

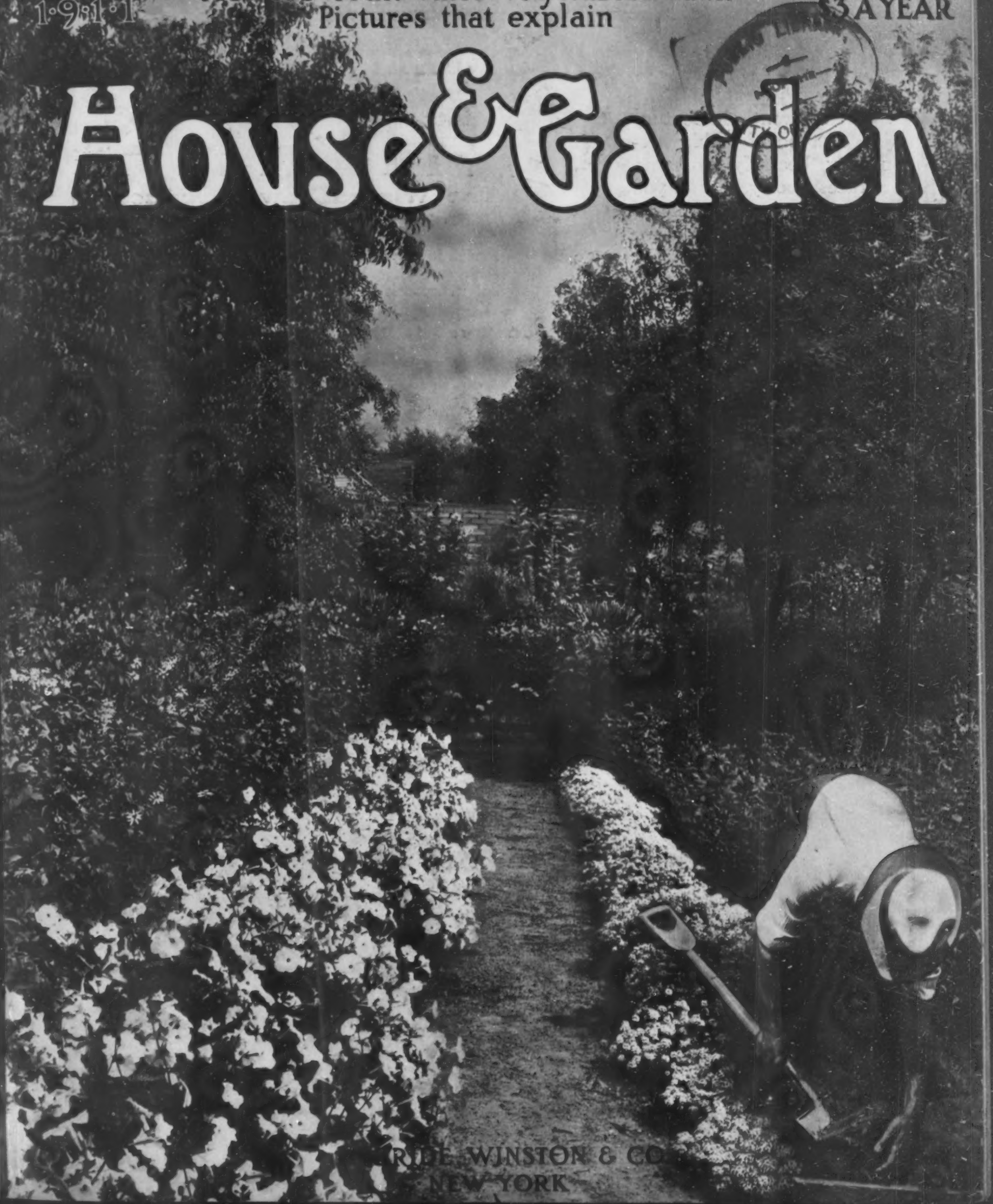
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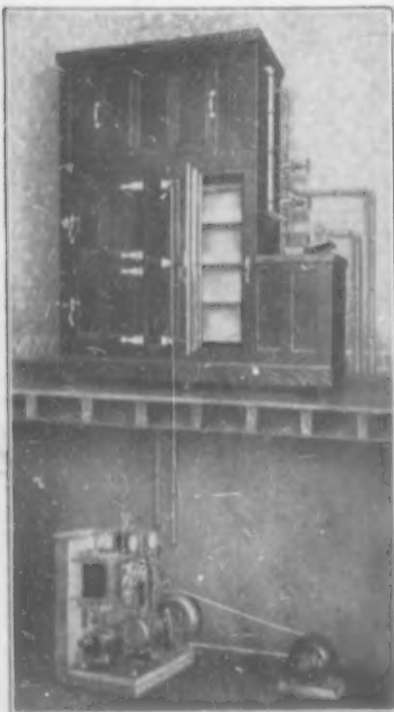
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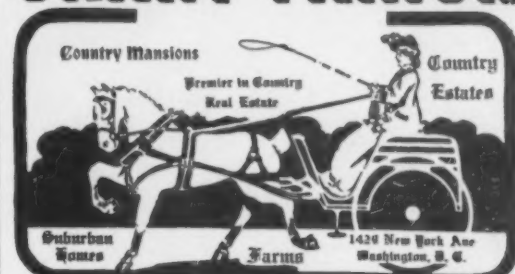
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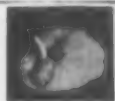
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Do Not Hatch Too Early

If there is one word of advice that should be sounded with more emphasis than another it is: "Do not hatch your chickens too early." The eggs during early spring are apt to be less fertile and more chicks will be lost by disease and exposure than later in the season. Then, too, it will be found that only the strongest survive and these will invariably prove to be cockerels.

Early hatched chicks are more expensive, in that green and animal food must be provided, while Nature supplies these two essentials later in the season. If eggs are purchased they cost more earlier in the season. The pullets coming to maturity before the fall molt takes place have to undergo this drawback and if they commence to lay during the fall they are apt to stop entirely during the winter months.

Of course, a few chicks may be hatched early if one desires fully developed birds for the fall shows or a few choice breeders both male and female, though yearling or two year old females make better breeders than early hatched pullets, but an early hatched cockerel, if fully grown, is fully as good as an older male for breeding purposes.

April and May are the ideal months in which to hatch chickens. Let them start with the grass. With the season far enough advanced to allow the chickens range upon land where natural food abounds, the best growth is possible. The best winter layers are hatched during these months, as well as most of the prize winners at the large winter poultry shows throughout the country. There are fewer losses and a less number of cases of stunted growth than is often apparent among early hatched chicks.

At this season of the year vegetation is starting up with a newness of life; the birds have returned and are building their nests and getting ready to rear their young; the sun is getting higher every day and is sending a larger amount of warmth to the earth's surface which is covered with tender blades of grass, and with the increasing warmth the ground begins to teem, and the air is full of insect life. Surely this is the time Nature set for hatching the chickens. A. G. S.

Poultry Runs

One of the most important things in poultry raising is to have proper runs. It is a mistaken idea that the best land for poultry is the poorest land that lies out doors, an acre of which will not produce enough hay to keep a goat alive. Hens and chickens require grass, and lots of it. An acre of good grass land is necessary for every one hundred adult fowls. A poultry plant requires just as good soil as a dairy farm. No wonder so many people fail in the hen business when they erect their buildings upon sand. Better locate the plant upon a rocky farm, for where there are rocks, good soil is sure to be

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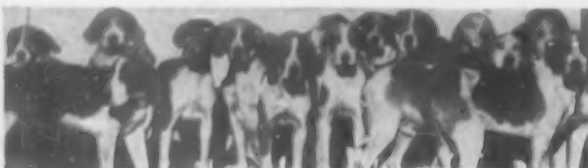
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A. G. S.

