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Photograph by Charles Little

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RICHARDSON WRIGHT, Managing Editor

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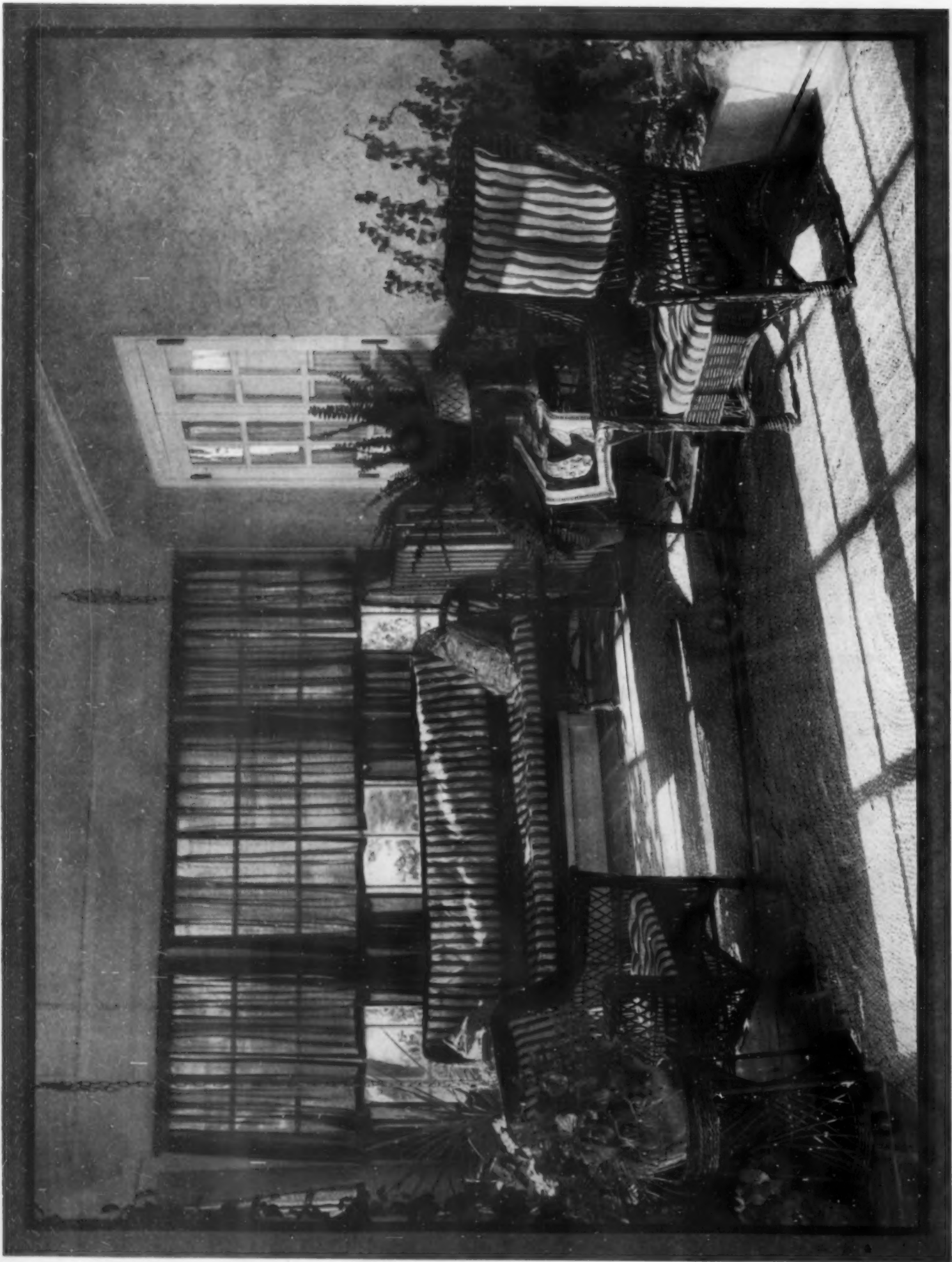
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Each year more and more people are appreciating the value of the porch as a living-room—a twelve-month living-room. At little expense for closing-in, furniture, decorations and plants, it can be made of great comfort throughout the winter. Willow or rattan furniture is the best to use, light sundour casement cloth at the windows, braided rugs on the floor—which preferably should be of tiles—and plants—plenty of plants. This outdoor living-room is in a house at Radnor, Pennsylvania; other pictures of it will be found on pages 178-179



Early spring work is cut down by half if a wheel-hoe is used. Harrowing is made easy—after plowing with the wheel-hoe plow the clods are broken up by attaching the cultivator tool

My Suburban Garden

STAKING OUT A CLAIM IN A YOUNG FOREST—DREAMS AND DISILLUSIONMENTS—THE TOOLS FOR QUICK WORK—THE MYSTERIES OF THE WATER TABLE—SUCCESS IN A WHEEL-HOE GARDEN

WARREN H. MILLER

Part I—Taming the Wilderness

FROM the beginning of things I believe I have been a born farmer, which is a very different thing from being born a farmer; for I was raised in a fine, old Colonial town where everybody owned a big place, ten to fifteen acres; gardened, lawned and hedged, every foot of it under cultivation—a very different thing from the average farm. Land was cheap in those days, and living was cheap, so that people of moderate means could easily own a big place and raise enough on it to keep a man who did the gardening, looked after the horses and carriages, etc., in return for his rent of the cottage and one-third the product of orchard and vegetable garden. Ours was one of the smallest of these places—four acres—yet, even we kept an old darkey, who lived in the cottage at the foot of the third terrace, and was given his rent and the cultivation of

that terrace in return for general gardening of the place and care of our stock. My particular job was the chicken and pigeon establishment, also all our hunting dogs, besides doing part of the weeding and planting of the vegetable garden, and I look back

in wonder to-day at the efficient way in which those trusts were administered, for a boy of twelve; to say nothing of the numerous side-lines of my own—rabbits, guinea pigs, an aquarium, a reptile den—Lord knows what all—white rats and mice, too, if memory serves me correctly!

Then, as I grew to manhood, came five years in Europe and fifteen years' pioneer construction work as an electrical engineer, living in rented houses on small plots of ground, so that one hardly had time to accumulate so much as a dog before new construction work necessitated moving again. But the yearning for a place of my



In the original garden nothing but potatoes would grow, because it had been neither limed nor drained



When preparing the raw soil for planting in a small garden, the first operation is to lay a main drain beneath where the path is to run. If the water table is right, it will be permanent

own, such as I had enjoyed as a boy, would not be stilled, and when I finally settled down, I determined that my three boys would have the same sort of big suburban place to grow up in as I did.

Alas, but the country had changed in those twenty years! In my native town, as in thousands of them like it near big cities on the Eastern seaboard, those fine old estates had all been cut up by the real estate men into little 50 x 100-ft. lots, with scarcely breathing room between the houses. Even the Governor's mansion, with its twenty acres of gardens and grounds, was now reduced to a bare two hundred square feet of land; Van Wyck house, with its noble avenue of pines, its box gardens and stately lawns—swept away utterly, not a trace of it to be found. The Kearney place—trying to look smug and respectable on fifty feet of front for all its sprawling, one-story ways; our own place—what! was this it! this big, high-gambrel roof, flanked closely by squat, "Queen Anne" cottages of nondescript architecture?—It was to weep!

After much search, I found a place 50 miles from the city, on the Atlantic coast, in a fine, hardwood forest, where a development company had put through a magnificent road system with cement sidewalks, water, gas and sewer.

Labor conditions had also changed since my early garden days. No longer could you put up a small house and get a man to live in it and garden for you for a percentage of the total and his rent. Now they want all this and wages

besides, which immediately makes the country place an expensive luxury, instead of a self-sustaining property. I foresaw that I would have to do all the gardening myself, and that, too, in the scant spare time permitted to a busy commuter; so I estimated that about an acre was all I could manage properly. And, as this acre was wild forest, which had to be cleared and tamed, I started on but one-third of it, leaving the rest in park for future years.

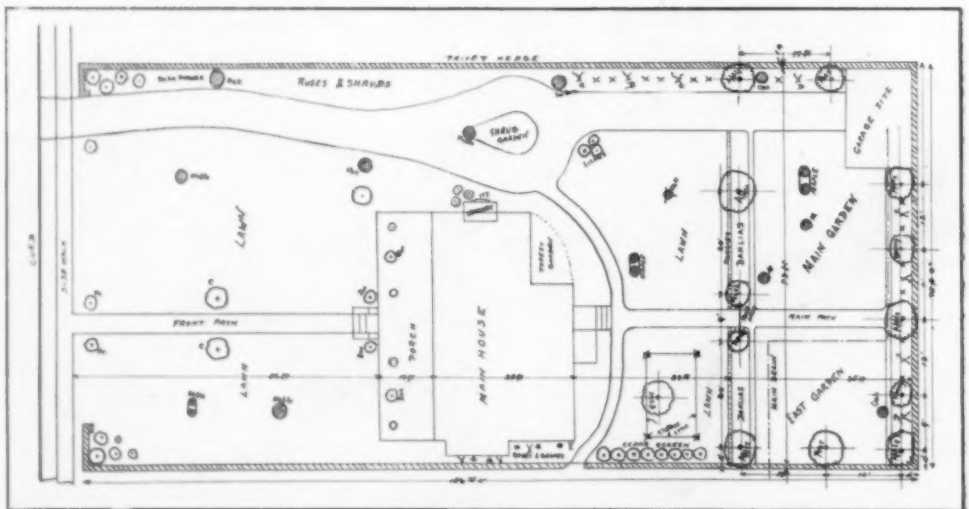
It's a heartrending business, this cutting down beautiful forest trees, but it has to be done if you are going to find room and sunlight for a garden and fruit trees. The diagram shows the original layout of house, barn, garden and shrubbery. We left about twenty-five forest trees on the place—four of them on the garden site—as I did not believe at the time of planning that the sun has a very different declination in winter than in summer, and I had read somewhere that the sun's declination was 20 degrees, so I concluded that the shadows of these trees would fall back of the garden on the forest. This theory the sun seemed to amply uphold—in February—for, even at mid-day, it seemed

hardly over the southern horizon. As a matter of fact, in midsummer the shadows of these trees fell directly below them at high noon, robbing the plants beneath of their sunlight, and I took all of them out the next year.

I did not realize that much of my boyhood success came from excellently prepared soil, well drained, well mellowed and well fertilized. This had all been done by my elders, leaving me nothing but planting and fighting weeds to insure success. In reality, my forest soil, even after stumping, clearing of roots and adding a thin top-dressing of field soil, was as sour as untold centuries of shade and forest leaf-fall could make it.



To determine the water table height, the bottom of the drain should start a foot below soil level. Note the sub-surface water level. This seepage should be run off to avoid sogginess.

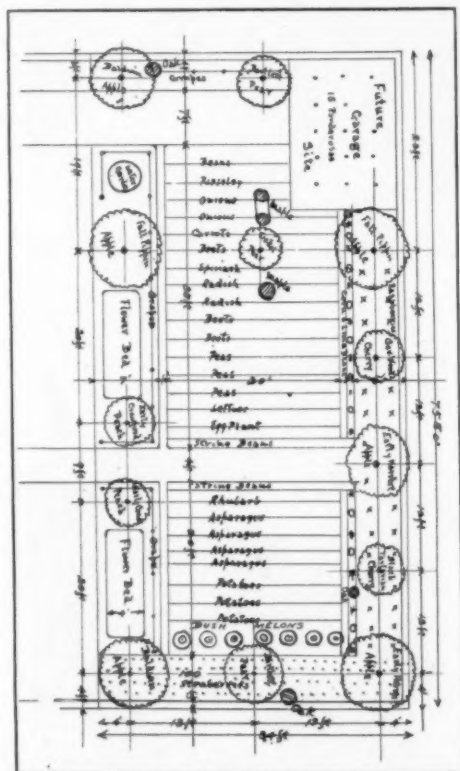


The original vegetable layout had too much of everything and not enough of anything. The plan shows the feasibility of a wheel-hoe garden

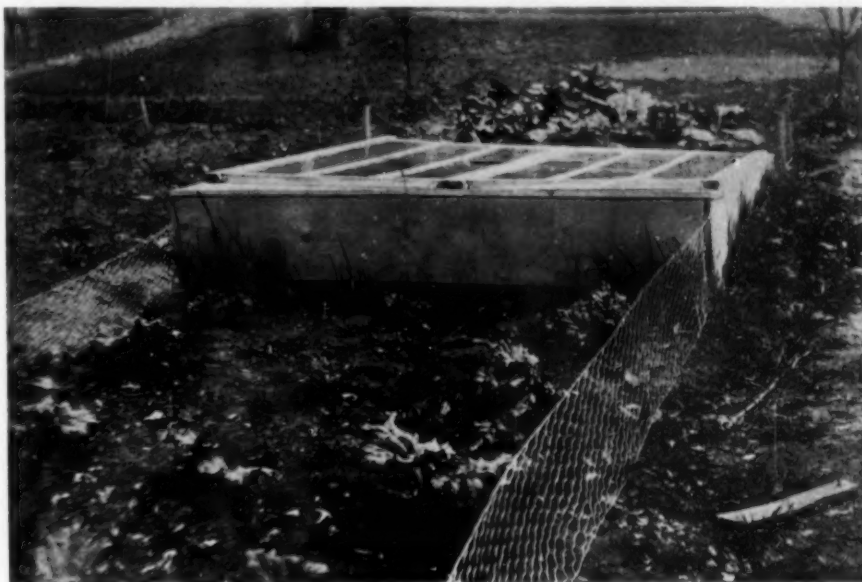
To me it looked rich and black, needing only drainage to produce a fine yield.

The first big February thaw, with its multitudinous puddles, showed me where the low spots were, and I filled most of them with furnace ashes and field soil. The garden was 35 x 75 feet, capable of feeding five people all summer with green vegetables and fruits if managed rightly. I first trenched and drained it, using about 100 feet of terra-cotta inverted U tile laid on boards in the bottom of the trench, with straw over the joints. The reason for this straw is to catch and hold the silt, which is carried along by the muddy water to the drain and dropped along the plank, thus blocking it. A great deal of it washes through the cracks in the tile joints and catches in the straw. If you put these inverted U tiles directly on the bottom of the trench without the boards underneath, your drain will soon be filled up with silt, and in a year or so you will have to dig it up again. The best material for the bottom board is pitch pine, because of its durability.

This drain carried off all surface water very efficiently, but still the garden was soggy and wet. My water table was not low enough. Now, I had read, vaguely, of water tables in agriculture papers, but I never thought of one as a hostile factor in my own garden. The water table may be defined as the prevailing height of water in the soil all over a given section of land. If too high, put your drains lower. I could not put my drain any lower, for its outlet was already at the lowest available exit from the garden, yet the water table was only about four inches below the surface



The original layout of house, barn, garden and shrubbery. About twenty-five forest trees were left on the place, four of them on the garden site making too much shade, as was later discovered



The first thing out of the ground: rhubarb in April. It wants the richest kind of soil and a low wire screen to keep out dogs and children. Sixteen roots planted at each end of the hot frame sufficed for a family of six



Liming the soil to cure acidity. Five hundred pounds of bone meal and land plaster were spread over the garden in March, following as nearly as possible the future lines of planting

of the soil. A spade thrust any lower would turn up wet, soaking, sandy loam. Now, the capillary action of soil will draw water up at least four inches above the water table, so my soil was always wet, even in bright sunlight. The only way out was to raise this water table by putting on more fill. This seemed an expensive proposition, so I decided to leave the soil as it was, in the hopes that summer would bring drier conditions.

to get to bearing, will give bushels of apples to your dwarf's dozens. The same is true of pears; the dwarf will begin to bear in two years (one pear!); the third year it may have three pears on it, and the fourth, a dozen. The standard will not bear at all until the fifth year after planting, starting with a two-year, 8-foot nursery tree, but then it will give a dozen for a starter, and from that time on will beat the dwarf five to one in yield. Standard pears should set on at least 20-foot centers, but in a garden like this they will do well enough as fillers between the apples.

For selection of varieties I had no literature available, and there were no orchards near me, but in general, for light, sandy soil, Baldwin (red, winter), Early Harvest (yellow, summer), and Stayman's Winesap (red, striped, fall) are good garden selections.

All peaches do well in light soils, so your choice will be mainly for a succession of ripenings throughout the peach season—Early and Late Crawford, Elberta, Ray, etc.—and in this garden I have had very good success with Governor Wood and Black Tartarian cherries. All these were two-year, 7- and 8-foot trees,

(Continued on page 199)

Meanwhile I had ordered a large box of privet, apple trees, pears, peaches, cherries, berries and grapes, and they now arrived from the nursery. I chose standard apples on the corners, with dwarf Bartlett pears in between, two peaches flanking the garden gate, and two cherries along the back as fillers between the apples. These latter should go on 35-foot centers if standard, whereas dwarf trees require but 15 feet of room; while it takes longer

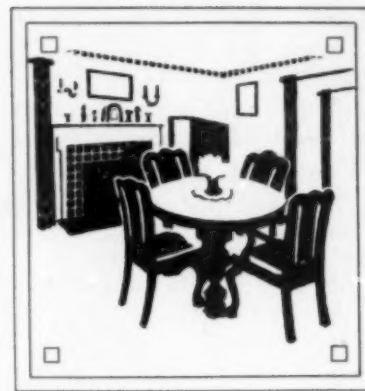


Distinction in Dining-Rooms

THE PERIODS THAT CAN BE MIXED—GENERAL RULES FOR MAKING THE ROOM A CHEERY PLACE—WHAT TO AVOID—AND A NOTE ON BREAKFAST-ROOMS

MARY H. LIVINGSTON

Photographs by Jessie Tarbox Beals



IN planning a dining-room of distinction there are three points to be considered: tradition; demanding and impressing one's personality through this tradition; and suiting one's means to one's choice. It cannot be the composite of various unrelated styles, nor of the unorthodox *nouveau* art—futurist and what-not new invention. We must feel conscious of a certain co-ordination in planning. Without co-ordination such a dining-room, although it be wonderfully clever and pleasing, may still lack distinction.

In a traditional room is immediately created an air, a spirit, something that responds to the background of our own experience—be this experience in a New England home, a Southern mansion, villas and cottages abroad, or be it merely a result of visits to our shops. People may protest against a period room, saying: "Why should I limit my choice of furnishings to designs produced between such and such a year? It hampers my selection." Such a person does not understand what the periods are. There is not standard of scale or universality of spirit

running through the periods, and hence they cannot be mingled successfully. You cannot put American Colonial with French furniture of Louis XIII, because one is light in scale and domestic in spirit; the other heavy in scale and majestically ponderous in spirit. It is not a matter of dates, this incongruity. By the consistent use of a period style, formality and restfulness, plus cheeriness, create the desirable dining-room.

To many of us, and particularly to men, dining is the high spot of the waking hours. A good dinner works the daily miracle of a man's existence. Let the dining-room have restful spaces, comfortable chairs, adequate table-room and the elimination of an over-loaded sideboard and ostentatious china closet. Let the walls be light in tone. Let there be enough light to eat by. Women are apt to light a table insufficiently—a soft, becoming glow from shaded candles. Men, with little or no concern for their wrinkles and graying hair, have a less impelling esthetic sense. So, if possible, have side wall fixtures, which, with the candles, will give sufficient light. If side fixtures are not feasible,



In summer, the dining-room can be made an adjunct to the porch if there are French windows. As here, the spirit of Colonial days should be carried out in mantel, hangings and furniture

use a center drop light with a flaring Empire shade of soft-toned silk bound with heavy fringe, toned with the color of the walls, making it as unobtrusive as possible. Have the light hung high enough so that the diner can see his *vis-a-vis*, but deep enough to prevent the electric bulbs from glaring into his eyes. If a central gas fixture has to be considered, use flaring white porcelain shades, and over these silk shirred shades of a warm tan or old rose. These throw the light down upon the table and give to the room a soft, pleasant glow. If preferred, candlesticks of silver or copper with shades or shields may be used on the serving-table or sideboard. In country houses there is often neither gas nor electricity, and in such a case small twin oil lamps with old-fashioned glass shades, or sconces for candles, are attractive and serviceable. The main thing to avoid is a large oil lamp in the center of the table or an electric hanging fixture with glaring green or red-glass shade. This unpleasant feature spoils more dining-rooms in the modern apartment than any other, I believe. It is almost always out of proportion and usually dwarfs the room. Why should it be tolerated when at a slight expense it can be removed and a tasteful substitute made? This matter of good lighting fixtures I have spoken of at length because it has to do so much with restfulness.

It is best to have no more furniture in the dining-room than is necessary. The table, enough chairs for family and guests, and a serving table. An open fire is pleasant, and the English habit of having a little coal fire to greet one in the morning is particularly conducive to starting the day aright. If there is a fireplace in the room, have the fire laid before the meal. In so many rooms boasting this distinctly sociable feature the fireplace is left bare and gaping, a hole of black dejection, whereas a few logs and coals on the firedogs, or a neatly filled and highly polished grate would add much cheer and distinction to the room.

It is rather a pity that the habit of a "dining-room suite" of furniture has become so impressed upon most of us. Much more interest and originality can be created by mixing two styles of consistent design. Choose, for example, mahogany Hepplewhite chairs, a sideboard of Sheraton design, inlaid with satin wood, and a serving-table of enamel or walnut of French Louis XVI. This combination, or one equally good, does not make the dining-room "mixy;" to the contrary, it is a pleasing and restful variation.

Another practice that helps give restfulness to a room is the use of things in pairs: well-balanced panels; a pair of lighting fixtures, two candles on the serving table or mantel; a pair of old decanters on the sideboard; two consoles or serving tables.

The most inharmonious thing in a dining-room is usually the sideboard, covered with plate and china. Its appearance is usually no worse, however, than the average china closet. There is something that smacks a little of the vulgar in such display. Those who champion the china closet maintain that glass and china should be kept in the dining-room so that the mistress can keep her eye on the breakables, take account of stock each day, and thereby keep the housemaid under discipline. Wouldn't it be as easy for the mistress to investigate her pantry each morning

All the furniture in the dining-room should occupy no more space than is absolutely necessary.



An example of a downstairs bedroom in a farmhouse converted into an attractive breakfast-room by consistent treatment



Classical scenic papers are effective in a Colonial room. No pictures are needed. For furniture, Sheraton chairs. The treatment of the china closet door is interesting



When not in use the porch-breakfast-room can readily be converted into an enclosed living-room. Here plenty of sunlight is assured whilst the casement cloth curtains will provide the needed privacy

In planning, have a space reserved for the sideboard, into which it fits. Do not let it protrude into the room. Such fittings as a china closet, if one must have one, should be built in.

The foremost essential for cheeriness is exposure. If possible, have the dining-room windows face south or east, for the morning sun at breakfast helps in starting the day well. If the exposure must be west, we will find much joy in watching the sunset as we dine in the summer.

A group of windows is always preferable to scattered ones. They lend themselves better to decoration with hangings and plants, and besides, we get from a group of windows a broad, generous outlook. On the opposite side should be the fireplace, so that when the sun deserts us at our meals we can make use of his understudy. The day of the basement dining-room has passed, let us hope. To those of us not brought up in New York the idea certainly made a most unpleasant impression at first experience. The pyramidal walnut suites of our mothers' day, set as they were in a dark-toned basement dining-room, must have made eating a dismal horror. But in many city homes the dining-room is sunless, albeit it is above stairs. In this case a light, gay-flowered paper will prove charming, adding the life and brightness that is lacking. In the country, light, paneled walls or plain papers are best.

The floor of the dining-room may either be stained and waxed or painted. In the center, leaving a border of about three feet, spread an Oriental or plain rug. Oriental rugs are the most accommodating things in the world; they tone in with every sort of furniture, decoration and hanging. Never use a patterned carpet in a dining-room, especially one with a scattered pattern. The floor should be kept unobtrusive.



A Jacobean room consistent throughout. This shows, in addition, the proper arrangement of furniture assuring a sense of light and space in the room

Walls may be treated in any number of ways, but must be kept lighter in tone than the floor. Paneled walls of oak or cypress are beautiful, but in using these woods one is limited in one's choice of furniture. One successful treatment is to panel the

wall in large spaces in creamy white or soft gray. Should wood paneling prove too expensive, strips of moulding fastened on the plaster and the whole covered with several coats of paint make a distinguished and at the same time an expensive wall. Either buff striped paper or plain Eltonbury paper in a warm tan makes an excellent background for mahogany furniture.

The ceiling must be toned in with the side wall, but never a dead white. Beamed ceilings are almost always too heavy and out of proportion in a small dining-room.

It takes a very large dining-room to carry off a beamed ceiling and have it achieve any distinction. Delicate plaster designing may be used with success on the ceiling of a rather pretentious dining-room, but a simple, classic cornice is much better than a heavy, over-elaborated type. All these things are simply a matter of proportion.

"To break bread" presumes a certain intimacy, and it is as her dining-room is cheery or cheerless, as her meals are carefully chosen and served, meagre or overponderous, that we judge a hostess. She stands or falls with her dining-room.

The Colonial dining-room is a gracious style, and for many homes this has proved the most successful, especially as we are rather rich in heritage of old mahogany. Simplicity must be the key - note: white, paneled walls, with perhaps an old family portrait over the fireplace; and simple side fixtures of Sheffield plate silver, make a good beginning. A wonderfully decorative and

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Even Japanese style of decorations can be adapted, as here; although the furnishings, decorations and hangings should carry the Japanese spirit to the last degree without making the room look stilted and exotic



The possibility of a fine seedling springing up at any time

in your garden is one of the fascinating features of bulblet culture

THE PLAIN FACTS OF GLADIOLI CULTURE—THEIR THREE METHODS OF INCREASE—SUCCESSION PLANTING—THE TIME TO CUT BLOSSOMS—WINTER CARE OF CORMS

STEPHEN EDSALL



HERE is no reason why any gardener should not get results with gladioli, just as there is no reason why any garden should be without them. For the gladiolus booms at that time when the garden needs brightening up—in those dusty, hot, midsummer weeks that come on the heels of spring freshness and prodigality and before the autumn re-vivification has set in, days when the perennial border is apt to look a bit seedy. Moreover, since they are to be had in a great variety of colors—ranging from scarlet and purple to white, rose and pure yellow—the gardener need have no fear of their clashing with the permanent plants. And they offer an added advantage in the fact that when cut they will keep over a week in

water, a possibility appreciated by all lovers of flowers in the house.

For those who have never grown gladioli, a word of explanation: they are increased in three ways—by natural division from the parent corm or bulb, by seed, or by the small corms growing at the base of the new corm. In the first instance all one does is to separate the corms from the original, either in the fall or when planting in the spring.

Between the seed and the bloom is a stretch of three years. Seed should be planted thickly very early in drills in the open ground, rich, sandy soil being preferable. They should be shaded until the tiny plants appear, and not allowed to suffer in the least for lack of moisture. Carefully cultivated, these should produce a crop of corms each about the size of peas. Plant the corms the second season. Some will flower the first season; all should bloom the third, affording a great variety and possibly some new kinds. Growing from seed has one disadvantage apart from the trouble; however, desirable varieties are not invariably perpetuated, whereas they are when grown from corms.

The most feasible method, then, is to buy your corms, which are cheap enough except in the finest varieties. Buy from a reputable seed house and your probability of loss and consequent disappointment will be reduced to a minimum if you follow directions. The first direction is to choose the right soil. Avoid a heavy, clay soil. They thrive in a light loam or sandy soil which is retentive of moisture, the ideal being a sod fall spaded or plowed, and then thoroughly worked over in the spring. Also avoid strong, fresh stable manure. If the soil lacks plant food, any commercial fertilizer thoroughly worked through will answer the purpose. Moreover, gladioli should have a new place every year, and always an open, sunny situation. Plant as early in the spring as the soil can be fitted, for late spring frosts do not penetrate deep enough to harm the early planted corms. If a heavy frost happens along, a light covering will forestall damage.

With the first planting, do not use the largest bulbs; keep them for the second or third planting, as the larger bulbs withstand the dry heat of summer better than the smaller ones. This succession of planting, with a two weeks' interval between, may be continued profitably as late as in the middle of June, or even as late as July 4th, but the months of August and September, being notably hot and dry, the later plantings are more likely to be less luxuriant, unless moisture is plentifully supplied. For these later plantings it is not difficult to find places, as some early vegetable has been used by this time, leaving vacant spaces in the gar-

(Continued on page 196)



Although the more common way of winter storing is to strip the bulbs of their tops, some gardeners prefer to hang them up in this fashion



A valley plumb full of hush to the brim—a valley of wonders, of secrets, of sudden surprises; and rank on rank the serried hills march along the horizon. Who could abide city streets when such a view awaits!

Mrs. John on Orchardring

THE CITY WOMAN WHO SET OUT TO UPLIFT THE COUNTRY FOLK AND FOUND THE TABLES TURNED—
A HOUSE THAT HELD HANDS WITH A WOODSHED—RECOVERING A LOST FIREPLACE—LIFE

SUSAN RATHBONE ANTHONY

EDITOR'S NOTE: Readers of House & Garden will recall both John Anthony and Mrs. John Anthony. Here is a page of confessions by the latter—a human story that will make your heart leap up if ever a longing for the country has seized you.



For forty-six years the charm of this fireplace had been lost

ANCY starting to live in the country—the New England hill country—in March! We came on the 22nd; came from a steam-heated, well-appointed city house to a bleak, desolate-looking, shivery hillside.

My grandfather used to say that you could tell how good a Christian a man was just by looking at his woodpile, so

I went out to look at ours. If John had stood sponsor for it I never could have read his title clear to the skyey mansions, but, luckily, I recalled that he had ordered forty cords. That was the first blow. Next came the hens. They ranged freely because the theory is that a free range is best for both orchard and hens. Unfortunately for my disposition, the hens thought the orchard was located on the front porch and on what ought to be the front lawn. John and I nearly came to "words" over them, but later, when he found how they devastated our garden and had no respect for his barn and his wagons, he decided to

build a hen-yard—or rather, let the "Chicken Lady" build it!

Before we were married I had seen the house, but because of John I wore rose-colored glasses. His practical pen had discoursed so eloquently about the stability of the underpinning of huge slabs of Vermont granite, the fine way his tiresome apples kept in the cellar, the ever-running spring water and the two old fireplaces that I, too, was sure nothing else mattered.

Then, too, I had been accumulating a lot of what the country-folk discredit as "book knowledge," and I saw myself transforming not only the house interior, but "uplifting" the manners, morals and house interiors of all my neighbors. Why not? Had I not had superior home training at the hands of that efficient housewife—my mother? I forgot when I contemplated all this that at home we always had a servant and always the possibility of extra help across the way. Again, why not, since I had not only taken two domestic science courses, but had taught several branches of housewifely arts for nearly a decade in two of the best-known household arts schools?

Metropolitan friends who looked a little pityingly on living in the country, even with John, said: "How much you can do for the country woman!" I disclaimed modestly, but secretly thought I could. However, it wasn't long before I found the country-folk were uplifting me! When there is only one woman to do every bit of work, it doesn't matter that she knows how to cook a delicious variety of food dietetically correct. One comes to understand why plain boiled potatoes supersede mashed and French-fried; why pie is the daily pièce-de-résistance—delectable,

"filling," quickly and easily made and fairly inexpensive. So it goes. I haven't yet come to white oil cloth or a red tablecloth, but I am no longer horrified by those who do!

