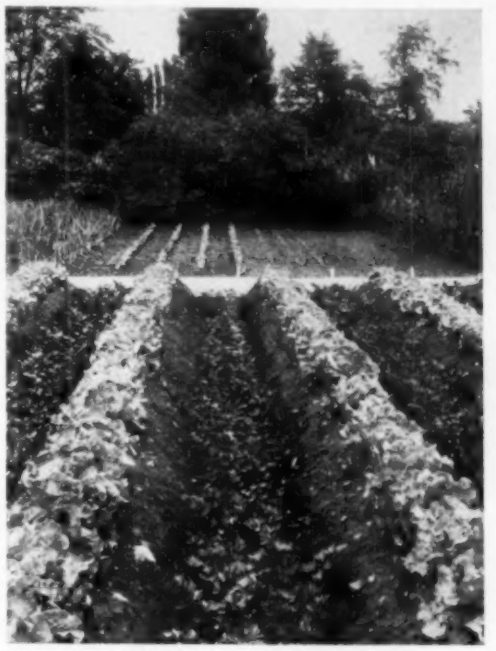
DO not let your work in flower and vegetable garden take your attention entirely away from the fruit trees. Apples should be sprayed before the blossoms open, with Bordeaux for "scab;" and by adding arsenate of lead, you get the bud-moths also. On cherries use Bordeaux for leaf blight before blossoms close and again when the fruit forms. On pears, for scab, before the blossoms open. For oyster shell scale, on any of these use kerosene emulsion as soon as the new brood, minute white lice, is hatched out. (For directions as to mixing Bordeaux and kerosene emulsion, see the articles in the April and June, 1911, issues of HOUSE & GARDEN.)

A small compressed-air sprayer, which can be bought for a few dollars will enable you to apply any of these sprays easily and thoroughly, and will, moreover, be of endless use to you in the vegetable garden, and for spraying roses, hollyhocks, and other flowers that sometimes need attention.

Plant Flower Seeds this Month

MAY is the flower garden month. Seeds of annuals and perennials should be sown. In the great majority of cases far better results can be obtained by preparing a special seed-bed, and sowing in rows about four inches apart, and later transplanting to their permanent positions, than by sowing in the beds directly. Most flower seeds are very small, and need the lightest possible covering—both in depth and materials used.

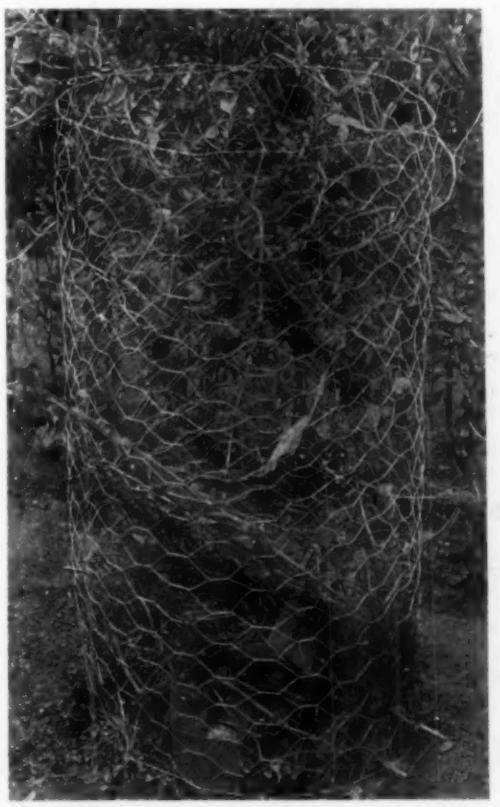
Toward the end of the month, if the weather continues warm, potted plants, such as geraniums, heliotrope, salvias,



Neatness and care in weeding go far toward producing a successful vegetable garden

etc., should be put out. In buying these, remember that you have a whole summer's blooming to prepare for, and select plants for shape and healthy condition, even if they seem small, rather than for size and any flowers they may have on them.

Try some *mass* planting this year. You will be surprised at the striking and beautiful effects obtainable with the simplest of flowers, such as zinnias, petunias, marigolds, portulacas, poppies, etc., planted in solid beds of one color, with a border of some lower-growing and contrasting color, such as sweet alyssum.



Burning the waste matter that accumulates in the garden is one way to prevent pests

Two Handy Contrivances

A SCRAP basket made of three-foot poultry netting is a most convenient device for the home garden. All sorts of scraps can be thrown into it and burned up as often as necessary. The basket is made by taking two wraps of the netting and hooking the cut ends in the wire, making a cylinder perhaps a half yard or more wide. It can be easily staked down in any handy spot to burn the rubbish. It is not only the quick disposal of small scraps and the constant keeping of the garden in a neat condition that makes this contrivance valuable, but also the fact that diseased portions of the plants or leaves that are attacked by insects can be so easily made away with in this manner. Everything dries out quickly in this basket, for it is open to the breeze. The contents are easy to burn and the basket none the worse for the blaze. The ashes left from the burning are useful in the garden.

Many amateur gardeners do not undertake the raising of Dutch bulbs because of the mice. Bulb lovers may have these flowers in spite of the mice if they want to take the trouble to plant their bulbs in a cage. A piece of strong netting, with a small mesh, can be bent to form a box-shaped trough. This can be made as long as the row is wanted. The earth can be thrown in, the bulbs planted, and a narrow strip of the wire fastened to it as a top, and the bulb bed will be mouse-proof. At the same time, the wire does not interfere with drainage or any other natural condition.

About the Vegetable Garden

DURING this month the first plantings should be made of wrinkled peas (if not sown in April), potatoes, beans, corn, cucumber, melons, pumpkin, and squash; and, as soon as danger of frosts is over, set out tomato, pepper and egg-plants.

It is not yet too late to hasten the maturity of muskmelons, corn, lima beans and cucumbers by planting in paper pots, or on sod, and starting them under glass or in a sheltered place, several weeks before they could be planted in the open garden. By this method the roots are not disturbed in transplanting, and the crop is not only earlier but much more certain than that planted outside.

In planting all the vine crops, and also with tomato, peppers and eggs, it always pays handsomely to prepare the hills by enriching them at the bottom with old, thoroughly rotted manure, and after working this in well, to mix in nearer the sur-

(*Continued on page* 65)

EDITORIAL

A GARDEN INITIATION

WITH the first burst of gray down on the brookside willows comes a strange stirring in the breasts of most men. It is evident in many unwonted actions—a sleepy irritability, long periods of silence, or suppressed excitement. With some of us it is premonitory of the time for our real recreations. The fisherman needs no calendar to advise him of the date when the law goes off—he feels its approach. The garden enthusiast would be possessed of his strange seizures were there no flood of optimistic catalogues to remind him. When the time comes for action both are off and away as runners released from their tense expectancy by the starter's pistol.

And now the season is here. If you are a gardener, you are as deep in your pursuits as the angler is in his brook. If you are not either, your associates are possibly thinking of a way within the law to exterminate such an ugly, unbearable person as you must be. For unless it is fishing or planting—there are few other alternatives—your spring freshened blood will go aboiling so that you will soon be as much a nuisance as a man unseasonably awakened.

In such a May mood gentle arguments such as Walton uses to prove the superiority of his beloved fishing over hunting or hawking will probably be of no avail. Nor will the enthusiast's proud exhibition of the product of his garden labors do more than fill you with scorn at one who can be so extraordinarily exercised over such trifles. Your description of his plants will probably coincide with that of George Fitch. "The plants which die first are the tomatoes. The plants with large leaves, out of which the worms make Battenburg lace, are cabbages. The plants with the soft brown bugs all over them are potatoes. The plants which come up and rush madly over the neighbor's yard are pumpkins, or squashes or cucumbers. The plants which come up tired and discouraged and need two quarts of water a day are lettuce. The plants which writhe about the ground in convulsions are peas."

But there is hope to civilize you by getting you acquainted with the garden's finished products, with the first full glory of May blossoms. The iris lances, straight and trim, will be flaunting their blue and buff banners in the breeze at the head of stiff marching regiments of tulip soldiers. You will find them uniformed in brilliant shades and flashing sun from satin petals. The hyacinths will be enticing you with their seductive odors, or you'll stop by the fairy-like little crocus people running over the new green lawn. And then the lilacs! If their Oriental fragrance does not stir your brain and make you long to possess, there is something wrong in your make-up, for there is a host of childhood recollections that the smell of lilacs brings crowding to most minds; you will want to make as much of it as you can. The snowballs, too, the sweet-briar roses, the azaleas, magnolias, and the flowering almond—will all be mute pleaders that beg you to plant them and love them for your own in Maytime. But if your heart is hard and oblivious to this appeal the orchard will capture you. It is like a dryad now, dancing to the gay melodies of spring, and with its white drapery floating out, quivering, and winning you to worship.

So out, either to the woods or planted rows and you will be tempted to try your fortune with the fall flowers or to set to work for next year. If you are already an enthusiast, there is much for you to learn for your own garden by making friends with the flowers of your neighbor. The gardens that are made from the most interesting names in the catalogue are often very disappointing. Nor is the art work of booklets an absolute index of what each particular flower will look like when it comes up in your garden. To find out the best arrangements of colors, the relative heights, and the flowers especially suited to your location, you must go garden hunting.

A RIOT OF ENTHUSIASM

IT all came about in the new renaissance. Up to that time the main street looked like the product of some titan machine of wonderful dexterity that had turned out two rows of olive drab buildings all of a size, and trimmed with exactly the same number of sawed-out scrolls and turned rings. But one *could* live along that street. Trim lawns or some plantings of shrubbery gave evidence of individuality and added attractiveness. So things had been for a long time, and the people seemed happy.

Then came the change. Mrs. See suddenly awoke to the fact that she was in the dark ages so far as the appearance of her home was concerned, and she set to work to advance. After reading and planning, she was determined. The family moved to the hotel, and down came cottage number five—by number was the only way you could distinguish them—and up went a very well designed white-painted, Dutch Colonial house. In spite of its decent modesty, it fairly jumped from its situation. As you went down the street thinking of nothing in particular you would reach Mrs. See's, and then wonder what had hit you.

Either because "that woman was not going to be allowed to put on airs," or because individuals were seized with the desire to improve their homes, the whole town was racked with the construction fever. One after another the houses were taken down and replaced by new ones. Sometimes, several were building at once. It seemed as though some strange fatality compelled everyone to put up a new house.

Although Mrs. See was the cause of the building revolution, she was not the example. Each household, as its time for upheaval approached, looked through building books, studied plans, consulted architects, and at last arranged themselves in the finished product, which was usually a house of excellent plan. The B's wouldn't dream of imitation, so their new home was of "craftsman style." The D's had been always original: they built a Swiss Chalet; the A's had once been to California, and their house was Spanish Mission. There were many other nondescript types, but none of them was duplicated. Finally Mr. G's castle was built. It was an exact replica of some European stronghold, in gray trimmed stone with great battlemented towers, and iron-barred windows. It was complete, all but the portcullis, and Mrs. G felt that the maid, Georgia, was a bit too frail to keep hauling that great iron thing up every time the bell rang.

There was little building after the G's castle; that was a little too extreme, even for this town. Everyone now began to view the work that he had been so busy upon. Most of the houses were very well done, and most were true to type. They were carefully planned and modest, but almost everyone bore an invisible stamp of good value upon it. But the street! Where it was once shy and retiring, it now was a true Babel, each place crying out in a different tongue, incomprehensible to its neighbor. Although you wouldn't put the finger of criticism upon one house, the effect of several together was horrible. The crassest nature could not be unaware of the discords.

Each man had been full of the enthusiasm of building something architecturally worth while, but made the mistake of thinking that that was the only consideration. They succeeded in making good houses, but forgot all about building in harmony with the surroundings. There are other things to consider besides style. If the fitness of things to the locality is neglected, good design is of no avail. The English can get individuality in a row of cottages that are almost the same; they care nothing for novelty. Co-operation is the one thing Jumble Town lacked; without it, its former state was ten thousand times to be preferred to its present.

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A Better Room for the Children

(*Continued from page 23*)

bring the joinings in inconspicuous places, as at the edge of a print or in a corner. The glasses may be held securely in place by a molding at the top and at the bottom of the frieze or dado, as the case may be. The prints may be spaced in a number of arrangements, close together or far apart, one above the other, or alternating, and many or few prints can be used as the mother desires. The square prints cost 35 cents each, the panel prints, 75 cents each.

Instead of making the arrangement of the frieze merely a matter of color, the child may learn from the nursery decoration a lesson in natural history. One side of the wall might have prints of domestic animals, of which there is a wide selection of subjects, roosters and hens and chickens, ducks, geese, dogs, cats, and mice. Another wall might have birds of the fields and woods, another of wild animals, and the fourth wall the fishes and frogs. A story may be drawn from this object lesson, beginning with a stroll in the yard, venturing further into the field, and lastly losing one's self in the woods.

In fact, the story telling value of these prints is one of their principal charms, and the mother who knows and loves the best stories for children can weave innumerable delightful tales around these prints. Indeed, the decorating and furnishing of a nursery seem to me to be not only a matter of harmonious color, least of all a collection of strictly commercial things such as one often sees in the so-called "best homes," but an intelligent collection and arrangement of things that are going to be of lasting value in the development of the child's education and personality. Of course, the selection of the wall paper, the furniture, the rugs, and the hangings must be made intelligently and with an appreciation for harmonious color and line also, but this done—and it is a very simple matter—it takes more thought and more time to bring into this room the things which make for its real distinctiveness and permanent usefulness in the lives of the children.

The Useful Columbine

(*Continued from page 24*)

several years. By sowing seed each summer and bestowing upon the young plants the comparatively small labor of occasional weeding and one transplanting, a successful border of this charmingly dainty flower can be maintained.