Prevention of Fleas

IN relation to the ubiquitous flea, in M. L. K.'s letter, perhaps a few preventives would be of assistance. When my Lady Babbie—a beautiful Scotch collie, was to have her puppies, the foundation of her bed was mainly pine shavings, and over these I sprinkled oil of eucalyptus. In renewing the shavings the oil was never forgotten. It is a good germicide also, and its pungent odor is not unpleasant. For kennel raised dogs, common moth balls, scattered liberally about, and air slaked lime, are good. In washing my dogs, I always put in the rinsing water a liberal dash of creosol or lysol. This also is a good preventive of skin troubles. Fleas dislike it exceedingly. My dogs are never troubled with fleas, and their coats are marvels. In the case of the mother and puppies, they do not know what a flea is.

E. M.

Notes for Southern Gardens

IHAVE grown from seeds a new European Asparagus named "Robustus." Contrary to expectations, the seeds germinated in a few weeks. The leaf is more nearly double than "Plumosus," though very lace-like—and is surely a more beautiful plant. It is of rapid growth and far more robust habit than other varieties. In many sections of California it grows outside, growing very tall, and making a beautiful porch vine. Many people look upon the varieties of Asparagus as something very tender and only to be carefully sheltered. Planted against a south porch or out, away from the wall, so long as they have the house as a shield, there is little fear of them freezing, even though the winter is a severe one. I've been told by people who are growing fine specimens, that the one secret of success is never to move them—that is, not to shift them from place to place. I've seen them in East windows, as perfect as in South windows—they are not so exacting as to place—if only kept in one place.

DAHLIAS IN CALIFORNIA

THIS has been my first season of Dahlia culture, and I believe the experience may serve for many who are planning to grow them another spring. In securing a start of bulbs in the early spring, I was advised to put them right in the ground—which was done. Plants soon started up, and were blooming in July. The first thing I realized, was the brittleness of the stems, which snapped at a touch. The blooms were disappointing too; inferior in form and size. Then came the dahlia pest, resembling the lady bug—which ate up the blossoms as fast as they opened, and riddled first the buds and then the foliage. So many branches had broken that the whole row looked ragged, so I cut the plants back, nearly

to the ground. The roots grew next to a row of callas, otherwise they might not have had water. As it was, they started up again, growing with a vigor and vim which soon brought them into stalky bushes. They started blooming along in August and they've surely been a whole garden in themselves. From few over a dozen plants we've had armsfull of bloom. When there's no attempt at disbudding, of course one can do more lavish cutting. The flowers were large enough for beauty, perfectly formed and strong stemmed. In the meantime, too, the "bug" had his turn of disgust at the ways of the gardener, and left with his family for other parts.

A real dahlia man would have told me at the start what I've been told since, that it's a great mistake to plant the dahlias early in the spring. The end of June is not too late. He says it is a fall flower, and when planted early is forced to bloom in the hot season, which will surely mean inferior flowers. Also that the insect, which he names "Diabrotica," will not trouble them in their regular season—in fact, will not be around at all. At any rate I'm glad my plants finally succeeded, for about the middle of the summer I would have given away some very fine varieties to the first bidder; now any disgruntled experimenter may pass his collection on to me. Another season I plan to do some disbudding and grow a few dinner plates—though for real everyday enjoyment the natural size, with perfect flowers and lavish yield is good enough. This bug pest may be native to California, as I've never read of it in any of the garden publications. I hear some people say that in California it is unnecessary to take up dahlia bulbs in the fall, as they are perfectly hardy. It surely saves the bother of storing away if left in the ground till spring. They then can be taken up and separated, and the ground thoroughly cultivated and fertilized before replanting. Good soil, room to grow and plenty of water, with late planting, are their easily met requirements. E. S.

Rhubarb from Seed

THE better kinds of rhubarb are so superior to the old kinds that are being grown in a great many of the home gardens, that it will pay one to buy a packet of seed, which costs only five cents, and grow the roots. They will grow in one year from the seed to the right size for setting in the row where wanted. The only popular variety that I know of which is worth planting is Myatt's Victoria. The roots of this variety may be obtained from some seedsmen for five to eight dollars a hundred, but they are such as you could raise from seed in your own garden in one season. The seed should be sown in drills in the spring, and thinned to give them plenty of room. A five-cent packet contains sufficient seed to raise a hundred roots, allowing for thinning.

H. F. G.

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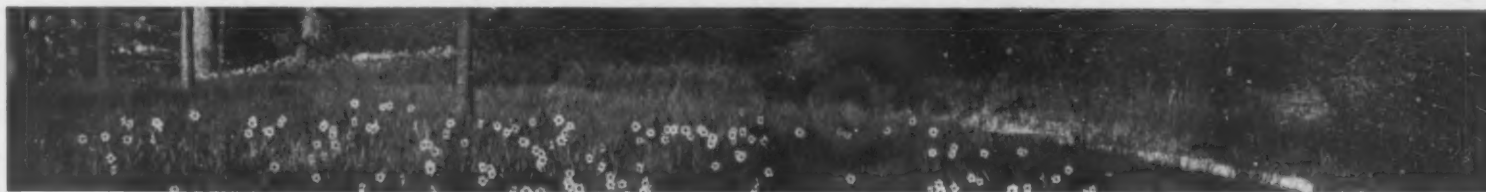
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Contents--April, 1911

COVER DESIGN:

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CONTENTS DESIGN: NATURALIZED NARCISSUS

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FRONTISPIECE: THE GARDEN OF THE SILENT PLACES

Photograph by E. M. Boul

WHAT MY GARDEN MEANS TO ME.....	237
<i>By Hanna Rion</i>	
THE ALL-STAR GARDEN OF A BUSINESS MAN.....	241
<i>By Henry H. Saylor</i>	
THE MONTH'S ACTIVITIES	244
TYPES OF FLOWER GARDENS.....	245
VEGETABLE GARDENS	248
GRASS SEED MIXTURES AND HOW TO USE THEM.....	250
<i>By Luke J. Doogue</i>	
COLOR IN THE FLOWER GARDEN.....	252
<i>By Adeline Thayer Thomson</i>	
GARDEN TOOLS THAT PAY THEIR WAY.....	254
<i>By Frederic de Rocheville</i>	
PORCH VINE SUGGESTIONS.....	256
THE FERTILIZER PROBLEM AND THE AMATEUR.....	257
<i>By M. Roberts Conover</i>	

GROW YOUR OWN FRUIT, III.....	259
<i>By F. F. Rockwell</i>	
WHAT PLANTING DOES FOR A HOUSE.....	261
<i>By Grace Tabor</i>	
EFFECTS THAT MAY BE HAD WITH SHRUBBERY THIS YEAR..	264
<i>By Rowland Collins</i>	
ANNUALS THAT SHOULD BE BETTER KNOWN.....	266
<i>By H. S. Adams</i>	
INSIDE THE HOUSE.....	268
A Handy Bungalow Kitchen	The House Telephone
A Wood and Willow Screen	
GARDEN SUGGESTIONS AND QUERIES.....	270
The Garden Month	The Value of Cosmos
Notes for Southern Gardens	
INGENIOUS DEVICES	272
Celery in Pipe Tiling	For Creaking Doors
For the Casement Window	
Prevention of Fleas	Poultry Runs