Like most of these hill-country houses, ours is a story-and-a-half house, holding hands with the woodshed and the barn. When we came, the front of the house was painted gray, with white on the east end. On the barns and woodshed, the sides visible from the road displayed a coat of red, but the backs of all the buildings were guiltless of paint.

I have not yet ceased to wonder where the former owner put his family of eight, to say nothing of his "lairs and peanuts." We find that our present family of four fills the house comfortably, and our Lares and Penates clamor for larger quarters. However, we feel distinctly metropolitan because we must hoist our upper-story furniture through the window. The room now our living-room had been used as kitchen, dining-room and living-room. The floor was worn hollow, splintered, and most of the yellow ocher paint had worn off. This color had been used on the baseboards, and a cold, dingy, drab paint was on the rest of the wood. An

ugly, flowered paper, with a dominant note of pink, was on the walls; the ceiling was black with smoke. The cook-stove, which continually leaked ashes because of a broken casting, stood in front of the fireplace. For forty-six years the charm of this fireplace had been lost. It was boarded up and over the boards a green paper hung in tatters. The shades at the window were old and dingy, perforated like a strainer.

We called in some painters and paperers who had been imported for a wealthy neighbor's work. Their estimate on one room made it impossible for us to consider employing them, so we rolled up our sleeves and started in. It took about four weeks of intermittent evening work to get that doleful, drab paint covered—but, such a transformation! We hid the paper with successive coats of tan Muresco—eventually we plan to seal it with our own wood; new shades were ordered from a hitherto despised mail-order catalogue. We made mahogany sectional book-cases by applying a mahogany stain to apple boxes. A few bits of real mahogany lent an air of verity, and we feel irritated when

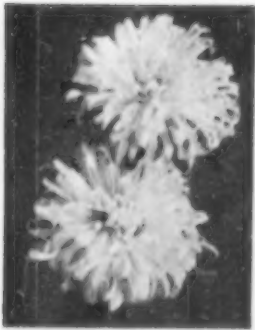
(Continued on page 186)



Soon I, too, began to watch the growth of the young trees and examine each suspicious curl of a leaf



At the end of the orchard is our "dream tree," where John and I dazzle our minds with plans for the future and feast our eyes on the view of the surrounding hills.

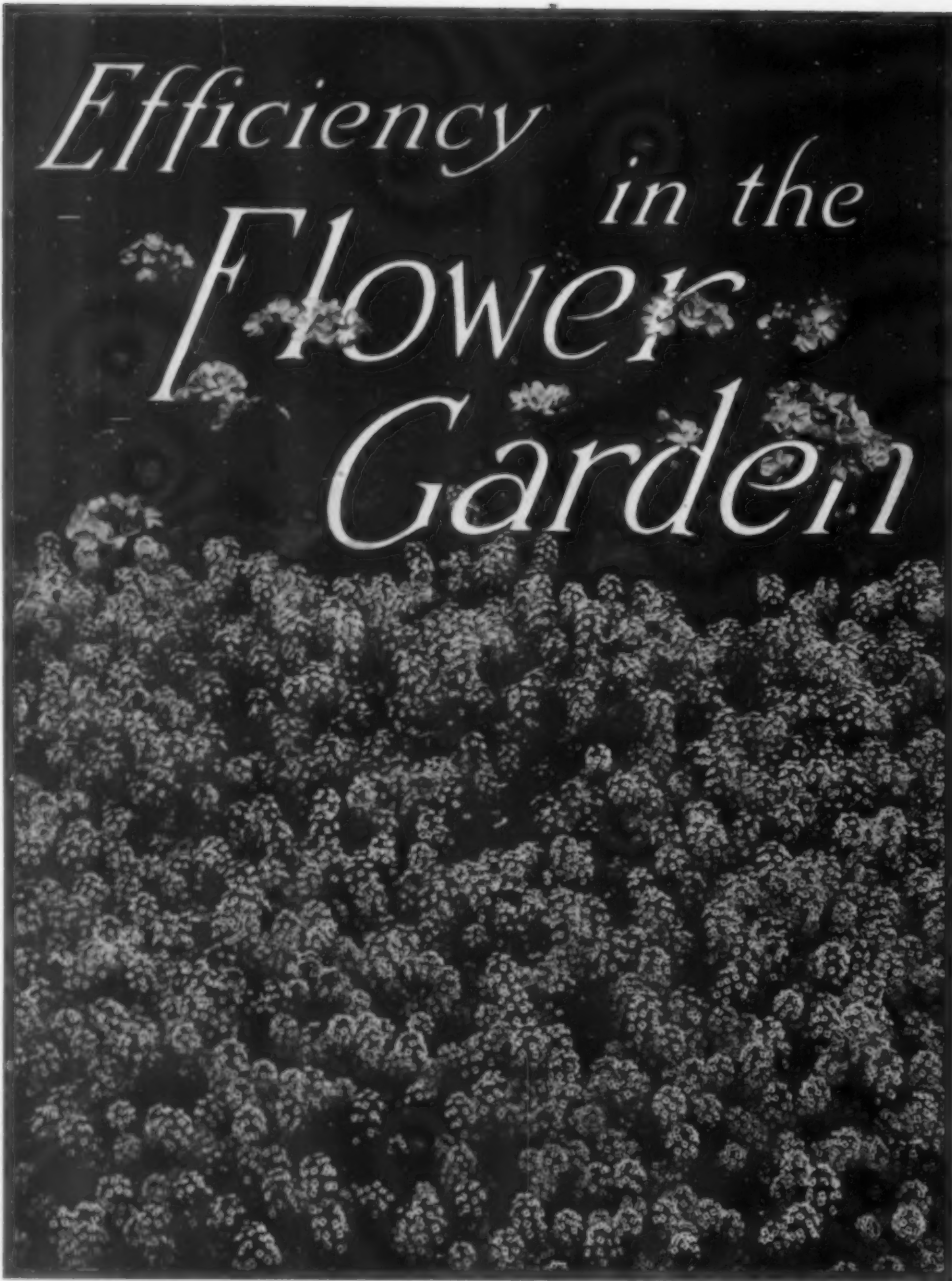


The China Aster is an excellent plant for a reserve bed from which to fill gaps

WHILE the various flowers available for use in the flower garden are classified botanically as annuals, biennials and perennials—hardy, half-hardy and tender; for cultural purposes they are separated into quite different groups. Some are started each year from seeds, flowering the same season; others are started (usually quite early in the fall) each year to flower the following year; others, the hardy perennials and some self-sowing annuals, bloom year after year; and still others, as the ordinary bedding plants and the summer-flowering bulbs, are carried over winter in a growing or a dormant state, to be set out in spring, and are propagated from seed only when a new supply is wanted. All of these classes of plants should be represented in the well-rounded garden.

Flowers to be sown from seed include the annuals, several biennials and a few perennials. One of the main differences between the flowers of this class and the regular hardy perennials is that while the former have to be started again each year, their seasons of bloom are much longer. They are, therefore, especially valuable for borders or for masses of color which are wanted to last the season through. Also there are some places about the grounds and some of the parts of the flower garden which one may prefer to change from year to year; and for use in such places the flowers which may be started from seed are especially valuable.

Efficiency in the Flower Garden



Because of the long season of bloom and ease of culture, nothing is better for edging than Sweet Alyssum

MAKING OUT THE SEED ORDER—THE FLOWERS TO START NOW FROM SEED—WHERE TO PLACE THEM IN THE GARDEN—HOW TO HANDLE THE SEEDS BEFORE PLANTING

F. F. ROCKWELL

Photographs by N. R. Graves



Though it has a tendency to weedishness and garish colors, the petunia is of easy culture and profuse bloom



A garden lingerer, the cosmos is unequalled among the tall annuals for late summer

The annuals, too, are, on the average, much more dwarf in growth and lend themselves readily for edging and foreground planting in front of taller things. A combination border with hardy perennials in the background and with bedding plants and annuals in the foreground makes a convenient and effective way of arranging the garden, particularly on the small place, where it is advisable to avoid the "chopped-up" appearance resulting from making too many flower beds, crowded, for want of room, too close together.

There are several methods of starting the plants, depending upon the use to which they are to be put and also upon the variety. Some of them, being introductions from warmer climates, take such a

long season to mature that they must be started indoors early in the season. Others which do not take kindly to transplanting and come into flower quickly are better sown where they are wanted to bloom. Still others which would bloom if sown outdoors and may be handled in that way, give much quicker results if started early so that a good part of their growth is made by the time they are set into the flower bed or border in which it is intended to have them mature. These methods may be described briefly as "Sowing in Heat," "Sowing in the Seed Border," and "Sowing Where They Are to Bloom."

The first method, of course, involves more

work than the others. It gives the earliest and most certain results. And, with a number of plants, such as cosmos, and with most of the biennials and perennials that may be grown to flower the first season, it must be used. In all cases, except where a dense edging or a tangled mass of bloom is wanted, one can get more satisfactory results by having plants to set out than by sowing seed.

Often it is not possible to start all one's flower seeds, and the next best method is to make up a little border of finely prepared soil raised somewhat from the level of the ground and in a sheltered position, where it can be readily tended and watered. In a coldframe, or against the south wall of the house or garage (where water from the eaves will not drip on it) will make a good place. It is much better to start all the seedlings in one place than to plant them all around the garden, a few here and a few there, with the idea of transplanting them later. They all need much the same care in the early stages of growth, and it not only saves a great deal of time, but it secures much better results to have them all in one place where the various operations of thinning out, watering, trimming back, and so forth, may be more expeditiously carried out.

Then, with most of your flowers started in one of these ways, things like poppies and nasturtiums, which are usually sown where they are to bloom, can be planted under the right conditions: just after a good, soaking rain, when there is a prospect of several days of warm weather, or at the beginning of a warm, rainy "spell."

By all means, make up your order for flower seeds in the garden. Take a little stroll around the place and see what needs to be planted, rather than look through the catalogue to see what there is you would like to plant. Jot down, as you look about, the conditions you will have to meet.

You can go over your place from side



Stocks grow ten weeks from seed, hence the name; successive sowings produce an all-summer bloom. Old folks call it the "gillyflower"



A rather stiff formal plant, the zinnia, when used intelligently, can be made of great decorative value along borders

to side and from front to back. With your garden problems all before you on a sheet of paper, you can go over the list of flowers to be started from seed—some of which are given at the end of this article—and select those things which will best answer your own particular purposes. Get for the back fence, for instance, a packet of the red sunflowers, which, while not pure red, are distinctly different from any of the older sort, being

striped, shaded and zoned with red—the flower being borne freely on tall, branching stalks. As for the neighboring hen-yard—start some *Ricinus*, one of the taller-growing sorts, if necessary, which will grow to a height of 8 or 10 feet; the hens will take care of that. Nothing is better for a long row of edging than Sweet Alyssum—Lilac Queen is a new variety which is equally as good as the white sort for a border. If the lawn mower must be used close to the bed something more upright will be preferable, and then one of the candytufts can be used. Or for a still more upright border the dwarf zinnias, either in mixed colors or in scarlet. Where a tall background plant is wanted, the new annual hollyhock, which will bloom freely the first year if sown early, would prove ideal. There are, of course, a number of other things which would answer this purpose—such as the taller snapdragons, or amaranthus or clovia. For a partly shaded bed, where beautiful flowers are wanted, one of the many fine bedding

begonias would do well—although for a situation of this kind nothing surpasses the tuberous begonias. Where a low bed of bright colors may be wanted in the full sunlight the favorite old portulacas are sure to give pleasing results. Paranna, a new sort, has flowers a great deal larger than any of the older kind.

Flower seeds vary greatly in size, in shape, in hardness, in the amount of heat required to get them to germinate, and in the ways which they should be handled after they are up and as they grow. But there are a few rules in regard to starting them which apply to all. Heat and moisture must be supplied, whether they are started inside or out, which will meet their individual requirements. Indoors both these things may be regulated. Outside, of course, one has to take a chance on the temperature; but it is one's own fault if he plants tender things in April and fails to obtain successful results. But, both inside and out, the amount of moisture can be regu-



The African Daisy, a beautiful annual, should be given plenty of room on account of its rather sprawling manner of growth

lated, and, as neglect in this respect undoubtedly causes more failures with flower seeds than anything else, the gardener, and especially the beginner, should make a strong resolution not to let his plantings of seeds dry-rot.

Almost any soil is rich enough to maintain little seedlings until they are ready to transplant, but not every soil will do to start them in. We cannot take too great pains in procuring or in mixing up a soil that will (Cont. on page 208)



There it was as it had always been—the front door shadowed with the clematis vines and the white snakeroot in blossom



The Old Ballard Place

AND THE GARDEN TO WHICH A WOMAN RETURNED
WHERE ONCE SHE USED TO PLAY—ON BOILER WORKS
AND BIRDS—WHAT THE GERMAN GARDENER WANTED
TO DO—OF HIM WHO LOVES A GARDEN

FANNY SAGE STONE

Photographs by R. L. Warner

WE always hurried by the place, especially after dark, fearing that some dreadful thing would spring out at us from behind the great spruce trees. No house and grounds could have been more gloomy and forbidding. A high picket fence, painted brown and sanded, was in front of the house. The gate was really the only fascinating thing about the whole place. It was kept shut by an iron chain that was hung from the gate to a post, and on it was a heavy iron ball. This chain made a splendid swing for a little girl, and on the few occasions when I ventured into the yard the temptation to stop for just a moment and try the swing would overcome me, until I thought of the stern-faced people who might

at any time fling open the big door and glare out at me. The place looked like the people within the house, and I can

remember when a child, wondering if houses always looked like the people who lived in them. A straight, brick walk, almost overgrown with grass, led up to the front door of the austere, white house with high, front steps and with many green blinds that were always closed. Shades were drawn to most of the windows, too, so little, if any, sun ever peeped into the cold, uninviting rooms. The brick walk led one around the house to a side porch. There were a few peonies, a honeysuckle bush, a syringa and some blush roses along its edge. A forlorn old horse grazed in the yard and kept the



Near the side porch was the same syringa bush now grown 'way above the second story windows, a shower of white blossoms in June

grass from entirely overrunning the place. My big brothers used to tell us that this horse was fed on barrel hoops, as we might plainly see when we looked at his sides, and we, in our youthful simplicity, believed it.

I remember going up the side steps of this house when I was a little girl and knocking timidly at the door when I was sent there on an errand, and the greeting that I met was like everything about the place—cold and formal. The glimpse of the interior, showing plain, white walls, unpapered throughout; no pictures anywhere; no draperies; no little home touches, made me long to hurry away much faster than I had come. So the place held for

its crawly arms over the eaves and onto the very roof itself.

I went often to admire this spot during my stay in Oldham. I was irresistibly drawn to it, not only because of its beauty and restfulness, but because of the fact that I was interested in seeing how much had been done to transform an ugly, uninteresting spot into a lovely one. It was so impressed upon me that I was constantly in a state of wonderment and surprise. Then, too, it was interesting and delightful to meet the ones who had transformed it and to go away with a sweet, happy memory of the place that long ago gave me an almost uncanny feeling.

Only half a block away from a noisy, dusty business street one



It was in the backyard that the clothes drier used to be, its long arms always ready for a swing. Now a bird bath stands there, and orioles and blue birds banter where the children would swing. There's a matrimony over the back door, too

many years for us all a memory full of mystery, dread and fear.

Imagine my surprise when, on going back to the little town of Oldham last summer, I found this place a most attractive one and the house full of charm. The youngest son of the family had married, and, full of the right kind of sentiment, had bought the old home and made it so inviting and comfortable that I found it hard to believe it the place of long ago. Yet there was the same little brick wall, not overgrown as it used to be, but well kept in every way. There, too, was the syringa bush near the side porch, now grown 'way above the second-story windows, and a mass of white blossoms when I saw it in June. The white lilac bush near the front steps was a real lilac tree, and a beautiful trumpet vine partly covered the south side of the house and ran

found this fresh, attractive yard, and it was all the more attractive because of the great contrast, perhaps. A yard 76 by 120 feet; houses very near, and shops not far away, and yet the spot was full of blooming shrubs and plants; birds were singing all the day, building their nests and rearing their young in safety. There were bird houses provided, two birds' baths and many fruit-bearing trees and shrubs and the different members of the family were on the lookout constantly for enemies of the birds. Cats and English sparrows were not cordially received. In fact, an air gun was often called into action.

I am going to tell you in detail about the making over of this yard, to show any incredulous city person who feels that it cannot be done, that it is a possibility and a very successful one.

At the south of the entrance to the front yard a double-flowering plum flourished and looked like a great pink popcorn ball in season. Across the front of the yard to the south was a pretty row of Japanese barberries that met a glorious hedge forming the south boundary of the place. This hedge had been worked out with thought and care. Most of the things in it were native shrubs and trees brought from the woods and lanes near by. How they did grow, and how graceful and artistic the whole arrangement was in contour, color and grouping! There were bushes of wahoo, snowberry, dogwood, high-bush cranberry, golden elder, the lovely purple barberry, golden syringa, sumac (the cut-leaf), Tartarian honeysuckles (in white and pink), and lilacs of different colors. It was always showing blossoms or

partly hidden by overhanging branches of cranberry and dogwood, was a great trunk of an oak tree, over which ran blossoming nasturtium vines. On this stump was the basin for the birds' bath, and all through the summer the birds came in numbers to drink and bathe, and no spot in the yard was more attractive.

I remember many delightful afternoons spent in this garden, yet one stands out in my memory more distinctly than any other, and it is because of the joy I had that day in watching the birds come to this bath. When I tell you of it, please remember how many people are saying things like this nowadays—"No wonder we never see birds now as we did long ago. They used to come to our yards, but they do not like the city." Then, too, please remember that this yard is less than a block from one of the



The wide beds in front of the hedges are a mass of color all through the season. First came the Oriental poppies, then the iris and peonies; later, the crowning beauty of the year—the Canterbury bells and the foxgloves. When these had gone, hollyhocks and snapdragons and gladioli showed their colors

fruit of some kind, and in the fall was especially attractive to the birds, as well as to the people. The cedar waxings would come in dozens and settle down on the Tartarian honeysuckles, and when they took their flight not a red berry would be left to delight our eyes. The catbird, cuckoos and brown thrasher would come creeping in and out, feasting on the berries of the elder, and seldom did they leave without calling back a little "thank you" song. This hedge formed a graceful, irregular line along the lawn. Around one of its curves was a border of sedum—and, by the way, nothing can be prettier in such a place than this plant with its trim, stiff branches, its soft, green color and its especially attractive pink flowers in the fall. Behind this sedum grew quantities of the white snakeroot that had been brought from the woods near the river. This filled in the space completely between the sedum and the higher shrubs back of it, and its white flowers harmonized with whatever blossomed near. Close to the hedge,

noisiest shops ever created by man—a boiler shop with up-to-date air hammers and compression drills. I sat alone with my book one May day, not more than fifteen feet away from this bird basin, when I saw a flash of wonderful orange, and the Baltimore oriole was taking a bath! I watched him quietly as he dipped and splattered and dipped again and again. Up he flew to the nearest tree to complete his toilet, and before I had looked back to my book the blue bird came, with his beautiful blue dress. He wanted to get into the water, but was not exactly sure of my friendship, and contented himself with a drink. Then off he flew, just in time to give place to three scarlet tanagers that settled themselves not only for a drink, but for baths as well. Think of this, and make your yards attractive for birds, whether you live in a noisy city or quiet town. Birds will come if you invite them and protect them. There is one objection to having a birds' bath

(Continued on page 192)

Real Irish

THE Irish terrier is a true Irishman. I do not mean a low comedian with a red wig and a stub of a clay pipe, nor a sweetly, sad, romantic tenor with nicely rouged cheeks and pumps with great silver buckles. The objection of a certain tremendously clever gentleman from Dublin that there is no typical Irishman is half truth, for the "typical Irishman" is usually a poor, lopsided creature. If drawn by a comic artist, his external features are exaggerated out of proportion. A lady novelist, on the other hand, will turn him inside out, an equally unfaithful portrait.

The terrier from Ireland is remarkably like his original master. As one of his oldest and best friends once said to me: "Shure, he's a rale bit o' the Ould Sod." Irish terrier and Irish gentleman both hide their deeper feelings and finer sensibilities under an apparently care-free exterior. The better one knows these two, the stronger their likenesses in disposition and character appear. So, after a deal of casting about, I can find no more fitting title for this, the story of the Irish terrier, than the two words "Real Irish." But one must remember what real Irish is.

The little, four-footed Irishman is the most lovable of dogs. Always happy and lively, with a devil-may-care air, he is a bit too cock-sure at times, but his heart is light as a balloon and almost as big, and he is always ready to meet anyone half way. He races through life, his head cocked on one side, his



The John L. Sullivan of dogs; he never "starts things" out of pure deviltry, but he can stand up for himself when occasion arises. His scrappiness is mostly an exuberance of spirit and a desire to mix in

A FAITHFUL PORTRAIT OF THE IRISH TERRIER—THE TRUTH ABOUT HIS FIGHTING PROPENSITIES—WAS HE ORIGINALLY AN ORANGEMAN?

WILLIAMS HAYNES

Author of "Scottish and Irish Terriers," "Practical Dog Breeding," etc.

bright eyes sparkling with keen merriment, his tail gaily erect. He is ever on the alert, and he never misses a trick in the game. He may blarney, but he never begs; and he fears no man or beast. Come fair weather or foul, good luck or bad, he is always the same cheerful little chap, ever ready to share any lot with his beloved master.

This master of his is his god. Though he can never be accused of snobbishness, still his deep affection for his own family is a very different thing from his frank camaraderie with the world at large.

His love is strong and sure and faithful to the very end of his life. Only the voice of his master, raised in displeasure or in discipline, can stop the gay wagging of his tail, but he is very sensitive to rebuke from those he loves. Through his heart he is tractable to training that could never be beaten into his tough little hide.

All the terriers are blessed with the happy knack of making themselves at home in any clime and under any circumstance, but in this the Irish terrier is trebly blessed. Box him up in a crate and ship him off—it makes not a bit of difference whether your destination be a ranch in Arizona or an apartment in New York—when you open up his box he will hop out, greet you with a joyous bark, make a hurried inspection of the new premises, and come back with wagging tail to tell you: "This suits me! Now, what's next on the program?"

Over and above his perfect adaptability to any surroundings, the Irish terrier can with impunity be cosmopolitan in his associations. He can hobnob with the grooms in the stables without losing those qualities that make him so delightful a companion for his mistress. He is one of those rare chaps equally at home and equally popular in the harness room and in the parlor. Moreover, he is well able to lead a varied life. He is a bully good pal for man or boy in the country. He is a fitting and proper escort for milady in town. He will hunt moles or rats or woodchucks with furious gusto from morn till night, and



He is built after the model of a thoroughbred race horse, lithe and springy



His coat—the redder the better—must be like pinwire, with a wooly underjacket



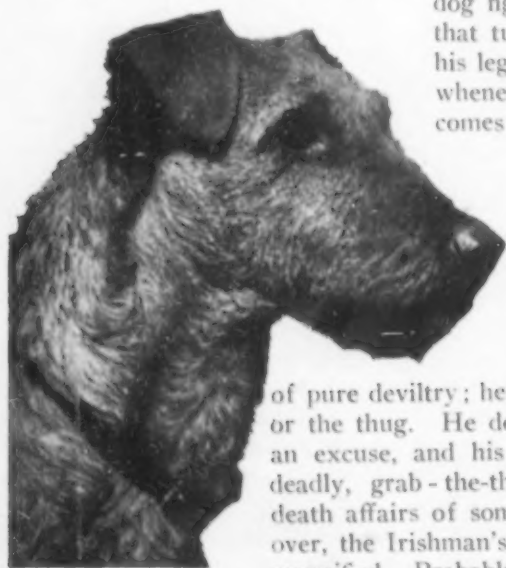
When he runs, the Irishman has a free, open swing, everlastingly on the alert

he will also lie for hours at a time on the nursery floor, mauled and pulled about by the children. He will run his legs off after a tomcat, and he will fearlessly tackle any tramp or burglar; but no one ever even thought of him as snappish or bad tempered. The Airedale is proverbially a versatile dog, but the Irishman is hardly less so. The main difference is one of pounds. The Irish terrier is not big enough to hunt grizzlies in the Rockies or lions in Africa. The Airedale is too big to be comfortable in the house or convenient in the city.

Years ago in belligerent Belfast, which was the hearthstone of the breed's home, the nickname of Daredevil was bestowed on the Irish terrier. He is truly a reckless dog, who carries a chip delicately balanced on his long, sloping shoulder. His rivals have made this the basis of many a jealous slur. "The greater the truth, the greater the libel," but the Irishman, despite all his liking for an occasional mixup, is not a bad dog. True, he is a very touchy dog, quick as lightning to resent any familiarity or interference from other dogs. "To be sure," one of his Ulster friends once said to me, "He's a daredevil, but ah! he's such a dear devil, and as for a dog that won't fight when he's picked on, he's as bad as a man—worse!" This truly Hibernian reasoning is perfectly valid and sound in the case of a so thoroughly Irish terrier. One does not have to believe that John L. Sullivan is deserving of a niche in the Hall of Fame to admire a man who uses his fists to protect his person or to answer certain insults. Nor does one have to be a lover of

dog fights to dislike a dog that tucks his tail between his legs and cuts for home whenever a gutter pup comes sniffing about. There is not a malicious hair in the Irish terrier's wiry jacket. He never sets out deliberately to hunt for trouble; he never "starts things" out

of pure deviltry; he never plays the bully or the thug. He does not scrap without an excuse, and his fights are never the deadly, grab-the-throat-and-hang-on-till-death affairs of some other dogs. Moreover, the Irishman's scrappiness has been magnified. Probably he fights no more than any other gritty, spirited dog, and, since he is amenable to reason, he will, if properly brought up, prove to be a remarkably peaceable canine citizen.



A difference lies in his head—it should be wedge shape, and dented between the eyes



He is intelligent as well as clever, and he can easily be taught those lessons in etiquette and obedience so necessary for his own peace and his master's pleasure

that the Irish terrier was nothing more nor less than the common or garden variety of terrier that flourished in the Border counties of England and Scotland about 1800, transplanted and given a national name that he did not deserve. The Daredevil's Irish friends came to his rescue, and Mr. R. J. Ridgeway capped the climax of all extravagant claims by stating that there were unmistakable references to the dog in sundry ancient Celtic manuscripts, chronicles of the Irish kings. He, however, failed dismally when the production of the aged parchments was demanded, and "Billy" Graham, whose love for the dog won for him the soubriquet of "The Irish Ambassador," very properly poked fun



Compared with the wire fox terrier, he is four or five pounds heavier and larger for his weight



Again compared with the Airedale, the main difference is one of pounds and size for weight



A touchy dog, quick as lightning to resent familiarity or interference from other dogs

at all this balderdash by solemnly declaring that the sole and only reason the Irish terrier was not itemized in the manifest of the Ark was that Noah knew they could swim so well that it would be foolish to take a pair of them aboard.

Dog fanciers dote upon finding an ancient and honorable lineage for their favorite breed, but the terrier from Erin is quite well able to stand upon his own straight legs, thank you. However, those who feel that age is a desirable attribute for the



If you are looking for a good companion, pick out a bright, husky pup, with good straight legs, a shortish back, small ears, dark eyes, and a red wiry coat

Irish terrier to possess will be glad to know that there is good reason to suppose that he is no upstart. When he was discovered in the North of Ireland he was well established in distinct type and bred true. These two facts are the tests of a thoroughbred and proofs of age. There were differences in detail among the early dogs, greater differences than we now see in a class of Irish terriers at our bench shows, but all were sandy or reddish in color, and all were markedly more light and racy in outline than the other terriers of Great Britain.

About 1875 the breed began to make friends outside of the land of his nativity. English fanciers took him up, attracted by his

winning disposition and his marked individualities, and all the discussions about his origin proved to be valuable advertising. But historical debates were not the only ones held on the attractive subject of the Irish terrier. His early friends wrought themselves into furies over the questions of how much white should be allowed on his chest and what should be the correct color of his toenails. Next came the cropping question—in those days the Irishman's ears were cropped, as the Great Dane's and the Boston terrier's are now—but this was settled once and for all by the firm action of the club devoted to the interests of the breed. The Irish terrier can, therefore, claim justly to have initiated the cropping discussion which ended in the abolition of this custom for all breeds in England, a question that has recently been put to our own American Kennel Club, and which may soon be answered by an anti-cropping edict in this country.

The red fox terrier bugaboo, which, like the poor, is always with us, was first raised over the long, lean head of Champion Bachelor, a famous dog who made his debut in 1885. Everyone who knows both the Irish and the wire fox terriers knows that the two are, speaking roughly, similar dogs. They are, however, quite distinct in type. In the first place, the Irishman is not only four or five pounds heavier, but, being lithe and racy, he is larger for his weight. He is built after the model of a thoroughbred racehorse, while the fox terrier is a cobby hackney. The greatest difference, however, is in the head and expression. The Daredevil's head is, roughly, like a wedge; the fox terrier's is coffin-shaped. Moreover, the correct Irish head has a definite "stop," or dent, between the eyes; the ears are placed higher and carried more lightly; the eyes are set in at a more acute angle; the stiff hair on the muzzle is a tuft under the chin—not on the upper lips. All these seemingly trifling details result in a very great difference in expression. The fox terrier looks keen and varminty; the Irish terrier expression is alert and devil-may-care. The difference, which seems a mere technical distinction on paper, is very appreciable when one sees two typical dogs of the breeds.

(Continued on page 198)

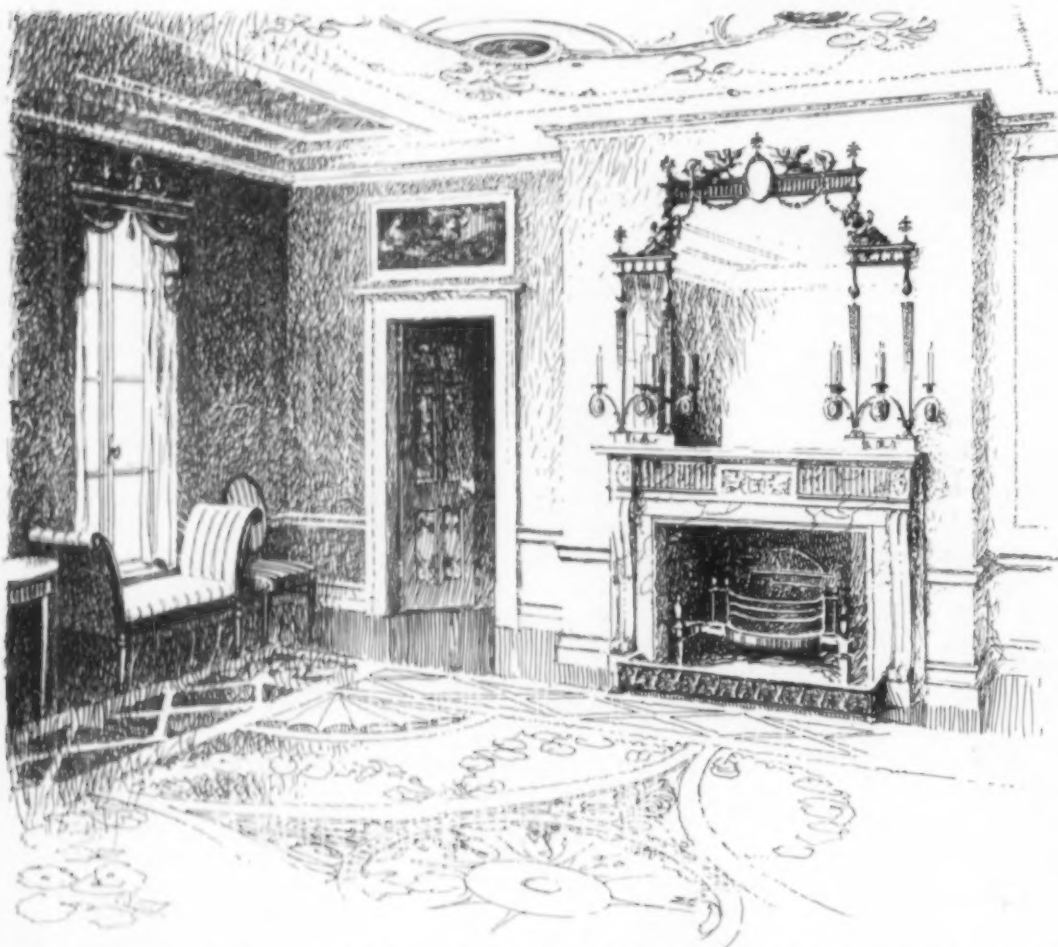


The ears should be placed high and carried lightly, the eyes set in at an acute angle

The Uses of Woodwork in Interior Decoration

CONSIDERING THE PERIOD OF ADAM—DIGNITY, DELICACY AND DRYNESS—THE STRUCTURAL ELEMENTS OF AN ADAM REPRODUCTION—THE PURELY ORNAMENTAL USE OF FURNITURE

ALFRED MORTON GITHEMS



Corner of a room after manner of Robert Adam—Mantel of white marble, colored inlay, or of white wood; gilt mirror-frame and window-cornice; gray, pale green or dull, yellow walls, relieving the white chair-rail, base, door frame and picture framing; ceiling, pale colors, with plaster cornice, mouldings and arabesque in white, and inserted circular paintings; mahogany door, painted panels; dark wood floor with carpet of special design; all furniture of Hepplewhite or Sheraton type

“IF we have any claim to approbation, we found it on this alone: that we flatter ourselves we have been able to seize with some degree of success the beautiful spirit of antiquity, and to inform it with novelty and variety through all our numerous ways.”