I find all of the forms interesting. There is the frail *canadensis*, called by Maeterlinck "the sad columbine;" a lavender and white of much the same form grows in the Canadian Rockies and I brought seed of it from there. The low-growing and broad-flowered *flabellata*

nana alba from Japan is another distinct form. The "common" Dutch-looking double, prettiest in white, and the "common" single, in pink, pure white, white tinted with mauve, and pale blue, I grow for the sake of variety, and a few of the darker purples and blues to accentuate the colors of the more delicate types.

The most beautiful are the very long spurred forms like *chrysantha* and *caerulia*, and the number of different colorings in these is astonishing. There is every shade of china blue and lavender blue in self colors and combined with white or purple, there is pure white, lemon white, and palest yellow, yellow shading to pink, and yellow and lavender, pinks and mauves shading to white.

I have noticed an interesting form among my flowers this year which is large and fairly long spurred with a semi-double corolla. There is also, for the first time, an exquisite flesh pink shading to palest yellow, somewhat of the *canadensis* form of flower, but more upright and taller in growth of stem and leaf.

Conditions here must vary greatly from those in New England, where an author writes that single columbines will, if sown early, blossom the same season. It was Bacon who called the columbine "commendable" and I think he was not wrong.

The Right Place for the Garden Arch

(*Continued from page 21*)

agination may make the foreground—all that lies this side of the arch—smooth turf, tangled wildwood, simple village street, or anything else that is distinctively different from all that lies beyond; anything will be better than the sameness that actually is. Be sure that whatever looks better in a picture will look better in a garden—which is simply a living picture.

The two arches made of spruce poles draped with hop vine, in the right-hand corner of the page, suffer from the same faulty treatment of approach. Here was an opportunity for doing, in a very informal way, what has been done formally in the illustration at the beginning of this article, but it is an opportunity lost. The flowers should have been confined to the space between the two arches—to a rectangle to which these would serve as entrances—or else they should stop outside the arches, leaving this rectangle between them devoted to something different. (When I speak of the rectangle between them, it is, of course, understood that I mean a rectangle lying to the right as one looks at the picture—where the flowers now are—and not simply the oblong space actually between the two arches, along which the walk runs.)

The second proposition to be considered is that an arch, giving distinction to the section which it adorns, must be placed in a section of distinction. It focuses at-

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tention upon itself and its environment, and the environment must live up to it. Therefore take heed to its location and see that it is made worthy. Spanning the opening from the garden into the stable yard, for example, it is unworthily placed. if it stands alone. (An arched opening in a wall or lattice is a different thing entirely and not to be considered as part of a discussion about arches.)

The latticed arch shown in the left corner of page 20, for instance, while presenting a charming tangle of vine and careless growth leading up to it, illustrates very well the manner in which the whole effect is diminished by carelessness at the focal point, through and beyond the arch itself. It frames—a vista of board fence! Glorified though it is with a lattice top, it is, nevertheless, just plain board fence; and it closes the prospect completely. Expectation and anticipation are cheated and disappointed, and half the beauty of the whole is lost. Not that board fence in and of itself is an objectionable thing; it would be quite as unsatisfactory if it were stone or brick wall. But if a seat invited the eye and spoke silently of rest—or better still, a seat and a table; or if a bird bowl stood there waiting its feathered bathers; or if a swing hung from the boughs above; if anything filled the hole—the blankness—how much better the effect of arch and tangle and all. So it is evident that an arch must be carefully placed, considering it from both sides. It must lead *in* pleasantly—and lead *out* just as pleasantly, for it draws attention to it and through it from either side. Always keep this in mind.

Passing from the isolated structural arch to the series of arches sometimes used in gardens as rose supports or supports for some flowering climber, the same generalizations hold good. A succession of arches should lead from one distinctive space—or through one distinctive space—to another, equally distinctive but quite different. The garden shown in the last photograph on page 20 illustrates such a transition, yet does not present a very happy result, for a number of reasons. The most readily discerned of these is the expanse of greenhouse running across the prospect—closing it—and cut into by the second set of wistaria-covered arches beyond the fountain. This is really a dreadful piece of composition which cannot be too completely condemned, for everything about it is wrong.

How and why? Well, in the first place, the second set of arches lead the eye in from the broad expansiveness of the open space about the fountain, and thus suggest—yes, demand—a focal point beyond themselves. But the greenhouse, so far from furnishing such a point, spreads out, with not even a doorway—which would be some relief—at this actual center; and thus the mind or soul or whatever it is that gets these impressions for us, is zigzagged along and confused and utterly wearied by the disorderly progress—by the lack of purpose, of coördination

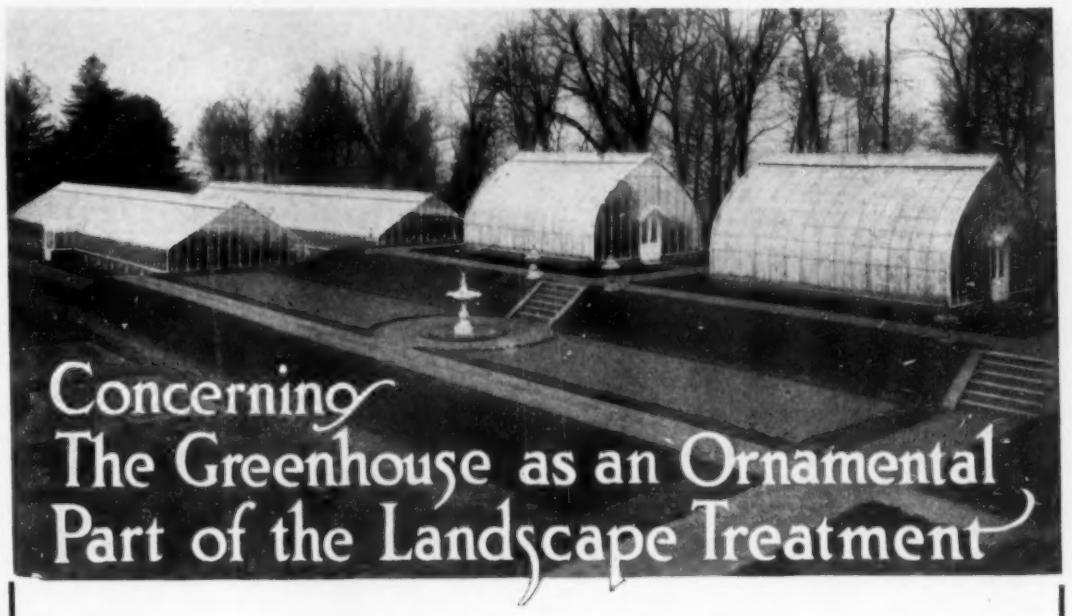
in the scheme. It is like jumping a lot of mental hurdles—only instead of rising up they go from side to side, and one must jump sidewise—which is dizzy work.

This same shiftiness is present in the light and shade. The two sets of arches offer partial shade; the open center, fountain and basin of water—presumably there is water in the basin—give the fullest light; and the greenhouse beyond again gives the same. Two such areas of high light are contrary to every principle of composition. What is the remedy in this particular instance? Let us see. It is in either the elimination entirely of the wistaria arches, thus throwing greenhouse and basin all into one large expanse of unbroken high light; or it is in the removal of the greenhouse and the extension of the wistaria arches back until the shadow of the background planting is reached. In other words, the two sets of arches—the rose arches in the foreground and the wistaria arches beyond—should lead either from well planted shade into the bright light and open space of the center, or from an open brightness at the outer margin into an arbor or bower at the center more deeply shaded than they themselves are. If they cannot do this, it is no place for them; certainly it is no place for the farther set under the present arrangement, anyway.

Arches through a symmetrical garden are almost never a success unless they do lead into a central arbor or summer house, and even then the arrangement is doubtful. But if a central arbor is desired, floral arches should by all means furnish the approach to it. Such a treatment of a garden has the disadvantage of cutting it into two or four parts, however, and unless the area is very large indeed, almost any other plan is preferable.

But spanning a long and grassy walk in any part of the grounds, a succession of floral arches is good, providing the space through which they lead offers a distinctly different aspect from the spaces which they connect. This is really the one thing that always matters vitally.

Arbors, which are sets of arches fastened together with crosspieces, are, of course, only a step further than sets of detached floral arches; and they are governed by exactly the same considerations, as far as their place in a garden design is concerned. They are, of course, invaluable as screens, or as an enclosure for any area which requires such treatment, especially when their connecting strips are carried all the way to the ground on either side, as in the very delightful and graceful structure shown at the top of page 21. Here is as great perfection in garden design as there is imperfection in the garden showing the greenhouse, and a comparison of the two pictures will develop the merits of one and the demerits of the other amazingly. The long walk stretching away in the former is charming to look at, and inviting to travel, with its hint of leading to something at the far end; but the walk under the wistaria



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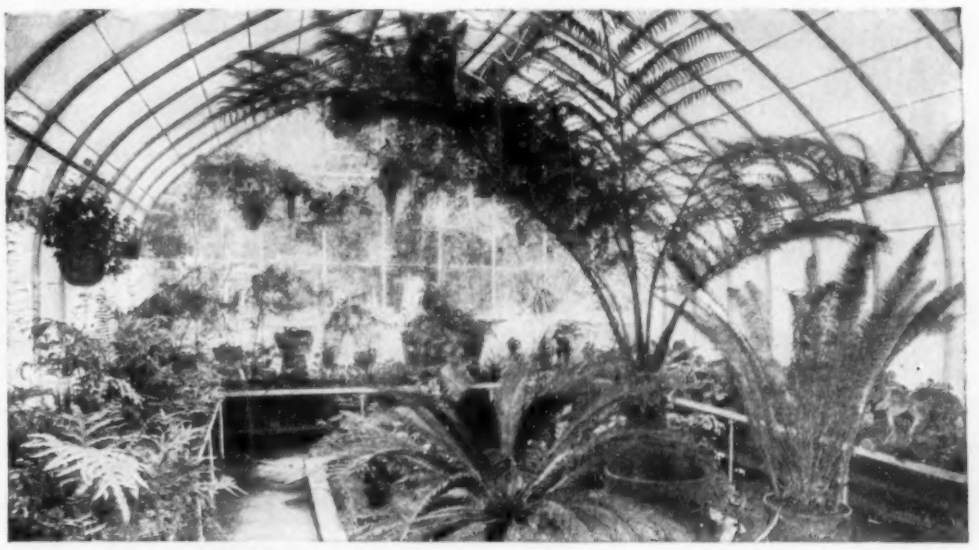

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arches suggests nothing in itself, and leads only to the bare greenhouse wall, where one cannot get in if he wants to!

These may seem small distinctions, but it is just these small distinctions that make a garden or mar it. Undoubtedly a great deal more money has been expended on the place which has the arches of wistaria and roses, than has been used in developing the quiet beauty of the "Governor's Garden," yet there is no comparison between them, except to the disadvantage of the former.

Arched gateways leading from the highway are almost unheard of in this day of fenceless dooryards, but some old Salem places show them, likewise many of the old homes in old Southern cities. And I doubt if a visitor, passing through one, ever approaches the dwelling which is thus dignified, without sensing that subtle difference which we rather clumsily express as the difference between ostentation and reserve. It is in reality a thing much more refined than that—an indescribable something as intangible as the scent of a flower, yet just as real—a something that is associated with the best traditions of the home. Are we losing it—can we get it back? Would dooryards and arched gateways help any, I wonder?

Reclaiming Old Houses

(Continued from page 29)

In the two extremes of the house, the attic and the cellar, one may look for trouble. In the former for roof conditions, such as bad roof timbers and boarding and a leaky roof. Naturally the latter condition has done more or less damage to the house interior; the wetting of woodwork has induced decay or that of plastering, a general weakening of the same. It may be that while the present condition of the roof covering is well enough, some previous state may have effected the damage above stated, so that it is well to look for evidence in any case. As to the roof boards, are they in condition to hold new shingles? This naturally suggests a point which is vital in considering the reconstruction problem of the old house. While an old bit of construction may hold together if undisturbed, having become from long association of parts and equal conditions of deterioration, as one mass, it is often a question if it will bear any attempt at rebuilding without great weakening or even destruction.

As to the cellar, apart from offering an excellent chance to ascertain the condition of the floor timbers, it is frequently the source of dampness. The question in such case is one of origin. Is the cellar so poorly ventilated as to effect this? Does it find its way through the cellar walls, or is it local? This last condition is often serious enough to make the abandonment of the whole thing advisable. It is

not best to have a well in the cellar, but if your soil will permit of drainage it can be filled up. A spring, however, is a different thing. Better waste no further time with such a problem, unless the nuisance be small and the slope of the land sufficient to carry a drain under the house wall and clap a concrete bottom on the cellar. Unless the house appeals very strongly, it will hardly warrant this expense.

Not to be overlooked are the chimneys. They may hide untold evils, evils which may mean the total destruction of the house. This consideration is by far the more uncertain in a house that has stood idle and wherein the masonry may have had a chance for great deterioration, since it was last used. The entire rebuilding of a chimney under the usual conditions attending old work makes it an expensive job, and yet when the flues are of considerable size, as is common in the majority of old houses, one may get over the difficulty by introducing a circular metal flue and filling in about it with concrete. Of course it is understood that alterations are of two kinds—vital, and merely convenient. The chimney is decidedly of the former. One can tell much of the condition in the attic and cellar, where the masonry is exposed. A pointed iron or often a good umbrella stick, will determine whether the brickwork be in a soft condition or not. When soft bricks have been used they are apt to have suffered much from the invasion of water, and will sometimes crumble at the touch.

Having obtained a general idea of the interior we may pass on to the exterior. As a general thing old houses sat too low, and dampness and much of the evil of decayed sills have originated from this source. If your problem is one of these, will the structure stand raising a foot or more? Sills must be reasonably sound to do this without considerable expense. Perhaps a simple area and larger cellar windows may solve the problem.

Right here it might be well to state that much of the old look may have to be sacrificed in making the necessary repairs. Is it the weather-beaten effect or the general design that pleases? Weathering may not necessarily have led to decay. Often such effects may be preserved. Then, too, it may involve more expense to repair a comparatively complete and satisfactory design than to convert a sound example not so pleasing.