THE NEW YORK SUBURBS SUPPLEMENT

THE HOME ON THE PLAIN.....	310
<i>By C. H. Miller</i>	
THE HOME IN THE HILLS.....	312
<i>By Herbert E. Angell</i>	
SALT WATER HOMES.....	314
<i>By Arthur W. Dean</i>	

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HENRY H. SAYLOR, EDITOR

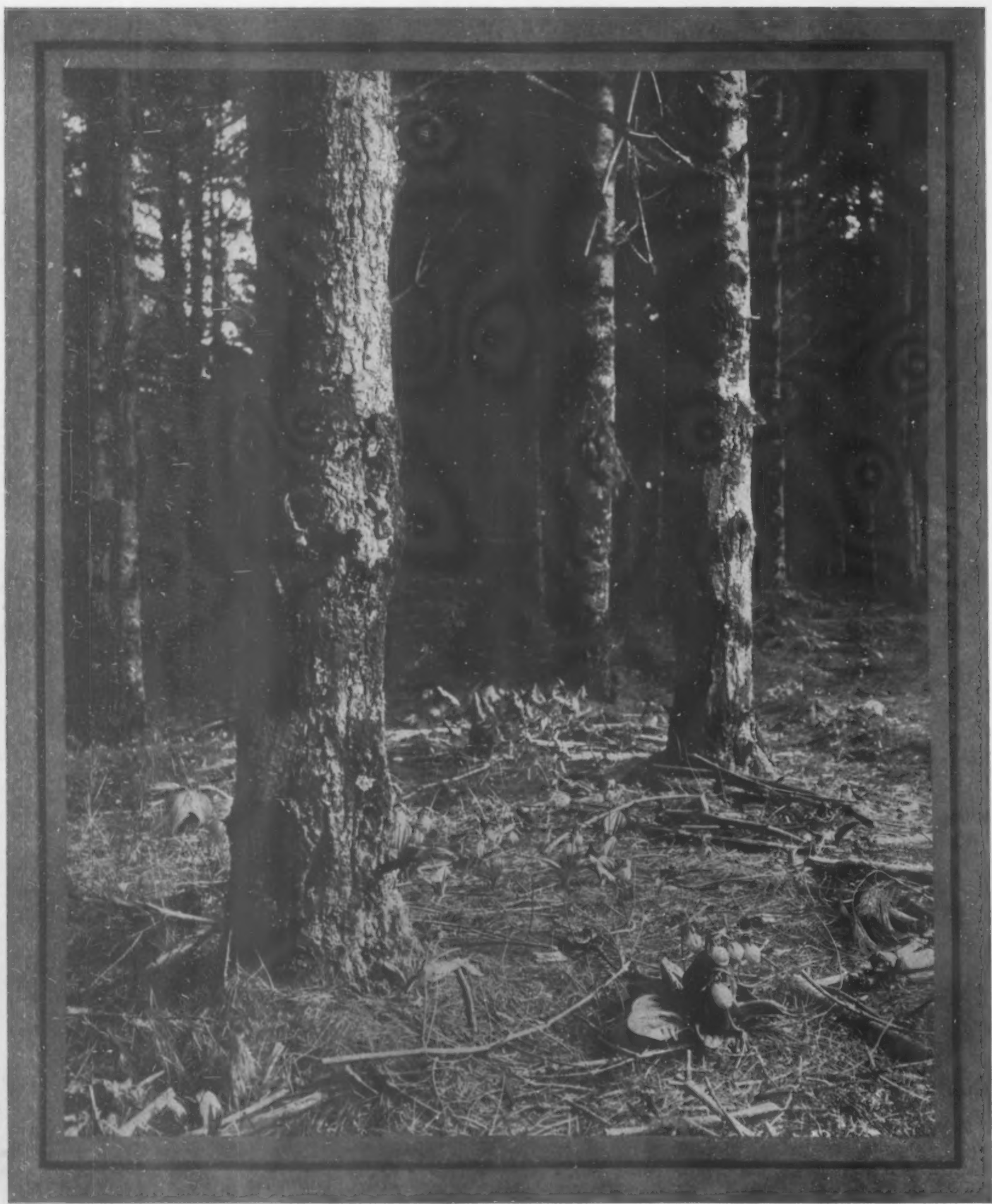


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THE GARDEN OF THE SILENT PLACES

Lady Slippers (*Cypripedium*) lend their graceful beauty to the pine-carpeted woods almost as soon as the snow has left them. Fortunate indeed is he who can have such a wild garden as an annex to the more formal one of his own planting



What My Garden Means to Me

BY HANNA RION

AUTHOR OF "THE GARDEN IN THE WILDERNESS," "THE GARDEN OF MANY LITTLE PATHS," ETC.

THE greatest gift of a garden is the restoration of the five senses. During the first year in the country I noticed but few birds, the second year I saw a few more, but by the fourth year the air, the tree-tops, the thickets and ground seemed teeming with bird life. Where did they all suddenly come from? I asked myself. The birds had always been there, but I hadn't the power to see; I had been made purblind by the city, and only gradually regained my power of sight.

My ears, deafened by the ceaseless whirr and din of commerce, had lost the keenness which catches the nuances of bird melody, and it was long before I was cognizant of distinguishing the varying tones that afterward meant joy, sorrow, loss or love to me. That hearing eventually has become so keen, there is no bond of sleep so strong that the note of a strange bird will not pierce to the unsleeping subconscious ear and arouse me instantly to alertness in every fibre of being. I wonder now if even death will make me insensate to the first chirp of a vanguard robin in March.

During that half-awake first year of country life I was walking with a nature-wise man, and as we passed by a field where the cut hay lay wilting, he whiffed and said, "There's a good deal of rag-weed in that hay." I gazed on him with the admiration I've saved all my life for wizards, and wondered what peculiar brand of nose he had.

Then the heart, the poor jaded heart, that must etherize itself to endure the grimness of city life at all, how subtly it begins



"Garden-making is creative work, just as much as painting or writing a poem. It is a personal expression of self, an individual conception of beauty"

throbbing again in unison with the great Symphony of the Natural. The awakened heart can sense spring in the air when there is no visible suggestion in calendar or frosted earth, and knowing the songful secret, the heart can cause the feet to dance through a day that would only mean winter to an urbanite.

The sense of taste can only be restored by a constant diet of unwilted vegetables and freshly picked fruit.

The delicacy of touch comes back gradually by tending injured birdlings, the handling of fragile infant plants, and the acquaintance with different leaf textures which finally makes one able to distinguish, even in the dark, a plant by its Irish tweed, silken or fur finish.

And the foot, how intangibly it becomes sensitized; how instinctively it avoids a plant even when the eye is busy elsewhere. On the darkest night I can traverse the rocky ravine, the thickets, the sinuous paths through overgrown patches and never stumble, scratch myself or crush a leaf. My foot knows every unevenness of each individual bit of garden, and adjusts itself lovingly with-

out conscious thought of brain or even use of eyes.

To the ears that have learned to catch the first tentative lute of a marsh frog in spring, orchestras are no longer necessary. To the eyes that have regained their sight more wonder lies in the craftsmanship of a tiny leaf-form of inconsequential weed than is to be found in a bombastic arras. To the resuscitated nose is



"A garden is ageless, and the gardener becomes ageless too, as ageless as the wind, the rain, the sun, summer and winter, for he becomes one with them all.

revealed the illimitable secrets of earth incense, the whole gamut of flower perfume, and other fragrant odors too intangible to be classed, odors which wing the spirit to realms our bodies are as yet too clumsy to inhabit.

To the awakened mind there is nothing so lowly in the things below and above ground but can command respect and study. Darwin spent only thirty years on the study of the humble earthworm.