So Robert Adam wrote a hundred and fifty years ago. His work in general, and particularly the decoration of his rooms, seem to me close in spirit to the old Roman work. His arrangements are always of the highest dignity, his outlines pure and delicate. *Dignity, Delicacy*: these are the chief attributes; must we admit at times a certain *dryness*? His rooms are lofty, ennobling, inspiring; but conventional to the last degree, with the rigidity of a formal age.

His was the last great period of English architecture; after it came the “church warden” and all the confused abortions that culminated in the Mid-Victorian. The great cabinetmakers, Hepplewhite, Shearer and Sheraton, were his contemporaries; under his influence their furniture developed the characteristically deli-

cate purity of outline and modeling we know so well. Robert Adam was the central figure, dominating these men and his three brothers; we see Robert Adam in the delicate classic Wedgwood figures, white on a dull blue, gray, pink or chocolate ground; for Wedgwood was a contemporary and copied Adam’s architectural decoration in porcelain. This cameo-like treatment was first popularized by Adam. Nearly all his walls and ceilings show fine white decorations on a pale tinted ground, whereas his immediate predecessors, as far as I know, never colored their ceilings except for a sparing use of gold on certain parts of the ornament; on the walls they used oak or white painted wainscoting whenever they could.

He himself explains his scheme in describing his work at Kenwood:

“The grounds of the panels and friezes are colored with light tints of pink and green, so as to take off the glare of the white, so common in every ceiling till of late. This always appeared to me so cold and unfinished that I ventured this variety of grounds to relieve the ornaments, to remove the crudeness of the white and to create a harmony with the ceiling and the side walls with their hanging decorations.”

Wainscoting he seldom used; nothing heavy or clumsy; such a thing as a beamed ceiling never occurs. His decoration is invariably in plaster in low relief, with rectangular or circular painted panels inserted over doors or in other

places in wall or ceiling where they composed in the general arrangement; these, with the deep-toned wood of the doors, formed the dark notes. His mantels were generally of white marble (he was the first to introduce marble mantels in England), with sometimes a colored marble inlaid in flutes or as a background in the decorated panels; he used wooden mantels at times, as in Sir Joshua Reynolds’ house, but he preferred marble. Over the mantel was a painting of one of his curious mirrors with its strange, elaborate frame.

He took under his charge the complete decoration of a room, designing the carpet, the window hangings, all the furniture, even the ornaments. There was nothing whatever left to chance; there could not be, with a room pitched in such a high and delicate key. A Jacobean room, with its dark oak wainscot, is of a burlier, heartier type and can assimilate many a monstrosity without being much the worse; but not so this exotic from the South, as certain manor houses in England testify, whose owners have furnished their Adam rooms without discrimination.

The furniture had its set place along the walls. Between the windows were half-round tables of inlaid or painted mahogany and other woods. They were called pier tables, as they stood against the "piers" or masses of wall between the window openings. Under the windows stood window stools. At other places against the wall were chairs and sofas. The dining-room contained a great sideboard, long and low, with wine-cooler and cellarette below, and knife-cases in the form of classic urns above. There seems occasionally to have been a center table in the dining-room. Otherwise all furniture was ranged along the walls.

For cards, the pier-tables were brought out and set back to back in pairs to form circular tables. If they were made in the familiar manner, with double-hinged top and sliding leg, a single pier-table would form the complete circle. In the dining-room several rectangular pier-tables were brought to the center and placed side by side, with a half-round pier-table at each end. This formed the dining table, or "Set of Dining Tables," as the term was then. After dinner, back to the wall they went.

There were no books, papers or odds and ends about; one or two vases or statuettes may have stood on the mantel; the books or papers were in the library. In short, the Adam room was the formal setting of a formal, dignified life; shocking at times their conversation might have been to our sense of modesty; but nevertheless the life was one of rigid convention and etiquette.

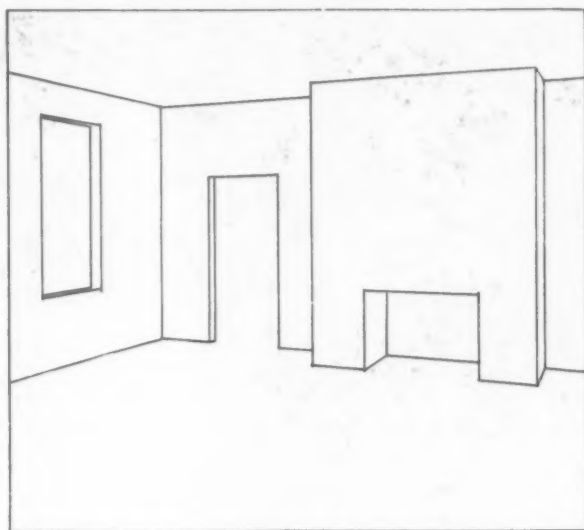
Whether such a style is suited to our free-and-easy ways, I much misdoubt. Would such a room seem ever right with chairs and tables not formally arranged? In a drawing-room, perhaps, or reception room or dining-room? One could never lounge in such a room; but, then, he cannot lounge against a Sheraton or a Hepplewhite chair-back without breaking it. Many an old lady still remembers being reproved for leaning against the back of a chair. *O tempora! O mores!* Perhaps rocking on the hind legs of a chair will be considered perfectly good form before long.

But to more certain matters. The Adam style, we have said, was primarily a style of plaster decoration. For this alone it should be worth our study, for we have made little use of decorative plaster in this country. A revival of it seems just begin-

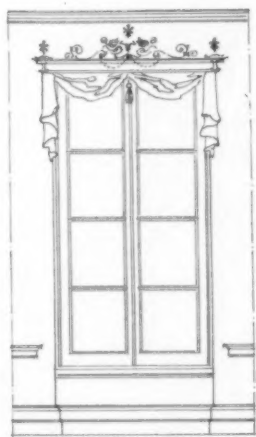
ning. Unfortunately, "plasterwork" suggests immediately the coarse, heavy cornices and centerpieces of the Brownstone Age; "Stucco" suggests cheap, poor, sham construction. But it need not mean anything of the sort. The Greeks and Romans had the highest respect for the hard, white coating. The great Doric temples of Paestum and Agrigentum, the Ionic Temple at Bassae—all were of cut stone covered with plaster or stucco. The finish was so fine and hard that in Roman times slabs were cut from the walls and used as table-tops, and even as mirrors! Vitruvius describes it as often more beautiful and more durable than marble; but, as far as I know, where marble was used as the building material it was not covered with plaster. The temples mentioned above were made of a rougher stone.

I do not know why plaster should not be more used to-day. There is no lack of skilled Italian workmen of the highest order. It is not expensive; compared to wood-carving, for instance, far less expensive; for one mould can make many ornaments. Adam's decorations were cast in metal moulds. His predecessors, under Wren and Grinling Gibbons or their followers, had modeled directly in the soft lime-plaster on the ceiling (they seldom used it on the wall), but Adam introduced the modern way of casting. Gelatine moulds are used now. A full-sized model is made in clay of each type of ornament; the architect or decorator criticises the model, which is altered until satisfactory. Then the clay is coated with shellac and grease, the soft gelatine poured around it, which, when it dries, is lifted away from the clay and is used again and again as a mould for the plaster.

The plaster casting is not always solid; unless very small, it is merely a thin crust of plaster of Paris reinforced with burlaps, following the outline of the mould and fastened in place on wall



The problem of the series—a window, door and fireplace, the major problems of any room

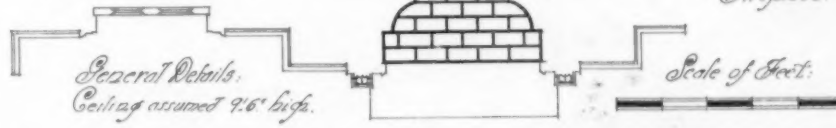
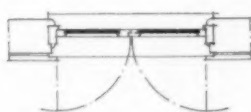


Elevation of Window



Section through Window and Elevation of Door and Fireplace

Section of Fireplace



General Details. Ceiling assumed 9.5' high.

Scale of Feet

Working details of the room to scale—much of the ornament omitted to simplify the drawing; all ornament and mouldings to be very fine and delicate in scale

or ceiling with galvanized or copper wire. When very large it is sometimes braced with pieces of wood, as in the case of large cornices or the ceiling ribs of a dome.

Such a construction was abhorrent to Adam and seemed, I suppose, unsuited to the material. He preferred the *bas-relief* of the Appian Tombs or of Pompeii, and he heeded Vitruvius, (Continued on page 205)



An intimate spot not thirty feet square is the flower garden. Rhododendrons, box and arborvitae form the enclosure, and around the walls, *sedum spectabilis*, with dwarf nasturtiums between; then come tall, blue iris interspersed with golden marguerites; a third tier is composed of daffodils, lavender and white phlox; and to complete the formal effect, a Rose of Sharon is planted at each corner

Landscape Gardening on a Small Place

BEING THE STORY OF A PATH ON A BROOKLINE PROPERTY—THE ROUND GARDEN IN THE SQUARE PLOT—GROWING A FRAME FOR A VIEW—THE CREATION OF INTEREST IN A GARDEN—PRAY, HUBBARD & WHITE, LANDSCAPE ARCHITECTS

ELSA REHMANN



THIS is the story of a path, because on its location depended the development of the whole property—a path on a small suburban lot, connecting the front door with the street.

Such a walk is a necessity in daily use. It must be practical, dry under foot and as direct as possible. These reasons should not deprive it of interest and make it commonplace. The very fact that it is in daily use is all the more reason why it should have beauty inwrought in its making. While

considerations of beauty and the means of arriving at and departing from a front door are by no means the same, yet it will be found that they are not antagonistic. A solution which offers convenience can at the same time be beautiful.

The house had to be set high above the street level. To accommodate its shape to the long, narrow lot, it was built wide and shallow. For these reasons the necessity of facing the house upon an unpaved road which is only a right of way, and the impracticability of placing the entrance to the grounds on it, forced a less conventional solution than is usually possible. The direct communication with the main thoroughfare only a block away through a narrow street on the south side of the house, made it of practical importance to locate the entrance on this street. Still the problem remained of how to get from the street entrance to the front door in an interesting but direct manner.

The grounds are walled in along the whole southern side to avoid steep, grass terraces. This wall is surmounted by a white picket fence and broken in the middle by the entrance steps. One step up out of the street we stand on a small space in front of seven steps, which are closed in on both sides by the retaining walls of lawn and flower garden. Once up these steps we come



The view across the "ante-room," showing the fence that emphasizes the privacy of the flower garden. By a succession of steps is the visitor introduced to the grounds, passing from the street by feathery *Retinispora pisifera* and massed rhododendrons and cedars to the path at the top of the terrace which fronts the house

to a little vestibule or ante-room, if we may borrow the architect's terms. It is a little breathing space, a place pleasant to linger in. Masses of rhododendrons, with a background of cedars, face us. On the left the white gate opens into a short cut through the flower garden to the living-room; on the right, tall, feathery *Retinispora pisifera* specimens on either side indicate that the walk continues in that direction toward the front door. After we pass the *retinispora* sentinels we make a turn, and another five steps brings us up to the house level. This turn and the shrubbery around it hide one flight of steps from the other, and the level piece of ground between breaks into two short flights what might have been one long, tiresome as well as tiring flight of steps. Once on the house level, the walk runs along the whole front of the house.

Not only is this arrangement of the walk direct and attractive in itself, but it makes possible a considerable space of unbroken lawn between the walk and the east fence.

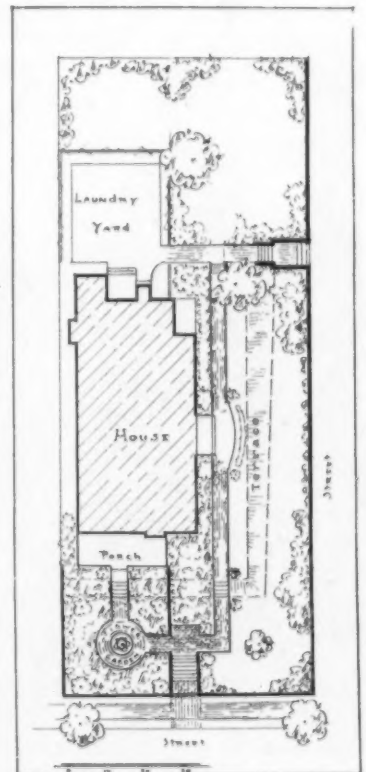
The solution seems so simple and appropriate that all the care, labor and study put into the planning for grading, for construction of wall work and steps is entirely lost from mind. It should be so. All study should be hidden behind seemingly unstudied naturalness. Such fundamentals, to which the planting—so important in itself—is added as a decorative feature, display the ingenuity of the landscape architect and show the practicability of employing him.

The path is laid in brick. Brick pavements have a permanent decorative quality and a warm color of special value in the winter effectiveness of a garden.

At the end of the path stands a maple tree—a piece of rare good luck to have it in just that position. Such a beautifully shaped old tree has a way of imparting some of its own dignity and distinction to the house and grounds near it. Its depth of shadow lends an indescribable charm, beside providing a strong contrast of shade to the sunny lawn.

The house is well orientated in relation to the various parts of the grounds. It faces east upon the lawn. On the south side is the living-porch facing the garden; on the north side, the kitchen, and cellar doors open on a lattice-screened and brick-paved enclosure used both as laundry yard and service court. A path, which joins at right angles to the path along the front of the house, connects this court with the roadway.

This service path is bordered by heavy and continuous masses



On the plan the relation of the path to the rest of the property is clearly shown

of shrubbery composed of groups of *forsythia*, lilacs and rhododendrons. The rhododendrons find an appropriate place in the shade of the maple tree. Next to them are the lilacs, their heavy, plain leaves harmonizing exceptionally well in color and texture with the rhododendron foliage, which is difficult to combine with deciduous shrubs. *Forsythia* foliage, as well as that of lilacs, retains its good, deep green late into the fall. Together they give three monthly periods of bloom, in April, May and June. The arching branches of the *forsythia* mould this shrubbery with the climbing Lady Gay roses on the east fence. In front of the roses are peonies. These two give two long periods of bloom. Peonies need isolation from other flowers for complete development, and are as valuable as a shrub in foliage effectiveness.

Next to the roses are poplars for height accent; then come groups of lilacs, *Deutzia lemoirei* and *Spiraea van Houttei*. Ranged along the



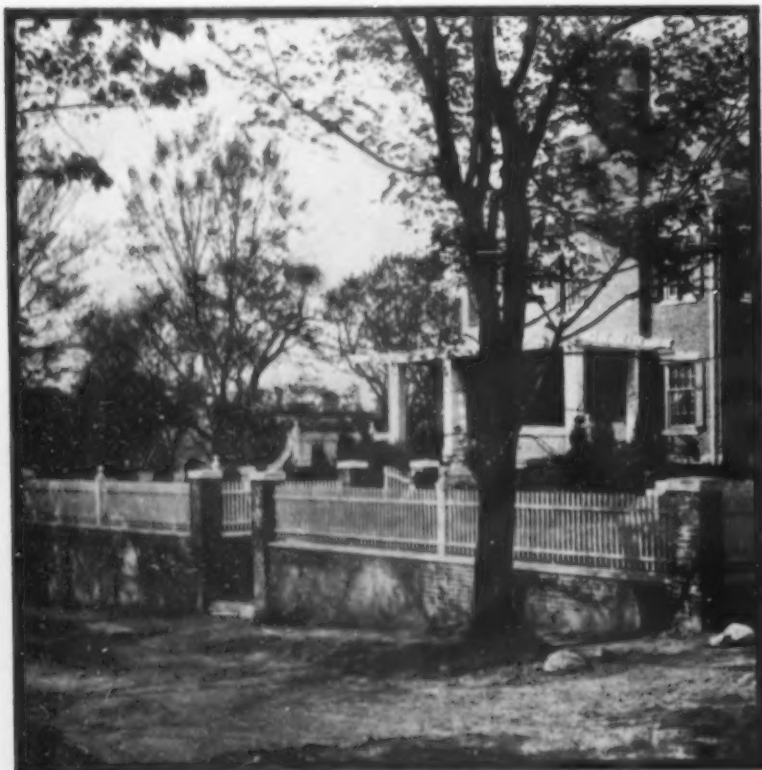
It is remarkable how large a small lawn will look if the planting is confined, as here, to the boundaries

fence, these groups balance the shrubs on the other side of the roses in effect of height and in succession of spring bloom.

This unbroken but irregular border hides the house from the street except where glimpses of doorway or arched window are seen through the branches. It gives a delightful informality to the grounds which characterizes so many of the older and larger Brookline places. Together with the shrubbery along the house it makes a complete frame for the lawn.

Andromeda floribunda was planted along the house under the windows. It is one of the most pleasing of the dwarf evergreen shrubs. The buds of its white flowers have a curious way of appearing all winter long as if they were just ready to burst into bloom, which helps to enliven the garden during the winter months. What happened to these plants I do not know, but the unfortunate placing of box bushes spoils the continuity of the border. The

(Continued on page 190)



The brick wall surmounted by the white picket fence is both practical and decorative, and adjusts the nice balance between garden privacy and the man outside



In order that the front of the house be not shut in and the lawn be given a free, open feeling, climbing roses are planted along part of the fence



Chicks a few hours after hatching ready for their first meal

Hatching Chicks With A Wooden Hen

THE SIMPLE PRINCIPLES OF INCUBATION—
HOW TO HANDLE THE MACHINE—THE KINDS
OF EGGS—CARE OF THE YOUNG BROOD

E. L. FARRINGTON

IF it were not for incubators, someone has said, we should be paying fifty cents apiece for eggs, instead of fifty cents a dozen. It is a fact, at any rate, that the tremendous expansion of the poultry industry which the past few years has seen has been made possible in large measure by the perfection of the modern hatching machine. Not that these machines are really perfect; far from it. Yet the best of them are remarkably efficient, even in the hands of amateurs. And it does not pay to buy a second-rate incubator at any price. Price is not always the gauge, however. There are some very good machines at a moderate price. In most States it is possible to get reliable advice on the subject by applying to the State experiment station, where tests of the different machines are constantly being made.

One may buy an incubator with a capacity of but fifty eggs, or one which will care for many thousands. Much depends upon the number of eggs available at one time. If it is possible for the amateur to get out all of his chickens in one lot, he will find it a great advantage, for much extra work is involved when it is necessary to care for several broods of chicks of different ages. And yet that may not be possible with a small flock, for eggs which are to be incubated should not be kept over ten days. If his flock is a large one, even the amateur may be justified in installing a large, sectional machine, possibly one heated by a small coal stove. In most localities he can make it pay for itself by hatching eggs for other people or by selling day-old chicks.

With a large machine, an incubator house or cellar will be needed, but the average amateur will purchase a machine which can be accommodated in his house cellar. Such a cellar usually serves very well if it is properly ventilated and the air not too dry. It is very important to have an abundance of pure air, and many poultry keepers substitute a frame covered with muslin for one of the windows.

One point not to be overlooked has to do with insurance. If something goes wrong and your house burns down you will get no insurance unless a clause covering the use of an incubator has been written into your policy. It is true that the danger is very slight, and yet it is advisable to take no chances, especially as the cost is negligible. With some types the insurance charge is ten cents on each one hundred dollars; with others, twenty-five cents. The charge is always less for machines which bear the label of the Underwriters' Laboratories, Inc., showing that they have been passed by the experts of the insurance companies. Sometimes a flat rate of fifty cents a year is made, if certain conditions

are complied with and the insurance offices are satisfied.

It is not wise to stand the incubator close to a door which is often opened, or where sunlight will fall upon it. Sometimes close proximity to a stone wall will keep one end cooler than the other. Stand the machine perfectly level, or the heat will not be evenly distributed; and have it so placed that the thermometer may be read easily at any time. In order to maintain an even temperature from the first, the incubator should always be started several hours before the eggs are placed within it. The machine is not ready for use until the thermometer can be kept at exactly 103 degrees. It is true that the mercury will drop low in the tube immediately after the eggs are put into the machine, but, as the eggs become warmed it will return to 103, although perhaps not for half a day. This delay need not be a source of worry.

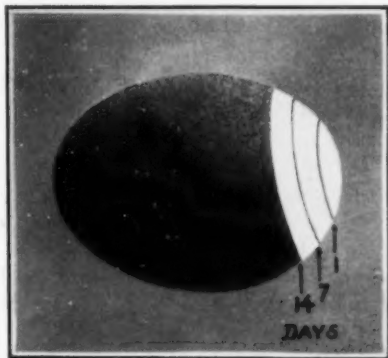
Many hatches have been lost because of imperfect thermometers. Curiously enough, too, when a thermometer goes wrong it is likely to be at a point between 100 and 105 degrees. It is only a wise precaution to have the instrument which is to be used first compared with the clinical thermometer of a physician.

The eggs must be considered, also. Eggs for hatching should be smooth, regular, of average size and strong of shell. It has been said that they should not be over ten days old, yet eggs which come from special hens or fancy stock may be set when two, or even three, weeks old, with an expectation of getting a satisfactory number of chicks. Do not put brown-shelled and white-shelled eggs in

the same machine, for, as a rule, the latter will hatch first. Fresh eggs usually hatch earlier than those that have been kept a long time, and when a high temperature is maintained, hatching begins quicker than if it is run low. All these factors tend to cause a little departure from the period of twenty-one days commonly given as the length of time required for hatching hens' eggs.

Some thermometers are made to touch the eggs, while others hang above them. The latter are preferable, for there may be something abnormal about the egg on which an instrument rests, resulting in a misleading reading. With a hanging thermometer the usual plan is to keep it at exactly 103 throughout the hatch, except that it may be allowed to run up to 104 or 105 while the chicks are breaking out of their prisons. When the contact type of thermometer is in use it is better to have the mercury register 101 degrees the first week, 102 the second and 103 the third.

After the eggs are in their chamber they need not be touched for three days, but the lamp must be filled and trimmed daily. It is well to have a regular hour for this work, in order to avoid any possibility of overlooking it. Practically the only danger which comes from the use of an incubator is the result of lamp neglect.



The air space in an egg should increase according to the scale shown here

The best way to trim the wick is to rub off the charred part with a match or a cloth. A new wick should be used for every hatch.

From the third day and until the eighteenth the eggs must be turned daily, and preferably twice—night and morning. If this is not done there is danger that the germ will come in contact with the shell, stick there and dry out. Turning does not mean that the position of the eggs must be directly reversed, but that it be changed somewhat. In general, they are rolled around in the tray with the hand. At the same time see that the eggs are so shifted about that they will have relatively different positions on the tray. Then, if there happens to be a variation of temperature in the egg chamber, all the eggs will develop alike.

While the eggs are out of the machine for turning they may also be cooled. It is probable that fair hatches can be obtained without cooling the eggs at all, but it seems to be a pretty well-established fact that stronger and better chicks are obtained when cooling is practiced. If the methods followed by mother hen are to be considered any criterion, both cooling and turning are important. Cooling tends to offset lack of ventilation and over-much heat in the machine. If by any mischance the temperature in the incubator should run several degrees higher than it ought to run, the damage which otherwise might result may often be avoided by removing the eggs and cooling them for an unusually long time.

Under normal conditions, five minutes are enough to cool the eggs at first, but the length of time may be extended to three-quarters of an hour when the three weeks are nearly over. Two rules may be of some value: return the eggs as soon as they feel cool when touched to the cheek, and return them to the machine as soon as the mercury has dropped to the 85-degree mark. Although the eggs may be turned twice a day, once is long enough to cool them, except for the time required for the turning process. Probably it



For the amateur an incubator capable of holding seventy eggs will suffice. This type heated by an oil lamp is simple of construction and easily handled



Between the third and eighteenth days the eggs must be turned night and morning. Roll them about gently on the tray so that each will develop thoroughly



Test the eggs by placing them between the eye and a strong light. An infertile egg will appear clear, a dark spot, with radiating red veins, indicates life

is needless to say that the door of the incubator should be kept closed while the eggs are being cooled.

There is no occasion for alarm if the operator happens to forget the eggs and leave them out of the machine for an hour or more, especially during the latter part of the hatch. There is lots of life in a partly formed chick, and the egg may become thoroughly cold without doing serious harm, if a little extra heat is given afterwards.

When the eighteenth day arrives, the eggs should be cooled and turned for the last time. Under normal conditions, with brown eggs in the machine, all the chickens should be out of their shells by the end of the twenty-first day. Chicks in white eggshells may emerge eighteen hours or more earlier.

As a rule, the machine will do its best work if the door of the egg chamber is not opened after the eggs have been pipped until all the chickens are out of their shells. There may be a great temptation to help some of the struggling youngsters; in fact, the novice is pretty certain to feel that he is not doing his duty unless he aids the more backward chicks in escaping from their cells. Experience shows, however, that this is a mistake. Unless a chicken is strong enough to get out of its shell unassisted it is not worth raising, and if the machine has been run properly, with an abundance of moisture, the chicks will fairly pop out of their shells, breaking in a ring around the middle. This is the desirable procedure; in point of fact, many hatches drag through several hours, often a whole day and longer.

When ducklings are hatching it may be worth while giving them a certain amount of assistance. The shells are very tough, and ducklings which I have helped into the world have seemed just as strong and lively after a few days as those which required no assistance. With chickens, though, it is better to keep the door closed until the hatch is over, although if the air inside seems very dry and the ventilation poor, the door may be kept open a crack by the

insertion of a match, which will at all times afford sufficient air.

If the incubator stands in a light spot, it is well to cover the glass with a dark cloth at hatching time. Otherwise the youngsters will crowd to the front and fall down into the nursery before they are fully dry. The temperature in the nursery may be just right for a chicken that is perfectly dry and moving around, but uncomfortably cool for a wet chick that has scarcely found its feet.

Twenty-four hours is none too long to leave the chickens in the incubator after they are out of their shells, but many poultry keepers open the door a little without changing the lamp, by which means the little fellows are gradually prepared for the shift from incubator to brooder. It is a good plan, in any case, to take out the egg tray with its accumulation of shells, leaving the chicks in the nursery. If there is no nursery, the shells may be removed and the tray left.

With a successful hatch, almost every egg in the machine on the eighteenth day should produce a chicken. There will be fewer eggs on that date, however, than when the incubator was filled, for some, and perhaps many, of them will have been tested out. This testing of the eggs is found by the amateur to be one of the most interesting features connected with hatching chickens with a wooden hen. It offers a peep into some of Nature's mysteries and helps the operator to realize the wonderful transition going on quietly within each little shell. If the eggs have white shells the first test may be made on the fifth day, but with brown-shelled eggs it is better to wait until the seventh day, as they are less transparent.

Testing is done by placing eggs between the eye and a strong light and excluding all other light. The kind of tester which comes with the average incubator is an elongated tube large enough at one end to cover both eyes and narrowing at the other end to an opening slightly

smaller than an egg. The eggs are placed one by one in front of the tube and close to a fairly strong light. An infertile egg will appear perfectly clear, like any fresh egg. If the egg contains a living chick there will be a small, dark spot and little red

blood vessels or veins radiating from it. A black spot without the veins indicates that the egg was fertile, but that the germ has died. An egg in which the contents are loose and mixed together is addled. An egg like the latter is more likely to be found when hatching duck eggs than when eggs from hens are being incubated.

It is customary to make a second test a week after the first, as there may be more eggs with dead germs in them. All the clear eggs tested out on the fifth or seventh day may be saved and boiled for the young chickens. They are often used by bakers and sometimes are sold in the public markets. Of course, they cannot be considered fresh, but neither can they be classed

as bad. An infertile egg never becomes really rotten.

The amateur sometimes finds it an excellent plan to set several hens at the time he starts his incubator. Then, when the infertile eggs have been tested out of the machine, they are replaced with those from under the hens, after the latter eggs have also been tested. In this manner it is possible to bring out a much larger number of chicks. And it may be said in passing that it always pays to test the eggs when hens are being depended upon, as well as when an incubator is in use. The hen doesn't mind, and the risk of having a bad egg broken in the nest is avoided. Also, if several hens are set at the same time, some of them can be liberated when the infertile eggs

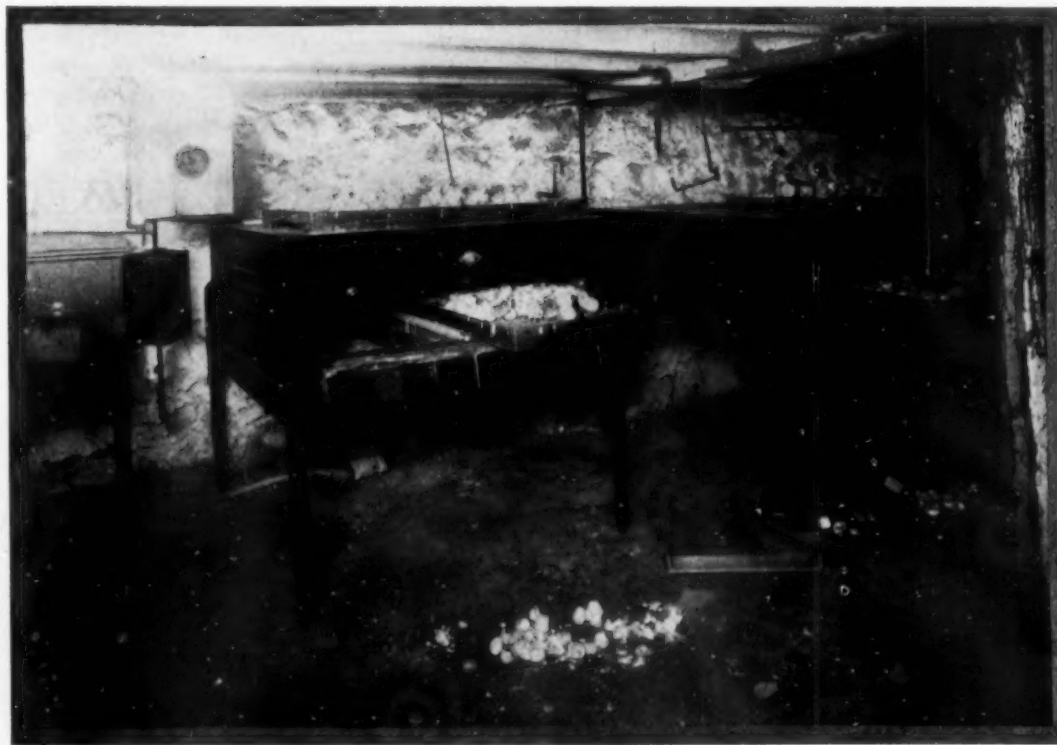
are tested out, as fewer birds will be required to cover the eggs that remain, unless, indeed, they are exceptionally fertile eggs.