Near trees are often valuable to the general scheme, and serve more than any other thing to relieve the sameness of an otherwise barren composition. Their shade, too, excels all artificial contrivances. And yet they should not be too closely set to the house, as they may induce dampness, and if overhanging the roof, the decay of roof covering and gutters. So do not fool yourself by such a leafy delusion; you may be obliged to sacrifice a pet ideal to gain the healthy conditions of light and air.

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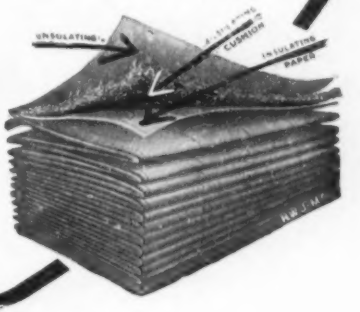

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moss-covered, make it a point to inspect the attic after a heavy rain. And remember, too, that a new roof and wall covering does not mean that what it hides is of necessity sound, but if the structure be plumb and true, the frame cannot be so very bad.

If you have discovered that your interior is insufficiently lighted, study your exterior to discover if you can correct this without sacrifice to the design. The bay and the mullioned window are not features of the simple Colonial design, although the square bay was frequently used in shop fronts, and in England, the three-sided bay. Sometimes the bay may perhaps be used, but it almost requires the overhanging second story—it depends on the local style and the amount of blank wall surrounding it. Colonial work was generally sparing as to glass, and windows were seldom crowded.

The foregoing seems at first glance to be considerable to consider at the beginning, but it is best if it can be done. One should have a general idea of the alterations, both of house and grounds, even at this stage. It is largely a question as to whether certain desired things are possible or not. The question of outbuildings should be given a passing thought as well as the house. Their condition and practicability if existing, especially in reference to their sanitary condition and location, means much. If they are yet to be built, their possible location should be determined roughly.

And now as to the general business method of procedure. First provide yourself with a pointed piece of iron about a foot long for the purpose of sounding beams, masonry, etc., also a lantern or pocket lamp. Presuming that your first survey is satisfactory, you should get a refusal of the property for a couple of weeks at least, in order to get the title looked up, and for this purpose get a lawyer, unless of course, you are an expert. In any event, the local lawyer, who probably has such things at his finger ends, is perhaps safer. If the title be not clear and cannot be rectified without time and expense, better drop it; future legal tangles are undesirable and altogether too near home. When the question of title is settled, make another inspection and bring a competent carpenter along. By this time you probably have a rough sketch plan of your first alterations. Don't let him run away with himself and with the idea that he is to find all the fault he can. Let him understand that if there is too much to be done you will not purchase. In any event don't commit yourself to the limit of what you will spend. Give him to understand that he is to give his figures and opinions that you may think it over. As to the price of the property, it should be borne in mind that a home is worth more to you than an investment; also that the property should have something to back it up, should you ever wish to put it on the market; it should be practical.

In getting a refusal, you should have a binder. This is a simple document for the owner or agent to sign in which he acknowledges the payment of a small sum (perhaps from five to twenty dollars, as the case may be) for which consideration he agrees to give a refusal of the property in question for a specified time and that in case you decide to take the property at the end of said time the deposit shall be considered as a part of the purchase price. Do not, however, commit yourself in writing or otherwise to the price asked, as you may find before you are through with your investigations that such is too high.

While your lawyer is drawing up the deed, try and ascertain from the abutting property holders if the existing bounds are right; if so, they should be willing to sign a plan, and it would be well to get a surveyor to make a simple outline plot and get the abutters to sign it, to the effect that the bounds as shown on the plan where abutting their property are correct. Use a dark ink for signature and sign the list yourself to show your good faith. Take a couple of blueprints and file the original tracing in the proper place with the record of the deed. Having done this job thoroughly is the best start toward a home.

And now you are ready to take up the more serious consideration of practical restoration as a property holder.

A Garden of Annuals

(*Continued from page 32*)

other and many of them are supremely beautiful. If the "stand" is even tolerably good, it is astonishing how much garden space five cents' worth of flower seed can be made to cover with lovely bloom. Try it, say, with the white petunia or the African marigold and see what a wonder-worker a single nickel may be. Not that the nickel should be regarded as the basis for buying annuals. Novelties and the better strains of favorite kinds frequently cost a dime. They are cheap at that; so are the fancy offerings at a quarter a package. Generally speaking, the best seed should never be regarded as too good. In the end it is the cheapest and, as a rule, when named varieties or separate colors are desired it is necessary to go above the minimum price.

While the cost in money is not, or need not be, much to reckon with, the cost in pains is considerable. The time spent in this labor of love may be reduced to moments of leisure that are not missed, but there must be a liberal expenditure of intelligence. Easy as it looks to be, and is, the garden of annuals has to be thought out like any other garden—planned, planted and cultivated with the same degree of common sense; which is the prime essential in the cultivation of flowers.

The planning will be found least irksome if done betimes and on cross-ruled

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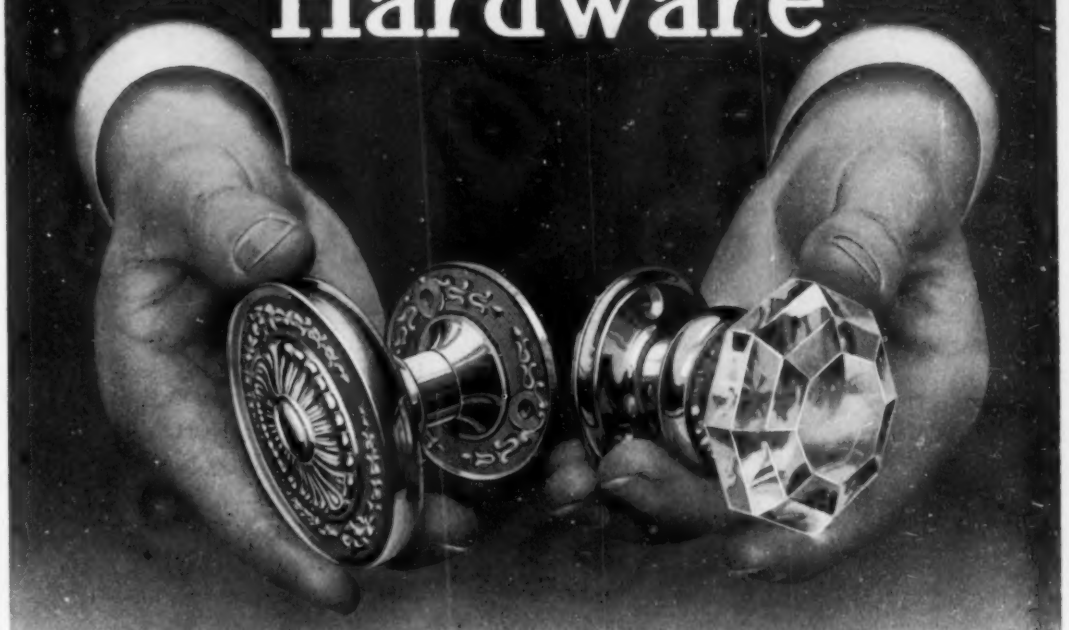

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We can come and inspect your trees and advise with you about their care. Have us do this as soon as possible. Send for our booklet, "Trees—The Care They Should Have."

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paper. A convenient way is to call each square of the paper—or every four squares—a square foot and measure off the available garden space accordingly. Then you have before you, in miniature, your garden area, but more easily comprehensible than the real thing. For the color scheme use a thin wash of water colors, after the manner of map-making. Number each flower, or variety of flower, that you intend to use and write the proper number, as many times as there will be plants, in the square or squares that the row or colony will extend over. Estimate the probable spread of each plant. Thus a space six inches square would be sufficient for a dwarf aster while four square feet would not be too much for a four-o'clock. Color can be what you will, but before selecting the flowers, season and longevity of blooming period must be taken into consideration. For these things some of the catalogues, fortunately, are an excellent guide.

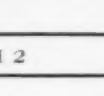
Excepting in the case of a very few flowers, poppies for one, that do not take kindly to transplanting, the seed of annuals should be sowed not in the garden itself, but in a seed bed. Avoid the open ground, where so many seeds may not be planted until "danger from frost is over," and make use of a coldframe. Late April or early May planting in a coldframe saves about a month in time, the seeds show a better stand and, all along the line, there is less trouble. With some of the more tender but most beautiful annuals, such as salpiglossis and sweet sultan, early planting is the only guarantee of success. Thin out when the seedlings begin to show their true leaves and a little later transplant to another frame, so that sturdy not spindling plants will go into the garden. This transplanting is not always necessary, or even desirable, but where rapid growth calls for it the little time that it takes should not be grudged. See that the soil is moist before digging up the seedlings for removal to the garden, and before planting pour a little water into the hole. If it is not very dry weather, no further watering may be required, but a careful watch should be kept on conditions. Plant with the garden plan at hand and the work will proceed with amazing rapidity. Cultivate the soil frequently, especially if the sky is prodigal of sunshine and chary of rain, until the foliage pretty well shades the ground. Then annuals may be regarded as "laid by."

What the best flowers for a garden of annuals are, no one shall ever say and find his opinion unchallenged. One man uses only China asters in his garden of annuals. He says they are the best flowers, and there you are. Certain it is that a most fascinating garden can be made of China asters alone, and a highly colorful one, though its sole hue early in the season would be green. But one might as well try to say what materials are best for an artist to use. There are the annuals, hosts of kinds and most kinds multiplied by the

various colors, and one has only to pick and choose what best suits the purpose in mind.

For edgings or low foregrounds, sweet alyssum, which blooms on after the frosts come, is the best white, and *Lobelia erinus* the finest blue. Verbenas, red, white, pink and purple; dwarf nasturtiums, red and yellow; *Zinnia Haageana,* various shades of yellow; French marigolds, yellow and maroon; calendula, various yellows; China pinks, red, white and pink; *Phlox Drummondii,* white, pink, red and pale yellow; globe amaranth, white and magenta; dwarf China asters, white, pink and blue, and dwarf petunias, pink and white, are all steady bloomers and very dependable flowers. Stocks, pink, white and mauve; China asters, pink, blue and white; zinnias, red, yellow and white; larkspur, pink, white and blue; poppies, red, pink, white, and mauve; *Salvia splendens,* scarlet; scabiosa, white, pink and maroon; sweet sultan, yellow, mauve and white; African marigold, orange and lemon, and *Nicotiana alata,* pink and white, are particularly good for the middle ground. Cornflowers, pink, blue and mauve; annual hollyhocks, white, pink, red and yellow, and cosmos, pink and white, give height to a background.

Broadly speaking, choose the long season annuals. Poppies and asters are exceptions, but they are complementary; when the poppies' brief glory is over, pull them up and plant in their stead asters that have been growing elsewhere. Discard sweet peas, as they are useless for garden picture-making, and vines unless they really fit in; the grounds may offer some better place for climbers. So with annuals that you particularly like for cutting, but do not need for the garden scheme. Put them in rows somewhere; they will not mind.



The Naturalizing of a City Man

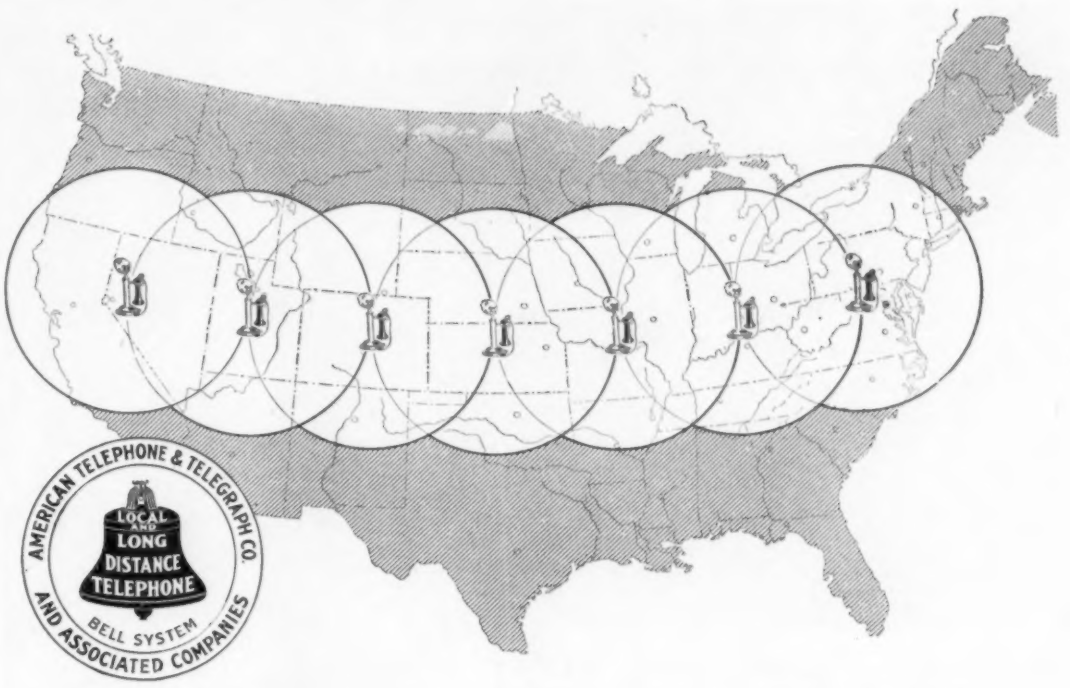
(*Continued from page* 34)

be more than you can use from your other field. Ground's too dry, anyway—seed won't come up. What did you put on for fertilizer?"

"Nothing—yet," confessed Mantell. He had ordered enough chemicals to mix up the formula given him by the State Experiment Station. These were to be shipped immediately from Boston, and he was assured by the local freight agent that they would come through at once, at that time of the year.