To get the greatest good from a garden we should not undertake more than we can personally take care of. I have not had

a gardener since the first year, when outside help was necessary for the translation of the sumach and briar patches of our Wilderness into arable land. A gardener is only helpful for the preliminary work of spading; after that his very presence is a profanation.

Garden-making is creative work, just as much as painting or writing a poem. It is a personal expression of self, an individual conception of beauty. I should as soon think of asking a secretary to write my book, or the cook to assist in a water-color painting, as to permit a gardener to plant, or dig among my flowers. For in even the most unimportant parts of my garden are little secret treasures—a stray cornflower that a Bedouin wind lured from its home-bed, a shy wild violet that strayed from the woods, being tired of blushing unseen, a blood-root which must have been brought some night by a fairy; where is the gardener whose eye and heart have been trained to respect these chance visitors?

The ancients had a delightful way of commemorating events and people by marble and other enduring things. I can see why we should hesitate to borrow from friends, but I don't see why we shouldn't borrow from dead Greeks; therefore I've made my garden largely commemorative, and memorial.

For instance, there's that hedge on the north boundary; it's true we needed a wind-break there, but it was much sweeter to forget necessity and let its planting become an epic; therefore after one especial

ly delightful honeymoon (we have them annually and sometimes accidentally) we came home with the new enthusiasm bred of a short absence from home, and set out ninety-something hemlocks and called it "The Honeymoon Hedge." Then there is the Terrace planned in honor of the advent of two dearly-loved friends who had a weakness for breakfasting outdoors. I made my garden-partner haul stones like an Italian laborer, for days, and we both behaved like ground-moles tunneling out earth for many other days; and then a great christening rain descended prematurely, and we only achieved a mud-hole in a stone quarry by the

time the friends arrived. But they had the prophetic eyes of poets, and when, shod with galoshes, they plowed through the mud of their future terrace they could imagine all the beauty we had intended, and almost wept with gratitude, and were perfectly docile about breakfasting indoors.

The Terrace was eventually finished—I ought to know, because I laid thirty feet of stone wall (which I find out by the dictionary should be called a "Ha-Ha," though I never suspected it had such a mirthful name at that skinned-thumb time), and we planted it with hundreds of tulips, thousands of hyacinths, a million crocus, and a trillion grass-seed and six Dorothy Perkins. The next year when the dear friends came again the Terrace was too beautiful to breakfast upon; they could only stand at a respectful distance with bared heads while it was formally dedicated.

There also is the rose-garden annex, planned for the aforesaid partner's birthday, he being prohibited from constitutionalizing in that portion of our realm for days. When the first of June arrived there stood—well, I won't say exactly the number, but if I had been a prosaic person I would have purchased just the same number of candles to stick on a short-lived birthday cake, as I planted roses in the abiding chocolate cake of the ground.

Of course every true gardener saves his own seed, thereby gradually bringing all the different varieties to greater perfection, and

incidentally he may name these self-developed brands after otherwise unfamed friends.

Whenever there is a particularly eccentric or beautiful color shown in a blossom, I tie a tape about it, and write its praise on the tape, so that when the seed is harvested a fickle memory need not be relied upon. By saving each year the very darkest hollyhock of the blackish variety, I finally achieved the actually black flowers, and had a chance to evidence my admiration of a certain friend's hair (not her character) by bestowing her name on the hollyhock.

If a man has an extravagant wife who cannot resist Irish lace robes when displayed on a lay-lady in a department store window, he should just gently lead her to the country, present her with two acres, or one and a-half, of ground, introduce her to flower catalogues and teach her to dig. She'll soon forget manicurists. It's the simplest general cure of all feminine weaknesses I know of.

No woman, once demoralized into a gardener, ever hesitated when confronted with a choice between a new gown and—well, say all the peonies, peach trees, roses and rhubarb plants the same amount would purchase. No wonder the first woman gardener could only afford the fig-leaf; all her clothes money went for anemones and more apple trees. One can only measure their change by retrospection; when a backward glance produces a finer



"I don't believe any living creatures could remain bad if they associated daily with flowers, for flowers have such an Irish way of seducing with blarney of beauty to the simple, real and only abiding things of life"



content with one's present state, then surely the spirit is not retrograding. I'm sure I'm a reconstructed being in more ways than one since I moved to the country, especially in my attitude toward vegetables. During the first year I ignored the "sass patch"—treated it as a snob does the real toilers of this world. But gradually lured by the sheer beauty of bejewelled-by-dew cabbage, the fragrance of the onion, I now expend as much muscle on the vegetable kingdom as I do on my roses, and incidentally I've become a vegetarian.

That's the only way to become one—just because there are so many good vegetables to eat, one doesn't need to encourage the slaughter of beasts to be well fed.

And this kind of vegetarian, the accidental kind, is not afflicted with anaemia; it is only the theories of the professional vegetarian that makes him look so bloodless.

When we were once without a maid, and very busy in the studio, we didn't have time to prepare course dinners, so we

chucked thirteen different kinds of vegetables in a big aluminum preserving kettle and went off about our business of being great. After several hours we came to, and remembering the pot a-boiling gave a yell of dismay; we were so sure it was burnt I don't think we had time to use the stairs, the banisters were more expedite. Now, if that pot had contained a chicken it would have gone to glory, but lo and behold, there were our faithful vegetables philosophically stewing away, sending forth a fragrance that was like a patch quilt of odors. And when we sat down to sample the thirteen courses compressed into one, we found a dish delectable enough to make Lucullus and Sulla resurrect before their time. Of course we had so much left over, after we'd gorged ourselves, the next day was provided for too, and by merely adding a preponderance of tomato the stew was metamorphosed on Tuesday (we'll say it was Monday when this kitchen vaudeville began), and on Tuesday the meal was quite different; on Wednesday by the addition of much cabbage and little disks of bacon, still another culinary enigma was achieved; on Thursday a heavy hand with celery made a new avatar of the dish; on Friday carrots recklessly donated caused a strange masquerade of flavor; on Saturday cauliflower gave the departing a reprieve, and on Sunday we held a wake over all the ghosts of thirteen vanishing vegetables.

The gardener is an explorer, an experimentalist, an idealist, and best of all he becomes inevitably a humanitarian. If he is an artist, he can satisfy all the cravings of his soul for color and pictures; if a musician he can find

expression for all the harmony in his being. Music, painting and gardening are based on the same laws of color, harmony, composition. Take a long path that is bordered by hollyhocks on each side, ranging from white through pinks, lilacs, salmon, red, yellow, climaxing with black.

The path leads curvingly, luringly to a point of exceeding loveliness, an open vista commanding a general view of the garden, and the distant hills and countryside. Is it not like the gradual crescendo of a passage of music developing through tones of ever-increasing richness to the final magnificent chord? A gardener lives in the present and future; if he has a sad past, he forgets it.

A garden is ageless, and the gardener becomes ageless too, as ageless as the wind, the rain, the sun, summer and winter, for he becomes one with them all.

I don't believe any living creatures could remain bad if they associated daily with flowers, for flowers have such an Irish way of seducing with blarney of beauty to the simple, real and only abiding things of life.

Finding contentment, the gardener exhales it.