When a considerable number of eggs is to be incubated a more

(Continued on page 197)



On a large place an incubator cellar will be found more practical, centering the work in one place and avoiding the possibility of a fire in the house



Care should be taken that the incubator be placed away from a stone wall and on a level, otherwise the heat will be unevenly distributed and the growth of the chicks retarded



Permanent coldframes made of cement are advisable for both the large place and the small

PERENNIAL USES FOR SASH—TRANSPLANTING SEEDLINGS—THE LOOKOUT FOR PESTS

D. R. EDSON

Photographs by R. S. Lemmon

THE first part of March may offer a breathing spell if you have your hotbeds made and your coldframes in shape. But before you sit down and fold your hands, check up all the things that have been mentioned in these articles during the last two months. See if you have made every possible preparation for the rush that is sure to come with the arrival of spring.

One thing, however, cannot be neglected even for a single day—the hotbed. After every snow the sash should be cleaned off unless, as seldom happens at this time of

windy, ventilation should be given. As the sash may be lifted at either end or at either side, air can always be let in in such a way that the wind will not blow directly through the opening, which might chill the plants enough to injure them, or, if the wind happened to be strong, tip a sash over and give you a lot of repairing to do.

The height to which the sash may be raised will depend upon the temperature, the wind and the condition of the plants for which you are caring. For this purpose make as many notched sticks about 18



Before transplanting seedlings, firm the earth gently about them with the fingers



Give the pot-bound plants a new lease on life—a larger pot affords more room for their roots

the year, exceedingly cold weather ensues, when it may be left on for a day or two as a protection against the cold. On bright days, unless they be very cold and

inches long as you have sash, which will hold the sash in any position desired. If you have left the mats on at night and a rain comes, be sure to hang them up where they can



Lift the seedlings out on a small slab of wood, which also serves as miniature trowel



Until the days grow warmer, care must be exercised in watering the cold frames

dry out thoroughly the next day. When pulled off and thrown in a heap they will probably be frozen stiff the next time you may want to use them.

first part of this month. So soon as the second or third true leaves begin to show they will be large enough to handle conveniently. If you intend to



So soon as the soil in the frames is ready to work, it should be made rich and mellow

Find the time some Saturday this month to get stakes and boards, and put up a coldframe to which you can transfer any sash you may need through the season in their present position. As the warmer weather comes you will have no further use for the sash which have been over the frames that were set out to lettuce, radishes, carrots and beets, or any in which hardy plants, such as cabbage, cauliflower, beets or lettuce, may be growing, if you have not put them in flats. Instead of simply putting the glass sash from these frames aside, you should have a frame ready where they may be used a second time over cucumbers, melons, beans and similar things. For this use, the glass sash may be bought a couple of weeks sooner. Make some frames the same size as the sash and cover them with plant-protecting cloth, which costs only about thirty cents for enough to cover each frame.

During March, about four weeks after the seeds of beets, cabbage, lettuce and cauliflower have been put in, the tender things such as tomatoes, eggplant and peppers, should be started. There is little danger of getting the temperature too high until they are well up! At night, 70 degrees will not be too much if you have a place where they can be kept as warm as that, and during the day, 10 or 15 degrees higher may be given without getting it too warm. In such a temperature, of course, the soil tends to dry out very rapidly, particularly in flats; and as the weather also is much brighter than it was a month ago, you will have to be careful to see that the soil never gets dried out. It may prove fatal to the sprouting seeds. And it is even more important than it was in the case of the early seeds to have a very light, fine soil to plant them in; it can hardly be made too light and dusty.

Plants will be growing much more rapidly now than when they first came up, and care must be exercised not to let the little seedlings wait too long before transplanting. All those sown last month should be transplanted the



The deeper you dig the garden, the better; but whether you dig with a wheel-hoe or with a spade, digging is no slouch job

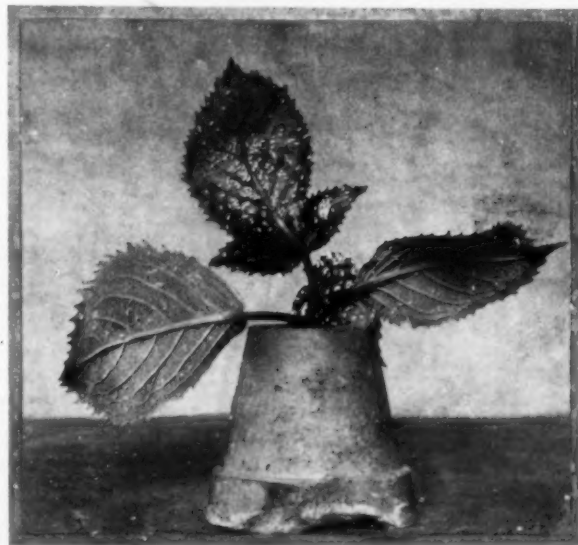
which is clayey enough to have a tendency to be sticky; add some sand, and, if necessary, some leaf mould and chip dirt, but usually these will not be required, especially for the early vegetables. It is always best to do the transplanting out of the direct sunshine, and if it must be done in the open frame, it is advisable not to do it in the middle of the day should it happen to be very sunny. If the soil is at all dry, give the flats a thorough watering the day before you transplant. Immediately after transplanting give them a watering with a fine spray (not applying very much, however, if the soil was watered the day before), and keep them in some place out of the sun or covered over with

newspapers during the warmer hours for the few days following. Should conditions of soil and temperature be right, the roots will take hold and establish themselves very quickly in their new surroundings.

In transplanting, the plants should be put about two inches apart each way. They can be put a little closer and still make very good plants, but nothing is to be gained by crowding them. A dozen good plants will yield more, and yield it sooner, than twenty-five poor ones.

What has been said about giving fresh air and plenty of it to the crops planted in the frames applies equally well to the transplanted seedlings. Those that begin to run up tall and spindling, or the leaves of which look light-colored usually need air. If

(Continued on page 187)



Keep an eye open for aphids; a few days' neglect and they will be beyond control. Use tobacco dust or a strong nicotine spray



Though a few trees had to be destroyed and some transplanted, an old-fashioned setting, perfect for such a house, was created

The Residence of Mrs. Allen J. Smith, Radnor, Pa.

FOR the establishment of her residence the owner selected a property among the rolling hills of Radnor, and chose the orchard of an old farm for the setting of the house. While this cost the destruction of a few trees and the transplanting of others, the spoliation was repaid when the house was finished, for, surrounded by foliage, it immediately took on a comfortable, old-fashioned look.

Furthermore, near the orchard ran the entrance road to the old farm house, lined on each side with old trees whose leaves and branches met far overhead. The road continued past the boundary of the present property, but, by removing one tree, this road was diverted to serve the present



Leading off the dining-room, which is comfortably formal, is a sunny breakfast porch, curtained and glazed in winter



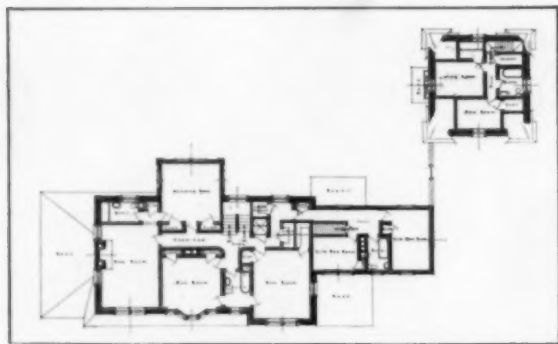
The long-paneled vestibule hall opens vistas on the living-room with its sun porch beyond



With a pent roof above and trellises on either side, flanked by the little casements, the entrance has an air at once strikingly individual and invitingly formal

house and garage. Its one-time direction is now gone, but, with only a new roadbed and top coating, the present approach has all the appearance of an ancient road beneath the old trees.

The problem of compromising the various demands of orientation, view and practicality in designing the house was reduced to a mini-



A generous dressing-room completing the mistress' suite is one of the developments of the second floor plan

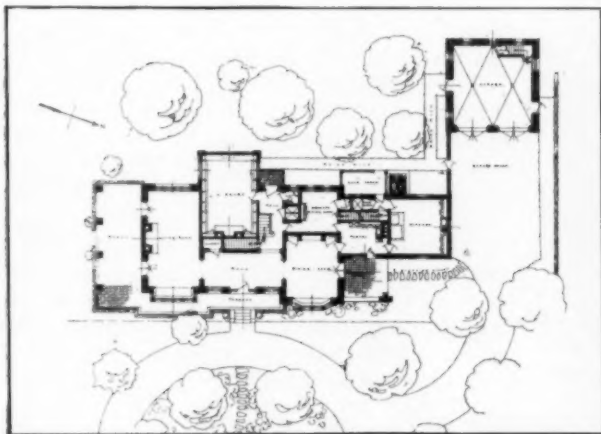
Walter T. Karcher & Livingston Smith, architects

mum, for in this case it largely solved itself. The high road runs practically north and south, so that the length of the house naturally parallels the road, while the living-room porch, which faces the view, has a full southern exposure. With no straining, the dining - room and breakfast porch could be placed in the right location to receive the morning sun, and the living-room and the living-porch to receive the sun all day long. It is rarely that all these demands are met.

The long, paneled vestibule hall opens vistas on the living-room with its sun porch beyond; on the dining-room with its cozy little breakfast porch; and in turn on the stair hall and rear entrance. It makes a com-



In the library the mellow mahogany gives a warm background for the books. Indirect lighting is used for the general illumination



The living-room, which extends the entire width of the house, and the porch receive the sun all day, a demand well met

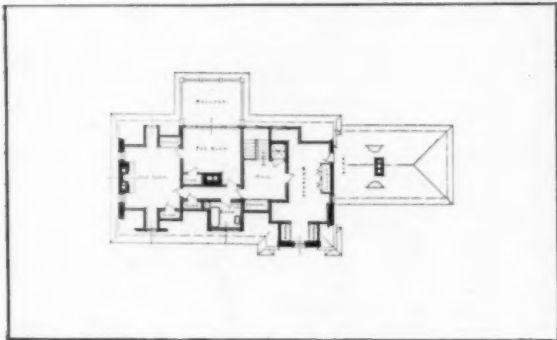


The wall tying up the house to the garage gives the group a one-unit appearance and lends greater privacy to the rear of the house

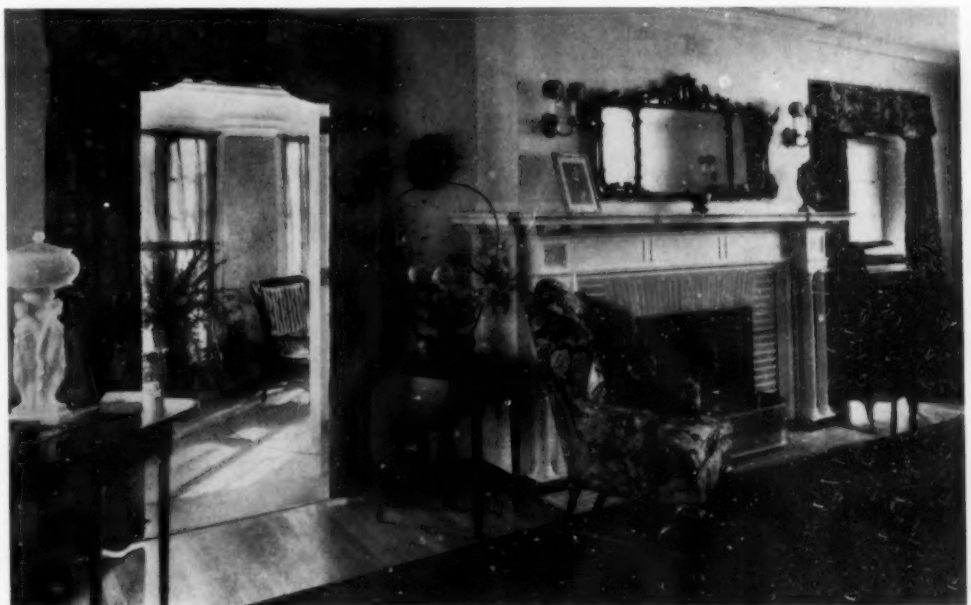
fortable introduction or farewell to the house.

The living-room takes the full width of the house, and beneath it is the billiard room, reached by a stair from the hall.

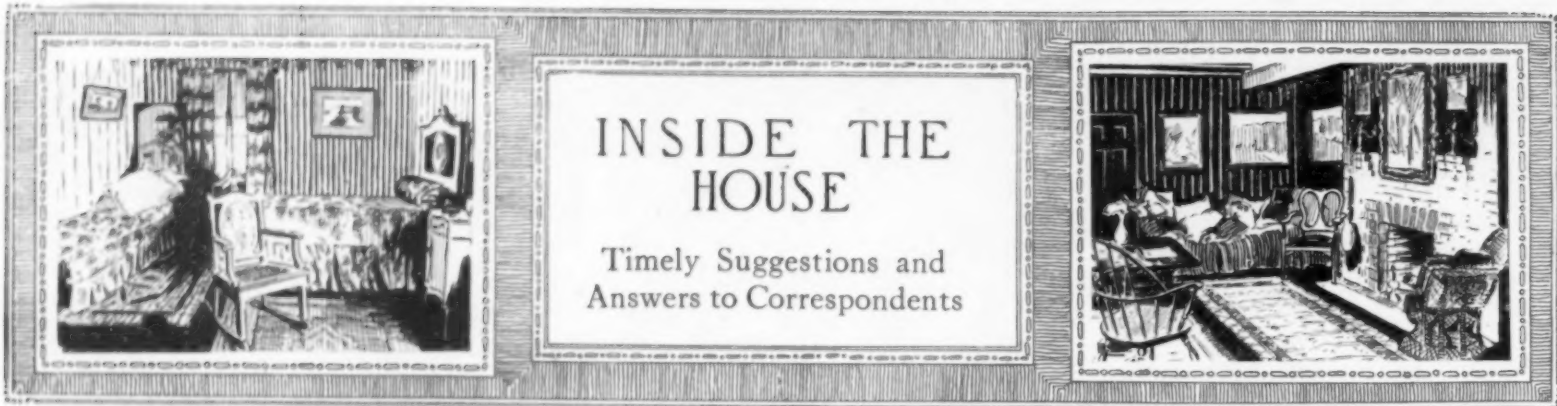
The den or library is purposely sequestered. One never "stumbles into it." The mellow mahogany red gives a warm background for the books, and the atmosphere is inviting.



There are plenty of closets on every floor, but the big store-room in the attic is an achievement



Consistent decorations in the living-room create a distinct atmosphere, at once rich and restrained, the heavy hangings relieving the whiteness of the woodwork and the walls



A Practical Flower Box

THE reason why many people fail with their flowers inside the house, and even in window boxes, is because the plants are not set in a receptacle that permits sufficient watering and proper drainage. Either they overwater and the soil becomes soggy, which leads to rotting of the roots, loss of plant food and consequent poor health for the plants; or else they underwater and the plants suffer from the lack of moisture. The most practical plan is to feed the water into the bottom of the box so that the roots can absorb as much moisture as they need and not be floated in a soggy soil, for roots are like the horse that you lead to the trough—they'll drink their fill and that's all.

There is being shown a box that is nothing more than a greenhouse on a small scale. It has a patented bottom which gives the plants perfect drainage, and at the same time does not leak. The water receptacle runs full length of the box and gives the roots a plentiful supply of clean water. It is made of galvanized steel, enamel dark green on outside, and will last for many years.

It can be set on the window-sill inside or hung from the window on outside, or fastened to rail on any part of the piazza. It gives the perfect drainage so necessary for the growing of plants, and at the same time will not leak or drip and damage the woodwork.

The Care of Curtains

WITH spring cleaning comes the necessity of caring for the curtains and draperies that have done service through the winter months and must be made ready to store away until they are needed again in the fall. All draperies should be thoroughly cleaned before being put away for the summer, for dirt and dust will rot even the strongest material if allowed to remain in it for any length of time. There are several easy ways to clean the most delicate curtains, but the most satisfactory method of washing white ones is to place them in a bag made of cheese cloth or mosquito netting. Let them soak in warm, "sudsy" water made with a pure, white soap for about thirty minutes; apply more soap and rub the

bag and its contents gently through the hands. Rinse in clear, warm water and again in cold water to which a little bluing has been added. Squeeze the water out with your hands; do not wring. Lacking a curtain frame, lay a clean sheet on the floor and stretch the curtains on it, pinning them at frequent intervals along the edge. Take care to pull the lace edges, if they have them, out smooth, and pin them securely to the sheet. When the curtains are dry they will look like new.

Heavy draperies should be hung on the line on a windy day and beaten as you would a carpet, but not so hard. When the loose dust is out they can be laid on the grass and the spots removed by scrubbing them with gasoline to which a small quantity of soap powder has been added. If they are badly soiled, wash them in gasoline and soap powder, rinse in clean gasoline and dry in the open air. Sprinkle powdered camphor balls between the folds of heavy draperies when packing them away for the summer, and wrap them in newspaper to avoid any danger of moths. It is said that blotting paper wet with oil of lavender is an excellent preventive of moths. If this is used it will impart a delightful perfume that will prove very pleasing when the curtains are called into service once more.

A Revival of Sconces

THERE are many occasions when the country dweller who cannot avail herself of the conveniences of gas or electric lighting wishes for suitable wall brackets that are at once decorative, simple and serviceable. For such needs come reproductions of Colonial tin sconces, shown in illustration here.

They consist of an oblong back that acts as a reflector and shields from the slight draught; a semi-circular base with a socket for the candle; and above, a flange bent over at a slight angle to reflect the light further. All the edges are turned to a seam over heavy wire, giving a substantial, rounded finish. There is a hole in the back by which they may be hung on the wall; the base is sufficiently solid to permit their standing upright on table or mantel.

Though painted in various colors, the most attractive is in black, with edges of green or dull orange, with the decoration on the top flange, employing the same tones. The design of these little decorations are supposed to repeat the design of the chintz used in hanging and covers in the room. Thus, one charming type is decorated with a green vase filled with vari-colored flowers, and, atilt on the edge, two yellow birds. Another is painted white and striped with green edges, and at the top a lattice basket overflowing with old-fashioned flowers. This is particularly appropriate for a Colonial bedroom. Still another striking example has a white background, black-striped edges, and on top a large bird swinging on a circular perch. It is from the futurist designs of the new chintzes that many of these sconce decorations are taken.

It must not be supposed that such sconces have only a utilitarian value. In a small hall they make by night an attractive temporary light, and by day are invariably decorative. Again, a pretty group may be made by placing on either side of a black-framed mirror striped with colors, one of these sconces with the decorations repeating the colors on the frame of the mirror.

Mostly Vanity

EACH season brings forth something new in the way of furnishings that are intended to add solely to the joy and



Decorated tin sconces, reproductions of a Colonial pattern prove both serviceable and ornamental

convenience of capricious woman, and this year comes a vanity box wonderful in construction and decorative in design. The idea of the permanent vanity box—as compared with those one can carry about—is very old. The ladies of Louis XVI's time possessed intricate affairs made up from little block-printed chintzes, and from these the inspiration for the modern reproductions has been caught. The older type, however, was not always so out-and-out in its purpose; its exterior gave little promise of the contents. It looked like a calf-bound volume, delicately tooled with gold, about twelve inches long, ten wide and three high, a most learned and forbidding tome on the whole. It was placed on the library table, but *les belle dames* knew what lay hid within, and, unsuspected, they could prink and powder.

Nowadays we are more obvious, and the vanity boxes shown in illustration look their part. They consist of three compartments designed to hold toilet necessities; a little mirror can be raised up, two candles providing sufficient light for milady's face. Quaint and simple as are the exteriors of the boxes, their exterior decoration may be made as elaborate as one wishes. One has a dainty Peroylise design; another is along a Chinese pattern on black lacquer. The colors are rich and warm, and, whether the boxes, closed or open, they give it great decorative value.

These cases may be placed in an entrance hall of the country house or in the room where ladies place their wraps when one is not using the bedroom for that purpose; moreover, a hostess, in providing toilet material in this manner for her guests, precludes the necessity of their using hers. In a country club they would prove of excellent service, for they can be of as much use as they are beautiful.

A Tabby-Cat Chair

THE past few years have seen a decided and most certainly welcome improvement in the form of furniture for children. Just as at one time children had to content themselves with sitting in the chairs of their elders, so another generation relieved the inconvenience of these little tots by making diminutive reproductions

of their grownups' furniture. In recent years, however, designers have been even more thoughtful for the comfort and interests of children, finding that just as a middle-aged man prefers a wing chair, so does a child take naturally to a chair that was created especially for her age and size.

Among the many interesting pieces of furniture for children being shown in the shops is a black tabby-cat chair, reproduced here in illustration. Quite apart



For the nursery, or home school room, a tabby-cat chair might be found attractive

from its quaint attractiveness is its practicability. It sits solidly on the floor and cannot easily be rolled over because of its broad bases, or knocked over because of its well-balanced weight. The long tails of the cats curl up to form a brace for the comfortable back. The seat and back slats are painted white. As an adjunct to the child's room, and especially to the home schoolroom, the value of this chair will be appreciated both by children and parent.

Madagascar Cloth

WHEN the bungalow, porch or den needs a touch of color do not forget the Madagascar curtain material, which comes in such vivid stripes of orange and buff, magenta and buff, in five-inch stripes, separated by fine lines of green, purple or black. The material is woven from dried Madagascar grass, which takes and keeps the brilliant colorings, and also furnishes a natural fringe as a finish. A pillow or two covered with this material, a couch cover, a table cover or curtains are guaranteed to cheer up the dreariest of rooms or the dreariest of days. The plain Madagascar cloth—buff—has the same light, springy effect that willow furniture possesses, and is, besides, a good "dirt color" for any use where brilliant

stripes are not desired. Two curtains sewed together will make a very acceptable summer couch cover.

The Unusual in Table Linens

MORE than ever are hostesses on the search for new things that will make their tables attractive, and the shops are trying to appease this desire not only with new articles and materials, but with striking adaptations and combinations. One can tire of fine damask however costly it is, and at the present time it would seem to be used less and less. For the dinner table, a fine damask cloth is still unsurpassed, but for breakfast, luncheon, tea, supper and receptions less usual and conventional covers are in vogue.

Small squares of Russian crash with simple peasant patterns and monograms in blue or green or yellow to match the breakfast service are being used. If there are but two persons at the table, a runner may be used made of Italian linen edged on either end with heavy crochet lace of conventional design, the side edges being done in blanket stitch with the hem turned over on the right side. This makes a serviceable and unusual cover. Many old Italian covers are characterized by this blanket stitch hem. If the crochet lace is of Italian design, distinct style is given the cloth. With such a cover use for center-piece a bowl or vase of Italian pottery.

Large supper cloths can be made of this same Italian linen. Here again the blanket stitch is used on the edge, with the stitches grouped in threes. At each corner can be inserted an Italian reticella square, and around it a simple Italian design. Always keep the stitches consistently Italian. At the corners fasten a long tassel of heavy linen thread. With this cloth use oblong napkins half the width of the ordinary napkin. They are unusual and quite as serviceable as the ordinary accustomed shape, being large enough to protect the lap and not too large to prove in the road. They can be decorated by putting a small reticella square at one end,

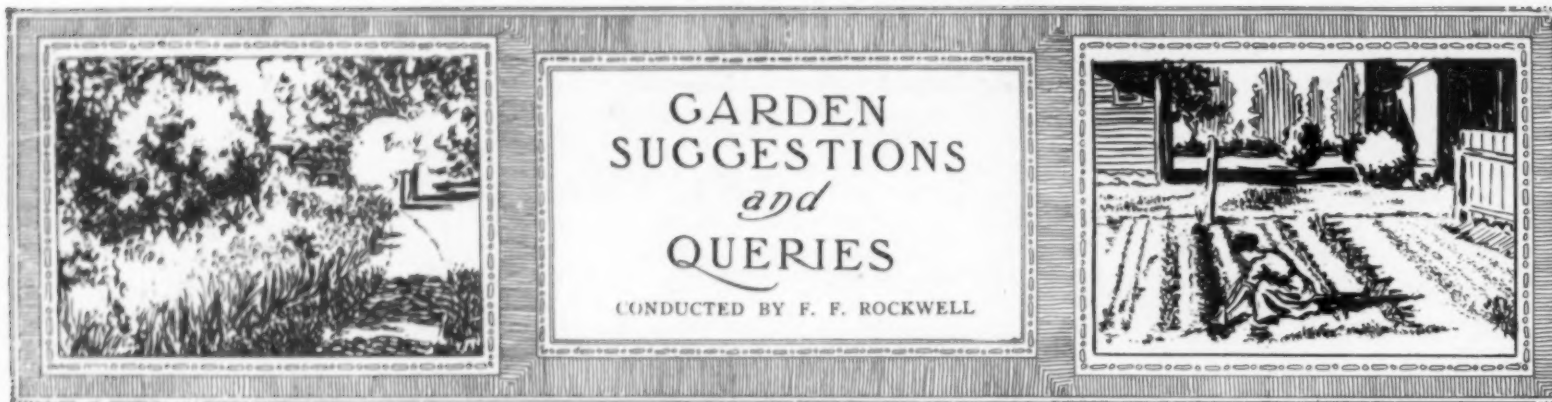
(Continued on page 210)



Closed, the modern vanity box is unpretentious and bears no indication of its purpose



Opened, there are displayed mirror and toilet necessities sufficient for a momentary prinking up



GARDEN
SUGGESTIONS
and
QUERIES

CONDUCTED BY F. F. ROCKWELL

PUT a red mark around March 1 on your calendar to remind you that you have but a month—four short weeks—left in which to get everything ready for the “spring opening” of April. When the snow drives and a northwest wind makes you turn up your coat collar and hasten to the shelter of the house, it may seem that spring is a long way off; but this is only winter’s final presumptuous bluff, and maybe by afternoon, out on the sunny side of the barn the warm sunshine will trickle down the back of your neck until your coat peels off.

There may be some things left that must be done before the sap starts. Look up the suggestions given in these pages last month. If you have not already attended to this work on your own place, do it now! This will be the last chance.

Set Out Small Fruits this Spring

Unless your place is thoroughly well stocked with the various small fruits, plan now for what you will want to set out this spring. These will take up comparatively little room, and none of the garden’s products are looked forward to and enjoyed more than June’s strawberries and summer’s blackcaps and raspberries and fall’s sugary grapes. Moreover, any surplus of any of the small fruits need never be wasted. Whoever heard of too much raspberry jam or too many currant dumplings in winter? Corners, wall, house-sides, etc., may be taken advantage of for growing the small fruits if your garden space is limited. Go over your garden carefully and mark down on the garden plan you made last January just how much space you will want to devote to small fruits. Then indicate on the sketch the number of each of the various fruits—

raspberries, blackberries, dewberries, currants, grapes, strawberries and dwarf fruits, apples, pears, etc., you plan to set out. If you find you cannot get them all this year, plan for them just the same. Then get what you can, maybe one or two or a half-dozen, as the case may be, of a kind, and leave room to put in the rest next year or the year after. Five dollars or ten dollars a year judiciously laid out for two or three consecutive years will result in a fruit garden capable of supplying the average family with a generous supply. Do not allow yourself to be tempted into buying altogether wonderful new varieties of the small fruits. Good new kinds there are. But it is always safest to select only, or mostly, kinds which receive the recommendation of more than one seedsman, and which have been out at least two or three years. The best varieties of the new fall-fruited strawberries are practical and very good, but you will probably be disappointed in the yield unless you take the precaution of removing the first crop of blossoms, which isn’t such a big task on a few dozen or hundred plants. The new St. Regis “Ever-bearing” raspberry differs distinctly from the older sorts and ripens fruit in the fall on the new canes. Ranere is a sort very similar to, if not identical with, St. Regis. Among the newer strawberries, Early Ozark and Fendall are very fine early and late sorts, respectively. Among the grapes, beside the well-known standard sorts, such as Concord and Delaware, Lindley, an ex-

tra large, sweet, red, and Pocklington, a delicious, juicy golden, will undoubtedly claim a place for themselves as they become better known. All the small fruits will do well in average garden soil, provided there is good drainage. As a rule, it will pay best to order first sized plants of the small fruits, as the difference in price does not amount to a great deal, and results are quicker.

Work in the Greenhouse

This month and next there are plenty of activities in the greenhouse to occupy fully all the indoor time enforced by inclement weather. If any Easter Lilies are being forced they should receive special attention from now on, being forced ahead with higher temperature and liquid manuring or held back if they seem too far ahead. The latter is seldom the case, however, and it is much better to have them a little too far advanced than lagging behind. If you have no roses growing in the greenhouse, get a few plants, dormant, from your seedsman, or out of the garden, if there are a few that you can spare, and give them a rich soil and a warm corner, with plenty of water after active growth begins. Plants of all kinds which flowered through the winter, and which have been resting for the past month or two, and plants which remain nearly dormant through the winter, such as palms, should be started into more active growth now. Re-pot where necessary, using for most things pots one or two sizes larger than those in which they have been growing. Some plants, such as palms and other fine-fibrous things, do better with a comparatively restricted root room. Azaleas should be started into



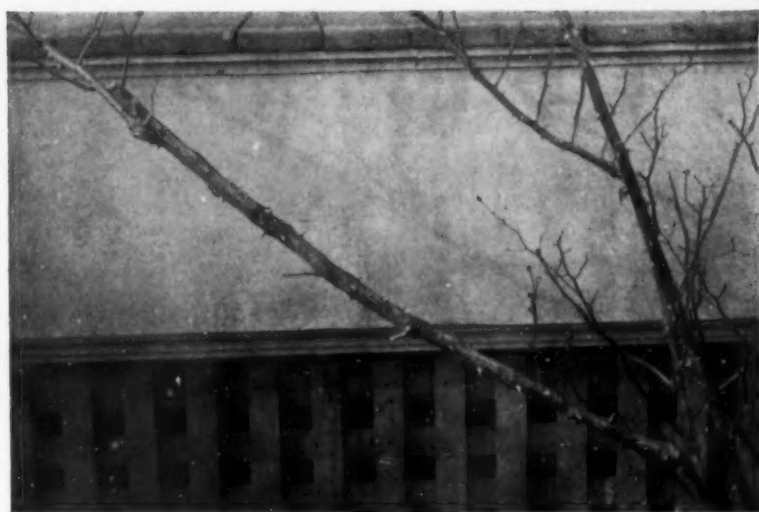
A strong-growing Manetti stock, cut ready for grafting



Too much old wood here; it should be cut back



Tying the graft rose in place on sturdy root stock



A Rambler that would bear a good deal of cutting back



Uncut it blooms scatteringly and at the expense of the individual blossoms

active growth from four to six weeks before Easter, depending on the varieties and the forcing conditions.