When they finally got the field finished off on the third, it was too late to plant, so that job was part of their Fourth of July celebration! On the fifth, the chemicals came, and on the sixth they mixed them, spread them broadcast, and harrowed them into the soil, with the Squire's Acme harrow, so that they were well mixed with the soil.

The weather continued dry, but in due season the tiny green sprouts pushed up



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through the dust, and made satisfactory growth. The Squire had not been told about the fertilizer, and shook his head dubiously.

"'Fraid you've wasted your time, friend," he said. "Hungry crops never pay."

Mantell had heard from his wife quite vivid word pictures of the "haying time" of her youth—when mowing machines were still an innovation, and the extra "gang" of "help," the jugs of cider, the "molasses water" for the women folks and boys who could rake, and the dinner out-of-doors under the thickly leaved maple, all went to lend romance and picturesqueness to the great occasion. His head was still dimly full of such scenes on the morning that they got an extra early start for the Squire's, from whose wide acres the burring click of the mowing machines had been floating over to them for the past two days. He expected to find the place a scene of hustling men and teams, and a horde of extra "help." Instead of that, only one man was in sight, and he was leisurely hitching up a strange looking machine.

"You're early, boys," beamed the Squire, coming out and mopping his brow from force of habit. "The dew won't be off for an hour yet."

And so for an hour they puttered around in the big barn, helping the Squire put in a new piece of track for the hay-fork, replace some cable that was a little worn, and oil up a lot of weird-looking machinery. One would have thought they were preparing for a motor ride, instead of a big day's haying. Through the loft window Mantell caught a glimpse of the odd looking machine that had just left the barn, like a gigantic grasshopper, kicking the hay up into the air behind it.

But when they did start, the hay moved in earnest. The apparently flimsy machine that Mantell had helped to oil up was a "hay-loader," which picked the hay up from the ground and carried it up to the top automatically. And when the load reached the barn, instead of being unloaded a pitchfork-full at a time, as Mantell's had been, the "horse-fork" swooped down, seized hundreds of pounds at a "bite," hauled it aloft into the air, and then ran it back into the barn and dropped it.

It was no more like the haying of which he had heard than a trip in a motor truck was like a horseback ride through Robin Hood's Sherwood Forest. But to Mantell this was no loss. For him there was romance in every wheel and cam and lever that took the place of human bone and muscle, and enabled one man to do the work that two or ten or a score had done before. It not only excited his interest, but fired his imagination as well, and as he worked he pondered how, in unnumbered ways, machinery might open up possibilities in the science of agriculture, a science which, every day convinced him more firmly, was still in its infancy, still waiting to be given a share of atten-

tion by the world's brilliant thinkers somewhere nearly commensurate with its importance. In spite of the hard physical labor, he enjoyed tremendously the several days spent in helping the Squire get in his enormous hay crop, for grass was the Squire's biggest specialty, and he never tired of discussing the fine points of its cultivation with any one who could talk intelligently on the subject.

Of course not everything went smoothly. In spite of Mantell's care, the potato bugs got a big start in the large potato field. No one had told him how rapidly they could develop and while all his attention was taken up getting in the late corn, they did an amount of damage which probably equaled any profits to be gained from the corn fodder. As soon as the invaders were discovered they were reported by Robert and Helen, with no little excitement and exaggeration. The ever-generous Squire was called upon for help. He had only a dry powder gun, and said it would be no use to use it until the next morning while the dew was on. This did not suit Mantell, however, as he could see that another day's damage would double that already done by the fat, greedy "slugs." So the Squire gave him a note to a neighbor who possessed a "knapsack" sprayer, which fortunately he was able to get. While Mantell was getting the sprayer, Raffles and Robert and Helen procured two rain barrels and the stone-boat from the Squire, and got one barrel ready of the "soup," as the young folks called it, for the bugs. Mantell, with Helen to help him refill the tank without removing it from his shoulders, did the spraying, and Raffles and Robert drew water, a half-barrel at a time, mixed the poison, and replenished the "soup" barrel. After the first half acre, Mantell and Raffles changed places, and again after each succeeding half acre, so that the field was covered in record time. By the afternoon they had the satisfaction of seeing many scores of little toes turned heavenward in the furrows and around the stables, and the potato crop was saved.

The winter squash they were not so fortunate with. These seemed to be doing splendidly, and had attained lengths of from six to ten feet, after great pains had been taken to fight off the big black squash bugs—when suddenly they began to droop and die in the middle of the day.

"The borers have got us," said Raffles helplessly.

One by one the robust-looking vines "went down," and in three days hardly a one was left. It was disheartening, and in the stem of each could be found a large, white, soft grub, which had done the damage. Robert gathered up the vines, each day, and deposited them in the hen yard, where retaliation was meted upon the miserable intruders, but that was small redress for the harm done.

While the Squire's teams had been busy with Mantell's and his own haying, his potatoes had not been cultivated, and the day that Mantell was hunting up a

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weapon with which to fight potato bugs, he had stopped, as he passed, to investigate the work which the Squire's man was doing with his old-fashioned cultivator. The field certainly looked finely, especially where it had been worked; but the broad teeth of the machine, with nothing to regulate its depth, ripped up the ground for several inches deep, especially where the man bore down a little on the handles, as he was prone to do. Mantell watched thoughtfully. That field of potatoes certainly looked well; it was undoubtedly ahead of his. Could it be that all the theories he had been acquiring about surface cultivation were, after all, incorrect? He decided that the next time he went through his own he would do ten rows deep, just as an experiment. There had been no rain for several weeks, and the dark, moist earth the Squire's cultivator dug up certainly looked good.

"There doesn't seem to be a single positive rule in this whole farming business," Mantell said to himself, as he passed on.

Then he fancied that a bird in the roadside thicket answered "Right-oh!" "Right-oh!" and laughed to himself, as the hot sunshine beat down upon his bare, tanned neck and arms, and the white road before him. Puzzles, problems, disappointment and all, it seemed many times better than the rush and odors and clangor of the city's streets, which he had known so long.

Homes that Architects Have Built for Themselves

(*Continued from page* 19)

ness is apparent. In the pantry there is a built-in refrigerator level with the wall which allows the ice to be put in from the outside. Underneath a spacious china closet, a place is provided to hold the extra leaves of the dining-table. The kitchen appeals at once to the housekeeper, for it is light and attractive and heated by the furnace, so that a gas range can be used all the year round, doing away with the coal range and unsightly boiler. The laundry is in the basement, where there is a stove with waterback connected for heating the water used throughout the house. The top of this stove also serves for heating irons. A bathroom and toilet are provided in the basement. The kitchen and pantry floors are covered with a Pompeiian red composition flooring put down in mastic form, and allowed to harden.

The second floor has three bedrooms, a bathroom and an unusually large sitting-room opening on to a balcony, distinctly pleasing and possessing some good architectural features. The walls are rough plastered, brown yellow, with float marks showing. At one end is a delightful alcove with a roomy divan. This alcove utilizes the space over the back stairs. Strong brown decoration is introduced in a wall

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hanging of Tappa cloth. The fireplace is severely simple with its Pompeiian brick hearthstone and facing; the bricks are laid towards the room instead of in the usual way. The plaster models designed by Mr. Boyd, supporting the cornice, make a unique and interesting decoration. Bits of bright color appear in the coats of arms hung beneath the picture molding.

Adapting foreign things to everyday uses is a feature of Mr. Boyd's work. The keyholes of many of the closet doors throughout the house consist of Japanese sword guards. A carpenter's bass, such as they use in England for carrying tools, does duty for a wood basket.

The two main bedrooms are large and well furnished in mahogany with flowered chintz hangings. Both rooms have deep bay windows, in which are grandfather chairs covered in chintz to match the curtains. The paper is a two-toned French gray with the pattern of a basket of flowers. White spot muslin curtains cover the windows, but do not show from within when the brown Venetian blinds are lowered. The walls are covered with well chosen artistically framed pictures, hung in groups beside the bureaus. The mirrors are set in old-fashioned gold frames. Beautiful old rugs on the floor, rush seated chairs, and mahogany doors with glass knobs give an Old World atmosphere. Adjoining the front room is the night nursery. Here the walls are covered with canvas painted white, with a six-foot wainscoting of square tiles sunk in natural cement with quarter-inch joint.

The guest room is on the third floor; with its brick fireplace and old mahogany furniture it is a charming little room in Colonial style. There is an old-time Terry clock, an antique mirror framed in gold, a spinning wheel, braided mats, and a patchwork quilt. The walls papered with a rosebud paper harmonize with some dainty sprigged muslin curtains.

So much for the furnishings and planning of Mr. Boyd's home. It will be seen that he has constructed his house in conjunction with another. This is due to the exigencies of the city block. Mr. Boyd has provided against having a house of unpleasant architecture thrust right up against his windows and at the same time added to the appearance of the block. The planning is so well executed that both houses receive greater privacy than would be the case were they separated by the narrow margin of city lots and each looked into the other's window.

Mr. Boyd says: "The problem has often confronted me as to why it was not possible in our suburban sections where the price of ground with all city improvements is necessarily high, to build a *pair* of houses in such a manner as to retain individuality in each house and yet make a comprehensive unit design of both. With this end in view I designed the houses, the corner one of which I occupy, the other being used as an investment. The accompanying photographs show how successfully this has been carried out."

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The Evolution of the Tomato

(*Continued from page 26*)

nature again asserted her evolutionary tendencies and produced a hybrid which, while maintaining the large size of a standard fruit, was decidedly elongated from stem to blossom end. Intelligent human effort has "fixed" this characteristic so that now we may enjoy those beautiful "Globe" tomatoes which the sunny South produces for us in great quantities during the winter months.

One fact is especially noteworthy in connection with the evolution of the tomato after mankind took hold of the problem, and that is: all the splendid modern types of this important fruit are due primarily to nature's initiative. Really serious efforts of breeders in crossing and hybridizing different sorts have often failed to accomplish in a decade what nature has frequently done in one season.

A single plant bearing improved purple fruit would sometimes be found in a field of bright red tomatoes. This plant the grower calls a "sport." "Chance product of nature" is a more comprehensive term, explaining the true reason of the occurrence. Now man's mission starts. Trained eyes will discover such seedlings; trained minds will compare them with already existing sorts. If the new seedling shows any unique characteristics whatever or reveals other qualities which cause the breeder to be hopeful, prompt action is taken and the seedling is separated widely from all other kinds the following season. Thus started the history of most modern tomatoes. Selection and intensive cultivation have made this vegetable what it is to-day. Nature has done the evolving, man has done the coaxing—for intensive cultivation is nothing but urging nature to do its best under the most favorable conditions.

Take a small fruited tomato and set plants of it on a rich piece of ground. In a favorable season, the fruits will grow larger there than in poor soil. Raise plants from seeds saved from these fruits and repeat this experiment for a number of years. Then the tendency in the plant to produce larger fruits will become a fixed habit—you have an improved type of the old variety. To accomplish this with sorts already well established is comparatively easy and requires nothing but watchful intelligence and patience. When it comes to chance seedlings of nature, different problems will confront the experimenter. The very fact that the parent fruit was a sport, causes all its offspring to be of a sportive character. As many as a dozen different kinds, considering color, size and shape may be found among the offspring of one sport tomato. When Luther Burbank stated that often he was obliged to destroy hundreds of thousands of seedlings in order to perpetuate the desirable characteristics of a few, he uttered a hard, but most important truth. To keep blood straight in plant strains is the steady nightmare of the breeder and often,

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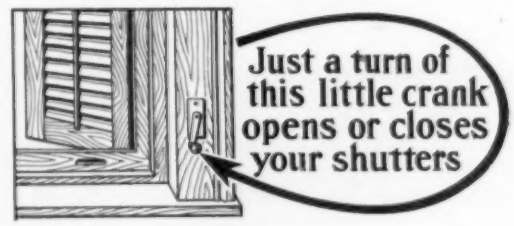

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after laboring a decade on a variety, work has been given up in despair on seedlings that absolutely refused to become "straight."

A most remarkable point is illustrated in the photograph showing the Currant variety and one of the Modern Globes. After being, perhaps, thousands of years in cultivation through ancient and modern times, the tomato takes on again its original shape—the round or globe form. Thus nature asserts its own tendencies and the man who studies them with an understanding mind will be amply rewarded. The ideal tomato we will have when we can grow fruits of the size of Globe in clusters containing the number of fruits in a Currant tomato cluster. So far as the fruit is concerned, the ideal tomato will soon be reached.

Henceforth the efforts of the breeder must be concentrated on the tomato plant rather than on the fruit, for no variety in cultivation to-day grows vines or branches strong enough to support clusters of a dozen or more nine-ounce tomatoes. The plant must undergo many changes before that becomes possible and I doubt if it can ever come to pass that the tomato will have to be treated as an annual. Tropical South America is the original home of the tomato, and there it can and will do its best. When Peru evolves a tomato Burbank, we shall, perhaps, from imported seeds, have results which are suggested above. In the meantime, there are many years of serious work on tomatoes to be spent in this country. Skin, color, solidity of fruit, flavor of flesh, keeping qualities, and many other factors may be worked on in connection with tomatoes, which will always be a staple in American gardens and homes.

The lessons that may be extracted from this short sketch of the evolution of one vegetable are many. What is gained in solidity of flesh is often lost in flavor; gains in size of individual fruit are counteracted by loss in size of cluster. Choice fruit is obtained at the cost of productiveness and quantity is lost to gain quality. But always and forever will quality be the first consideration. Those sorts that prove exceptions to the above rules are the ones that combine quality with productiveness, thanks to the intelligent application of the human mind.

Improving the Flower Varieties

(Continued from page 37)

A fine annual of recent introduction, and as yet comparatively little known, is the African daisy (*Dimorphotheca aurantiaca*). The original is of a beautiful rich golden orange color, but already new hybrids have been secured which run through an extensive range of colors, white, light blue, yellow, red, lemon and salmon, and combinations of the above, in zoned forms, resembling cinerarias. The plant makes a dwarf

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3. *Clematis paniculata.* Luxuriant growth. Masses of star-like, pure white flowers. Very fragrant. Each 25 cts., doz. $2.50.