Tucked away in a dim corner of the curiosity shop of my brain is a fragment heard, read or dreamed some time in the nebulous

(Continued on page 300)



"If the gardener is an artist, he can satisfy all the cravings of his soul for color and pictures; if a musician, he can find expression for all the harmony in his being"



For March plant the snowdrop in the partial shade of dusky evergreens



In April the forsythia or golden bell takes the centre of the stage



German iris is the reigning flower of May, if planted in generous masses

The All-Star Garden of a Business Man

HOW THE MAN WHO HAS LITTLE TIME TO DEVOTE TO HIS GARDEN MAY HAVE AN UNFAILING SUCCESSION OF BLOOM FROM THE BEST THINGS THAT GROW

BY HENRY H. SAYLOR

Photographs by N. R. Graves, E. J. Hall, the author and others

IT sounds decidedly paradoxical, does it not, to affirm that the man who has the least amount of spare time to spend upon the appearance of his home surroundings may have the very best that the horticultural world offers? It really sounds too good to be true; yet that is what I am going to try to show.

I shall never forget the feeling of utter, hopeless ignorance that swept over me when my eyes were first opened to the beauty, my understanding to the joy, that a garden offers. As I pored over book and magazine, seedmen's catalogues and planting tables, there gradually came a realization of the immensity—the real awe-inspiring depth, of the subject. The terms "annual," "perennial," "herbaceous shrub," "mulch" and "scale," meant as little to me as did the portentous Latin names of genera and variety. At the mere thought that any mind could ever grasp all the details of nomenclature, the manner of plants' growth, their respective heights, time and length of bloom, color, requirements of soil, light, shade and moisture, sowing, transplanting, pruning and fertilizing—at the mere thought that a single mind must be able to coördinate all these and many other facts before planning a garden that would give continuous and harmonious bloom, my reason fairly tottered. Nor does the problem seem much easier on closer acquaintance. The really successful "garden," as we understand the term—a garden of some extent, in which are found at least the main representa-

tives of the floral kingdom, arranged in close and always harmonious relationship, is never achieved in a day. Only year after year of tireless experimenting, with adherence to a single general plan for the whole, will bring at least a fair approximation of the ideal—never the goal itself.

But, how, then, is our friend the business man, with little time to spare, going to achieve even a reasonable measure of success in the setting for his house? In a word, by planting only a few things, and those the real giants of the garden—the "stars" of the garden stage.

Did you ever stop to think that every month from early spring through the autumn brings at least one flowering plant that stands supreme among its fellows—the peony of June, the hardy chrysanthemum of November, for instance? But mere superiority of appearance will not be enough as the test for those plants that will bring success to our business man's garden. We must have only those things that need little or no care, that are highly resistant to the army of garden pests. And we shall prefer a variety of form, so that all shall not be border flowers, or shrubs, or vines. Our business man's garden must not be merely that of a collector, having all phloxes or all roses.

What we do want, then, is a steady succession of the really big garden features—a variety of them, resistant to disease, and each fully capable of occupying the whole stage at the height



Also in May comes the bloom of that dazzling shrub, Van Houtte's spirea

of its glory. And if they are to do this in a really satisfying way we must plan generous masses of each. A plant or two, or a shrub or two, from among those we select will make but a feeble showing. Each must seize the stage in its turn with a blare of trumpets—and hold it for its appointed time. Whether there is to be one large group of each selection, or several groups in different

points throughout the garden is a matter to be determined by the plan of your own particular place. Only let there be not the slightest doubt, at any time, as to which star is holding the stage.



Peonies should rule June; if you have time for their care, add roses as here

Well, let us get at this matter of selecting those things that are to reign, each in its turn. I have no doubt that you will disagree with me on many of these; but do not, I beg of you, discard the principle of the thing if your gardening knowledge is small and your gardening time very limited; substitute other plants or shrubs or vines, if you will—this is but a personal choice.

For the very first flower of spring to rule the month of March, I nominate the snow-drop—the common old-fashioned sort that bears the weighty name of *Galanthus nivalis*. It is the first sign of awakening Nature, appearing often beside patches of snow—the most inspiring, ethereal, delicate white flower imaginable. Plant the bulbs in the fall, scattered over a patch of lawn that is partially shaded—preferably by dusky evergreens. Plant several hundred of the tiny bulbs at least. The flower is so small

that it simply must have the reinforcement of plenty of its fellows—and they cost but a dollar a hundred. Once set, they may be forgotten—until they overwhelm you with their cheering message that spring has returned.

For April's share in the pageant of bloom let me recommend the forsythia or golden bells. You know the shrub—the first and one of the very few yellow-flowering ones. Its drooping branches burst into a mass of gold from base to tip before the trees really

get under way in their leaf-making. The variety *Forsythia Fortunei* is probably the best. Plant several masses of the shrubs in the background of your border; their foliage will set off the flowers that come later. Here again the groups, once planted, preferably in the fall, need no further attention for years to come.

Call me inconsistent if you will, but I am going to name two stars to rule May. My plea is that the time has come when we must have a border flower coming into the limelight—we've had bulbs and shrubs, and yet we need more of the foliage—producing



Hiawatha, a sturdy climbing rose for the July garden; petals crimson to white



Let a row of stately hollyhocks dominate the garden in July

element to form backgrounds for later effects, and to give that air of solidity and permanence to the garden that shrubs do give. So it's to be the German iris—in mass, once more, and that most dazzling of shrubs the *Spirea Van Houttei*. I shall leave the choice of colorings in the iris to your own taste; there are varieties in white, pink, deep purple, lavender and yellow, with almost innumerable combinations of these. Whatever you choose, plant plenty of white to set the other colors off to best advantage. The spireas will need no attention after the first planting in a large deeply worked location. After setting out the irises, in early fall, all they will require will be an occasional division of the clumps as these grow too big. In dividing, do not make the clumps too small, or you will lose a season of bloom.

So we come to June—the queen of all the months in the garden, and what a wealth of material it brings us from which to choose! At the risk—rather, upon the certainty—of being branded a heretic, I am going to pass by the rose and advise the business man to give June over to the peony. I haven't a thing against the rose, but its smaller enemies in the animal kingdom certainly have, if we may judge by the viciousness of their attacks upon it. What with the rose-bug and the mildew and the blackspot and the greenfly and the scale and the slug, the “queen of flowers” would give our business man



Nothing compares with the hardy hydrangea for late-summer bloom among the shrubs

material it brings us from which to choose! At the risk—rather, upon the certainty—of being branded a heretic, I am going to pass by the rose and advise the business man to give June over to the peony. I haven't a thing against the rose, but its smaller enemies in the animal kingdom certainly have, if we may judge by the viciousness of their attacks upon it. What with the rose-bug and the mildew and the blackspot and the greenfly and the scale and the slug, the “queen of flowers” would give our business man

troublesome times in prolonging her reign. The peony, on the other hand, doesn't seem to have an enemy in the world. Up come its deep red shoots with the spring-flowering bulbs, and they bring in June a wealth of bloom that truly is incomparable. All the peony asks is to be well fed. Set out the dormant roots in the fall, and the only labor to follow is an annual rich mulch of

manure in November, an application or two of liquid manure as a stimulant when the flowering begins, and every three years or so a division of the clumps. Here again, I shall leave the selection

with yellow anthers; the well known Dorothy Perkins, a pink double; Gardinia, a yellowish white double; Tausendschön, pink double; Lady Gay, shell-pink double in clusters, and others. And there is another reason for adding a climbing rose to our list; it will help to blend the house with its site more satisfactorily than shrubs alone or border flowers alone, or the two together.

For August the lily would be my choice. It brings to the list a new note in its stateliness and cool purity. And *Lilium speciosum*, it seems to me, should form the backbone of the display. The *aura-*



Speciosum lilies occupy the stage in August. Plant with them a few *auratum*s—Japanese lilies

of colors and types of flowers to your own good judgment. Just a word of caution, though: Choose largely from the good old tried-and-true sorts; there are magnificent new varieties constantly being put forth, but many of them are only different from, not better than, the thoroughly fixed varieties.