Bulbs of various kinds, including, besides those started last month, cyclamen and gloxinias, should go into pots now, and be kept in active growth until they may be put out in the frames. It is not too late yet to gain a good deal by starting your cannas, dahlias and tuberous begonias, in moss or leaf mold, and potting them up as soon as they are well started. The dahlias and cannas are not so particular about the kind of soil in which they are potted up, but for the others a very light, rich compost, containing plenty of rotted manure, fibrous material and a little sand, should be used. Cow manure, if thoroughly decomposed, is preferable to horse manure. Be careful to water only lightly until they become established.

The cuttings taken from plants in January and February will be ready for "potting off" during this month. A good, fibrous loam, with a little sand added if it is not friable enough, and enriched with bone flour, will answer for these. Don't let the plants stay in the rooting box or bed too long; the roots shouldn't be over half an inch at most, and half that is plenty. Put them well down in the pots and make them firm by tapping the bottom of the pot firmly against the bench before pressing the soil about them with the thumbs. Keep shaded from the sun and syringe daily for a few days after potting. The pots should be partly sunk in soil, ashes or moss, to keep them from drying out too rapidly, as they will invariably do on a bare bench bottom. Cuttings that may be wanted in some quantity, such as carnations for next fall's plants or coleus or sweet Alyssum or salvia, for borders or masses, may be put in flats instead of potted up, and will make strong, sturdy plants for setting out if they are properly looked after.

Keep a sharp lookout for insect troubles of all kinds. Sprinkle tobacco dust around the plants. Plenty of fresh air and regular watering will go far toward preventing

any trouble from such sources. The green aphid is the pest most likely to cause trouble. But even after it puts in an appearance it may be successfully got rid of by the use of nicotine in the form of a spray or fumigation. The "mealy bug" will succumb to alcohol and a small brush.

Spare the Knife and Spoil the Roses

The most important of all the jobs in the rose garden is the spring pruning. And it is one which many people neglect, either through ignorance or because they just can't bring themselves to be so hard-hearted as to do it the way it should be done. As a general rule, I would be willing to state that the more a rose is pruned, the better! But, like most general rules, this one has a number of exceptions, even among the "garden" roses, to which it is meant to apply. The hardy sweetbrier hybrids and the hardy climbing roses of the Rambler class need very little pruning, except to cut out old or broken wood, and perhaps shorten back a too-ambitious spray or a winter-killed tip here and there. The rugosas, which grow rank and throw up too many canes, need an occasional thinning out, but no pruning in the sense

in which it applies to the garden roses, the teas, hybrid-teas and hybrid perpetuals.

Before you begin the job of pruning your roses you should settle in your own mind what you want them to do for you: whether you want extra fine and large flowers, at the expense of number, and the natural, graceful appearance of the bushes; whether you would rather have a medium number of flowers of medium size, or whether you would prefer to have the bushes themselves in bloom as ornamental and full of flowers as possible, even if the individual flowers weren't quite so large. The more severely you prune, the larger and fewer flowers you will have. For ordinary purposes the second system is probably the most satisfactory. As soon as it is safe to remove the winter mulch in the spring, and the leaf-buds begin to swell, begin with the hybrid perpetuals, which are the hardiest sorts, and cut out all but a few of the strongest canes on each plant. These should be cut back to only a few buds or eyes on each if large flowers are wanted. For general garden culture they should be cut back a half to two-thirds of their length. The teas and hybrid teas and the weaker-growing varieties of the perpetuals should be pruned even more closely. The cut should always be made above an outside eye, so that the new sprout from it will grow outward, keeping the bush to an open form.

Spring Painting Hints

It is remarkable what a difference a can of paint can make in rendering the garden presentable, even when applied by an inexperienced person. For such a one here are a few hints: wash all surfaces clean before painting; rub down all rough or cracked surfaces with both coarse and fine sandpaper; have your paint thoroughly mixed—this may seem impossible, but persistent stirring will accomplish wonders. Whenever possible, place the freshly painted article out of reach of flying dust. And don't forget to keep your brushes in oil when they are not in use.



These few tools will be found sufficient for early Spring operations



EDITORIAL



THE BALANCE OF ANIMATE NATURE

FACTS set down boldly have an inexplicable attraction — even disjointed facts. But when one can pick out two fact items, place them side by side, the reader is often astonished to find not only a singular relationship, but each appears the more important for that relationship. Thus, it is an astonishing fact that the annual loss to plant industries of the nation and to forests through pests ranges between ten and twenty per cent, is valued at \$500,000,000, and causes an annual expenditure of between \$7,000,000 and \$8,000,000 for spraying machines, spraying solutions and labor.

It is also an astonishing fact that between 1840 and 1910 eleven species of valuable wild life were totally exterminated in the United States; that twenty-five others are candidates for oblivion, and that in one State alone—Ohio, which was once abundantly stocked with a great variety and a great number of game birds and mammals—fourteen species have become extinct, and eight species of valuable birds are reported to be threatened with extinction, one of them being the quail, the most valuable bird influencing the fortune of farmers and fruit-growers of North America.

Between these two bare lines of statistics there may seem to be no relation until one considers the services of the quail. For the facts, turn to a volume by William T. Hornaday, "Wild Life Conservation in Theory and Practice"—a book that should be in every sportsman's hand.

"It is fairly beyond question that of all the birds that influence the fortunes of the farmers and fruit-growers of North America, the common quail is the most valuable!

"It remains on the farm throughout the year. When insects are most numerous, bob-white devotes to them his entire time. He destroys them during sixteen to eighteen hours of the summer day. When the insects are gone he turns his attention to the weeds that are striving to seed down the farmer's fields for another year. He consumes, as palatable food, the seeds of 120 species of weeds; and the quantity that one bird can consume in one day is almost beyond belief. The thousand seeds for one bird's daily ration is a small quantity and far below the average of what a healthy adult bird requires. To kill weeds on the farm costs money—hard cash that the farmer has earned by toil or labor of cash value which he himself bestows. Does the average farmer ever put forth any strenuous efforts to protect from poachers and other enemies the quail that work so well and so faithfully for him? The exceptional farmer does; the average farmer does not.

"All that the average farmer thinks of the quail, even those in his own coverts, is as so much meat for his table.

"A list of the 120 species of weeds whose seeds are eaten by the bob-white looks like a botanical rogues' gallery. Conspicuous in it are such old enemies as the pigweed, smartweed, beggartick, foxtail, burdock, barnyard grass, crab grass, ragweed and plantain. It has been calculated that if in Virginia and North Carolina there were four bob-whites to every square mile, and each bird ate one ounce of weed seeds per day from September 1 to April 30 the total amount consumed in those two States would be 1,341 tons.

"As a destroyer of insects it would seem that the common quail deserves the first place. We know of no other species whose appetite covers so wide a variety of insect food. It is known that this bird consumes 145 different species of insects,

and the list includes all the notorious insect pests of the farm and orchard save the few that live and work high up beyond the reach of a bird that lives on the ground. However, the quail's repertoire includes the codling-moth, the garden caterpillars, flies, mosquitoes, plant-lice, cotton-boll weevil and a host of others."

All of which brings us around to the original figures given at the head of this editorial—that from ten to twenty per cent loss is caused to crops every year, loss that was unknown forty years ago, loss that man must suffer because we have prevented, through our wilful destruction of wild life, the maintenance of the balance of animate nature.

This balance is all a part of Nature's scheme for having a place for everything and everything in its place. When the balance is broken someone must pay. In this instance man pays, pays heavily. And so, on our pages of *HOUSE AND GARDEN* you find a strange contrast—articles that give directions for spraying and articles that give directions for preserving bird life. In the former we are valiantly trying to supply a defect that the loss of the latter incurs, striving to keep up a balance that Nature, were she permitted, would gladly do. Nor is it any vicious circle, this balance, for were American sportsmen to appreciate the situation in all its gravity they would soon find a solution. They would soon learn that to every wild bird ruthlessly killed some farm somewhere must suffer.

Only the stern restrictions of the law seem to curb the savagery of some sportsmen. But others, fortunately, are amenable to reason. A great fault lies in the fact that the reason has not been brought to their attention with sufficient force. Start with the reform leaders in embryo—start with college men. What do they know of the necessity for preserving wild life? Were the facts presented to them, doubtless the next five years would see sincere effort being made by these men to provide for proper legislation and a curbing of individual savagery.

And, as in any other reform, the problem of the preservation of wild life must start with the individual. The type of sportsman who can boast enormous bags is growing scarcer every day. We do not admire him any more than we would nowadays marvel at the prowess of an Indian boasting of the scalps hung from his belt. The game hog is a distinctly distasteful person. He represents the regrettable past. He is, moreover, a living contradiction to the banal platitude that the selfish man ultimately harms only himself. Having no respect for the rights of wild life to their life, it cannot be expected of him to show regard for the farmer's right to the protection wild life affords.

By this we do not mean to imply that there is not a legitimate use of game or that all wild life should be given a coddled existence. The relief from work and worry that a gunning trip affords is undisputed. Nor can any of us deny that a taste of game is a great relief from a steady diet of beef and mutton. But to the doors of such conservative folk cannot be laid the blame, for the slaughter of our wild fowl is necessitated by the demands of those jaded epicureans to whom even good beef and mutton are revolting. Killing for food necessity exists only in the farthest outlying districts, and yet, as Hornaday observes, fully ninety-five per cent of the men and boys who kill American game regard game birds and mammals only as things to be killed and eaten to satisfy hunger—the viewpoint of the caveman and the savage. None of them knows what real hunger is, save by hearsay.

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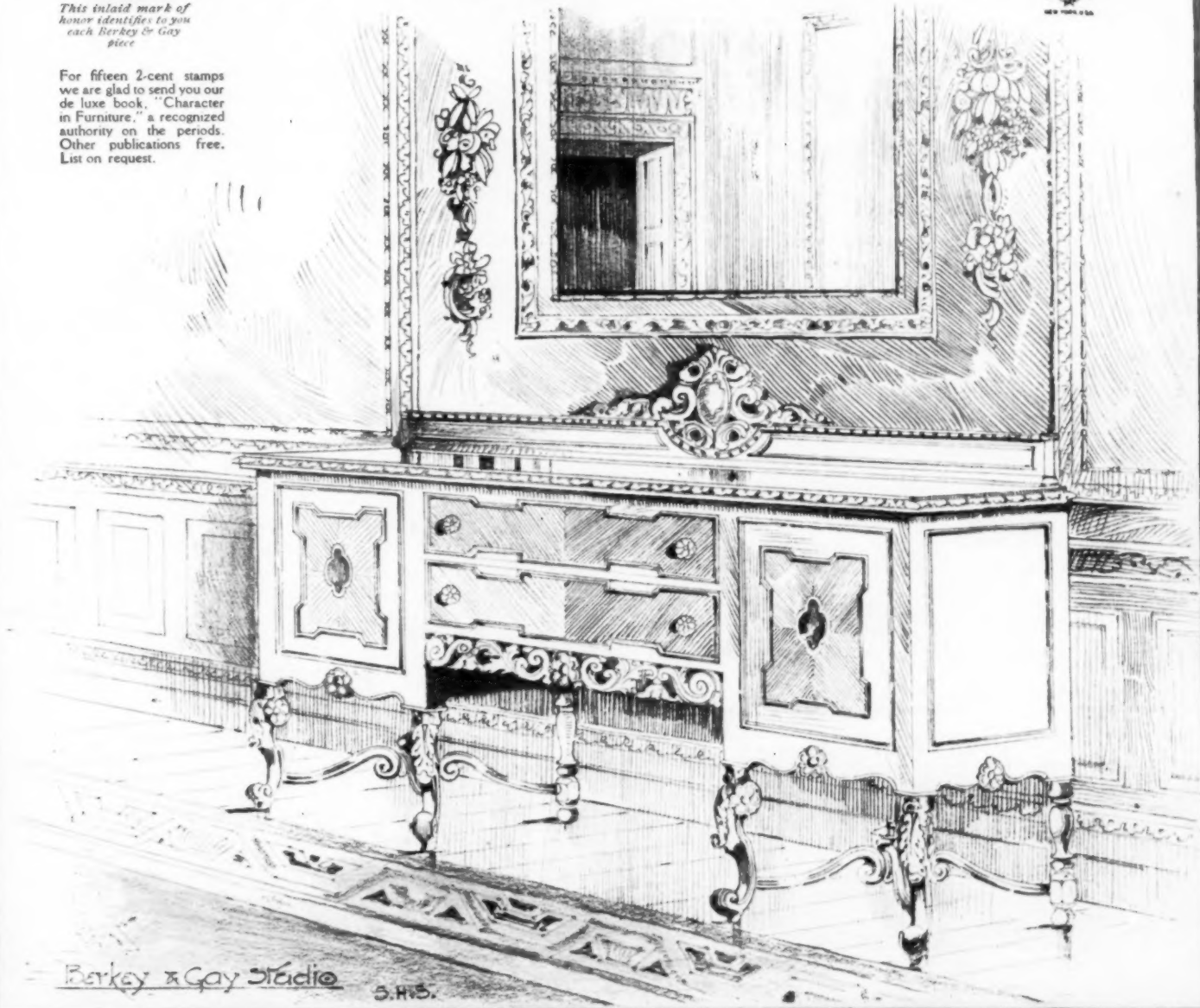
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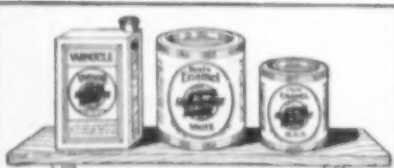


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Have an
"Acme Quality Shelf"

Keep always on hand at least a can each of Acme Quality Varnotile, a varnish for floors, woodwork and furniture; Acme Quality White Enamel for iron bedsteads, furniture, woodwork and all similar surfaces; Acme Black Iron Enamel for ranges, stovepipes and other metal or wood surface. These will cover many of the "touching-up" jobs. Put up in containers of $\frac{1}{2}$ pint and up, with friction-top, replaceable covers which are easy to open and close and keep the contents in usable condition.

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Mrs. John on Orchardling

(Continued from page 159)

some of the undiscerning consider them only makeshifts.

A warm, two-toned brown Scotch wool rug nearly covers the floor. With little outlay we have a room of charm and distinction, and the chief attraction is the big fireplace with its crane, the brick oven at one side, the funny little cupboard over one end and the few bits of Chinese crackle ware on its high, narrow shelf. Occasionally we have a merry fireplace supper with an R. F. D. beefsteak—bless the parcel post!

With the exception of twelve of my forty years I had always lived in the country. I was certain that I knew country life thoroughly; that there could be no problems which I could not cheerfully meet. For years I had been obliged to drive two miles to the inadequate stores of the neighboring hamlet and the station, although the railroad went within sight of my old home.

Critics of our scheme of living—and they were many—shuddered when they heard that we were to be eight miles from a railroad and four from "the store." I felt superior to all criticism, for I was riding on the crest of the wave of John's enthusiasm. If we could have afforded an automobile I doubt if I should have felt so isolated as I eventually did for a time, but I was childish, positively childish, because I couldn't see the cars. The east wind would waft us a whistle occasionally, and the sound gave me an added pang of homesickness. Not until I had driven that eight miles several times did I cease to feel cut off from communication with the world. Those first weeks, although the mail brought many letters, I felt as if I had been buried—as if the world beyond our confining hills was marching on and away from us. A part of all this was caused by the lack of feminine companionship, which I had never before been without. My fingernails were worn off and my fingers became battered because I didn't know how to get help. My laundry work was so badly done by Mrs. Mason that I finally attempted it myself—with disastrous results, more mental than physical.

The spraying season hove in sight, and, although I didn't board the extra men, I had continuous processions of them over my kitchen floor to get water—and such looking men! The lime-sulphur spray made them look like coal diggers; the odor of sulphur was omnipresent, and for a time I was sure of the geographic position of Hades. Even John's watch stopped because of the fumes. And the clothes he wore! Probably I was ultra fastidious, but the ubiquitous dun-colored clothes of country men-folk and the drab calico of the women "got on my nerves." I had chosen my own garments with an eye to



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Neatly painted. Key-bolted together in 15 minutes. Send for illustrated catalogue.

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beauty as well as utility. I carefully avoided kimono aprons until a misguided friend sent me three. During the depressing season of spraying I fell from grace in clothes and hair and manicuring.

From my experience I know that a woman of delicate physique should not attempt country life on a farm unless she knows she can get help for her unaccustomed duties. Too, she must be willing to form new ideals of housewifery—not to be overfastidious about inevitable "tracking in." I can't yet practice this preachment, especially on days when, as someone puts it, "I'm running a boarding house for hired men." With our growing prosperity, those days will decrease. Already we are planning to better advantage for my relief and John's, too.

At first I felt that I couldn't wait for things to get in order. Now I know that half the fun is in doing them by degrees, and I have ceased to feel apologetic for things which must wait. After all, it's the looking ahead that counts.

A visit to my old home wrought the cure. I was away from John and the orchard for five endless weeks, and I found a new perspective. I had an orgy in New York—theaters, bridge, shops, Knox hats, taxicabs, automobiles, teas, tournaments—nothing availed to content me. I came home gladly, gayly, and things have smoothed out before my altered mood. It was *life* that I wanted—life on that hill-top with John Anthony!

There are houses made for comfort, and houses made for style; and there is also a house in California made for sunlight that you will enjoy reading about in the April HOUSE AND GARDEN.

Your Saturday Afternoon Garden

Continued from page 177)

they turn yellow without cause the trouble is likely to be in the soil or on account of too much water. When the dripping-off fungus puts in an appearance, plenty of fresh air and flour of sulphur scattered over the surface will help to check its further ravages. A close temperature, a sudden shock or chill of any kind, or having the surface of the soil or the foliage wet, during the night when the temperature is likely to go down, the result of watering too late in the afternoon, are all conditions favorable to the damping-off disease. It attacks the stems of the little seedlings at the surface of the soil, often entirely destroying a large percentage of them.

The green aphid is another pest that may cause serious trouble, as it is almost the color of the leaves, quite small, and hides in the heart of the plant or on the under side of the leaves until it becomes numerous. Left unmolested for only a few days it multiplies so rapidly that it may get beyond control. Any condition that is likely to weaken the growth of the

A Special Message Addressed to You

If you had assembled all the facts pertaining to all the pines, you would select **Arkansas Soft Pine** for all manner of interior woodwork, and get your "**Pick of the Pines.**" Your conclusion would be the same as that reached by the United States Government Officials, if you, as they, were absolutely unbiased and guided by the facts your investigation brought to light

Predicated on the investigations that have been made for you by Uncle Sam, you should employ Arkansas Soft Pine for interior and exterior use for these reasons:

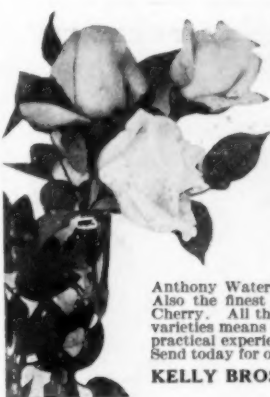
<p>For the Interior</p> <p>No other wood shows such a variety of pleasing figure. Some of it is splashy and bold; some of it has been delicately engraved by nature, the greatest of all artists. Its uniform texture insures the even absorption of fillers, stains or dyes and a proper finish with shellac, varnish or wax. Properly treated, an effect is secured that is unsurpassed by the finished appearance of any other wood.</p>	<p>For the Exterior</p> <p>Arkansas Soft Pine contains practically no rosin or resinous oils. There is a notable absence of pitch streaks. It does not gum the carpenter's tools or power machinery. Open cells permit of the absorption of sufficient of the oil and pigment to bind paint firmly to the surface to which it is applied. The result is that Arkansas Soft Pine holds paint. It is easy to work and worth working.</p>
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plants, such as too high a temperature, neglect in watering, too close atmosphere, dark corners, will favor its rapid development. This is one of the sucking insects, and cannot be poisoned. If, from former experience, you have reason to think that you will be troubled with aphids, get a supply of strong tobacco dust made for this purpose, and keep it sprinkled on the ground and on the surface of the seed boxes between the plants, as well as on the foliage. In the event of the plant pest becoming established, strong nicotine spray is the best remedy.

As the days lengthen and the sun climbs higher and the urge to be out-of-doors gets more insistent in one's veins, there are some things which need attention before any planting can be done. First, the garden itself must be thoroughly cleaned. Rubbish of any kind should be picked up; old cabbage or old cornstalks, as soon as the ground loosens up enough to get them out, had better be got out of the way, especially if the garden has to be dug or spaded instead of plowed, as it is difficult to get them in and under. Old bean poles, tomato poles, melon vines, and so forth, all help to make harboring places for insects and disease spores. Everything that you do not need to use again should be burned. Not only the garden itself, but any untidy corners near it where weeds may have grown and died down, making an ideal bug reserve, should also be cleaned up with fire and steel rake. The asparagus bed and the raspberry bed and the raspberry patch, if near the vegetable garden, are frequently prolific sources of trouble, and they should also come in for an overhauling.

The question that bobs up at this time of the year is: "How early can I begin to dig?" There is such a thing as beginning too soon. Nothing is to be gained by it; in fact, you may actually injure the soil by being hasty. Some soils may be dug as soon as the frost gets out of it. Others will remain too wet and sticky for some time afterwards; this depends largely upon how good the drainage is and also upon the character and the physical condition of the soil. A cold, wet spring may delay things for a couple of weeks even after the frost has gone. There is, however, one safe rule to follow: the ground can never be well worked while it is in wet and sticky condition. If it sticks to your spade or falls from it in pasty lumps, you may be sure that you should let it alone for a while. When the soil is turned over, whether you use a spade or a plow, it should leave it clean and dry, the lumps breaking apart readily when hit with the foot or the back of the spade. Some soils seem wet and sticky and of an unfavorable temper when in reality they are not, merely because they have not been properly drained.

There are two or three weeks in the season in which the ground can be got into proper shape in the spring. Ground

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"...always been favorable to your Stains and used them on my own home. The cyclone destroyed the place last March, and in going over the wreckage found that the shingles not blown away are as good as new, although they had been on the house thirteen years last January. In that time they were given two coats of Cabot's, when the house was built, and two coats about six years ago."
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Stained with Cabot's Shingle Stains.
Wilson Eyre, Architect, Philadelphia.

that is backward can be worked up into broad ridges for the planting of a few extra early things, like peas, planting on top of the ridge. While an emergency method of this kind may help temporarily, a thorough system of under-drainage should be put in as soon as possible—early next fall, if you cannot find time to do it now.

Before you begin digging, the manure or compost should be put on. That can be done before the ground is quite ready to dig. But it should be done only just before, and, if possible, the very day that you are going to "break up the soil." If it lies around on the surface after it has begun to decompose it loses much of its effectiveness. The best way, if the garden has to be dug by hand, is to get at it, and get it over as soon as possible. The sooner you can get it all dug, the better, even such parts of it as will not be planted until May. Besides getting the work out of the way, this saves moisture in the ground from the early spring rains, since water evaporates much more rapidly from ground that has not been worked over. Do not, however, make the mistake of spading up or plowing the ground and then leaving it that way, raking off a strip now and then only as it is needed. It should be pulverized and raked and made fine and smooth at once; this to create what is known as the "dust mulch," which is nothing more than the surface of well-prepared top soil, which, drying out very quickly to a depth of half an inch or an inch, holds the moisture in the soil below.

The deeper you can dig your garden, the better, provided you do not have to turn up the hard, lumpy sub-soil. However, a little of this mixed in will not make any difference, and where the garden is shallow from not having been dug before, a little of this raw dirt from the bottom should be turned up every year, in order that the garden may be gradually deepened. The deeper the garden, the more capacity will it have to store up plant food and water for the use of the growing crop.

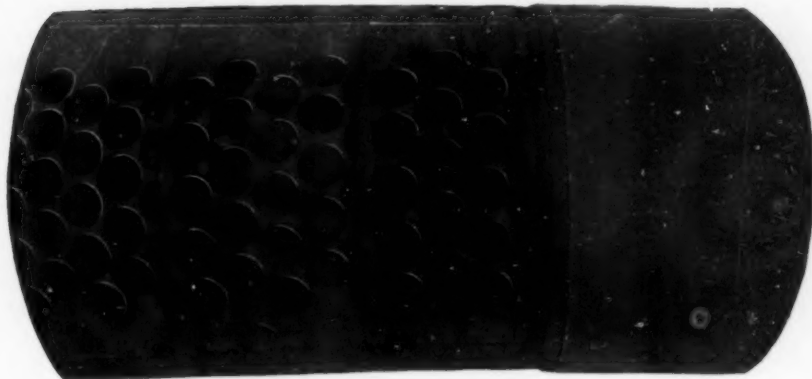
If there is manure to be turned under, the soil in the bottom of each furrow must be well mixed with the soil from the next furrow that is thrown in on top. If it is dug in the usual way so that some of the manure is near the surface, this will be a constant annoyance throughout the season.

Should fertilizer be necessary, spread it on after the ground is plowed or dug, and rake it in. It will be as well in this case, however, to apply the fertilizer to each strip of the ground as you get ready to plant it. Such parts of the garden as cannot be planted soon after they are prepared will have to be raked over thoroughly before planting, in order to break the crust that may have formed and to destroy any small weeds that have sprouted.



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LEWIS & CONGER

Home Furnishings

45th Street and Sixth Avenue, New York

Landscape Gardening on a Small Place

(Continued from page 172)

rhododendrons and cedars at either end of the house show how effective evergreens can be against red brick walls. Two Rose of Sharon bushes, with double, pink flowers, frame the entrance porch. A new effectiveness has been given to the old, neglected Rose of Sharon by the production of many new hybrids with flowers of clear and single colors. Their upright habit accentuates the quiet formality of the entrance porch. This upright stiffness which makes it so difficult to mould them into a shrubby border invests them, when they are so placed, with a peculiar dignity, producing an architectural balance. It is especially in contrast to these Roses of Sharon that the already-mentioned box bushes under the windows show that they are in wrong positions. They illustrate a frequent mistake in shrub planting, for they have no reason for existence except the willful caprice of the planter, who is wont to consider his material only at its own and separate value, instead of at its subordinate value as part of a well-ordered design.

The planting along the house and lawn enclosure has been given in such detail to show how full of interest a little place can be when careful attention is given to the proper arrangement of shrubs as a boundary around a lawn.

The evergreens give much winter interest to the lawn, the deciduous planting emphasizes the spring bloom. After the roses are through blooming in July, the lawn is framed by quiet greenery, and the color interest is absorbed by the flower garden.

It is a delightful little place not thirty feet square, this flower garden. We like its friendly colors, its intimacy placed close against the house, its little touches of formality and its seclusion, standing high above the street.

Part of its success is due to its enclosure. On the north side is the porch, with masses of rhododendron. On either side of the path is a box bush, and along the steps Lilies-of-the-Valley are crowded close together. On the east side is the picket fence, the curve of which follows the slope up to the house level. On the west side stand a row of arborvitæ trees, now six to eight feet high, and on the south side the branches of the street trees make a heavy, green screen.

In a small garden the design wins approval through sheer simplicity. This design is based on a circular composition inscribed in a square, an old motive kept always new by variety in details. The very center was the place designed for a sundial. It could have been substituted by a slender-columned bird bowl. The spreading *Pinus mugho* there now is at its present height an acceptable central feat-

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ure, but soon it will grow too large and dwarf the rest of the design. The manner in which the brick is laid on the path around the *Pinus mugho* emphasizes the circular composition.

To the choice of the flowers is due much of the effectiveness of this garden. The succession of bloom and color harmony creates a pleasurable perennial interest. Their symmetrical arrangement emphasizes the circular composition.

On the edge of the circular path are eight *Sedum spectabilis*, with dwarf nasturtiums planted in between. In back of them are planted the tall, blue *Iris pallida dalmatica*, interspersed with *anthemis*, the golden marguerite. The third tier is composed of daffodils and lavender and white phlox. Along the street wall stand, in front of the dark-green of the *Arbor Vita*, light-blue larkspurs raise their slender spikes in spring, and *Aconitum*, the monkhoods, give a similar effect in autumn. On either side of the gate a bush of low *Deutzia gracilis* blossoms early in the spring, and later in June two plants of yellow day lilies placed on either side of the path to the house make bright spots of color. To complete the formal effect, a white, flowering Rose of Sharon is planted at each corner.

From the time the narcissus come out in April until the phlox fades in September there is always something blooming in the garden. The middle of August, when the picture was taken, is the gala time. It is the climax of the flowering season. The Rose of Sharon, the *sedum* and the phlox are all blooming together in a harmony of lavender and white with a bright touch or two of yellow *anthemis*.

It is not necessary, however, as it is not possible, to have so much bloom all the time to make the small garden effective. When I saw it in early July, with the *Hemerocallis* just beginning to bloom and the larkspurs in flower, the garden was quite charming, with its delicate touch of blue and gold.

When it gets too cold to sit out, the garden lies unadorned with bloom, but it has lost little of its attractiveness. The rhododendron foliage, the fragrant box bushes, the *Pinus mugho*, the pyramidal *Arbor Vita*, contrasting with the warm, red brick of the paths, provide much winter interest.

The enclosure, the architectural details, the design, the flowers, each has an important part to play. Not in their individual parts, but in their inter-related action toward effectiveness and beauty lies their value in the art of garden making.

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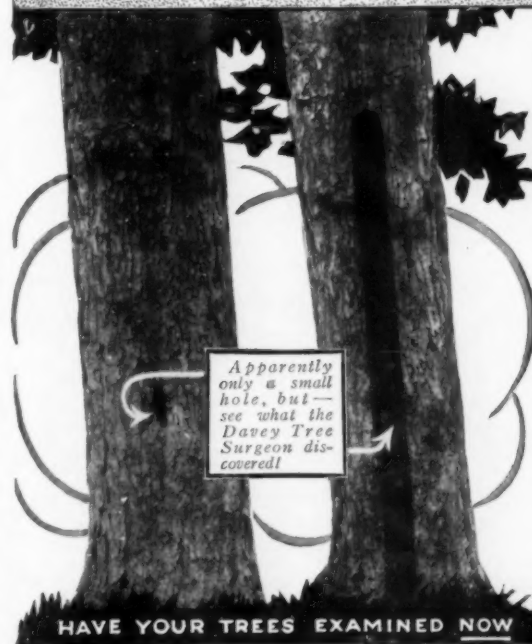
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The Old Ballard Place

(Continued from page 164)

near a hedge. Cats can, and will, creep under the shrubs, and, hidden there, will lie in wait and do much harm, as feathers near the hedge have often testified.

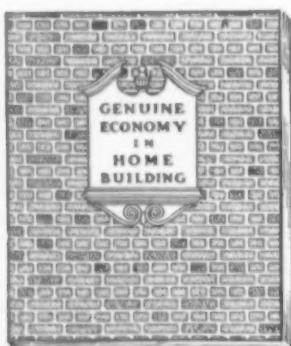
Peeping out from this hedge here and there were dainty little Columbines, with their graceful bells in different colors. Forget-me-nots were blue with their blossoms through the summer, and in the fall the asters along the front of the hedge were glorious. Directly in front of the house, at the north of the brick wall, were masses of bridal-wreath bushes, and a great, golden forsythia made sunny the northeast corner of the yard. Tartarian honeysuckles formed the north line to the house. All along its north foundation wall and hugging up close to it were lilies-of-the-valley and ferns.