4. *Mammoth Beauty Passion Vine.* Vines run 20 to 30 feet and are covered with bloom. The colors are beautifully blended white, red and blue. Nothing more beautiful for the garden. Each 15 cts., doz. $1.50.

5. *Kudzu Vine.* Picture shows one season's growth—a marvel of rapid growing. Will run 40 to 50 feet in a season. The beautiful flowers, similar to Lathyrus, grow in long racemes, color rosy lilac. The most wonderful vine to cover trellises, arbors, verandas, etc. Strong plants, each 25 cents, doz. $2.50.

5 Hardy Vines—every one STRONG and full grown, for $1.00. Price includes delivery.

NOVELTY: Climbing Hardy Hydrangea from Japan

In this magnificent climber we have one of the most valuable additions to the Vine family. The foliage is of the richest glossy green, heart-shaped, and the flowers of a creamy white, growing in large umbels, cover the vine, lasting a long time. It grows with marvelous rapidity, twines around any object without any support, covering it with a dense mantle of glossy greenery. Should be grown by lovers of beautiful vines. Each $1.00.

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growth—less than a foot and a half high—and is of strong growth and easy culture, bearing the large, marguerite-like blossoms, two and a half inches broad, well above the foliage. This new flower should find a place in every garden.

Another fine annual, especially good for cutting, that has remained too long in the background is the lupine. It grows very easily, even in poor soil, and may now be had, not only in blue, but in pink, yellow, scarlet, and white—a very choice collection.

It always seems to me that the geranium is the least appreciated of all garden flowers. We speak of them as "pink," "red," or "white," and think of them as rather coarse and common. There is not room here even to mention the many new varieties, but I want to urge upon every reader the fact that a great surprise is in store for him, or her, if the trouble to look up and procure a few of the new types is taken. Not only are there distinct and beautiful shades of color, but in many are distinctly contrasting colors, and others have unique petal formations, as in the cactus class.

The Lady Washington geraniums or pelargoniums, are very near the top of the list of beautiful flowers. The one thing that has kept them from being very popular is their short blooming period. A new race, however, has recently been developed, which blooms for a long season, or rather has re-blooming periods, and this should make these lovely flowers much more popular.

The cosmos is another fine flower which has had one drawback—that of blooming so late that Jack Frost usually got the best of the crop. The new early large flowering overcomes this to a great extent. Lady Lenox, a beautiful shell pink, has enormous flowers four inches across, and should be tried by every flower lover. Crimson Ray is the first of a new type, which might be termed "cactus" cosmos.

The ever-popular poppy has not been overlooked in the general improvements taking place. The indefatigable Burbank has just given us a new line, the result of hybridizing three of the older species, with many new colors and increased size of flowers. In the Shirley type, Celeste yields shades of sky-blue and lavender gray, heretofore unknown among poppies.

A new annual decorative plant that should prove of great value is the Summer Fir, which makes a neat stately looking little tree. Everyone now knows the Summer Cypress (*Kochia trichophylla*) and this "fir" should make a splendid companion for it.

Another decorative plant that has recently been greatly improved is the celosia. Thompson's Superb and other new plumed sorts are great acquisitions; and Pride of Castle Gould marks a new standard. Among the cockscombs the French Striped makes a very unique and novel attraction.

Even such pretty little old-fashioned plants as lobelia and forget-me-not have

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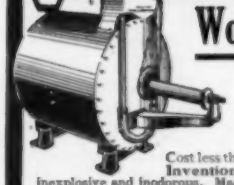

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not passed unnoticed. Of the former, Tenuir grows to a height of eighteen inches and has flowers four times as large as the old dwarf sorts. Of the forget-me-nots Ruth Fischer has fine flowers of great size, and there is also a new double-flowered form.

The garden "pinks" (*Dianthus*) have been developed into a number of beautiful named varieties, and the new *mirabilis* strain makes a strikingly beautiful flower. In annual phlox the new large-flowering Cecily marks the present height of achievement.

The variegated or onyx leaved nasturtiums are not new, but a good many people seem still to be unaware of their existence. By all means try them this year if you have not already done so.

Among gladioli every year sees the introduction of several good new sorts, but the most striking recent development is Kunerdi Glory, the first with *ruffled* petals and remarkably beautiful. Mrs. Francis King, soft pink, and Peace, white, are two grand new giant flowered sorts.

The annual climbing vines also have several remarkable new things to show. First of all the new Cardinal Climber, a brilliant and distinct vine, with beautiful foliage and flowers of intense cardinal red, one and a half inches across, and borne from July until frost. It grows thirty feet tall. This will undoubtedly become a great favorite, as it gives us a new color in this class of plants.

The variegated Japanese hop is the most beautiful annual foliage vine, the individual leaves being beautifully mottled, and the effect of the whole vine, which is a healthy, rapid climber, being quite wonderful. Early Sky Blue will do much to win for the moonflower its deserved place among all who have room for a climbing vine.

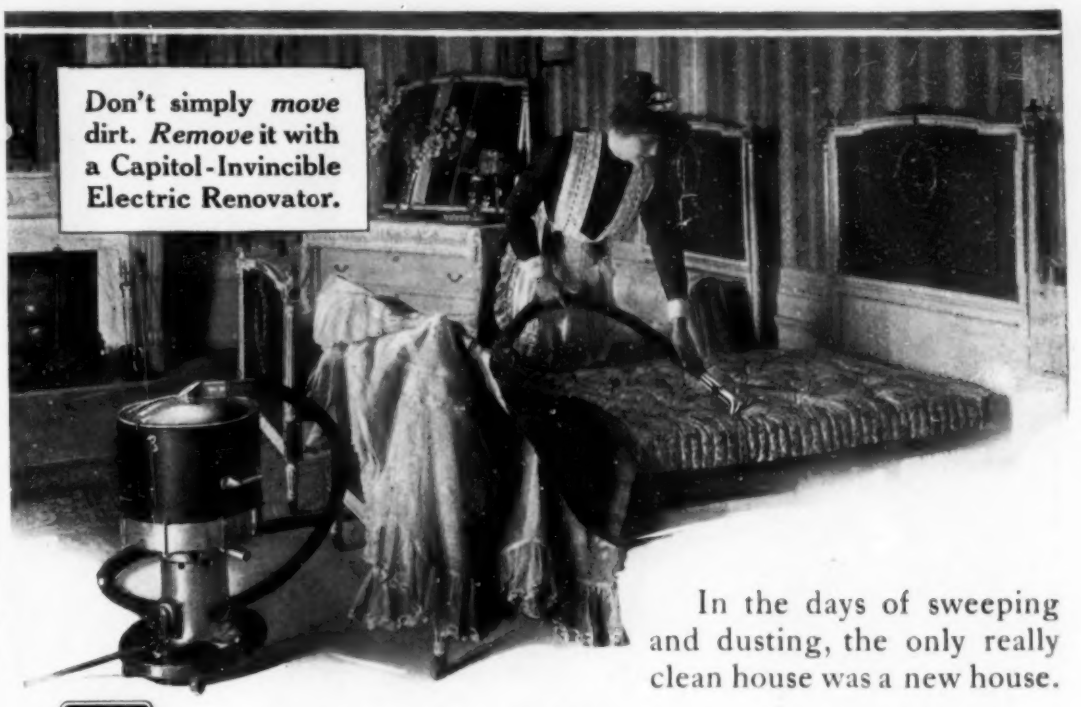
Besides all the above, many other distinct and valuable new flowers may be found, and any of them should serve as an inspiration to the gardener who loves plants sufficiently to attempt the selection and possible improvement of any of them for his own garden. A little attention to these newer and better things, and a little effort along the lines suggested in the first part of this article, will make the garden not only more beautiful, but vastly more interesting than ever before.

Garden Suggestions and Queries

(*Continued from page* 45)

face, a handful of cotton-seed meal, bone flour or fine tankage, or two or three of these mixed together.

All plants in the frames during the last of April and first half of May will require daily attention and almost daily watering. Watch constantly for any sign of green aphis or plant-lice, and keep on hand a supply of Aphid poison and *strong* tobacco dust, to be ready for immediate action if they appear. Keep the glass off as much as possible, while maintaining the required degree of temperature.



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not only banishes dirt from your home but it *saves you.* Germ laden dust stirred up by sweeping is dangerous to health. You, your maids or your children can keep your home and everything in it free from dust with little effort.

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Use your own judgment in buying a vacuum cleaner. Our booklet, which we will send you free, entitled "How to Buy a Vacuum Cleaner," is written by an eminent electrical and mechanical engineer and will advise you of the merits of all the principles used in vacuum cleaners. If you would have a clean and sanitary home, you need this book.

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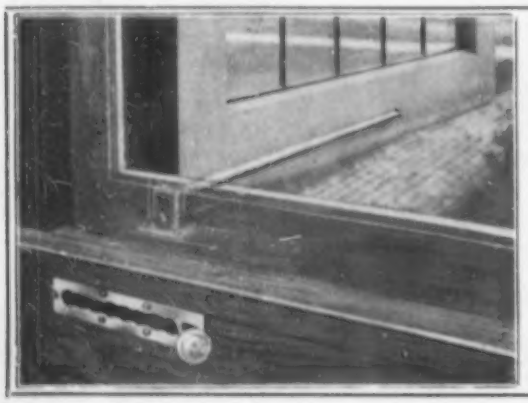

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CASEMENT HARDWARE CO.
175 N. State St., Chicago

(*Continued from page 5*)

easily attended to, for the dog can usually be turned loose for a run by himself, if necessary, without danger of straying away. If the grounds are small, or the neighboring country thickly settled, it is well to keep a general supervision over the dog when he goes out for a run in case he shows a tendency to wander, for if left entirely to his own devices he may acquire the habit of "tramping," much as certain human beings do.

A setter should preferably be housed in a dry, comfortable kennel out-of-doors, even during severe weather. His heavy coat will keep him warm there, so artificial heat is quite unnecessary. If so desired, however, his sleeping quarters may be in the house, where he should have a regular bed, such as a heavy rug or carpet, in some out-of-the-way corner.

The English setter yields to none in symmetry and grace of outline, beauty of coat and attractive expression. His head should be long and with a pronounced "stop," as the break in profile at the eyes is termed. The skull is broad and shows plenty of brain room; ears of moderate length, set on low and hanging close to the cheeks. The eyes should be bright and kindly in expression, of good size, and dark hazel in color. Nothing detracts more from the pleasing effect of the head than light colored eyes. The muzzle is quite deep, long from the stop to the point of the nose, and rather square, while the jaws are of equal length. The body should be moderately long, loins wide, strong and slightly arched, and the chest deep. The feet are very compact and well padded, and the legs strong. The tail is, or should be, one of the setter's most beautiful adornments. A good specimen will carry his tail straight from where it leaves the body, for a curve in any direction is objectionable. It is of moderate length and bears that long, silken "flag" or "feather" which, to our mind, is the most striking single feature of the dog's appearance. There is also a pronounced "feather" on the backs of the front and hind legs, but nowhere on the dog should the hair show any marked tendency to curl, although a slight waviness is permissible.

The color and markings of English setters vary considerably with the different strains, and even dogs of the same litter frequently differ widely in these respects. The generally accepted combinations of color are as follows: white and black, white and lemon, white and liver, white and orange, and tricolor, or white, tan and black. The darker color may be in patches of greater or less size, or in tiny spots which give the dog a flecked appearance. All of these combinations look well, so the intending purchaser has to consult merely his individual preference in the matter. In the case of the light-colored dogs perhaps a slight amount of extra care is required to keep their coats looking well.

Have You a Refrigerating Plant in Your Home?

AS soon go back to lamp-light; to the open fireplace; as soon give up the telephone --- as continue to use melting ice to preserve foods in summer. The modern, sanitary, convenient and satisfactory way is to use

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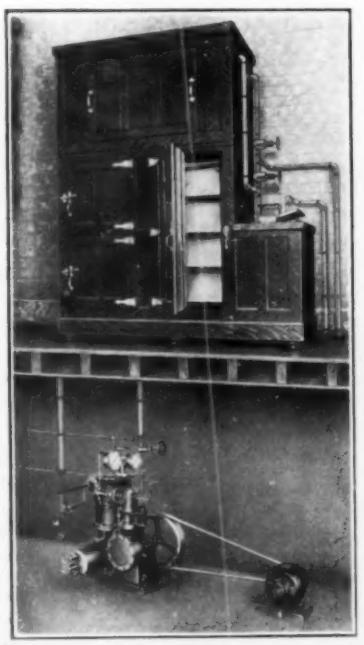
HOUSEHOLD REFRIGERATING AND ICE MAKING PLANTS

It is being installed in many of the large houses all over the world, because to those who have sufficient need, it gives service which makes the good you get from ice look mighty slight.

Ice makes the air moist, heavy and sticky. It is laden with germs. Your food cannot be so pure and taste so good as when kept in a refrigerator cooled by a Brunswick, where the air is dry and sweet. Another point: you don't have to depend on an often unreliable ice-dealer. A Brunswick requires but a few moments of the butler's time each day.



Writ for Bulletins

If for nothing else than to get an idea of the possibilities of home refrigerating, this literature will repay your time reading it. If you prefer, we will have our representative call on you and explain the Brunswick system. But anyway let us have your request for information, and we will see that you get it.

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A Beginner's Experience with Bee-keeping

(*Continued from page* 13)

hiving a swarm when it had formed.

I found from reading that swarming is a perfectly natural process with the bees and is their method of increase, and that should one emerge, all that I could do was to wait until they had settled on some near-by bush or branch of a tree. This they were certain to do. I found that I was absolutely powerless to cause them to settle, even though I resorted to that antiquated practice that still prevails among ignorant people of rushing out at the time of swarming, ringing bells and pounding tin pans with the idea that it makes the swarm settle. As a matter of fact, it has absolutely nothing to do with it, as the settling of the swarm at time of pan beating was merely a coincidence.