For July I would suggest hollyhocks—a stately row of them, preferably nodding in at the window along the sunny side of the house. Do not neglect the old-fashioned single-flowered varieties—in pale pink, yellow and red—in favor of the newer double sorts, though some of the latter will add to the interest of the showing. Hollyhocks are supposed to be biennials—that is, the plants from last fall's seed will bloom the summer after the one that is coming. As a matter of fact though, the plants continue to bloom usually for several years after that, and as the seeds sow themselves you will never lack for thrifty young bloomers, provided only that the soil in which they grow is really deep—three feet of loose loam if possible. And with the hollyhock, to add to my inconsistency, and at the same time throw a sop to the man who refuses to live without some sort of a rose, I would brighten July with one of the hardy climbing roses—by preference a hybrid of the good old Memorial or *Rosa wichuriana*. There are plenty from which to choose—Hiawatha (see illustration), a charming combination of ruby-crimson and white



The dahlia is unquestionably the reigning flower of September

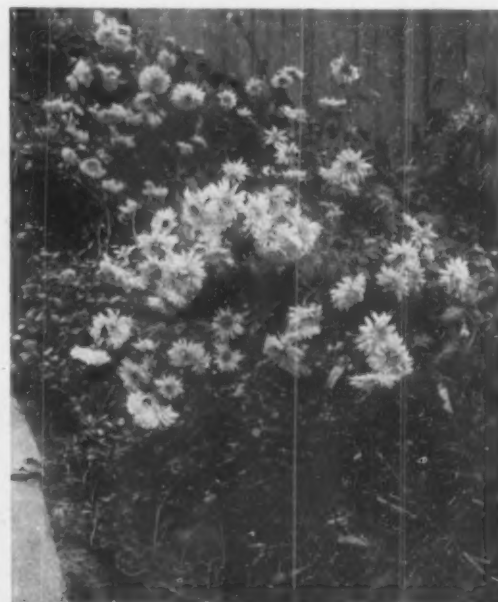


Let the phloxes rule October—the late-flowering sorts, with plenty of white

now obtainable, there is a rare treat in store for you. It alone of the list will need annual planting; each fall, late, the bulbs will have to be taken up, hung in a dry place indoors to ripen, and set out again in May. The best way to choose the varieties you want, is to visit a dahlia exhibition in the fall, or note the ones that appeal to you in some other garden.

In October the late varieties of phlox are fully able to keep up

(Continued on page 290)



Many varieties of the hardy chrysanthemum will brighten the garden to November fifteenth

tum lily, from Japan, blooms at about the same time, and is considered by many to be the most beautiful of all the family, but it is apt to die out after about three years, so it is well to plant only a few bulbs of it with the *speciosum*. With the lily will come into bloom one of the finest shrubs that we have—the hardy hydrangea, and it must be added to our list to carry on into the fall the burden of bloom. The great heads of white turn pink with the cool weather and if cut off they will hold their color after the first severe frosts throughout the winter indoors. Put a large bunch of them in a brass bowl on some high shelf or other out-of-the-way place. Severe pruning in the late fall or winter is all that the hydrangea needs; the bloom is borne on the new wood each season.

The dahlia is the reigning star of the September garden, and if you have not recently seen the amazing variety of form and color in which it is



The Month's Activities

A CAREFULLY PLANNED CAMPAIGN FOR THE BUSIEST MONTH IN THE GARDENER'S YEAR—WHAT TO DO AND JUST HOW TO DO IT

Photographs by F. F. Rockwell, E. J. Hall, N. R. Graves and others



[This article is designed to furnish in compact space and a few plain instructions, information that will enable the busy person, who has not made his or her garden preparations ahead, to have a successful garden notwithstanding. The tables and cultural directions, together with the plan provided for keeping an accurate record of both the flower and vegetable garden for future reference, will prove of great value to everyone who plants. Do not fail to remove and mount this Guide as suggested. It will make this year's gardening easier and next year's better.—EDITOR.]

IF all the advice that HOUSE & GARDEN and other good horticultural magazines have been giving for the last few months had been carried out by every reader, I suppose the professional market gardeners would be pretty nearly forced out of business, and that there would be no need of this article. But there are men who, for lack of time or other good reasons, have not yet bought their seeds, started their own vegetable and flower plants, had their gardens plowed, and are not now sitting down and impatiently waiting the first day warm enough to plant.

It is the person who must begin at once and work fast or the one who has no garden at all, as well as the garden enthusiast, that this article is designed to help. If you have made all your preparations, so much the better; but if you have not, it is not too late to pitch in now and have a garden that will take your neighbors by surprise. You can, if you will, plan a Napoleonic garden campaign that cannot fail to bring a great degree of success; yes, even if you have to leave most of the actual labor to a hired man—though in that case you will lose just half the fun of the thing.

The first thing to consider is the manure heap, or, in lieu of that the commercial fertilizer. Get the manure if you can. The chances are largely that it will give you better results than the chemical fertilizers, especially if you have not had experience in using the latter. (Read the article on page 257.) Buy a few loads of well-rotted manure—it should be dark and crumbly and free from large lumps—from some farmer or livery stable. If pigs have run on it it is worth more. Have this scattered evenly over the garden plot, so as to cover the ground with it. The more you put on, up to three inches thick, the more profitable your garden will prove to be.

This task finished, you are ready for the plowman. (If you can't get manure, and have to use chemical fertilizers altogether, plow first and put on the fertilizer afterward, as directed later.) Get a man who knows his work and will turn your land over to the bottom, or sub-soil—four, six, eight inches deep, as the case may be. Don't let him start to plow until the soil has dried out enough to crumble as it leaves the plowshare. If it's wet and sticky it isn't ready for plowing. Have him use a reversible plow, so as not to leave any wasteful "dead" furrow and unproductive tramped corners.

If your garden patch is too small to plow, get it spaded. Whether you yourself do this work, or whether you have it done, see that the soil is dug to the bottom and thoroughly turned. By taking a strip not quite twice the width of the spade or fork, and cutting at each thrust diagonally, you will find the work much lessened.

Unless you have provided a very heavy coating of manure, the addition of some chemical fertilizer after the ground is plowed and before harrowing will prove a profitable investment. It

doesn't matter very much what the brand is; get the analysis as near 4-8-10 as you can—that is, 4 per cent. nitrogen, 8 per cent. phosphoric acid, 10 per cent. potash. Remember that, as a general thing the more you pay per bag the cheaper you are getting your real plant food. In addition get fifty or a hundred pounds of nitrate of soda to use for top dressing during the season. Three hundred and fifty pounds of such a fertilizer will not be too much for a quarter-acre garden, if used without manure. If some

manure is used, cut down the amount of fertilizer in proportion. On a calm day broadcast the fertilizer evenly over the ground. You will get it distributed more evenly by making two applications, first walking across the garden and then up and down the length. It will be well to keep half a bag or so for some crops that need extra assistance later, also to sow where second or "succession" crops are grown.