Over the front of the house itself grew wonderful clematis vines that were full of little white blossoms in the fall, making the air sweet with their fragrance. One of these vines grew onto and over the lilac tree at the corner of the house. This was the old front yard.

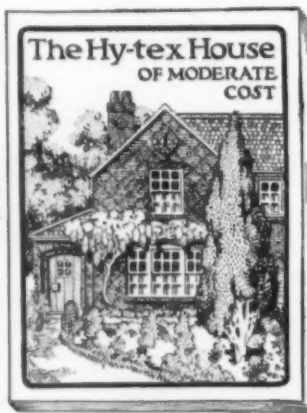
Between it and the back yard there used to be a high board fence. I was glad to miss it. The old back yard was given over to the clothes-drier, with its great, long arms, its platform and steps; to board walks and ash heaps; to the well and pump; to barn and chicken yard; to cornfield and vegetable garden. The day of the great clothes reel is past, but the memory of the joy that came as we hung to the arm of this reel while we were rapidly swung around will be ever with us. Were you ever a little girl who was compelled to play in the back yard, never stepping foot in the front yard in your play? If you were, you will understand me when I say that my first glance at this back yard when I saw it last summer made me long to be again a little girl, compelled to play only there, where there seemed to be everything to make interesting a little girl's play. A splendid apple tree grew here, and a mulberry tree full of fruit attractive to the birds. A hedge of lilac and sumac hid the back fence completely. A woodbine and wild grape vine covered the south side and front of the barn, and the space once claimed by the ash heap and board walk had been transformed into a most inviting spot. Cherry, syringa and sumac trees made an effective corner, in front of which was a long, curved bed full of hollyhocks, foxglove, gladioli, snapdragons, pyrethrums, zinnias and a border of love-in-the-mist. The wide beds in front of the back and south hedges were a mass of color all through the season. First came the oriental poppies in many shades, then the iris and peonies. Later came the crowning beauty of the year—the Canterbury bells and the foxgloves. After these had gone, hollyhocks, platycodons, snapdragons



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and gladioli showed their colors. There were beds, too, filled with anchusa in its pretty shades of blue; hardy larkspurs, monkshood and Sweet William, and when the fall came this garden was brilliant with asters, cactus, dahlias, chrysanthemums and zinnias.

Where the cornfield and chicken yard had been I found a beautiful lawn, at the north line of which was an occasional bush or tree and another birds' bath out in the sunshine away from bushes and danger. On a little trellis over the woodshed door grew the matrimony vine, and the south fence—a little wire fence—was covered with the vines of woodbine and bitter-sweet. Loving hands and much thought had been given to the task of making this garden spot a pleasing one. Joy had come to those who did the work and to those who came to enjoy it.

No one but the German gardener looked on with a thought of criticism. He, with a wry face and a shrug of his shoulders, would say: "Oh, ya, it is good—but nodding's to eat in dis garten! Should be, anyway, strawberries or somedings," and a kindly Scotch neighbor was, perhaps, of the same opinion, when he came modestly asking: "Might I be allowed to set out a few lettuce heads in the corner by the barn?"

I left Oldham and this garden late in the fall full of regret, but at the same time convinced that nothing in the way of transformation is impossible to the one who really loves and studies a garden.



Dining-Rooms of Distinction

(Continued from page 156)

unusual room may be had by using Colonial landscape paper of classic or Chinese design. This necessitates long, unbroken wall spaces. Needless to say, pictures have no place here. Sheraton dining-room chairs of shield-shape back give a refined appearance and silhouette beautifully against the wall. In such a room a corner cupboard for old china looks well, or better still, a pair of such cupboards. The door of the cupboard can be made attractive by removing the top panels and filling the frame with small panes of glass, thus giving above a glimpse of the best china, whilst the lower part may be used for the less attractive.

In many dining-rooms in the country that have a northern exposure an excellent plan is to use a Colonial yellow paper with white wainscoting and trim, small-paned windows, a cheery, old-fashioned chintz on the windows and begonias—for begonias grow beautifully in a north room. Thus a dismal, north room can be converted into a cheery place. A piece or two of well-polished brass helps out the effect in such a room. For the table, an



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effective centerpiece is a white china lattice basket filled with flowers or fruits.

In a Colonial room which is rather delicate care should be taken that the bricks of the fireplace are inconspicuous. In many cases the effect of a fine white mantel is utterly ruined by the wide bonding of the bricks below it, bonding so out of proportion that it quite spoils the room.

Gate-legged dining-tables are usually more picturesque than comfortable, and are better used in the library or living-room than in the dining-room. There are many lovely types of Colonial dining-tables with delicately turned legs, and to go with them Sheraton Colonial chairs with rush bottoms. In general, it is wise not to use velvet for chair seats; modern hair cloth made in very attractive colors and patterns or leather-covered or rush seats are more comfortable and servicable.

Nearly related to our Colonial room is the English Georgian, with its simple, white paneled walls and mahogany or inlaid furniture of Chippendale design. A serving-table of black Chinese lacquer fits in well in such a room. If the walls are gray, use taffeta curtains of rose, with a narrow, black stripe, and on the floor lay an Oriental rug. Thus you have gray, rose and a touch of black repeated, making a distinctive room.

An English Jacobean paneled dining-room is always elegant, but is more suggestive of dinner than breakfast. Fortunately, those who can afford such a room can afford also a breakfast-room, which provides the necessary sunshine and restfulness for the day's beginning. The furniture for such a Jacobean room must of necessity be rather heavy in scale and the hangings rich in color and texture. There is much to be lived up to in a paneled room. Above the paneling the frieze may be treated in several ways: plaster mixed with a tint to tone in with the woodwork, a decorated frieze of medieval design or a plain paper. It is better not to use a color different from the paneling, as it breaks the wall surface and detracts from the paneling itself, which, if of good proportion, has much decorative value. Above all, avoid making the top trim of the paneling serve as a shelf to display steins and plates. In such a room one or two pieces of antique furniture will give an air of distinction, especially one of those court cupboards which were a unique product of Jacobean days. Casement windows would lend an air of similitude to the feeling this early English period connotes.

If one wants to have an English dining-room, a simpler and less expensive treatment is to finish the walls in rough, tinted plaster or tan paper of a heavy texture. Have the floor, doors and trim of oak and use English cottage furniture. Casement cloth or a linen of Jacobean design at the window would make this a beautiful room and not an expensive one.

The rough plaster walls of an Italian dining-room are best fitted for a country house. Here windows, devoid of trim,



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should open onto a terrace, and there should be arched niches in the wall for rare, old Italian pottery or copper. In such a room a simply carved stone fireplace and Italian walnut furniture would give an unusual effect. Linen hangings, luscious with fruit of warm colors tone in with the soft buff of the walls. It is curious that these Italian rooms—so simple, reposeful and full of quaint, decorative charm—are not more often adapted to our American uses.

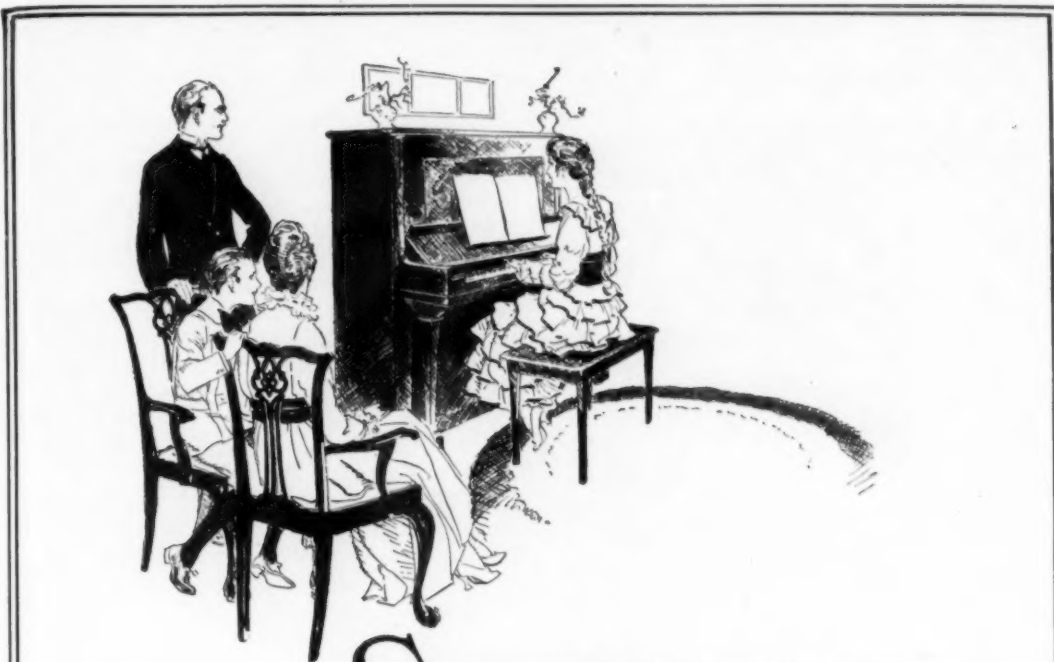
Especially would I make a plea for the long, narrow tables that are used with so much success in Italian villas. If the guests are few and favored, by placing them opposite one another they have an intimacy they cannot have across a large, circular table; and if the guests are numerous, the table may accommodate them all. Also it affords an excellent opportunity for decoration; at either end a huge bowl of flowers, a pair of those charming brass candelabra, or even the informality of a pair of early wrought iron candlesticks whose beautiful lines, one imagines some Fifteenth Century craftsman fashioned with the same loving care that he expended on a silver chalice. About the whole room is a feeling of ascetic severity.

Contrasted to this is our very modern room of enameled and decorated furniture and the omnipresent touch of black: rooms, black carpeted, gray walled with gray and black furniture; rooms of clear pure green, with a touch of strong, deep, old rose; rooms with blue walls and gray carpet and blue and gray furniture. Such rooms are clever and really charming, but they have too obvious a note, one gets merely the strong sense of color combination. They are unusual, but not always distinctive.

Such effects should be confined to the breakfast-room. There one needs toning up, and any fantasy is welcomed. You feel the spirit of play, of fun in their planning and making, and to-day the shops are tempting beyond resistance in these very modern combinations of furniture and fabrics.

A most important consideration in a breakfast-room is the outlook. There must be a good view of the weather, so to speak. In summer the breakfast-room may be little more than a porch.

In many old farm houses one finds a downstairs bedroom. In remodeling, why not convert this into a breakfast-room? Its possibilities for decoration will be a source of much delight. Gay chintz paper, sundour hangings, white enameled furniture decorated with old-fashioned bouquets, and there you have a convenient, cheerful and charming breakfast-room, an altogether desirable adjunct to your dining-room of distinction.



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Getting Results with Gladioli

(Continued from page 157)

den that can be utilized in this way. It is better to plant gladioli in beds or groups, rather than in rows, as the plants help to sustain each other.

In heavy soils the corms may be covered two inches deep and four to six inches in light soils. For massed effects, plant four to five inches apart and twice that distance if one wishes to fill in nooks or portions of the border. When the gardener plans for successive planting the earlier lot should be put in a foot apart, to admit of later settings between. A six-inch distance, however, is generally applicable.

As they grow, stake the plants, for the stalks are fragile. In conspicuous positions stakes are desirable. Those who care for garden novelties will find in the shops a variety of pretty stakes with butterfly and bird heads that add a touch of color and picturesqueness quite pleasing to those who have been accustomed to the more homely but none-the-less serviceable, old-fashioned garden stake. If these are not desirable, stakes can be driven in at regular intervals around the beds and a cord tied on them, which will help support the stalks. Some gardeners nail laths to the top of the stakes and wind on them a mesh of light string that will steady the fragile spikes against the wind.

The time to cut gladioli spikes is when the lowest blossoms open. Keep them in fresh water and cut the stems daily, and the buds will open one by one. With this precaution they will last over a week. Cutting the spikes will help increase the size of the bulbs—an advantage that will be appreciated next season. If the stems are allowed to dry without cutting after the flower spikes are removed strength is thrown back into the bulb—an added advantage for the next season. It is a wise plan to cut gladioli so soon as the flowers appear, for the flowers fade quickly if left on the plant—some varieties particularly. This is notably true of America—the delicate, flesh-pink variety—which will be wilted at the end of one warm day.

Like cannas, elephants' ears, tuberous begonias and dahlias, gladioli must be lifted in the autumn. Late in the fall, after frosts and before freezing, the corms should be dug up, cleaned and dried in the sun for several hours. The top should be left on, or, if space is needed, kept on until completely shriveled, when the corms can be stored away in boxes about two and a half inches deep. Keep your varieties separate as much as possible. Place in a cellar where they can be undisturbed throughout the winter.

Should the gardener wish to force blooms in November and December, the process is simply done by keeping some of the corms in a cool place, thereby retarding their growth until August. Plant them in boxes of rich soil four to eight inches deep, and keep them outdoors until frost.



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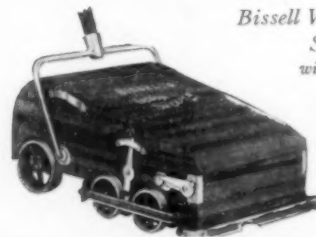
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Hatching With a Wooden Hen

(Continued from page 175)

convenient tester will be needed. A good kind consists of a device similar to a metal lamp chimney, with a light tube at one side. It may be used on an ordinary lamp, and leaves both hands free. A plan used by some poultrymen who have incubator cellars allows the eggs to be tested in daylight and without the use of a lamp. A board shutter having an opening in the center a trifle smaller than an egg is fitted into the window so tightly that all light is excluded except that which comes through the opening, and against which the eggs are held to be examined. If there be a strong light outside, as when the sun is shining brightly, the testing may be done very easily and quickly.

While making the test for fertility it is also advisable to examine the air cell at the end of the egg in order to learn whether evaporation is normal or too rapid. One of the illustrations indicates the proper size of the air chamber at the end of a week and two weeks. When the contents of the egg seems to be drying faster than it should the air chamber will be larger and the operator will know that more moisture is needed. The moisture question is one which has been the cause of much discussion, but too much moisture seems, on the whole, to be better than too little. In many machines it is provided by means of wet sand trays. With other machines pails of water may be placed under the lamp, the floors wet down or the eggs sprinkled with water at a temperature of 103. Sprinkling is often advantageous when duck eggs are hatching.

With the chicks finally out of the incubator, it is easy to understand that the machine will need a thorough cleaning and disinfecting before it is used again. The lamp burner should be boiled and a new wick inserted, after which the machine may be started on a new hatch.

From all that has been written one might suppose that the operation of a hatching machine is a complicated matter, but in point of fact it is not. Certain things are to be done in the right way and at the right time, but a first-class machine will require little attention except night and morning. Follow the maker's directions carefully, for he has doubtless spent many hours trying to anticipate every possible contingency. He wants to make it as easy as possible for his customers to get satisfactory hatches. As to the rest, the amateur who has the highest degree of success is the one who looks carefully after every detail, but otherwise leaves the machine alone. Tinkering, especially with the thermostat regulator, is foolish. After the first adjustment, the temperature may usually be regulated by increasing or lowering the lamp flame. And, finally, it must be remembered that nobody can hatch good chickens in any sort of incubator unless the eggs were laid by hens possessing strong vitality.

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Mott's Light-Weight Porcelain Bath

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Barter's
Tested
Seeds

Real Irish

(Continued from page 167)

The lithe conformation, which is so typical of the Irish terrier, must never, however, be carried to an extreme of shelliness and weakness. A lean, lank, slab-sided dog is no true daredevil. His coat, of course, must be like pin wire, with a wooly underjacket. In color it must be red—the redder the better. The washed-out tint of wheaten straw and the smutty red with a dark streak down the spine are equally objectionable. Judges set great store by coat and color, and rightly so, for these are important parts of the dog's attractive individuality. When he runs,



From nose to stern he is made of tingling nerves and springy muscles

the typical Irishman has the free, open swing of a galloping thoroughbred. He is always up on his toes, and from nose to stern he seems to be made of tingling nerves and springy muscles. No dog is more everlastingly on the alert.

In the city, in the suburbs, on the farm, the Irish terrier is a mighty good dog. He has size enough and sand enough to be useful both as a destroyer of varmints and as a guardian. At the same time he is small enough and nimble enough to be convenient in the crowded street or the four-roomed apartment. He is always good company, quick of wit, sympathetic, and lively without being boisterous. He is intelligent, as well as clever, and he is easily taught those lessons in etiquette and obedience so necessary for his own peace and his master's pleasure.

If a friend, with his heart set on owning an Irish terrier—there are many worse ambitions—should ask my advice, I would suggest he go to a reputable kennel prepared to pay what he could afford, for a good dog is worth a good price, and one does not like to have to apologize for his four-footed companion. I would advise his getting a youngster about six months old. At this age he will be over the troubles of his puppyhood, and yet young enough to be brought up in the family,



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which is something to be greatly desired in the case of a house dog. I would suggest he pick out a bright, husky pup, with good, straight legs, a shortish back, small ears, dark eyes, and a red, wiry coat. Six months later his dog may have developed into a "world beater," fit to win at any bench show in the land, or he may, as the fancier says, have "gone wrong." In either event, I will wager that whether he cost twenty-five dollars or two hundred and fifty, my friend will not take a hundred per cent profit on his bargain.

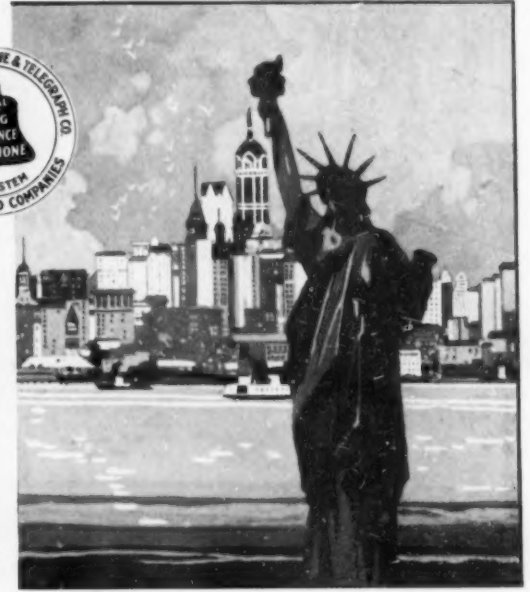
Forty years ago no one dreamed of spraying. That was because Nature took care of us—her birds and mammals thrived on the pests that would otherwise have spelled ruin to crops. Since then men have thrived on the wild birds and mammals. Hence spraying is a necessity—a necessary evil, perhaps, yet a part of garden work that is vital. Read "Repelling the Pest Invasion," in the April HOUSE AND GARDEN.

My Suburban Garden

(Continued from page 153)

with trunks about $1\frac{1}{4}$ inches in diameter. They cost 35 to 50 cents each; surely a diminutive outlay for all that future wealth and pleasure! Orchardmen always buy one-year trees, which are mere "whips," costing about 20 cents apiece. They do this partly because of the reduced cost (which runs into money on 10,000 trees) and partly because they can head the little whips of trees themselves, and every orchardman has his own notions as to the proper height to head. For a suburban garden, the two-year tree is best, for it already has been headed at the nursery better than you could do it yourself. Three-year trees are sold by some nurseries, but buying them is a great gamble. Some of my three-year Baldwins are fourteen feet high, and must have by this time roots at least eight feet long, but if you were to dig up such a tree at the nursery your top and roots would be far out of balance, for most of the big roots will have been shorn off by the spade, and it would take years to get on its feet again, if, indeed, it lives at all. Our two-year trees came to us with a ball of roots about two feet long, and simply needed cutting the tops back about one-half. They should go in the soil to above the graft joint, for all these nursery trees are shoots of Baldwin, Winesap, etc., grafted onto stock apple roots, and this root will send up out-law shoots of its own unless the soil comes up well above the graft scar.

In this first planting I did not dare put them in very deep because of that wet soil, and I think, on the whole, for amateur gardeners, the mound system of planting is best, anyhow—set the roots a little below garden level and mound up to cover the graft joint. All my later plant-



Creating a New Art

At the Centennial Exhibition at Philadelphia, the exhibit of the Bell System consisted of two telephones capable of talking from one part of the room to another.

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Starting with only these feeble instruments, the Bell Company, by persistent study, incessant experimentation and the expenditure of immense sums of money, has created a new art, inventing, developing and perfecting; making improvements great and small in telephones, transmitter, lines, cables, switchboards and every other piece of apparatus and plant required for the transmission of speech.

As the culmination of all this, the Bell exhibit at the Panama-Pacific Exposition marks the completion of a Trans-continental Telephone line three thousand four hundred miles long, joining the Atlantic and the Pacific and carrying the human voice instantly and distinctly between New York and San Francisco.

This telephone line is part of the Bell System of twenty-one million miles of wire connecting nine million telephone stations located everywhere throughout the United States.

Composing this System, are the American Telephone and Telegraph Company and Associated Companies, and connecting companies, giving to one hundred million people Universal Service unparalleled among the nations of the earth.

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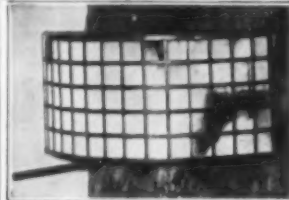
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ings have been done that way, and all have succeeded splendidly. For filling the 4-foot border around the garden in between the fruit trees I ordered a quantity of small fruits at about 8 cents a root.

The raspberries and grapes, and later currants and blackberries, were planted in a 4-foot bed along the back fence, with an overflow along the west border of the garden.

My original vegetable layout is open to a good deal of criticism. It has the usual beginners' defect—"too much of everything and not enough of anything." If there was a single kind of standard vegetable that I overlooked in that layout, the oversight was entirely unintentional.

I also overlooked the important fact that all the plants of any one vegetable do not come ripe simultaneously. In fact, only about one-third of the plants of any planting will be ready for picking at any time, and this must be allowed for in figuring quantities. My first plan contemplated 100 strawberry plants, 1 x 1½ feet spacing, along the east border of the garden; a row of eight bush muskmelon hills; three 25-foot rows of potatoes; five 25-foot rows of asparagus; one 25-foot row of



Planting a young nursery peach. Mound system is best. Dig a shallow hole, set in roots, tramp rich soil about them, next a shovelful of manure, and top off with ordinary field soil piled up above the graft joint as shown.

rhubarb, spaced 3 feet; one of eggplant, spaced 2 feet; one of lettuce, three of peas, two of radish, two of beets, one of spinach, onions, carrots, parsley, a tomato garden of 15 plants, 100 feet of string beans, forming a garden border, and 60 feet of corn along the back fence, in front of the raspberries. With extremely rich, mellow soil this arrangement might have given fair results by making the east garden all permanent plants; i. e., rhubarb, asparagus and strawberries, all requiring rich soil and coming up year after year undisturbed.

You will note that it is a wheel-hoe garden, all the vegetables in long rows running north and south, no small beds and no paths except the main central and traverse paths, wide enough for a wheelbarrow or garden wagon. All my boyhood gardens were a series of small beds and had to be hand-weeded and hand-hoed. Since then the wheel-hoe has come into prominence. I got one, right off, for one can accomplish five times as much in one-fifth the time as with the old spade, hoe and rake methods. The wheel-hoe has a small plow, which turns over your soil as fast as you can push it, three cultivator hooks to break up the plow clods, two harrow rakes and two hoes, the latter for weeding. I could appreciate all those soil-preparation tools, and used them at once, but the efficiency of the hoe attachment as a weeding tool I did not realize until next year, for my rows were down too close together at first to use the hoe properly.

Planting went on merrily by simply throwing two furrows against each other with the plow and planting on the ridge (you see, I was still much afraid of that wet soil), and by the middle of May the tender vegetables were in; beans, corn, tomatoes, eggplants, and the summer came on apace.

But I had reckoned without my soil. The fruit trees and berries put forth their leaves bravely, the vegetables came up on time, and those early May days were a delight. But by June a subtle change came over the whole garden. The soil was still as black and wet as ever, in spite of three weeks of sun; the young, tender seedlings of lettuce, radishes, beets and spinach seemed to languish and stop growing. A distinct appearance of withering overtook the fruit-tree leaves; they were curling up and turning yellow, the raspberry leaves were shriveling before my eyes. An alarming blight seemed to spread over everything. At first I thought it was lack of sufficient sunlight, so I took out, furiously, the remaining forest trees over the garden. It then got direct sunlight from 10 A. M. to 4 P. M., in spite of the wall of forest trees on the east and west. Still the desolation went on; all the trees dropped their first crop of leaves and the strawberry and asparagus plants turned yellow and died. Young radishes, spinach and beets simply withered away and died after the first two leaves; the string beans (which will grow anywhere) contented themselves with two sickly yellow leaves; peas rose to about six inches high, stopped, and turned yellow.

Ah, that terrible June! I, that was one of the most successful boy gardeners of my time, saw my work as a grown man coming to nought before my eyes. It could not be the drainage entirely, for under the long, sunny, dry spell my soil was simply fresh and moist—not soggy. Could it be the soil itself—that rich, black loam that looked to be so ideal for plant

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Chrysanthemum plants, grown from same cutting in same soil, in Phipps' Conservatory, Pittsburgh, Pa., the one at left with Radium Brand Fertilizer (R. A. F.), at right with ordinary commercial fertilizer. The comparison of the flowers in their natural state is far more striking even than shown by the camera. What Radium Brand Fertilizer (R. A. F.) has done for the Chrysanthemum it will do for your flowers, vegetables, etc.



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In answering mention HOUSE & GARDEN



No. 1



No. 7

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Hand Book of Trees and Hardy Plants



growth? One after another, five of the fruit trees died—one Baldwin, both Fall Pippins, both cherries; they put up a noble fight for life, sending out two sets of leaves with what sap they possessed, but, when I sadly dug them up—phew! the sour stench that arose from that black, muddy mess of rotten roots! The same occurred with the raspberries—magnificent two-year Cuthbert roots—now sour and black, not even attempting to grow a fibre of new roots, killed with "wet feet" in sour soil! But the overflow berries and grapes, planted any old place about the house, were thriving mightily; so was all the privet and shrubbery in the dry soil at the front of the place. I took hope and consulted a soil expert, for I knew it was not a sunlight problem, but soil and drainage, that I had to deal with.

Said the expert: "That soil of yours, when you get it tamed, will be the most wonderful grower you ever knew. What it needs is lowering the water table about six inches, or else, what is the same thing, raising the soil about six inches. But, above all, it needs plant bacteria. What the roots live and grow on is bacterial life coming from the humus or loam in the soil. Your soil is sour and the acids accumulating in your forest soil for ages kill your vegetable bacterial growth as fast as it starts. What you need is a season of sunlight on that garden, two hundred pounds each of lime or land plaster to sweeten the soil; two hundred pounds of bone meal and at least four wagon loads of manure. Spread these on your garden in the fall, plow it in, and next spring I'll warrant you'll grow the prize vegetables of your section!"

He spoke just in time, for I had about made up my mind to turn the garden into a tennis court. Acting on his advice, during the rest of July and part of August I let it grow up to weeds. Seven of the trees which I had planted well up on filled ashes and field soil were thriving, and the garden level was beginning to rise by that steady process of accumulation which is always going on in a growing proposition (for four-fifths of the bulk of plant and weed life is taken out of the air). Just before the weeds went to seed I started work by scything them down all over the garden. The first load of manure arrived and also 100 new strawberry plants, and about the end of August I plowed under half of the east garden to make a new berry bed. This part of the garden was always high and did not need fill. I used half of the manure pile in mellowing it, and the other half was planted with the young strawberries, a shovelful to each plant. Next June they were wonder berries of that neighborhood! There's nothing like good old manure to make the garden grow! My, but that was a busy fall! First came fifteen wagon loads of field soil, which were spread evenly over the whole garden, raising it about six inches. Then on went the land plaster, 200 pounds of it, and then 200 pounds of bone meal

and two wagon loads of manure. This whole dressing was then plowed under with the wheel hoe.

The stumps of two big maples which stood side by side in the garden were next taken out, burnt, and their ashes spread over the soil. I stood aghast at the hole they left, as it was about eight feet by six and three feet deep, and I was at a loss how to fill it. However, when people want a hot frame in their garden they usually begin by digging just such a hole as I already had, so I simply filled it with two wagon loads of fresh horse manure and put up a frame 6 feet x 7 feet of $\frac{7}{8}$ -inch x 12-inch yellow pine boards, and on them put two hot-frame sashes, thereby making me a hotbed out of a vexatious hole in the garden! The mill size of these sashes is 6 feet x 3 feet, and they cost \$3.00 each. A headboard and footboard made up the difference between my frame and sash size, after which six inches of rich manure and field soil went in on top of the manure fill. The hot frame received two coats of white paint, and was sown to lettuce forthwith, which soon came up, and we enjoyed fresh lettuce all that winter.

This job was hardly finished when the new fruit trees arrived. I made up my mind that it was a mistake to plant such large trees as apples along the south border of the garden, because of the shade they would inevitably cast, so we decided on a line of peach trees spaced 10 feet apart, with a bed of dahlias in between each peach tree, making a solid wall dividing the garden from the rear lawn. This, with a rose arch over the garden entrance and a solid border of pansies in front of the dahlias clear across the garden, would give a pleasing effect as viewed from the rear lawn (as this latter is always a favorite camping ground for my family). So these peaches went in first; two Elbertas (a splendid fall market variety), two Crawford lates (white and juicy) and the two Crawford Earlys flanking the garden gate, which, having been planted on an ash fill, had survived from the first garden. Half way down the main garden path and ten feet apart went in two new cherries—Black Tartarian and a Governor Wood. The former we used to call "Oxhearts" when I was a boy, and the latter is an early red-and-yellow sort. Along the west border of the driveway I put in two Kieffer pears and a Champion Quince. Kieffer does splendidly all over South Jersey, a rich, juicy pear, larger than Bartlett. Mine grew to be ten feet high their first year.

All these trees and brambles were planted mound style; that is, a shallow hole in the soil, good, rich earth packed tight about the roots, next a shovelful of manure, and finally a mound of garden soil piled up to cover the graft joint onto the root.

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Trees put in in late October start considerable root budding before the hard frosts reach them in December, and in the spring they get time to make a lot of root-growth before the sap rises in April and the buds begin to come out. Trees put in as late as the middle of May may succeed, but it's a toss-up, for the leaves begin to demand sap before the roots can get a start to supply it, and all the sap dormant in the root and trunk is soon exhausted. After dropping its first leaves, it will still grow another set, and then if sap is not forthcoming from the roots the tree will inevitably die.

I was very uneasy about planting any more trees along the back border of the garden, though that is theoretically the ideal place for them. This was the lowest ground in my particular garden and everything had died there the first year, even the hardy privet hedge. The new fill, however, had raised this nearly a foot above the main traverse drain, but still I feared the overhanging branches of the forest trees shutting out the direct sunlight at high noon. Two Early Harvest yellow apples had survived here, however, and were getting along slowly, having been planted on high spots, so I decided to risk a row of ten currant berries (Industry), all of which did well the succeeding summer. Here also, next to the drain, I decided to put the new asparagus plants, of which I had ordered fifty three-year roots to replace the hundred two-year roots which had all died. Asparagus must have a permanent bed of its own, in rich, dry soil not likely to be disturbed by annual plantings of vegetables, so where could they be better put than in the rear border of the garden, in front of the currant bushes and behind the main drain? The old location in the east garden I foresaw would be soon wanted by the new strawberry runners, of which we would have at least 300 to find room for the next fall. No almanac or seed catalogue that I know of tells you how to set asparagus roots, though they tell you how far apart and what kind of soil to put them in. The thing to do is to dig a trench about a foot deep and two feet wide and set the plants in well-rotted manure in two rows, 18 inches apart in the rows, "staggering" the rows; that is, one row ahead of the other nine inches. Fill back the trench soil so as to cover the tops of the roots about four inches. Two years later, when you begin to use the shoots for the table, build a blanching mound over them of loose loam a foot high, and cut the shoots off side-wise through this mound with an asparagus knife.