Though I did not know them, I afterward learned that swarming can largely be controlled by increasing the air supply of the crowded hive by elevating it above its bottom board an inch or so. Another plan is to place a shade board over the hive. This is made of three or four pieces of old boards about 3 feet long each, nailed side by side on cleats about 2 inches wide and set on top of the hive lid for shade.

My bees swarmed out the 25th of June. I never saw so many bees in all my life, they just boiled out of the hive, and in a few minutes there were clouds of them, circling around above the hive, and their hum could be heard at a great distance.

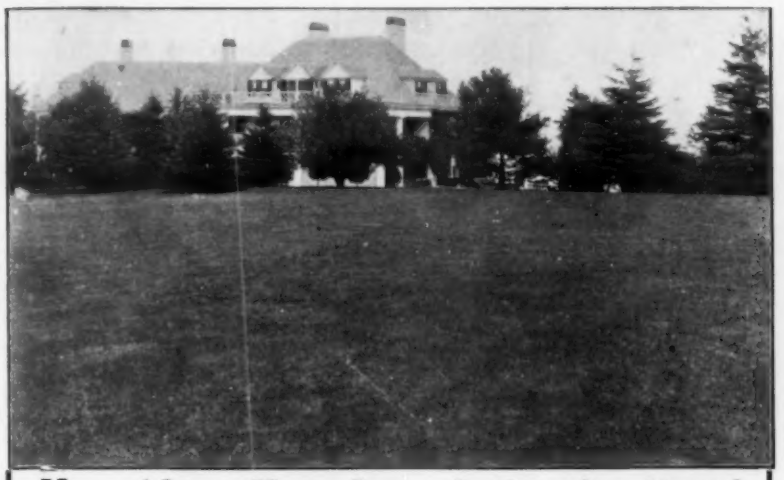
No bells were rung, no pans banged, and in a few minutes the bees began to cluster on a nearby branch of a young peach tree, a mere handful of bees, but as others joined the cluster it grew in size at an amazing rate, and when they had all settled it was a living, squirming mass that would have filled a bushel measure.

For several days the new hive had stood in its place near the parent hive all ready for this emergency. I was fully protected with veil and gloves, but without the smoker, as no smoke is required in handling swarms. For some unknown reason swarming bees seldom sting. With some trepidation I cut off the frail branch to which the swarm was attached, and carried it, bees and all, to the new hive and gently laid it at the entrance. It was remarkable, for without more ado the bees demurely marched into their new home like so many platoons of troops.

This new hive that came with the outfit differed only from the one that had the bees, in that instead of having the frames filled with combs, they were filled with full sheets of foundation wax (thin sheets that have been run through a press and stamped into rudimentary cells). Each sheet was securely wired in to form a septum which the bees draw out into full combs.

The frames of the original colony were similarly wired before the parent colony was run into it by the dealer the season before, and when once these brood frames

(*Continued on page* 70)



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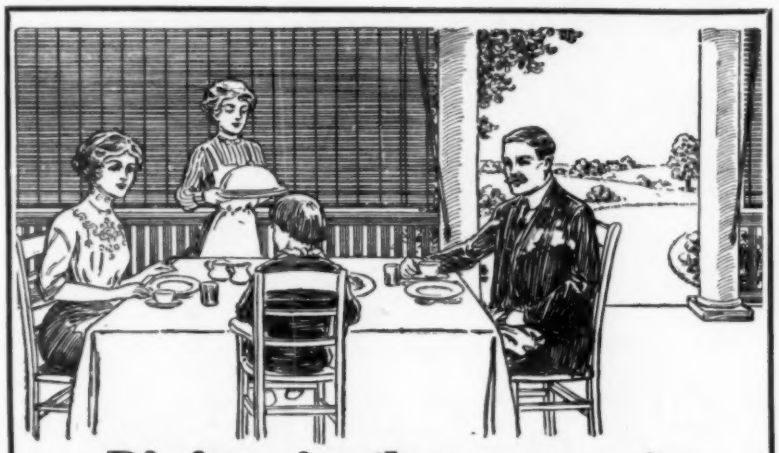

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Send for Paint Helps 62

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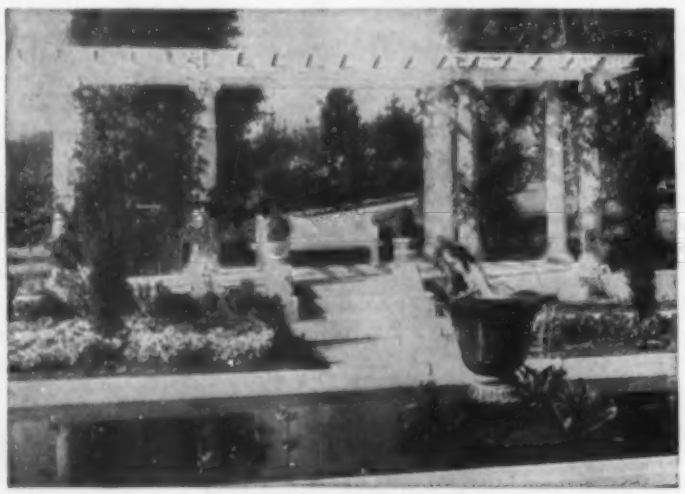

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(*Continued from page 68*)

are filled with combs the combs will last for years and become tougher with each season. I have some combs that have been in use for ten years, and they are good for years to come.

Although the old hive was now depleted of most of its bees, yet at this time young bees were hatching so rapidly that it gave promise of soon being a full swarm. We got no more surplus from it, however, as the working force of field bees emerged with the swarm, and for this reason we transferred all of the storage chambers with the bees that were in them to the new hive. This was to insure their completion, and thus we hived our swarm, and doubled the size of our modest apiary.

The hived swarm having no combs in their new brood nest were of necessity forced to store most of the honey that came in during the next few days right up in the section boxes they were working in before swarming, and just where we wanted it, so before they had built combs in the brood frames, our sections in the storage chambers were completed.

The surplus in the storage chambers was not taken until the latter part of July, as I wanted them to receive the full benefit of the clovers that were in bloom at swarming time, and after being given to the new swarm, they were left there until the 20th of July. This is the proper time to take them to keep our pure white honey from the clover separate from the later flow from goldenrod, asters, buckwheat, and other fall flowers whose honey is darker in color, and though it is nevertheless delicious its flavor is not as fine as that from the early flow.

There is a little appliance known as a bee escape board that comes with the outfit outlined in the beginning of this article that enables us to take the harvest without disturbing or being disturbed by the bees, and it was at this point I brought it into play.

The little boxes with their full combs of honey were lifted out and empty ones put back into their places, and toward evening using a little smoke, the bee escape board was removed and the refilled chambers set on the hive again with the hive lid over all, ready for the fall flow that begins about August 10th.

Just as the first cold weather began to kill the goldenrod and wild asters, I brought the bee escape board into play again and took the last of the surplus from them.

When I took stock I found that at the close of the season my single hive had produced just 146 finished combs weighing a pound each. Besides this, I had the extra swarm making two hives of bees for wintering.

On November 10th, I took off the lids of the hives, and right over the tops of each hive I placed the chaff tray filled with shavings, and with the lids of the hives over this my bees were ready for their winter sleep, and required no further at-

(*Continued on page 72*)

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(*Continued from page 70*)

tention until the next spring, when the storage chambers that were put away for the winter would be filled again with the little section boxes and ready to be filled with combs.

The bees wintered perfectly, and came to the following spring in splendid shape. The two hives produced me that season just twice as much honey as the one did the season before, and that year at the season's close I had four swarms instead of two, and thus the apiary grew until in a few years I had as many as ten hives.

Being a man with many duties connected with my profession, the bees have naturally been but an avocation with me, yet to the man who essays beekeeping as a means of livelihood, eventually becoming the owner of several hundreds of hives, there are great possibilities connected with it. I recall an apiary in New York State in the midst of the buckwheat region, the hives of which number 800, and whose annual output is about 75,000 pounds, though, of course, in any other section than this peculiarly favored one it would be suicidal to place more than 100 hives in one yard. The flora in any given locality is naturally limited, and to keep several hundred hives in the average location would mean that we would have to have several bee yards of say 100 hives each scattered throughout the surrounding country about five miles from each other, but easy of access by wagon, auto, trolley, or rail.

In conclusion I might make the statement that I have found that bees were not naturally cross or vindictive, but, on the contrary, become tame as pets if treated considerately and not needlessly jarred in their homes. If in spite of this assurance of their docility you are fearful of stings, then let me say that a moderate use of the smoker, supplemented by the veil and gloves will make it possible to go through a whole season of the most intimate acquaintance with them without even receiving a single sting.

What to Plant for the Fall Garden

(*Continued from page 16*)

too numerous to make possible any attempt at enumeration here. They contain single, semi-double, double, fringed and laciated forms and colors running through every shade of pink, crimson, rose and red, with pure white, and combinations fantastic and beautiful. Imperalis and Mirabilis are, I think, the choicest of the several strains of the mixed colors.

Care should be taken, where an abundance of fall flowers is desired, to keep the flowers picked off clean during the summer. This precaution should be followed, indeed, with all annuals and bienaials if one wishes to secure a long flowering period.

(*Continued on page 74*)

The Tale of "Old Hickory"

For ages the trees were man's shelter and abode. He *lived* in them. They were a part of his being.

But in the van of civilization, the trees disappeared. Cabins, then houses, finally cities sprung up, where once the forest swayed. Civilization did its work. The poetry of the wilderness was *gone*.

But—the desire of man to live in Nature did not go. The rough bark of trees, the blue skies, still hold their appeal.

So he went back into the wilderness, and there fashioned for himself a seat from the rough barked trees therein.

It served so well, that he brought this work of his hands, with other pieces of like craftmanship and beauty to match, back to the city.

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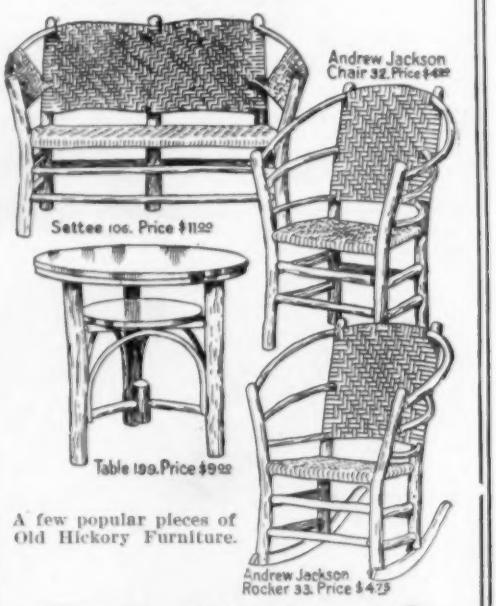

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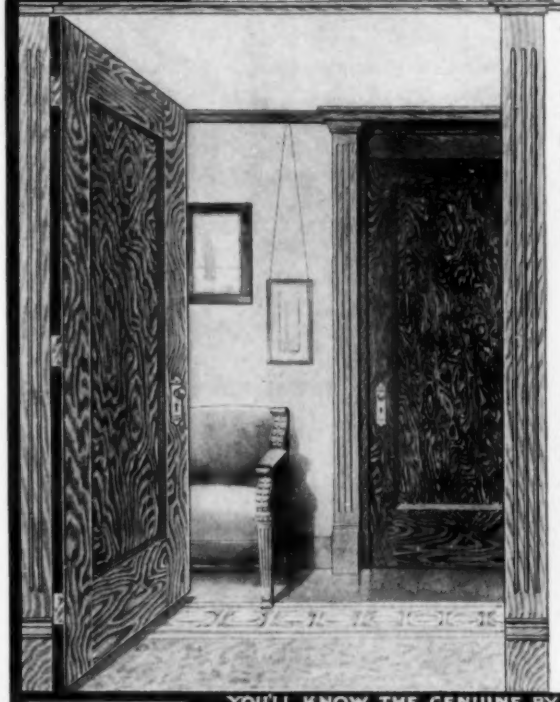

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the bulbs that never disappoint

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(*Continued from page 72*)

There is a number of flowers besides those already mentioned, which play minor parts in my fall garden, most of them even after the first frosts. Of these I admire none more than the velvety, delicately veined Salpiglossis, which has never received half the popularity it deserves—due in part, I am convinced, to its hideous cognomen, "painted tongue." The new Emperor strain is distinctly an improvement upon the original forms.

Another favorite is the California poppy, with its great variety of freely borne flowers. Still another is the old fashioned stock, although for late flowering the new-fashioned varieties, Bismarck, and more especially the Beauty or Cut-and-Come-Again sorts are more desirable. Kochia, the summer cypress, or burning bush, always has a prominent part in my fall garden, with its symmetrical outline of flame-like red. It frequently "self-seeds" even in my cold climate, but the plants must be given plenty of room, or they will amount to little.

Some half dozen others deserve their places, too, but are of less importance. Scabiosa, gaillardia, calendulas, batchelor's button, portulaca, alyssum may all usually be found in the late garden, usually more by chance than by design. Even these simple flowers have not been neglected by our seed merchants, and I would suggest while you are about planning your fall garden, your looking them up, and trying some of the newer types.

If you will take the trouble, this year, to plan definitely for a fall garden, I am confident that the result will be highly satisfactory, and that you will never again leave it to the haphazard chance of having things left over from the summer garden.

The Value of the Compost Heap

IN clearing up about a place in the spring, there is always a liberal amount of litter, particularly leaves, to be found, and all of this should be regarded in the line of luck, rather than a nuisance, for there is a great amount of value in it that should be taken advantage of. Gather everything that is raked up and store it, piled up, in some place until it is thoroughly decomposed, for in the reduced state it is real plant food.