Don't put on the fertilizer until you are ready to follow its application immediately with the harrow. Of these there are several types (see article on garden tools on page 254). The nature of your soil will determine which is best for your use. As a general thing a disc harrow, followed by a spike-tooth harrow for leveling the surface, will put things in very good shape. But whatever the kind, see that the harrowing is kept up until the soil is well pulverized and fined to a depth of several inches. In a small plot, of course, you will have to rely upon the iron rake and the wheel hoe or hand hoe to do your harrowing with. In this case, it will be well to apply fertilizer only to that part of the garden which you expect



If the soil is at all dry firm the seed into the rows with the ball of the foot; then cover with loose earth

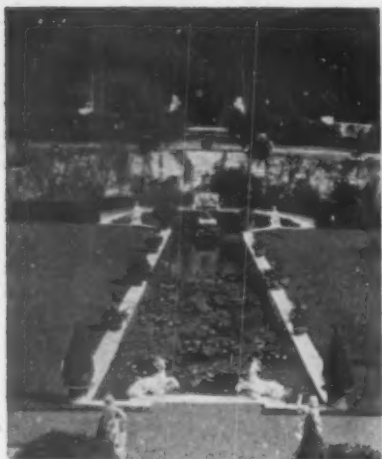
to sow or plant within a few days.

The harrowing should be followed immediately by sowing or planting, with a final leveling of the soil with the iron rake; and you should finish it off so fine and smooth that a cat couldn't walk across it without leaving very noticeable tracks. In such a fine seed-bed, the little rootlets will not dry up in dead air spaces before striking into the soil; and the little seedlings will not be smothered beneath stones, trash and lumps of earth too heavy for them to lift.

This much is preliminary; now for what is to go into the ground, after it is ready. The work described above will have taken several days—but everything suggested there can be done within that short time, remember that. In the meantime there will be work for your evenings. The success of this garden campaign of yours will depend upon your giving at least a few hours to planning carefully ahead the lines of action. After that you can, if need be, turn it over to someone else to carry out.

Measure off your garden plot and make a sketch to scale on a paper of convenient size. Then refer to the table on page 246 and

(Continued on page 249)



"Bellefontaine," Lenox, Mass.—the formal sunken type with the lily pool as a central feature



An unusual example of the formal type, in that it is laid out on an open plain instead of having a frame of woods



The formal bulb garden of spring. After blooming the bulbs give way to other bedding plants

TYPES OF FLOWER GARDENS



An inspiration for the beginner—a garden of annuals giving a mass of color from seed sown now, but you will have to do it all over next year



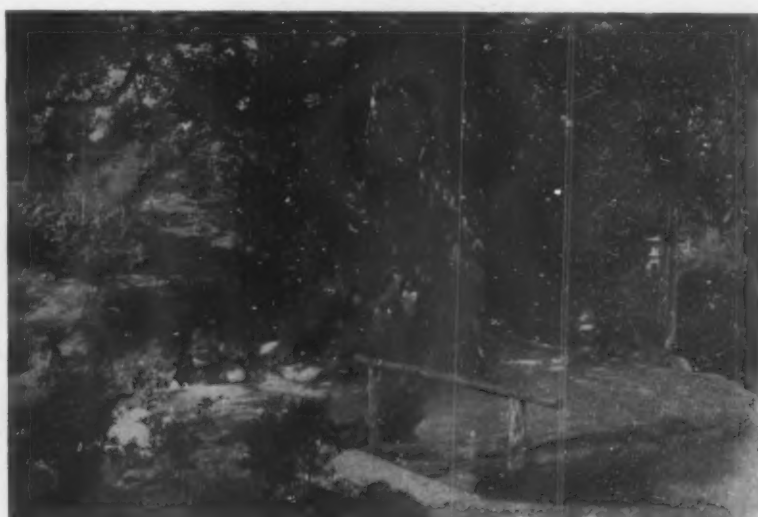
The typical English "docrway garden," where lawns are replaced by a tangle of perennials that bloom and increase from generation to generation



The wild garden along the path through the woods. Rhododendrons line the flag walk and early spring bulbs are naturalized with the pansies around the flagstones



A combination of rock and water garden that furnishes a home for all sorts of shy bog and Alpine plants



A Japanese garden must have its winding stream, giving opportunity for bridge and stepping-stones, reflections and mystic symbolism