Editor's Note.—This is the first of a series of four articles that Mr. Miller has written on his garden. The next appears in April—"Slave of a Wheel-hoe"—a fascinating story of garden work.



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The Uses of Woodwork in Interior Decoration

(Continued from page 169)

who, writing in the Age of Augustus Cæsar, warned against the affectation of heavy plaster cornices, lest they fall. But Adam did not use the Lime-Stucco of the Ancients, but a sort of dead Plaster of Paris, mixed with fibre and glue to hold it together—a poor material, one would think.

It might be interesting to digress somewhat on this general subject. Lime, Plaster, Stucco, Mortar, Plaster of Paris, Cement, Concrete—these names are generally used so loosely and incorrectly that it is difficult to make oneself understood in writing about them. The other day a client spoke to me about disliking concrete houses. I completely misunderstood him, rather stupidly, I confess, but, as I disliked what I understood by "concrete houses," too, it did not matter. Of course, he meant a house with a facing of cement and sand, generally called a "stuccoed" house, or a "rough-cast" house; structurally its walls might be of hollow tile or wood-frame and wire lath, or brick, or anything else. He did not refer to the construction. I thought he meant a house with walls built of concrete, the sort of a house that Edison has so glowingly recommended, cast in one piece—walls, floors, roof and all, in one day, in a series of iron moulds—or the house built of great concrete slabs, that the Sage Foundation first tried at Forest Hills Park, and discarded later, preferring houses of other material.

This is merely a case in point; let us examine what these terms generally are understood to mean by architect or builder. There are only three active materials involved—Lime, Plaster of Paris, Cement. Each is obtained by roasting or calcining rock; each is mixed with sand and water before using, and all harden in what seems at first a more or less similar way. As to their differences, here they are:

Lime: Made from roasting Marble, Calcite, Limestone, Chalk, Oyster Shells, which, chemically, are all Calcium Carbonate, or Ca Co₃, differing among themselves only in their form of crystalization. By this process Carbonic Acid Gas, or "CO₂," is driven from the stone and leaves the pure white material we call Quicklime, unslaked lime, or, chemically, Calcium Oxide or CaO.

Quicklime longs for its old companions; its hands are outstretched; leave it alone, exposed to the air, and quietly, unobtrusively, it seizes every molecule of Carbonic Gas that comes near, and before we are aware of a change, behold our sack of Quicklime has become crumbly, air-slaked Lime! Of no more use is it for building; it might be used as a fertilizer or to make an indifferent, poor whitewash,

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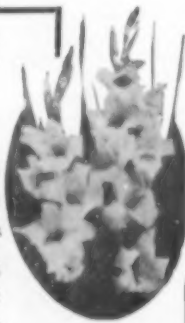
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but for little else. Put it in a pail of water and it sinks, inert, to the bottom like a white mud; such molecules which have not found their Carbonic Acid mates will accept the water instead, and there is a certain amount of bubbling.

For Quicklime has also a strong affinity for water, and changes to Calcium Hydroxide with enthusiasm, with great bubbling and heat, with steam arising and a vast to-do.

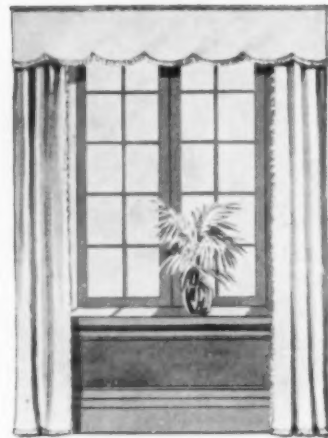
This Calcium Hydroxide, or Hydrated Lime or Slaked Lime (not Air-slaked Lime) or Line Putty, or "Fine Stuff," is what is used in building. Mixed with sand it formed the only mortar generally used throughout Northern Europe and the United States until Portland Cement was developed in the last century.

The slaked-lime and sand, too, mixed with cattle hair and called "Coarse Stuff," is used for the first coats of the common inside plastering of houses; formerly it was used for the finishing coat, too, though without the hair. Its disadvantages are its slowness to dry and the difficulty of slaking the Quicklime; for, notwithstanding its violent bubbling and steaming when water is poured on, there always are a few particles which resist the water, which prefer their single state and will not unite, despite the Italian with his hoe. Time alone seems to solve the difficulty; all architectural specifications call for the lime to be slaked "at least three weeks before using," or sometimes "three months;" the old Romans, Pliny tells us, had a civil law by which it had to slake for three years before anyone could use it! The longer it slakes, the better it becomes.

On the wall it dries out and "sets" in a day or two; but a very slow change begins which is not completed for hundreds of years, perhaps—the divorcing of the water and substitution of such Carbonic Acid Gas as it can absorb from the air, when it has returned to its original form and is actually artificial limestone, very hard and strong.

Plaster of Paris is the next to consider. It is formed by roasting Gypsum or Alabaster, which are chemically Calcium Sulphate + Water. The roasting drives off part of the water, leaving the fine powder we know as Plaster of Paris. Mix it with water and part of the water is absorbed; it quickly hardens into its original chemical state, though it never gets as hard as the Gypsum it was made from, nor as hard as Lime does. It swells slightly as it "sets," so fills moulds well. Therefore it is the material always used for cast decorations.

It does not stand the weather as lime will; rain disintegrates it, so it is not used out-of-doors. Mixed with slaked lime, however, it sets slowly, taking hours, instead of minutes, and is used for the last coat of inside house-plastering. Formerly



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only lime was used, as we said before; Plaster of Paris is a comparatively recent discovery—or rediscovery—since the interiors of some of the earliest Egyptian tombs were coated with this material.

Cement is the last of the three. It is somewhat like lime, but much more complicated chemically. Until a very few years ago—in the eighteen hundreds—it was produced by calcining (roasting) a volcanic or a sedimentary rock which naturally contained the proper ingredients; this cement is known as Roman, Puzzuolanic, Rosendale; now the best of our cement, and by far the most of it, is produced by calcining an artificial mixture of the proper ingredients; there is nothing left to chance; we are sure of our product, which is stronger than the old natural cement; we call it Portland Cement.

Cement does not need to dry out in order to set, but a little water will cause it to set anywhere, under any condition; under water, as well as in the air; so, like Plaster of Paris, it must be wet only immediately before use; if it once starts to set and the "set" is broken, it will never be so strong again. There is no need for this; it takes several hours for the Initial "Set," not several minutes, like Plaster of Paris. However, it is sometimes mixed with lime in the same way, to retard the setting. If the final set has once started, the cement must not be disturbed, or it is not fit to use again; therefore, no wet cement can be kept in good condition overnight for use in the morning; though I find that the smaller and irresponsible Italian contractors are prone to attempt it, breaking up the left-over material and mixing it with a little new. Its hardening power has gone, though, and it is not much better than so much sand.

Sand does not take a chemically active part with either Lime or Cement; it merely dilutes the material, and, if in proper proportions, it makes the hardened material less apt to shrink and crack. Cement particularly has a superabundance of strength; it would be wasteful to build a wall of cement and sand alone, so small stones or clean cinders are mixed with the cement and sand, and this triple mixture is *Concrete*.

As to the terms Mortar, Stucco or Plaster, they do not describe special materials, but indicate where the materials are used; though the word "Plaster" is sometimes carelessly used as an abbreviation of "Plaster of Paris," and is misleading.

Mortar is the material that fastens stones or bricks together in a building; it may be Lime Mortar, lime and sand; or Cement Mortar, cement and sand.

Plaster, or Plastering, is the wall and ceiling covering. A room may be plastered with lime and sand, with Plaster of Paris, lime and sand, or with cement and sand; a house may be plastered outside with Lime and Sand, or with Cement and Sand; or, in the case of old houses in the



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Win. Warner Harper Proprietor.

Chestnut Hill,
Phila., Pa.
Box H

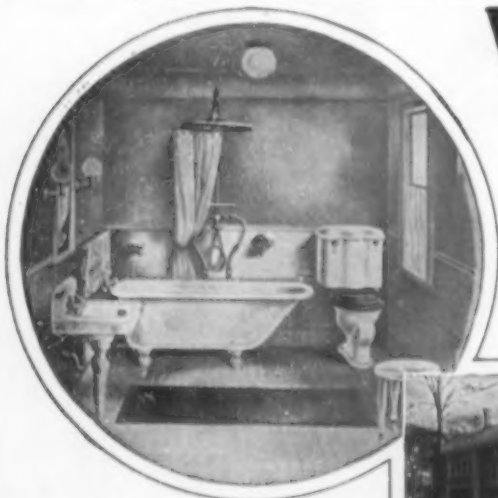


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Make a Man Proud of His Plumbing

Whether for the modest cottage or the elaborate mansion, each individual Wolff Fixture receives the personal supervision of the department head from the moment our factory commences work through all stages of construction until its final completion.

**Plumbing Goods for
Anyone and Any
Home at Any Price**



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Manufacturers of Plumbing Goods Only

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Pottery: Trenton, N. J. CHICAGO

In writing to advertisers please mention HOUSE & GARDEN.

Southwest, plastered with Mud. The Plastering is the Covering; it has no reference to a particular material.

Stucco, as used now in America, means simply Outside Plastering. It used to refer to a certain material composed of Lime, Sand and Marble-dust, but this meaning is lost.

My client should have said a "Plastered House," or a "Stuccoed House." A "Concrete House" is far from what he meant. But all this has nothing to do with Robert Adam and his style. He introduced a curious material for plastering or stuccoing his buildings outside, and kept the exact formula secret, I believe; he had bought it from an Italian. Inside for his ornament he used a mixture of "dead" or "set" Plaster of Paris, some sort of fiber and an unknown glutenous compound, the mixture, as we have said, poured hot into metal moulds. We do not know exactly what it was; but the material is unimportant. His interiors would have been just as good in ordinary Plaster of Paris and Lime; perhaps better.

We are behind him in design—the average of us—but we have plastering materials at our command of which he never dreamed. They are all combinations of our elemental three, Lime, Plaster of Paris and Cement, but so many combinations are there, with so many inert materials! Selentic Cement, Parian Cement, Keene's Cement, Adamant Plaster, Scagliola, Marezzo, and the various kinds of outside plastering, such as Sgraffito, Depeyter, Rough Cast, Pebble Dark, and all the various imitations of stone.

Let us throw up our hands and stop, or we will soon have a text-book on "Plastering!"

Efficiency in the Flower Garden—II

(Continued from page 161)

be just right. It must be a soil that will absorb and hold a great deal of water. It must also be fine and light, so that the sprouting seeds may push up through it readily. Decomposed sod, or garden loam with as much fibrous matter in it as possible; leaf mold, or chip-dirt or cocoanut fibre, and sand or very finely sifted coal ashes, are the ingredients required. Mix the loam and leaf mould in equal portions and add as much of the sand as is needed to "cut" the mixture thoroughly, making it so that when a handful of it is squeezed up into a ball it will crumble apart under the touch of the finger when released. After these things are mixed together run them through a sieve—an ash-sifter will answer the purpose, if you haven't one you use especially for your garden work. While flower-pots are sometimes used for starting seeds in, it is exceedingly difficult to keep the soil in them at an even degree of moisture, and results are likely to be unsatisfactory. Seed-pans, which are made for the purpose and are inexpensive,

are much better. If you have to use a pot, take a comparatively large one, and, after filling it about a third full, place a small pot in the center of it and fill the prepared soil around this, leaving it empty. Sow the seeds on the surface of the soil between the two pots and apply water through the inside pot, which is plugged at the bottom. Or the soil may be put in the small pot and the space between the pots stuffed with moss, which is kept evenly moist. In either case the water passes slowly through the porous sides of the smaller pot, keeping the soil moist without getting it wet. A light of glass over the pots, raised slightly at one side to admit air, will also help to conserve the moisture. While this method is good for very fine seed, like that of begonias or petunias, small, shallow wooden boxes, which may vary in size from a cigar box to a cracker-box "flat," may be used with more convenience and as much success for the majority of the flower seeds.

A number of different sorts may be started together in the same box, but be careful to tag each one as you plant it. Do not cover the seeds too deep. Very fine seeds should be merely pressed into the moist soil with a brick or piece of flat board, and covered with a thin layer of cocoanut fibre or sifted moss to shade the little sprouts until they begin to bury themselves in the soil. The small flower seeds should be covered an eighth to a fourth of an inch deep—the old rule is two to three times their diameter when sown inside, and three to four times when sown outdoors. Larger things, such as sweet peas, should go from a quarter to half an inch deep. Very hard seeds, such as moon-flowers, cannas and musa (banana), should be carefully filed or cut through and soaked a day or two in tepid water before planting.

Seed-beds made for flowers in a cold-frame or outdoors in some sheltered spot should be carefully drained, preferably by having a layer of coal ashes two or three inches thick put down, and the three or four inches of surface soil should be prepared as above. A little bed only a few feet square will serve for starting a great many plants. The rows of most sorts may be made as close as three or four inches, if it is intended to transplant the seedlings. If one expects to thin them out and grow them where sown until ready for changing to the garden, they should be allowed more room.

In sowing flowers in the open where they are to bloom, every possible care should be taken to provide a fresh, finely pulverized seed bed. A liberal dressing of manure or fertilizer should be added to it before the seed is put in.

Among the best of the flowers which may be started from seed to flower the first year are: African daisy, allysum, ageratum, antirrhinum, asters, balsam, begonia, calliopsis, cannas, candytuft, mar-

"ILLINOIS" SELF-WATERING WINDOW BOXES AND HANGING BASKETS

Patented January 29, 1907—June 22, 1909



The tube in the left hand corner extends upward for the purpose of pouring water into the reservoir in bottom which supplies moisture to the roots of plants through sponges and holds sufficient water to last 10 to 20 days.

THE PRINCIPLE OF SUB-IRRIGATION, CONCEDED BY AUTHORITIES AS THE ONE CERTAIN METHOD OF OBTAINING THE BEST GROWTH IN ALL KINDS OF PLANTS, IS EMPLOYED TO PERFECTION IN ILLINOIS SELF-WATERING WINDOW BOXES AND HANGING BASKETS. THEY CAN BE PLACED IN ANY WINDOW OR HUNG IN LIBRARY OR PARLOR WITH ABSOLUTE ASSURANCE THAT NO ANNOYANCE WILL BE CAUSED FROM LEAKAGE AND CONSEQUENT DAMAGE TO PROPERTY.

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The Factor of Safety in the Human Body

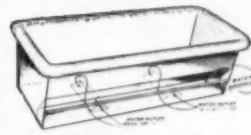
This booklet tells you how to keep tab on your strength reserve. We mail it on receipt of postcard request. If you ask in a letter enclosing six 2c stamps, we will also send a sample copy of GOOD HEALTH—the pocket magazine which teaches you how to keep well. Address your postcard or letter—

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\$1.00 brings you this metal Window Box That Makes Plants Grow



It can be set inside or outside the window or on the porch railing. Will not leak and damage the wood-work. Patented ventilated and drainage bottom. Made of heavy galvanized steel, enameled dark green, 6" deep, 7 1/2" wide and made in any lengths.

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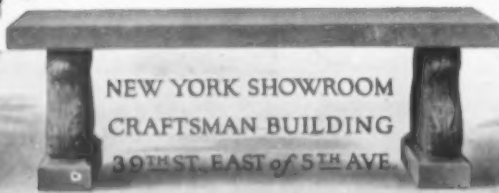
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DOUBLES *the* GARDEN'S CHARM

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CRAFTSMAN BUILDING
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guerite carnation, celosia, annual chrysanthemum, cosmos, dahlia, dianthus, gypsophila, annual hollyhock, kochia, annual larkspur, lobelia, mignonette, myosotis, pansies, petunia, poppy, portulaca, ricinus, salpiglossis, stocks, sunflowers, verbena, zinnia.

Vines and trailing plants which may be grown from seed: Balloon vine, canary-bird vine, coboea, cardinal climber, cypress vine, dolichos, gourds, Japanese hop, moonflowers, morning glories, nasturtiums, sweet peas, thunbergia.

The Unusual in Table Linen

(Continued from page 181)

the edges finished with a narrow hem, as was the tablecloth. Such a set is inexpensive and easy to make, since it is all done with a coarse thread.

Cross-stitch cloths and napkins are always attractive, especially when the pattern is compact and the stitches small. They go especially well in Colonial dining-rooms.

In the shops are being shown hand-woven linens from Russia decorated with red designs set in bands. They prove serviceable for tea or the light supper.

The conventional pink and blue flowered china requires a damask of smooth texture, so, in the event of our luncheon or breakfast sets not being of a sturdier make and design, it is advisable to keep to the ordinary damask. Among the attractive damask covers is one blocked in yellow and white, others have blue borders. These are especially appropriate for tea in summer on the porch. Little weights attached to the corners will prevent the wind from curling them up or blowing them away.

For a reception, a filet or open-work cloth laid over a colored silk damask gives a rich effect. Especially luxurious is it when the damask is yellow, the china gold, and white and gilt candlesticks are used. Which is another way of saying that color is more and more being used in table linen.

A Solution of Cold-Frame Inconveniences

WHEN the calendar and the annual crop of horticultural catalogs announce that spring is really not so far away as it seems, the soils-and-seeds enthusiast without a greenhouse is prone to long for something between a hotbed and out in the open. There are flats to be prepared and soil to be dried and pulverized; seeds are to be unpacked and planted early; innumerable little fussings and fixings suggest themselves but retire before the boisterous and inconvenient conditions obtaining about the average home garden at this time of year.

It was to make comfortable and pleasant these necessary pre-season activities that the glass-fronted workroom illustrated on this page was devised—a cross, in effect, between a greenhouse and a cold-frame,

TETTENBORN

Solid Porcelain Refrigerators

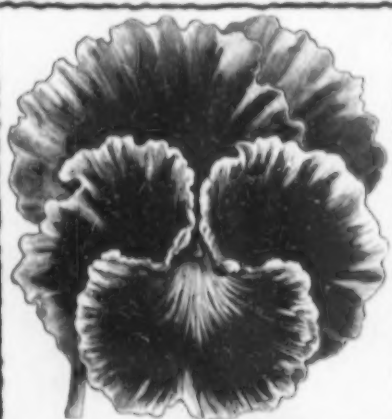
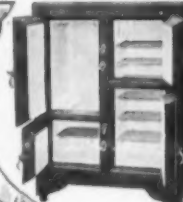
Are the only refrigerators made having the entire ice chamber of one piece of genuine solid porcelain ware over an inch thick without a seam, joint, crack or sharp square corner or edge. Guaranteed against cracking or breaking.

You can appreciate how really permanently safe and sanitary these are and the decided advantages they offer.

Each food compartment too is of one piece without seams or joints, (Not enamel on iron or steel), but real solid porcelain ware.

The circulation is right. The walls are five inches thick, solidly insulated (thicker than any other) require less ice. Many sizes. To ice from outside if wanted. Special sizes to order. Our catalog will be to your advantage.

BEAVER REFRIGERATOR MFG. CO., New Brighton, Pa.



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Maule's Seeds

Endorsed by more than 450,000 progressive gardeners as the best ever

Our new Seed Catalogue contains everything good in seeds, bulbs, small fruits and plants. 750 illustrations; 176 pages. Free to any one sending us a request for it. Send for it today.

WM. HENRY MAULE, Inc.
2117 Arch St. Philadelphia, Pa.

Send 10 cents, mention this paper, we will enclose in the catalogue a packet of the above GIANT pansy.



No. 11 No. 12 No. 13
\$1.25 Each, the Three for \$3.50



Four Roomed Martin House No. 77 \$5.00

BIRDS PREFER RUSTIC HOUSES

and we know how to please them in matter of Architecture. Best Wire Sparrow Trap, \$4.00; Booklet, "Bird Architecture," 20c. Free with every order. Attractive Martin Houses, \$4.00 to \$20.00. We prepay on Mailables within Third Zone. Weight of three, 10 lbs.

The Crescent Company, "Birdville" Toms River, N. J.

with many of the advantages of the former, most of the latter's, and some of its own thrown in for good measure. It is the *de luxe* edition of the conventional frame, wherein one crouches in cramped attitudes and fear lest the seedlings be nipped by the cold before the sash can be replaced; it does its work efficiently and it is inexpensive to build.

The chief requirements for the construction of such a place are a perpendicular out-building wall with a southern exposure, four or five standard hotbed sashes, some 2 x 4 joists and rough boards, and a roll of tar paper to cover the roof and ends. The photographs show the



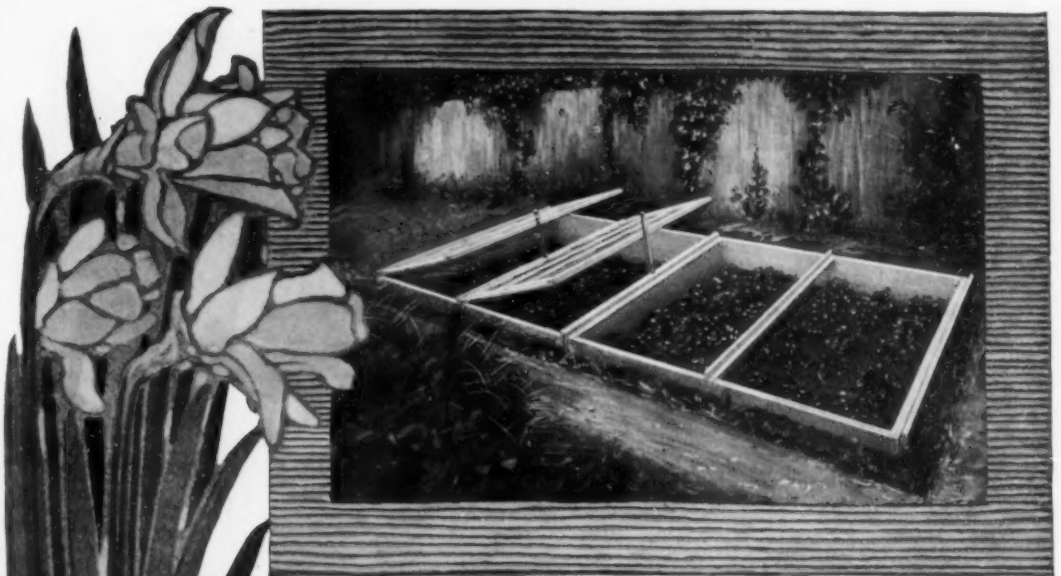
The roof is covered with tar paper and slants enough to shed rain

general plan of construction, which can be varied to meet individual requirements. In this particular case the beds are level with the outside ground, for the entrance doorway connects with an out-building whose floor is sunk four feet below the surface, but there is no reason why they should not be built up to conform to other situations. The beds should not be more than ten inches from the glass at its lower end, for the nearer they are the better



Glass-fronted workroom built against the south wall of out-buildings

will the plants grow and the more easily they may be ventilated. For ventilating, the sashes are simply lifted from the cleats at the lower end and slid the required distance down their runways, thus leaving openings at the top. This must be carefully attended to, for though the temperature will run high during the middle of a sunny day, the ground itself remains quite cold and the plants will damp off quickly



A four sash standard frame, 12 ft. x 6. Price \$23.90

How to Give Your Garden a Running Start

THE latter part of last winter, you will remember, was just the kind that made you think that "spring is going to be early this year." But it wasn't. It lagged along until some of us had to plant our gardens all over again, and others said: "What's the use, anyway, of trying to have an early garden any more in this confounded climate?"

Along in February we reminded you that Cold Frames or Hot Beds were the only sure insurance against a late garden. We even went so far as to say pretty strongly, that you ought to buy some of our Frames—even if only ten of the Single Plant ones for \$6.25, and boost your garden along two to six weeks.

This year you are going to buy frames—you made up your mind to that, eight months ago.

This being so, as it certainly is so, then the thing for you to do; is send at once for our Two P's Booklet, which tells you about the Pleasure and Profit of Cold Frames and Hot Beds.

We have seven different sizes and kinds of these frames, or garden boosters. Send your order now (when we can ship at once) and have them ready for the first signs of Spring.

Every one of them is illustrated, described and priced in our Two P's Booklet. There are several pages of Helpful Hints, and a Planting Time Table, both of which you want, handy, under one cover. Send for this Two P's Booklet.

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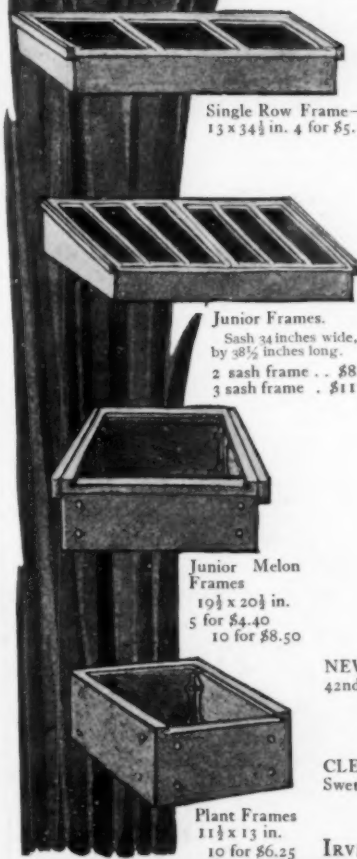
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Alfred Mitting has had 47 years experience with berries

from all over the world. His new berry, Macatawa, is the wonder, to all that see it in fruit. It is 3 1/2 inches one way by 3 3/4 inches the other way. Send a postal card today for his 1915 catalogue with 1 colored plate, including the cream of all berries from a commercial standpoint or for home requirements.

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STRONG, two-year-old, pot-grown Rose Plants that will give a full crop of flowers this season, is one of our most important specialties. In our Garden Book this season we offer and describe over two hundred of the choicest varieties, including the latest introductions of the world's most famous Hybridisers.

Special: The "Dreer Dozen" Hybrid-Tea Roses, a collection of high-grade sorts that always do well—for \$5.00.

Or, send for a copy of the Garden Book free, and make your own selection.

HENRY A. DREER  *Rose Specialists*  714-716 Chestnut St. Philadelphia, Pa.



without proper air. Regular greenhouse benches instead of the solid beds would lessen this contrast of soil and air temperatures.

The sunken pathway is a great convenience, for it does away with tiresome stooping over the beds. The work-bench at the back, too, is invaluable as a place to prepare the flats; their seed can be thoroughly pulverized and mixed without danger from the wind; and, surrounded by a delightfully warm atmosphere, one can work all day in comfort. By April first it is safe to plant lima beans, squash, melon and cucumber seed in small pots set in flats. Most of these would rot or burst in the hotbed, but at least two weeks can be gained, especially with the squash, by starting them in the glass-front room.

Quite contrary to what one would expect, this near-greenhouse is not good for transplanting from the hotbed. In the spring it is a workroom and cold-frame rather than a forcing-house, for plants ac-



The sashes are set at an acute angle to catch the sun's rays

customed to bottom heat will stand still when deprived of it; yet there are few weeks in the year when the little room is not in use.

In July, for instance, when the sashes have been replaced by a covering of coarse cheesecloth, perennial and biennial seeds are sown here in patches or drills and carried through the first transplanting. The cheesecloth affords sufficient protection from direct sunlight and the beating of heavy rain, yet admits light enough to induce good growth. As soon as the seedlings begin to grow after transplanting, it should be rolled back except during the intense heat of midday, thus preparing them for full sunlight at the second moving. Columbine, dianthus, campanula, hollyhocks, and especially those seeds which are slow to germinate, will do well under these conditions.

Early in August pansies may be sown,

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Build up your soil and increase the yields. Unless you add HUMUS and PLANT FOODS to depleted soils you cannot expect results.

Well-Rotted Horse Manure **DIAMOND BRAND COMPOST** **Dried, Ground and Odorless**

is free from weed seeds, largely HUMUS and abounds in plant foods. It will also stimulate bacteriological action in the soil. A large grower aptly says "Stable Manure is the only thing that supplies all the needs for truck gardening, greenhouses and lawns, with one application." Give your lawn a coating of Compost this Spring—need not be raked off—it will hold the moisture during the summer and keep your grass green. Use it in your vegetable and flower gardens.

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Sunlight Double Glass Sash make the earliest and strongest plants at the least cost of money and labor. They are complete without mats and shutters. Just put them on your hot-bed or cold frame and then watch the plants grow—not too fast—not spindling—but steadily and strongly. Thus they are fitted to keep on growing when transferred to the open ground.

Immediate shipment is made and freights are equalized to the buyer according to distance. Ask about this when you write.

Get our free catalog with all details, also Prof. Massey's booklet on hot-beds, cold frames and small greenhouses for 4c. in stamps. Write today.

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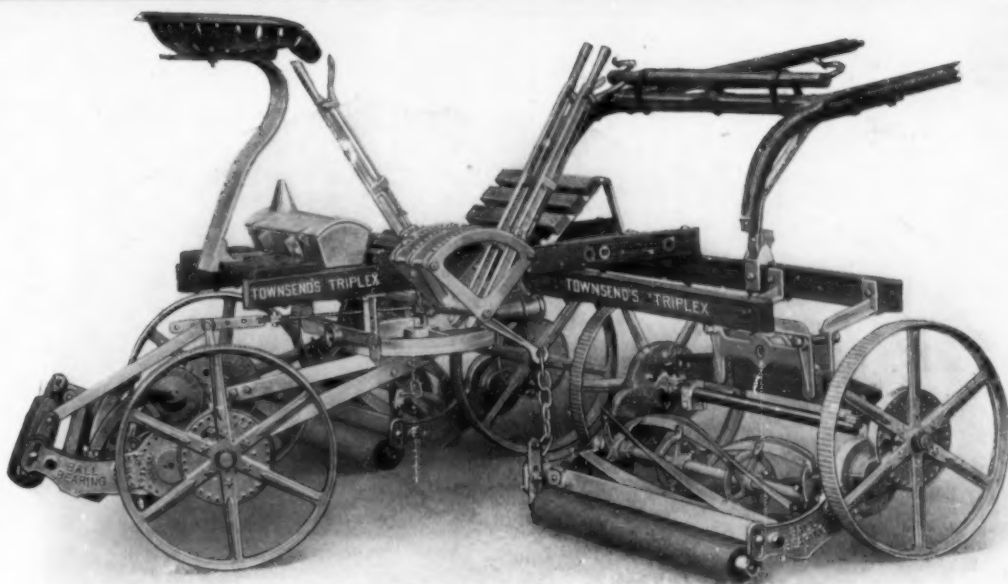
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Drawn by one horse and operated by one man, it will mow more lawn in a day than any three other horse drawn mowers with three horses and three men. (We guarantee this.)



Floats over the uneven ground as a ship rides the waves. One mower may be climbing a knoll, a second skimming the level and a third paring a hollow. Does not smash the grass to earth and plaster it in the mud in springtime, neither does it crush the life out of the grass between hot rollers and hard, hot ground in summer, as does the motor mower.