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(*Continued on page 76*)

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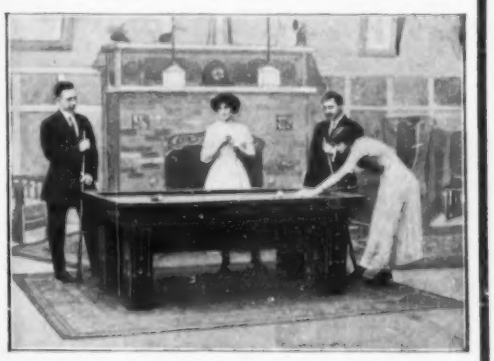

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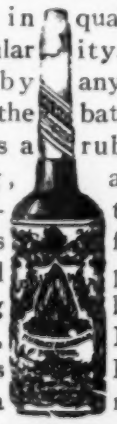

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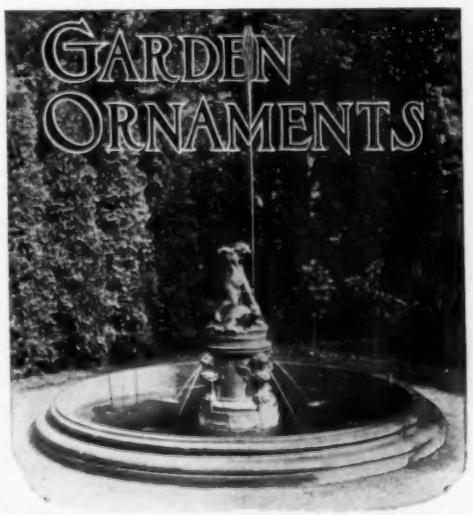

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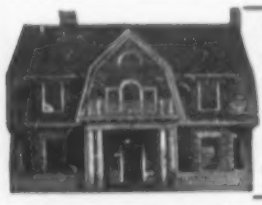

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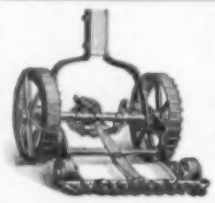

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(*Continued from page 74*)

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A compost pile is either large or small, but it is always an accumulation of vegetable matter that is piled up to be reduced by decay to a friable mass, in which condition it is suitable for plant food. To reduce the mass to this state will take from six to twelve months, depending, of course, on the varying conditions.

The compost pile should receive all the rakings during the year, the grass from the lawn, old sods, clippings from flower beds and edgings with occasional sprinkling of bone meal and manure. Water at intervals.

By saving all these things and putting them back into the ground you are giving back to the soil what you took from it, thereby insuring nourishment for whatever growing things may be put into the ground. Commercial fertilizers are excellent up to a certain point, but they avail but for a short time in a soil deficient in humus. Humus is the life of the soil, and the decayed product of the compost pile is humus, or plant food.

Suggestions such as the above may seem to apply directly to very large places where there is plenty of room, but they are just as pertinent for small places where but a few house plants are to be considered. To make leaf mold where room is a consideration a number of methods may be followed. If possible, dig a large hole in the ground and into this put everything raked up. Tramp down hard and soak with water. After the pit is well filled cover with loam and leave for some months, or until decay is complete. Where it is not even possible to dig the hole use barrels, proceeding just as in the pile or pit by piling in leaves and raking and allowing to decay. A few barrels will give enough mold for repotting a number of good-sized house plants, and it will more than repay you for the trouble.

While leaves are excellent for the soil in a decayed state, they should never be dug into the ground as raked up where planting is to be made. They will heat and injure any plants put in with them. Have you noticed while walking in the woods the soft springy feeling of the ground on which you walked? Have you attempted to pick up a log and had it fall to pieces in your hands? That is the way Nature puts back into the ground what she takes from it. You can do the same by making a compost pile, and it will pay you.

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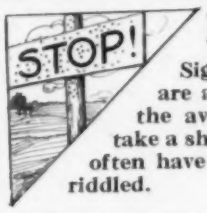

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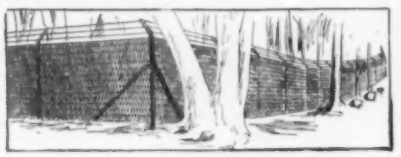

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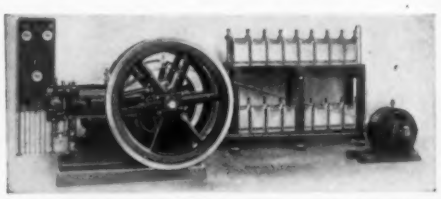

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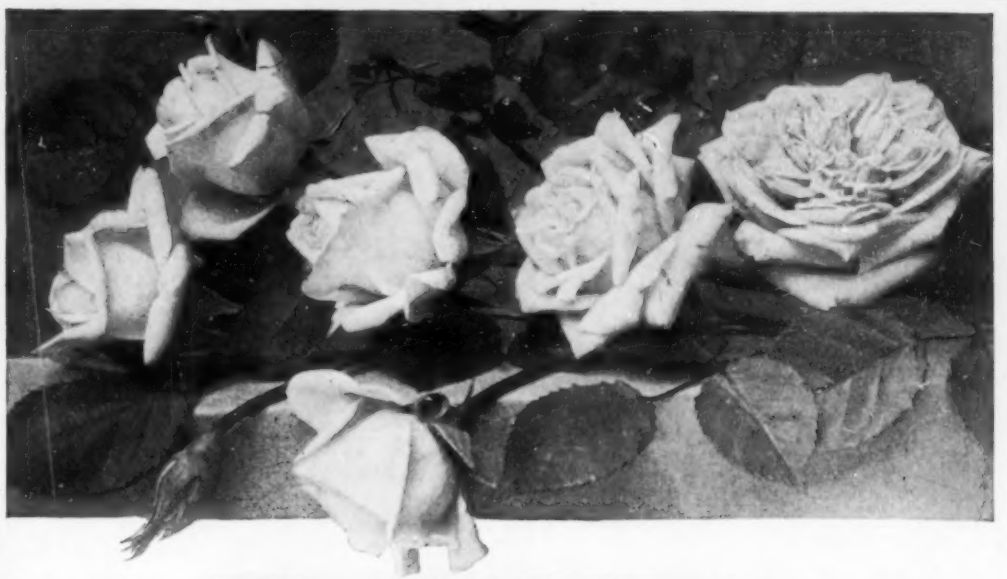

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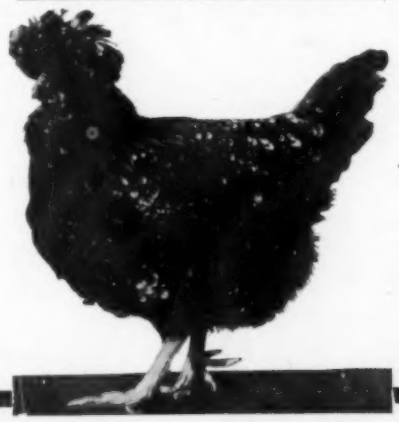

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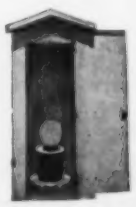

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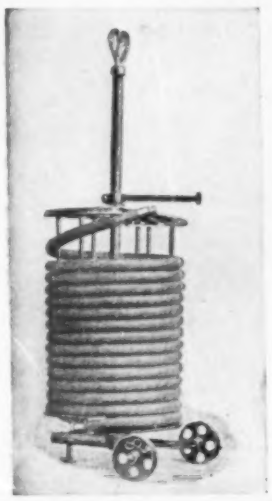

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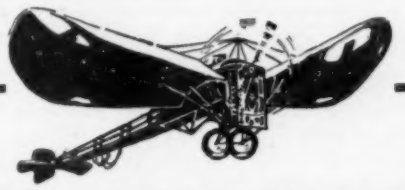

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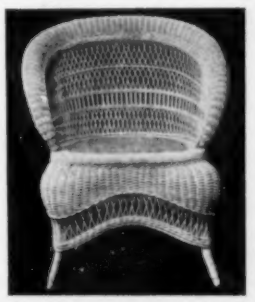

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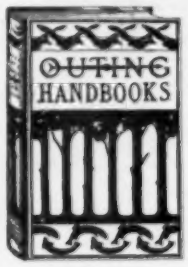

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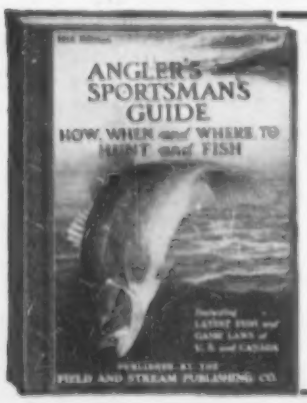

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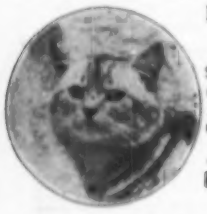

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Our Terriers are blueribbon winners at New York, Boston, Pittsburg, Chicago, Kansas City and other large shows.
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OUTING MAGAZINE YACHTING OUTING HANDBOOKS
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Chicken Raising on a Small Scale

THE plan of buying day-old chicks has made it very easy for anybody to become a poultry raiser in a small way. It is no longer necessary to bother with broody hens or to sit up nights with an incubator, although there is a certain fascination in hatching chickens which many people would be loath to forego.

Chickens absorb the yolks of the eggs from which they have hatched just before they break out of their shells, and the nourishment thus obtained is sufficient to last them for two days or more. Accordingly, it is not necessary to feed them for that length of time, and they may be sent by express for hundreds of miles with perfect safety in small, ventilated pasteboard boxes designed for that purpose. That being the case, it is an easy matter to obtain as many chickens as may be desired of any particular breed and from any particular breeder. The price will range from fifteen cents each to many times that amount, depending upon the quality of the breeding stock or the reputation of the breeder.

After the chicks arrive they may be raised in fireless brooders. That means that mother hens are eliminated from the entire proceeding. Heated brooders may be used if there is an outbuilding for them or a sheltered place out-of-doors. Such brooders are to be chosen as a matter of course when a large number of chicks is to be raised, but the fireless brooder will give excellent satisfaction when only a few are desired. Heated brooders require much attention, and there is always a fire risk when they are operated in the house.

Any warm room will answer for the fireless brooder; there is no reason why it should not be kept in the kitchen. As the weather grows warmer, it may be moved to the porch and then out on the ground, being sheltered by a box.

A fireless brooder is a very simple device—merely a box with felt or burlap under the top and strips of felt at the entrance. The cloth within the brooder comes close to the back of the chicks and the heat generated by the chickens themselves keeps them warm. The chief difficulty comes in getting the chicks to run into the brooder whenever they begin to feel cold. They will go in more readily if the brooder is fitted with a piece of glass to make the interior light, but a better plan is to fill a hot water bottle occasionally and place it on the brooder in such a way that the heat will penetrate the felt or burlap. Whether this can be done or not depends upon the construction of the brooder. The cost of such devices is very little—from $1.50 up, but a very satisfactory brooder may be made at home in a few hours.

This is the simplest way of raising a few chickens. Too much work would be involved if the number were large. People who go to the country or the seashore for the summer can start chickens in this way and have them to eat during the summer

months. One of the advantages of this plan is found in the fact that chicks raised in this manner are free from lice; that is, if they were hatched in incubators.

When chickens to be kept for layers the following winter are desired, they should not be hatched too early, or they will molt in the fall. If the breeds are the Plymouth Rocks, the Wyandottes, the Rhode Island Reds or others of about the same size, they may be hatched from the middle of March to the middle of May. When the smaller breeds like the Leghorns, the Houdans or the Anconas are kept, the hatching season may run from the first of April to the first of June.

Young chicks thrive best if they have fresh air in abundance, but are not allowed to get chilled. The more they are out in the open on warm, bright days the better for them. There is danger of too much heat in heated brooders. Their pens should be kept clean, of course, and it is well to have the bottoms covered with a litter of finely cut alfalfa or hay. The sweepings from a stable loft make an especially good litter. Home-made fireless brooders are usually partially filled with soft hay, which is used to close the entrance at night.

Many people make the feeding of young chicks a complicated matter. Nothing is gained in this way, however. Oat flakes make an ideal food for the first week; ordinary oat meal is often used. The commercial chick feeds are excellent and are sold by poultry supply houses, seed stores, grain dealers and often by the family groceryman. They may be given on a board until the chicks are strong and then scattered in the litter. Four times a day is often enough, and the chicks should be given what they will eat up clean. A pan of fine grit should be before them at all times from the first, and water should always be supplied, preferably in a fountain so constructed that they can not climb into it.

By the time the chicks are two weeks old they will not require to be fed oftener then three times a day. Then a mash consisting of three parts bran, one part of corn meal, one part of middlings and one part of good beef scraps may be kept before them in a hopper; or a ready mixed growing feed may be purchased at the poultry supply houses. The grain in the litter should be continued, of course. After they are five weeks old, a coarser grain mixture may be bought or the ration changed to a variety of grain including wheat, hulled oats and cracked corn. Only enough to keep the chicks busy scratching should be given. They will go to the hopper of mash if they do not find enough grain in the litter, so will not be underfed. It is well to give bits of lettuce and other vegetables frequently.

Feeding in this manner is not a hard task and the birds thrive. Wet mashes should be avoided by the amateur, but a constant supply of water must not be overlooked, for it is one of the secrets of success in chicken raising. E. I. FARRINGTON.

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For Art and Economy's Sake

you should exercise great care in selecting willow furniture. For the market is flooded with cheap imitations of the only genuine Willowcraft Furniture. They don't have the style, the richness, nor artistic treatment of Willowcraft. They are expensive in the end. When buying, look for the word "Willowcraft" burned into the wood under each piece. None other genuine. Free style book shows over 160 latest designs. Write for it today.

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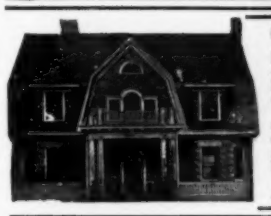

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Ornamental Geese and Ducks, Foxes, Squirrels, Ferrets, etc., and all kinds of birds and animals.
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Are the Greatest Utility Breed

To make room for growing stock I will dispose of this year's breeders at very attractive prices.