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Farr's Hardy Plant & Specialties

Edition 1915-16

tells of the favorite plants that make the hardy garden an endless joy from the earliest days of spring to the time when the plants must be covered for their winter sleep. It is a book—rather than a mere catalogue—describing in an extremely interesting way the habits, the form, the likes and dislikes of my favorite perennial plants, with notes about the time of blooming and colors of the flowers. There are many illustrations of my Irises, Peonies,

Delphiniums, Aquilegias, hardy Chrysanthemums, with twelve full page plates in natural colors, (reproduced from Lumiere plates) just as the flowers grew here at Wyomissing.

Over Five Hundred Varieties of Peonies

are accurately described, the text having been prepared from my own field notes. The book includes the Irises as well as the Peonies, classifying and describing the hundreds of varieties and telling how and where to grow them. Other favorite hardy plants described are the Phloxes, Asters, Poppies, a choice selection of Roses together with a unique collection of the new and rare Lilacs.

This Book is for You

if you write for it. I trust that it will be an inspiration to you, as its predecessors have been to others who love the many hardy plants that are a never-failing source of delight, making the hardy garden a place of recreation and rest.

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Do you know the joy of looking each day for new rosebuds, to watch them open and grow into splendor, to feel as if they were almost human and begging your care and love? Plant a garden of C. & J. Roses and you'll learn this delight. Ours are the aristocrats of the rose world—selected for their great beauty and hardiness, and are **guaranteed to grow and bloom.** Selected from all the varieties in commerce, they constitute a wide range in color, size and growing habits for all climates. We offer nearly

400 Roses—Nature's Best

101 of them are winners, and we have marked them with a * in our 1915 Rose Guide—making ordering easy and safe. The Rose Guide is a beauty—contains 85 instructive illustrations, 19 in color—42 pages of interesting descriptions. It's **free,** and with it we send **9 Art Rose Poster Stamps,** if you mention

House & Garden. Drop us a postal today. Plan now for a beautiful rose-garden. Remember, C. & J. Roses are guaranteed to bloom.

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Rose Specialists—Over 50 Year's Experience.



SALPIGLOSSIE

(Orchid-Flowering)

as illustrated on the front cover of our Catalogue, is a distinct favorite with those who have become acquainted with this delightful annual.

The orchid-flowering strain branches freely from the main stem, forming fine, spreading plants, flowering from all branches, making it invaluable for cutting.

Following are a few of the popular varieties:

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OUR SPECIAL OFFER

For 25 cents, in coin or stamps, we will send one packet each of the six separate varieties listed above, which if purchased separately would cost 60 cents.

For description and prices of other novelties and specialties in flowers and vegetables, as well as standards, write for a copy of our 1915 Spring Catalogue.

Stump & Walter Co.

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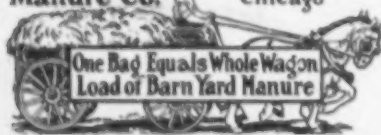
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Your lawn, your flowers and shrubs, your vegetables and fruit trees, all need plant food. Use natural fertilizer. It is best. And use it now to get your soil ready for spring planting.

SHEEP WIZARD MANURE

is all natural plant food and humus that makes better soil and better crops.

The Pulverized Manure Co. 25 Union Stock Yards Chicago



Sold by Garden Supply Houses Everywhere

the small plants set out in the garden, and late in September lifted back into the greenhouse on which the sashes should be replaced about October 15. By Thanksgiving Day the pansies will begin to show buds or even a few blooms and will make fine plants for budding out in April. Clumps of hardy chrysanthemums may also be lifted in August and set near the edge of the bed, close to the sunken path. Their branches will, of course, turn somewhat from the wall, but the flowers will be quite satisfactory and the season of bloom considerably prolonged.

About August 15 begin with the first sowings of lettuce in the work-room beds, and repeat every two weeks until October. Make the plantings small and scatter the seed well, thus avoiding weak and useless seedlings. The variety which shows red edges on its leaves, and one of whose names is mignonette lettuce, will be found most satisfactory for this work, as it stands the cold well and much of it will winter over and begin to grow again in the warm weather. Its ability to carry things through the cold weather is indeed one of the most valuable features of the pseudo-greenhouse—R. S. Lemmon.

The Water Hyacinth

JOHN BURROUGHS says there are no morals or ethics in nature. Strong plants overgrow the weak and usurp the territory. This aggression is less common in the water than the land, yet one of the most prominent examples in nature is the water hyacinth. Within the past decade it has been more closely observed, written about and strenuously dealt with than any plant in the United States, if the Canada thistle is excepted.

When first introduced from Guiana as an ornamental aquatic it became vastly popular. Its magic growth and rapid florescence excited interest and admiration.

The fact soon became apparent that no aquarium of average size could support such powerful growth except for brief periods. From aquaria large divisions of the plants were turned into more commodious water-tanks, and fertile soil in the bottoms encouraged growth. Tanks overgrown, ponds, lakes, running streams, and even bayous, were beautified by new plantations. The rapidity with which it colonized all still waters and slowly running streams was a matter of congratulation. This condition of things prevailed for only about three years, when objections were urged against the aggressive spread of the plant. It covered ponds, lakes and bayous from bank to bank. Canals were so densely overgrown that plants had to be cleared out and destroyed. Navigable streams became impeded to such an extent that strenuous measures were adopted to eradicate the plant and prevent its further increase. Great care was exercised to keep it within already-infected limits. Wherever one root found

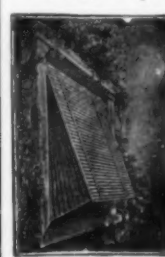


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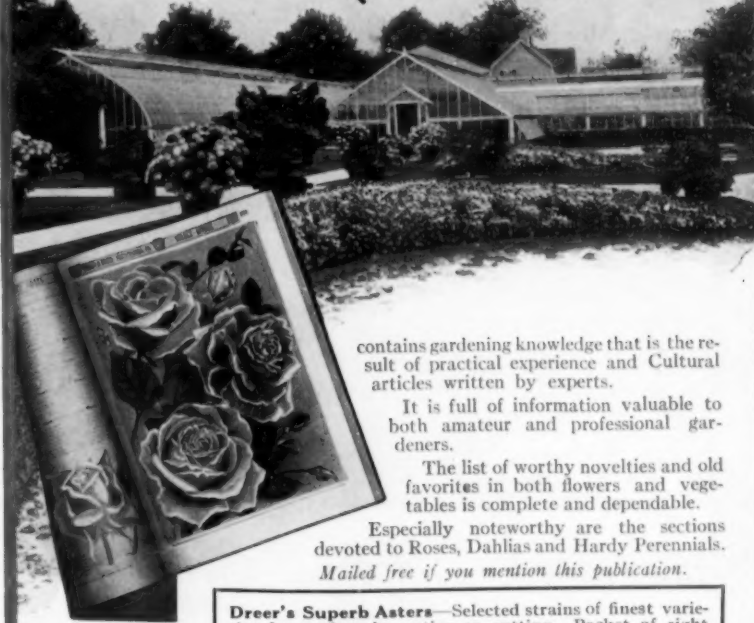
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its way to water the increase and spread was immediate. It is not surprising that it thus naturalized itself when it is considered to what class it belongs.

Named after the botanist Pontederia in the sixteenth century, this genus of monocotyledonous plants numbers eight American species. *Pontederia cordatus*, the pickerel weed, is the most widely common. Several former species are not now classed with that genus, but separated as the genus *eichornia*, the most distinguished of the two species, *E. crassipes major*, known under several local names. In Jamaica it is called the bladder-stalked pickerel weed; in Guiana, the gamalote or water plantain, and in the United States, the water hyacinth.


The specific name, bladder-stalked pickerel weed, is derived from the curiously inflated stems. This balloon-like stem construction naturally supports the plant, enabling it to float upon the surface of the water with the many clustered roots depending. Filled with delicate, spongy air-cells, the inflated stems act as buoys, causing decided difference of root growth from the pickerel weeds in general. They spread horizontally over the muddy bottom, whereas the water hyacinth is independent of soil, deriving its sustenance from air and water. The roots, vertical in the water, when shallow will take hold of bottom soil of sand or muck. However, as soon as the water rises and streams increase in depth the plants float on the surface and the roots depend high above the bottom soil.

The water hyacinth advances always in a heavy phalanx. It bears down and overgrows every plant it encounters. Coarse aquatic plants on the margins of running streams afford the water hyacinth protection until a plantation forms; then every plant disappears except the aggressor.

The name water hyacinth is from the similarity of the bloom stalk to that of the hyacinth. The tall, erect bloom-stalk bears twenty flowers, more or less, all around and from base to tip, each the size of a silver half-dollar, exquisitely tinted rosy-lavender, with a gleam of gold in the center. The plant, with equal justice, might be called the water orchid.

In color, size, shape and texture the flower of the water hyacinth bears close resemblance to some of the loveliest of the terrestrial orchids. The crisp, green foliage, shining as if varnished, of the freshest, quickest growth of any plant of land or water, and the beautiful hirsute roots of reddish-purple, softly depending beneath the surface of the water, with the grace of seaweed, add their charms to the loveliness of the flowers.

For its perfect beauty and rapid growth, the water hyacinth is, and always will be, a favorite for aquaria indoors, where every interesting feature can be closely scrutinized, and for water tanks of large sizes, inconspicuous, outdoor po-



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It is only in southern climates where still waters seldom, and running waters never, freeze, that the water hyacinth becomes an evil. In Florida and Louisiana untrammelled growth would be granting a complete monopoly. Impenetrable masses of heavy, green growth would render the passage of small craft impossible, and even the progress of strong and well-equipped vessels over deep waters would be impeded.

Neither in Florida nor Louisiana are these conditions allowed to prevail. Over ten years ago the wild growth of the plant was condemned. Active measures were adopted for its extermination. Harvey's Canal and Bayou Saint John, in New Orleans, and the Saint John's River, in Florida, are prominent examples of its obstruction to navigation and the manner in which it crippled fisheries.

All ordinary remedial agents failed; the plant continued a crying evil. The Government gave efficient aid. Liberal reward was offered for the discovery of some destructive agent. Nothing did more than temporarily check growth. The many chemicals, mechanical devices and modes proposed for the purpose would fill a book if enumerated. Some were applied to the water and some directly to the top growth and crown of the roots. Entomologists sought for insect foes, poisonous to plants. Destructive bacteria did, for a time, materially lessen the growth; it inspired more reasonable hope than any other agent.

Not long ago, Bayou Baratavia and Bayou des Allemands, in Louisiana, were so densely overgrown that important lumber manufacturing plants had to suspend operations until a clearance could be made in order to get the log tows through. The Government has supplemented private business interests quite recently by two vessels specially fitted and equipped for clearing these bayous of the plants. They use a combination of chemicals, which appears to be only of temporary benefit. The two vessels endeavor to cover the entire surface of the bayous with sufficient regularity to keep pace with the rapid growth, so that traffic can proceed; the engineers say there is but little hope of extermination. There is an expressed determination to increase the hyacinth fleet for more extensive operations upon infected waters. One simple method of uprooting and destroying the hyacinth is employed in Bayou St. Johns, which is a very important body of water connecting New Orleans and Lake Ponchartrain. It consists of small boats with long-handled rakes, operated by boatmen, who tear up roots and top growth constantly at all seasons as fast as growth advances. From margin to center these boats push their way through the overgrown waters. Back

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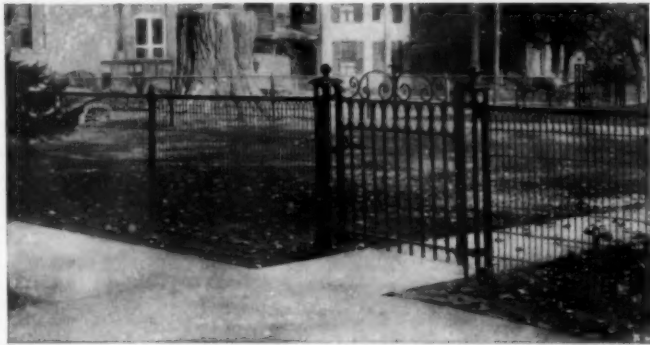
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Sincerely yours,

(Signed)

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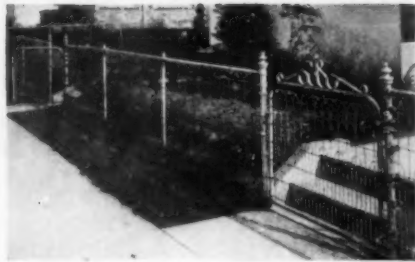
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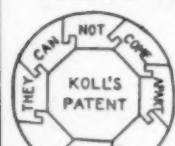
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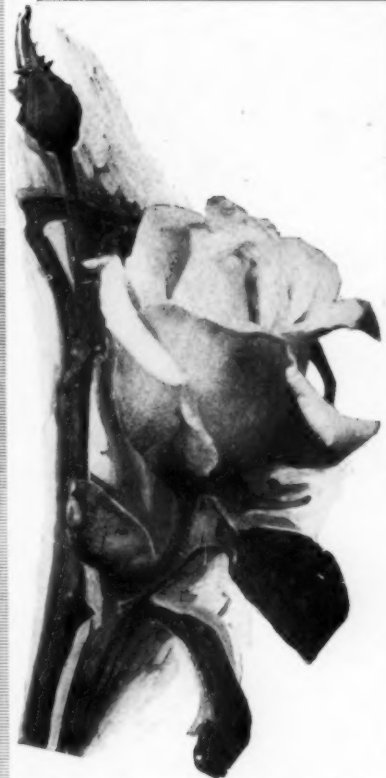
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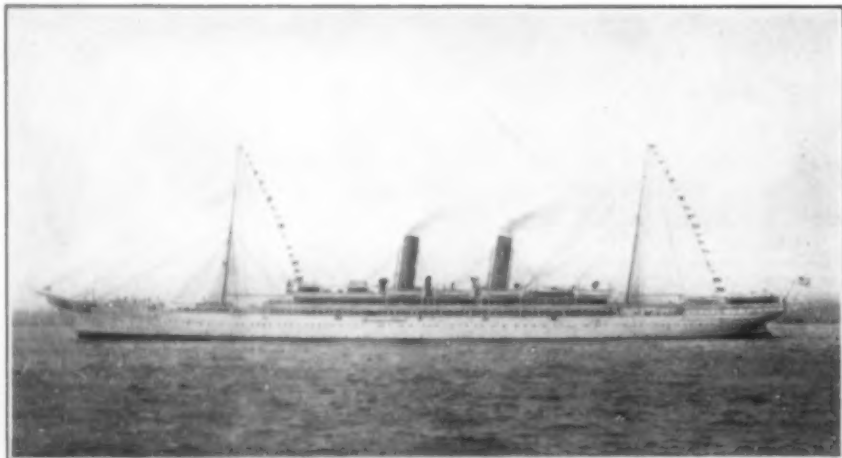


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qualities are more appreciated in Europe, where growers always keep the roots in stock.

We have several blooming plants of butterfly weed in our own garden, one that came up of its own accord, and others that have been transplanted from the fields. One is a thick bush measuring a yard across and about two feet high. The past season it bore eighteen flower heads, six to eight inches across. These began to bloom the second week in July and continued in flower for almost two months. The young shoots must be carefully watched for in the spring, as they are very late to appear above ground, coming long after many plants are up and growing. Last summer we undertook to remove the entire root of a young butterfly weed growing on a nearby hillside. When the plant was finally taken up it measured thirty-seven inches from the tip of the root to its lowest leaves. At the same rate, what would be the size of an old, well-established root? More than one of the plants that we have moved have been firmly anchored to a rock. This fact gives us a hint to set them out where the roots can lay hold of some crevice in the rocks.

We have picked from our plants several brown, velvet pods, each containing many dozen of the silk-winged seeds. Some of these were planted in the fall, others are to be saved for spring planting, and next season we intend to do our part to make this beautiful plant more common. It is more generally seen in the South, but here in the Northern States it is almost a rarity.

The name is supposed to have come from one of two characteristics of the plant, either the attraction it has for butterflies or the fact that the shape of the spray somewhat resembles a butterfly with spread wings. We have observed several butterflies hovering over the flowers at a time. One lazy fellow we caught with a camera. He was so intent on his business with the flowers that he did not notice when we shoved him into a better position to have his picture taken. Butterfly weed is known by other names, one of which is pleurisy root, the root being used in medicine. It is called, also, orange root and orange milkweed. The relationship to the milkweed family is shown in the shape of the individual flower, the seed pod, and in other ways, but it lacks the milky juice so noticeable in some of its relatives. So ornamental a plant could be excused from contributing to the necessities of life, but, beside its medicinal use, the butterfly weed, both flower and pod, was used in foods by the Indians.

One of the show pieces at a recent exposition was a bed of these brilliant flowers which had been imported from Europe. Surely it is time that we emphasize the fact that our own gardens can supply this flower in sufficient numbers so that it will not be necessary to bring it across the ocean.—I. M. A.

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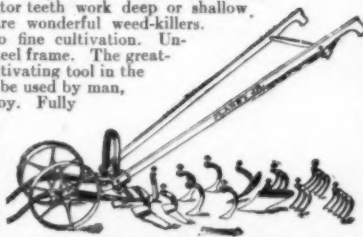
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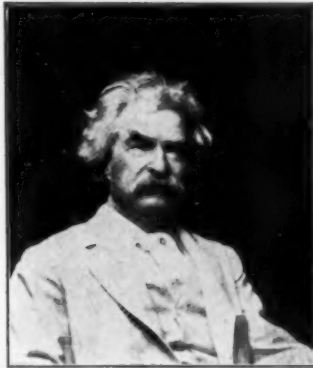
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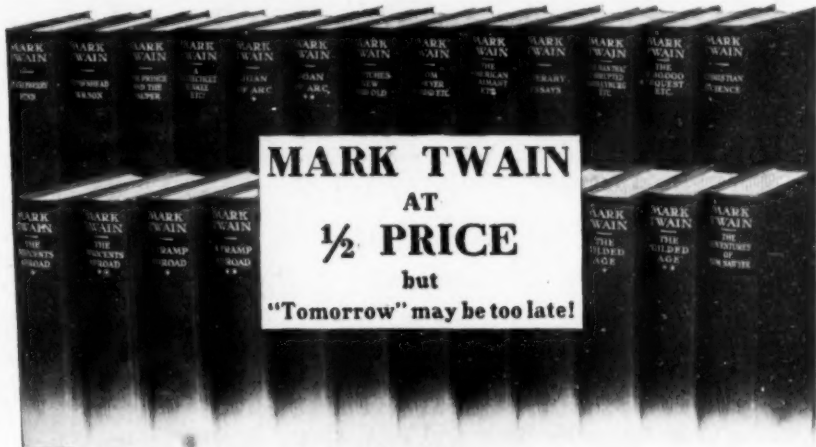
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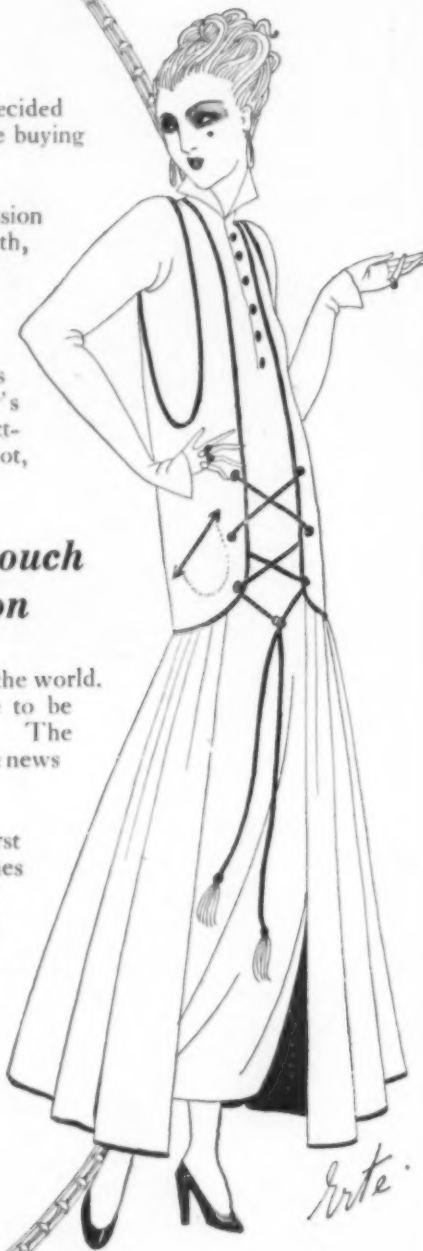
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The house centipede is a Southern species, its natural home being in the latitude of Texas, but it has slowly spread northward, and, having reached New York and Massachusetts about thirty years ago, it is now very common in these States and extends westward well beyond the Mississippi. It is a very delicate creature and almost impossible to catch, having a worm-like body about an inch long of a grayish-yellow color. The name "centipede" is misleading, as it does not possess a hundred legs, but no more than thirty, although the speed at which it travels across the floor does not give the ordinary observer sufficient time to count them. Its head is armed with a pair of very long, slender "feelers." The bulletin advises the housekeeper who feels that the centipede has become a pest in her house to use fresh pyrethrum powder near bathrooms, closets, cellars, conservatories and store-rooms where it may hide itself. The suggestion is also given that all moist places should be kept free from any objects, such as flower pots, mops, or dirty rags behind which the insect may conceal itself.

It is very questionable whether the centipede would ever, unprovoked, attack any human being or other large animal, still if it is pressed with the bare hand or foot, or is caught between sheets in beds it will probably bite, and a few cases on record show that severe swelling and pain may result, for the insect belongs to a poisonous group of centipedes. The wound can hardly be called dangerous, however, and prompt dressing with ammonia is recommended to alleviate the disagreeable symptoms. The centipede is in one respect like a spider, in that it springs after its prey and is very rapacious. Trained observers have noticed that in capturing such a pest as a cockroach, the centipede springs over its prey, inclosing and caging it with its many legs, after which it devours its victim. In the act of devouring a moth it has been observed to keep its numerous long legs vibrating with incredible swiftness, giving the appearance of a hazy spot surrounding the fluttering moth.

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WHETHER we are hobbyists or serious, matter-of-fact gardeners, we have learned that, if we are to get more than cost out of our gardens, it is unwise to grow any vegetable really unsuited to the location.

While we may succeed with the standard varieties, some of us have to leave out more exacting sorts because the garden soil is too dry or too wet or too light. The fact is, that, in some instances, a kind of garden annex in another place where a few rows of vegetables, unfavored in the main garden, may be grown is a necessity.

Still, one can greatly improve unfavorable soil conditions by using plenty of humus in the form of compost or of cover crops upon light, poor soil by occasionally giving a coat of lime to heavy, sour soil or by spreading sand upon a clayey garden spot and working it through with the plow.

An economical garden scheme for a tract having definite portions of light and heavy soil, as well as moist spots, calls for a classification of vegetables according to their requirements.

The soil should be as fertile as good manuring can make it. The distinctions in soil as made in this classification relate to its natural composition as to the predominance of sand or clay and its moisture capacity, sandy soil being light and clayey soil heavy.

Class A—Light, rich soil (sandy):

Okra.
Asparagus.
Early varieties of sweet corn.
Sweet potatoes.
Endive or chicory.
Turnips.
Squash.
Beans—bush.
Muskmelon.
Watermelons.
Tomatoes.
Pole beans.
Celery.
Spinach.
Radish.
Eggplant.
Beets.
Peas.
Carrots.

Class B—Heavier soil (well-drained):

Irish potatoes.
Cabbage, brussels sprouts.
Kohl-rabi
Rhubarb.
Bush beans.
Later plantings of peas.
Lettuce (cutter of).
Onions and leeks.

Class C—Moist soil (not wet nor clayey):

Cauliflower (cool, moist location).
Cucumber (warm, moist location).
Parsnip.
Pepper (warm, moist).
Cresses (cool, moist location).
Head lettuce (cool).

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Green

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A satisfactory rotation may yet be effected while keeping these vegetables within proper bounds. In following the above classification these rotations will prove satisfactory:

Tomatoes after pole beans, turnips, beets, melons or squash.

Eggplant after muskmelon, squash or beans.

Late squash may be grown after early turnips the same season, and late cabbage after early beans.

Later varieties of squash may be planted between the rows of asparagus about June 25th.

Late tomatoes and late peas and beans may also be planted between the asparagus rows toward the end of the cutting season with decided advantage to the asparagus.

Potatoes may be grown where peas and beans grew, but cabbage should not be grown after any member of its family if it can be avoided.

Where it is convenient to give pole beans a permanent trellis of post and wire they may be successfully grown year after year in the same spot. The posts are set six or eight feet apart in rows four feet apart, two wires being run from post to post near the top and bottom. Light twine looped from one wire to the other holds the running vines and is easily cut down at the end of each season. Early radishes, spinach, peas, lettuce, beets, etc., may be grown between the rows until the beans have climbed.

April Poultry Work

WHAT most disturbs the poultry-keeper's peace of mind at this time of year is the broody hen. Even among the Leghorns, Anconas and other supposedly non-sitting breeds, broody individuals are often to be found, and sometimes they are aggravatingly persistent. In former days it was considered the proper thing to duck the broody hen in a pail of cold water or to starve her or to treat her in some equally inhuman fashion, as though she were a criminal in feathers. We have learned better now. The poultryman's object is to get the hen into laying trim again as soon as possible, and therefore she should have extra good care. She should be given a crumbly mash every day, with the addition of a few table scraps, if any are available, together with cracked corn and plenty of water. She must be removed from the nest, however, and put where she cannot sit comfortably. A small pen or coop without nests and with no litter on the floor is a good place for the broody hens, and if an active cockerel can be put with them, they will soon be broken up. Many poultry houses are equipped with a coop having slatted sides and bottom and which



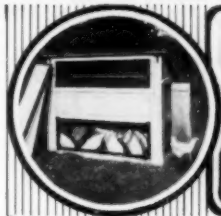
is fastened to the wall well above the floor, where the broody hens are imprisoned. Properly handled, these hens ought to be laying again in from ten to fifteen days. It is important, though, to take them from the nests as soon as they are found to be setting. The longer they set, the more stubborn they become.

It is a good thing to get the newly hatched chickens out on the ground as soon as possible. There is something about contact with Mother Earth which seems to be of the greatest benefit to all poultrykind.

When the chicks first come from the brooders to view the world they are pretty likely to get lost, and if they remain away from the heat they become chilled, after which they take sudden leave of the world of which they have just caught a glimpse. There is no better plan than to make a little yard in the form of a half circle, using inch-mesh poultry netting. There are no corners in such a yard, of course, and the chicken that forgets the way back to the heat will simply follow along the wire until it presently finds itself under the hover again.

When the modern portable hovers are used it is rather desirable to make a little fence of boards or of canvas to break the draughts for the first week or two, as well as to confine the chickens. Special wire cages are made to fit over the hovers, and are not expensive, while they protect the chicks from rats, which do not even wait until the birds have reached the squab broiler stage of development before they dine on them. Every year thousands of chickens are carried away by rats, and when a new brooder house is built it pays to spend a little extra money to make it rat-proof by putting in concrete foundation walls which go two feet below the surface. When the animals are already on hand, the only satisfactory way to get rid of them seems to be by the use of one of the poisons sold for the purpose, and which can be given in a box with a small opening so placed that the fowls cannot reach the poisoned bait.

When poultry keeping is to be entered upon by the simple process of buying a few dozen day-old chicks, this is a good month to begin. Day-old chicks may be sent safely by express many hundred miles if properly ventilated boxes are used. It is well, however, to have the journey as short as possible and very important to



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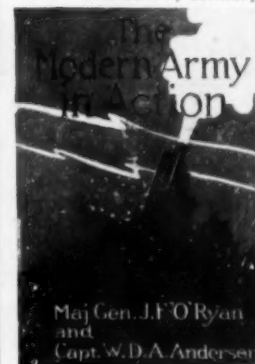


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buy from a man who has the reputation of keeping high-class stock. It is an unfortunate fact that many day-old chicks have very brief careers.

Another way to begin this month is to buy a hen with a brood of chickens. The plan of advertising hens with chicks has been tried for the past year or two in some sections and has met with a ready response. The hen will take care of the chickens until they are large enough to look out for themselves. Then she can be made the principal item in the composition of a palatable chicken pie.

It is important to keep the brood coops dry, which is sometimes a little difficult when April showers come in quick succession. Some of the commercial litters made of peat are exceedingly satisfactory in brooders of all kinds and serve equally well in brood coops, which they help to keep in a sanitary condition, even in damp weather.

Cleanliness must extend to the yards. If an attempt be made to bring up chickens on tainted ground the result is almost certain to be failure. In fact, that is the rock on which many poultry enterprise proudly launched and successfully navigated for a time has eventually split. Where only a few chickens are being reared it is not a difficult matter to keep them in roomy but portable yards and to move the chickens daily. Even when only a limited grass plot is available, it is possible to keep the grass from being killed out when it has a week or ten days in which to recuperate. This is really not the best plan, though, for growing chickens need fresh earth as well as grass. They need the earth to dig and dust in, but it should be where at least one crop has been grown since chickens were allowed on it before.

Chickens running with a hen are almost sure to have lice. There are several kinds of lice which play a part in making all poultry miserable, but the most disastrous to chickens is the big-head louse, which is best gotten rid of by means of a very little lard rubbed on the head. This, of course, is in addition to regular weekly applications of insect powder. And perhaps it should be said that the Persian insect powder commonly used should always be fresh. It may be purchased at any drug store and costs but little. Probably most of the prepared insect powders are just as good, but they are not always available.

Fireless brooders may be used satisfactorily at this season, as there is less danger now of the chicks becoming chilled. Of course, they require much less attention than heated brooders. The one point to remember is that the chickens provide their own heat and that there is no warmth in the brooder unless they are in it. For the first day or two the fireless brooder needs close watching, the chicks being repeatedly coaxed or driven to its shelter. So soon as the youngsters have learned their lesson, however, very little attention is required.

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It is with first-aid remedies, designed to save the victim's life by tiding him over that critical period from the time he crawls, whimpering, into the house until professional services can be obtained, that the following paragraphs have to deal.

Arsenic and strychnine are the poisons most commonly used by the dog-hater. Phosphorus is also to be considered, for it is the chief deadly ingredient in many rat poisons, and so can be easily obtained even by people of no standing in the community. Even when intended for its legitimate purpose—vermin destruction—it sometimes happens that a dog will get hold of it and suffer accordingly.

Considering arsenic poisoning first, the symptoms to be expected are heat and tenderness of the abdomen, quickly followed by frothy vomiting and thirst. The dog's breathing is heavy and labored, and in a little while he will have convulsions. The thing to do, as in all poison cases, is to get the stuff out of his stomach as soon as possible. For this, the best temporary remedy is an emetic of milk, magnesia and oil, or flour and water. It should be given in good quantity as soon as possible after the cause of the trouble is suspected. If the first dose does not have immediate effect, give another, for time is precious.

Strychnine symptoms are quite different from those of arsenic. The dog yelps and whines with pain, jerks his head, froths at the mouth, and, as the poison takes greater effect, his legs twitch curiously. These indications will be followed by arching of the back and occasional convulsions. Give him a powerful emetic and hope for the best until the doctor comes.

Phosphorus causes frequent vomiting and purging, heat and tenderness of the throat and stomach, and convulsions. Give an emetic and follow it with frequent doses of magnesia or chalk dissolved in water.

It must not be supposed that every case of poisoning can be treated successfully by the above methods. The remedies are efficacious as far as they go, and in the majority of cases they serve their purpose; but when the poison has had time thoroughly to work into the dog's system, it is a toss-up whether or not he can be saved. The veterinary, or, lacking one near by, a druggist, should be reached with all possible speed, for a few minutes' delay often means the difference between a live dog and a dead one.—R. S. Lemmon.



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