Now is the time to arrange for your next season's Pens—I have quantities of exceptional chicks to choose from.

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Beautiful Swans, Fancy Pheasants, Peafowl, Cranes, Storks, Ornamental Ducks and Geese, Flamingoes, Game and Cage Birds

"Everything in the bird line from a Canary to an Ostrich"

I am the oldest established and largest exclusive dealer in land and water birds in America and have on hand the most extensive stock in the United States.

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Carrara Garden Marbles

OUR Art Rooms show a rare display of fine Carrara marbles and terra-cottas for garden furniture. We are importing these beautiful articles directly from Italy, where the best in the world are to be found.

No. 17—$230

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Our ambassador personally selects the pieces oftentimes from the sculptors themselves, thereby eliminating all intermediate profits. By reason of this direct purchase we sell, at lower prices, beautifully carved Italian benches, tables, chairs, fountains, jardinières and window boxes.

Window Boxes, on feet, are as little as $27.50; as much as $125.
Jardinieres as little as $12; ranging upward to $125.

No. 17.—BENCH, with back of solid Carrara marble; beautifully carved. $230.

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Terra Cottas from the Famous Signa of Florence

Again we import directly and sell at moderate prices, chairs, urns, founts and tables, finely carved in the ivory-tinted terra-cotta. Some of the smaller pieces cost as little as $12, ranging upward to the larger ones at $125.

We Guarantee all Articles for Outdoor Use.

JOHN WANAMAKER

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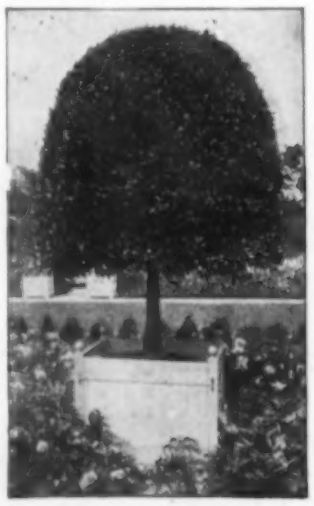

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HARDY OLD-FASHIONED PLANTS. We grow thousands of rare, new and old-fashioned kinds. Special prices on quantities.

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.

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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.

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FOR LAWNS, GOLF COURSES, TENNIS COURTS, Etc.

Are now being used by all the Championship and prominent golf and country clubs in America and Great Britain, and by many private estates.

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Write for Particulars

EVERY reader of TRAVEL for the past year has become familiar with the name of Albert B. Osborne, whose "Picture Towns of Europe" has been a feature of so many issues. Mr. Osborne is a lawyer by profession and traveler by preference. He has, however, shown himself to be more than a dilettante, and we hope to have him as a regular contributor for a long time to come. He sails for England the latter part of June to gather material for a series of articles that will begin some time in the fall.

In response to a request for some details about his life Mr. Osborne says: "Before I was old enough to know better I went into politics and was vice-president of a Democratic State Convention at eighteen and mayor of the City of Corry, Pa., at twenty-five, the youngest mayor in the country at that time. I was chairman of the State Convention that nominated Governor Pattison as candidate the last time he ran for governor. In that same year, in 1902, I was foolish enough to run for Congress.

"My special hobby is a little railroad in the Middle West, and after that travel comes, although music runs it a close race for second place. Indulging this fad for music I use the pianola, upon which I like to think I can play in a way to deceive the very elect."

Albert B. Osborne, author of "Picture Towns of Europe," was Mayor of Corry, Pa., when he was twenty-five

It is not often that a scientist turns to fiction for recreation, but it is just this that Garret P. Serviss has done in his latest novel, "The Second Deluge." With his knowledge of astronomy Mr. Serviss has been enabled to give this wonderful tale of the second destruction of the world by flood a plausibility attained by no other story of its kind. As a young man we know of expressed himself, "He has Jules Verne lashed to the mast."

Mr. Serviss claims no more for his novel than a fictional interest. A New Orleans newspaper, however, recently published an editorial of nearly a column to refute his theory of a second deluge. The gist of the editorial was that the next destruction of the world would be by fire and not by water, a belief which, of course, is supported by biblical prophecy. The book contains a suggestion of humor that will be perceived by those who have a discerning eye.

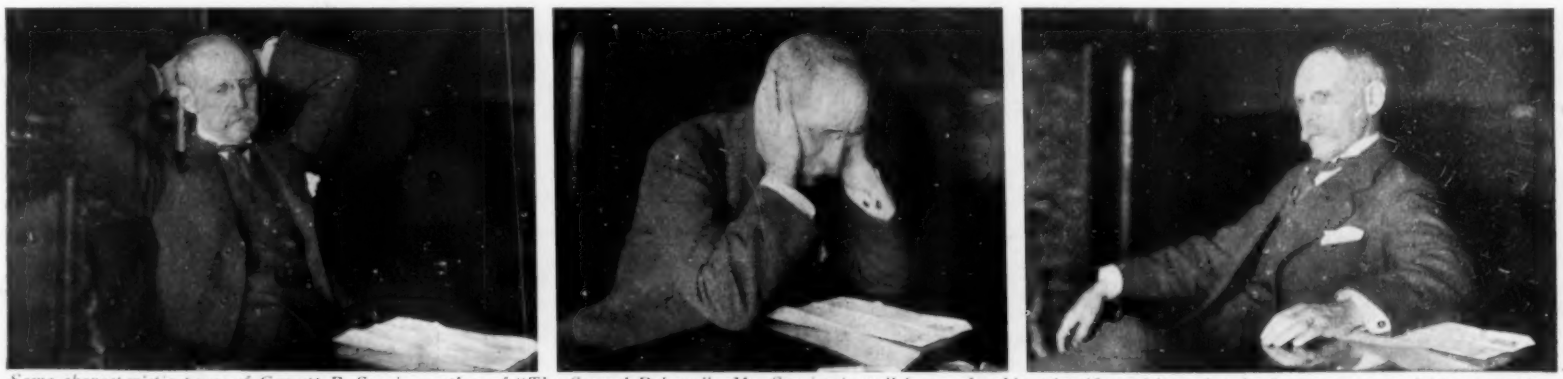
You can tell from the title of "Let's Make a Flower Garden" that the author, Hanna Rion, is full of cheery optimism. Mrs. Ver Beck, for that is her real name, wrote also "The Garden in the Wilderness." Writing from her home in Bermuda, she says, "There doesn't seem to be anything of interest about me except my donkey," and proceeds to tell a little story about "Gunja," pictured in last month's OFFICE LOUNGE.

"Such a great believer in allowances am I, I give even my jackass, Gunja, tuppence a week spending money. He is a spendthrift, hence the limited allowance. As a rule, Gunja spends the entire tuppence on ginger snaps, for which he has inordinate appetite. After trying the ginger snaps of several stores, he decided upon a certain brand kept only by one grocer. Even when his tuppence has been spent he refuses to pass this grocery without our either advancing his next week's allowance or magnanimously treating him.

"The wisdom and advisability of giving an allowance to one's jackass was particularly evidenced on one occasion. Gunja having thrown me out of the cart on the top of my head, proceeded to run a race with his own previous record. Several bystanders, bicyclists and policemen entered the race, too, but they were only referred to afterward as having "also ran." Having outdistanced everybody for some miles, Gunja neared his especial grocery. Immediately slowing up, he trotted sedately to the pavement, mounted the curb, and taking his cart with him, entered the wide door of the shop; then, walking up to the counter, he politely brayed a request for tuppence worth of ginger snaps."

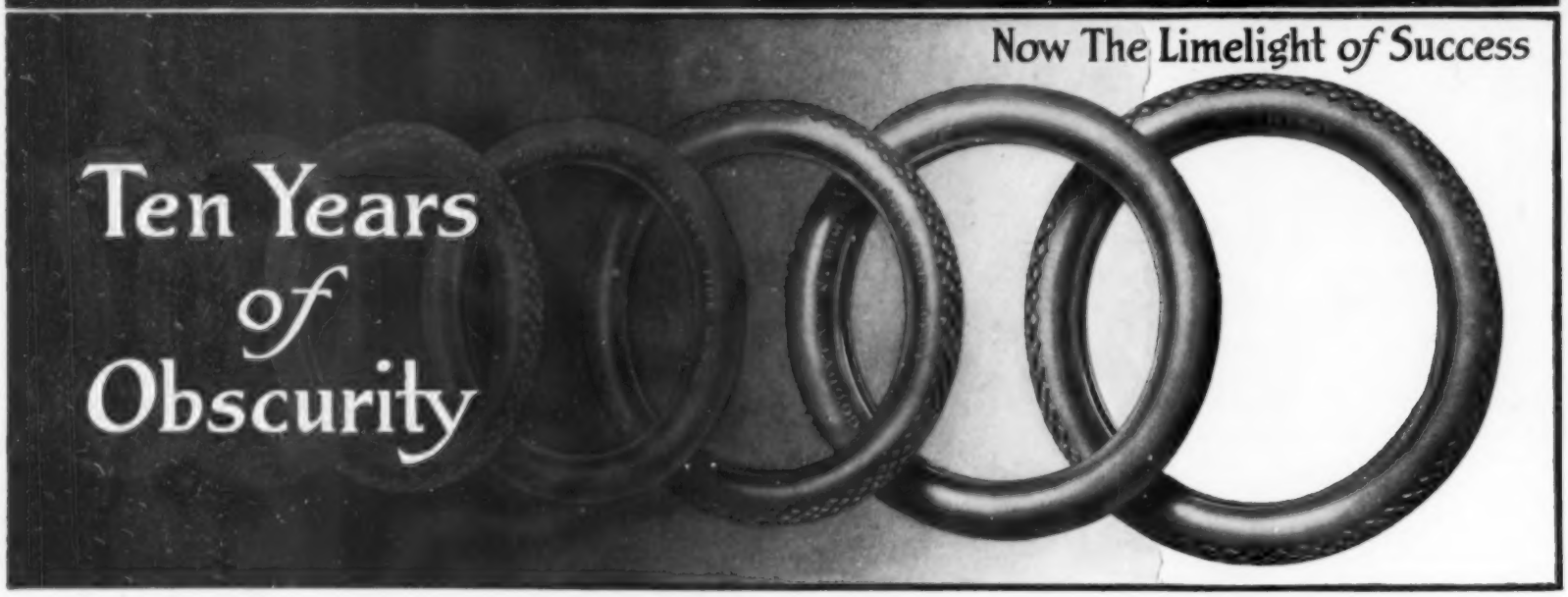
Lewis Gaston Leary's latest book, "Andorra, the Hidden Republic," is, so far as we have been able to ascertain, the first book on the subject in English. Andorra is the smallest republic in the world, for its population is only 6,000. The lowest peak of this mountainous land in France is 8,000 feet high, and its people share the rugged character of their country. For one thousand years they have been exempt from customs duties with France and Spain, and, taking advantage of this, they buy Spanish cattle and keep them a little while in their own country—ostensibly to ease their conscience; they send them into France as Andorra cattle, thus avoiding payment of the tariff. Dr. Leary made a trip to Andorra last summer and studied the country and its people in preparation for this book.

HOUSE AND GARDEN simplified the homemaker's problem by telling him the kinds of architectural styles and their special requirements. This is now being done with gardens. If you are in doubt about the most fitting thing for your place, you must read this series. In July the subject will be "The Wild Garden."



Some characteristic poses of Garrett P. Serviss, author of "The Second Deluge." Mr. Serviss is well known for his scientific writings, but he has won an enviable reputation as a novelist. The Albany Argus says, "Jules Verne was a Gradgrind compared to Serviss."

No-Rim-Cut Tires—10% Oversize



Ten Years Spent Getting Ready for This Sensational Success

No-Rim-Cut tires have seemed to come like a meteor into the leading place in Tiredom.

In two years the sales have increased 500 per cent. They have trebled in the past 12 months.

Now these new-type tires by far outsell any other tire in existence.

But this, remember, is our 13th year. Some of those years were spent in darkest obscurity. Ten of those years were spent perfecting this tire.

So this amazing success has big reason behind it. It has come through slow progression.

Testing 240 Materials

We started tire making 13 years ago, by bringing to our plant the best experts we knew. And we kept on bringing them.

For nobody knew in those days how to meet automobile conditions.

To prove ideas quickly we built testing machines, where four tires at a time are worn out under every road condition.

There we have tested some 200 fabrics—some 40 formulas for treads.

There we have tested every method of making, of wrapping, of vulcanizing.

Every material and method was compared by actual mileage, on this metered machine of ours.

Thus year after year we increased tire mileage, and lessened tire troubles. Thus we finally brought the Goodyear tire about as close to perfection as men ever will get it.

Cutting Tire Bills in Two

Then we started on other savings. Records on thousands of ruined tires showed that 23 per cent had been rim-cut.

This led to the invention of No-Rim-Cut tires. This patent type has made rim-cutting impossible. It saves tire users that 23 per cent, by a method which we control.

10 Per Cent. Oversize

Next we dealt with blow-outs, due to overloading tires. We made these tires—No-Rim-Cut tires—10 per cent. over the rated size.

That means 10 per cent more air—10 per cent added carrying capacity. And that, under average conditions, adds 25 per cent to the tire mileage.

These two features together, with tens of thousands of motorists, have cut tire bills right in two.

8½ Per Cent. Profit

Then we aimed to sell these perfect tires for the least price possible. Our multiplied output aided in this. So did our modern equipment.

No-Rim-Cut tires used to cost one-fifth more than other standard tires. We brought them to an equal price. And our profit last year, despite all our facilities, was but 8½ per cent.

200,000 Users

It was ten years from the start before men woke to these tires. Then one told another, and the tide of demand developed like a flood.

Now over one million have gone into use. Sales have doubled three times in two years. Now some 200,000 motor car owners insist on these premier tires. You will also insist when you know them.

Our 1912 Tire Book—based on 13 years of tire making—is filled with facts you should know. Ask us to mail it to you.

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