HOUSE & GARDEN'S GARDENING RECORD AND GUIDE-1911

KEY	FLOWER	DISTANCE OF PLANTS APART (IN.)	BLOOM	COLOR	HEIGHT (INCHES)	USE	DIRECTIONS	FLOWERS
P	AQUILEGIA (Columbine) †	12	June-July	Various	12-24	Mass-border	The seed of most of the garden flowers is very small; some of it as fine as pepper. Although these tiny seeds will often develop into good plants under most adverse conditions, success with them can be made certain only by taking great care in preparing the seed-bed and transplanting. While some, like the poppy, which does not gracefully bear transplanting, may do better if sown where wanted; most of them will make better plants by sowing in a specially prepared seed-bed and transplanting. Such a bed should be well drained and slightly raised—4 feet wide and length required will be a convenient size—and the surface soil should be light, sandy and finely sifted. Mark off with pointed stick, across the bed, drills about five times the depth of the diameter of seed to be sown, and 6 to 12 inches apart. Scatter thinly—three to fifteen seeds, according to size, to the inch, firm lightly into the soil, cover and firm lightly on top. Tag each row! If soil is at all dry, water off previous to sowing. If seedlings come up too thickly, thin out. Remember a dozen good plants will give more satisfaction than a hundred poor ones. Keep seed-bed clean, and when plants begin to crowd, transplant on cloudy day or late afternoon to permanent beds. If hot, shelter for a day or two from direct sun. (See about setting out plants in accompanying article.) Most garden seeds should be sown out-doors in May. If like sweet peas and cosmos, they should be put in earlier; directions on packets—read these always—will give instructions. Many sorts may with advantage be started in frames or in the house, or bought from a local florist, thus securing an immediate display in the garden.	AQUILEGIA (Columbine)
P	ACHILLEA	10	July	Various	12-36	Border		ACHILLEA
P	ADONIS	6	May-June	Yellow	24	Border		ADONIS
P	AGERATUM †	5	June-Oct.	White	12-36	Mass-edging		AGERATUM
P	ANEMONE †	12-15	Aug.-Oct.	White to rose	12-18	Mass-edging		ANEMONE
A	ASTER †	6	July-Sept.	White, blue, pink	12-18	Border		ASTER
A	BACHELOR'S BUTTON	15	June-Sept.	White, blue, pink	12-18	Border		BACHELOR'S BUTTON
A	BALSAM	24	May-Aug.	Crimson, purple	10-18	Mass		BALSAM
A	BLEEDING-HEART (Dicentra)	12	June-Oct.	Orange, yellow	8-19	Mass-border		BLEEDING-HEART (Dicentra)
A	CALENDULA	8	August	Orange, yellow	28-24	Mass-edging		CALENDULA
A	CAMPANULA	8	June-July	White, blue, pink	12	Border		CAMPANULA
A	CANDYTUFT †	4-12	June-Sept.	White	18-36	Mass-edging		CANDYTUFT
A	CASTOR BEAN	16	Foliage	Foliage	60-90	Screen, ornamental		CASTOR BEAN
A	CHRYSANTHEMUM †	18	Aug.-Oct.	Various	12-36	Mass-border		CHRYSANTHEMUM
A	CLARKIA †	8	June-Sept.	White, rose, purple	18	Mass		CLARKIA
A	COCKSCOMB	8	June-Oct.	White, red, yellow, purple	6-12	Border		COCKSCOMB
A	CORAL BELL	15	July-Aug.	Coral red	12-30	Border		CORAL BELL
A	COREOPSIS †	12	June-Aug.	Yellow-brown	12	Mass		COREOPSIS
A	CORNFLOWER †	8	June	White, blue, rose	24-72	Mass		CORNFLOWER
A	COSMOS †	24	Aug.-Sept.	White, pink, red	24-36	Mass		COSMOS
P	DAISY †	36	July-Sept.	Various	60	Edging		DAISY
P	EVENING PRIMROSE	10	May	White, pink, rose	6-8	Edging		EVENING PRIMROSE
P	FORGET-ME-NOT †	6	April-July	Yellow	6-8	Edging		FORGET-ME-NOT
P	FOUR-O'CLOCK †	10	July-Aug.	Blue	6-18	Border		FOUR-O'CLOCK
P	FOXGLOVE †	10	June	White, red, yellow	30	Mass-screening		FOXGLOVE
P	GAILLARDIA †	10	July-Oct.	Pink, white	10-36	Mass		GAILLARDIA
A	GLOBE AMARANTH †	18	July-Oct.	Pink	36-60	Mass-border		GLOBE AMARANTH
A	GODETIA †	8-12	July-Oct.	Red, yellow	12-24	Mass		GODETIA
A	GOUDAS	8-12	July	Various colored fruits	60-170	Mass		GOUDAS
P	HELIOPSIS	12-16	Aug.-Sept.	Yellow	36-48	Mass		HELIOPSIS
P	HELLANTHUS	5	August	White to rose, yellow	36-72	Ornamental		HELLANTHUS
P	ICELAND POPPY	8-12	June-Sept.	White, yellow, orange	15	Screening		ICELAND POPPY
P	IRIS †	6-10	June-July	White, yellow, blue	18-30	Mass-border		IRIS
P	LAKSPUR †	3	June	White, blue, pink	12-60	Border		LAKSPUR
A	LOBELIA	10	June-Sept.	Rose	36-72	Screening		LOBELIA
A	LOVELIES-BLEEDING	10	June-July	Blue, crimson	6-12	Mass-edging		LOVELIES-BLEEDING
P	LOVE-IN-A-MIST	10	June-Sept.	Yellow to scarlet	36-60	Mass		LOVE-IN-A-MIST
P	LUPINE †	4	June	White, blue	12-24	Border		LUPINE
P	MALLOW †	8	July-Sept.	Rose, white	18-30	Mass		MALLOW
A	MIGNONETTE †	6	Aug.-Oct.	Lemon, white	10-24	Mass		MIGNONETTE
P	MONSHOOD (poisonous) †	10	July-Oct.	Green, white	12	Mass-edging		MONSHOOD (poisonous)
A	MOONFLOWER †	6	July-Aug.	Blue, white	36	Border		MOONFLOWER
A	MORNING GLORY †	4-12	July-Aug.	White	15-30 ft.	Screening-vine		MORNING GLORY
P	NASTURTIUM †	5-12	July-Oct.	Various	12-30	Screening-vine		NASTURTIUM
P	NICOTIANA †	8-12	July-Aug.	White, red	12-60	Mass-screening		NICOTIANA
P	PANSY †	7	May-June	Various	6	Border		PANSY
P	PEONY †	24	May-June	Red, pink, white	24-36	Mass		PEONY
P	PETUNIA †	8-12	July-Sept.	White to claret	24-36	Mass-edging		PETUNIA
P	PHLOX †	5	July-Oct.	White to rose	12-60	Mass-edging		PHLOX
P	POPPI	4	August	White to scarlet	6-12	Border		POPPI
A	PORTULACA	4	July-Aug.	White, red, yellow	6-9	Mass		PORTULACA
P	PRIMROSE	5	April-May	Yellow, pink	4	Mass-edging		PRIMROSE
P	PYRETHRUM †	12	Aug.-Sept.	Various	12-24	Mass-border		PYRETHRUM
P	RUDEBECKIA (Golden Glow) †	12	June-Aug.	Yellow	60-100	Mass-screening		RUDEBECKIA (Golden Glow)
P	SALVIA †	6	Aug.-Oct.	Scarlet	12-24	Mass-border		SALVIA
P	SCHIZANTHUS	5	June-Aug.	White, yellow, blue, maroon	10-24	Border		SCHIZANTHUS
P	SILENE †	8	June-Aug.	Mixed, yellow, lilac	12-36	Mass-edging		SILENE
P	SNAPDRAGON †	5	June-Aug.	White to rose	3-5	Mass-border		SNAPDRAGON
P	STOCK †	5	June-July	White to crimson	24	Border		STOCK
P	SUNFLOWER †	24-48	August	White to yellow	18	Screening		SUNFLOWER
P	SWEET ALYSSUM †	4	May-Sept.	White	36-100	Screening		SWEET ALYSSUM
P	SWEET PEA †	8	June-Oct.	Various	8	Mass-edging		SWEET PEA
P	SWEET WILLIAM (Dianthus)	8	July-Aug.	White, pink, red	12-72	Screening		SWEET WILLIAM (Dianthus)
P	VERBENA †	12	June-Aug.	Purple	12	Border		VERBENA
P	VERONICA	8	August	White	5-18	Edging		VERONICA
P	VIOLET †	6	March	Brown, yellow	24-30	Border		VIOLET
P	WALLFLOWER	6	July-Aug.	Various	6	Mass-edging		WALLFLOWER
P	ZINNIA †	8	July-Oct.	Various	12-30	Border		ZINNIA

To use this planting table to best advantage, first cut it from the magazine. Cut off the heading strip at the right-hand edge, between the two lines, and mount the table and this heading on a sheet of heavy paper or cardboard to tack up in your tool-house. The heading strip is intended to continue the horizontal line of the table heading, having under it, on the mount, blank columns for your own notes. After mounting in this way, draw in with ink the continuation of the vertical lines, completing the record space.

†—Climbers.
B—Biennials.
A—Annuals.
†—Flowers especially good for cutting.
†—Especially fragrant flowers.
†—Plants for moist places.

HOUSE & GARDEN'S GARDENING RECORD AND GUIDE - 1911

VEGETABLE	VARIETIES	PLANT	DEPTH TO SOW - INS.	DISTANCE BETWEEN SEEDS - IN.	SEEDS FOR ENTIRE SEASON	SEED FOR 50 FT. ROW	DIRECTIONS	VEGETABLE
Asparagus, seed.	Palmetto, Donald's Elmira, Barr's Mammoth.	April-May	1	2-4 in.	15 in.	1 oz.	Transplant in spring of 2nd year.	Asparagus, seed.
Asparagus, plants.	Palmetto, Donald's Elmira, Barr's Mammoth.	April	4	1 ft.	3 ft.	50	Divide roots and spread out level.	Asparagus, plants.
Bean, pole.	Kentucky Wonder, Golden Cluster, Burger's Stringless.	May 15-June 10	2	3 ft.	3 ft.	1/2 pt.	Thin to four or five best plants.	Bean, pole.
Bean, lima.	Early Leviathan, Giant Poddie, Burpee Improved.	May 20-June 10	2	3 ft.	3 ft.	1/2 pt.	In sandy soil; put edge-wise, eye down.	Bean, lima.
Beet, late.	Crimson Globe	April-August	2	3-4 in.	15 in.	1/2 oz.	Scatter thinly; thin out on cloudy day.	Beet, late.
Carrot, late.	Danver's Half-long, Ox-heart, Chantenay.	May-July	1/2-1	2-3 in.	15 in.	1/2 oz.	Deep soil; thin out; store for winter in sand or pits.	Carrot, late.
Corn, late.	Seymour's Sweet Orange, White Evergreen, Country Gentleman	May 20-July 10	2	3 ft.	4 ft.	1/2 pt.	Cultivate frequently; shallow.	Corn, late.
Cucumber	Early White Spine, Fordhook Famous, Davis Perfect.	May 10-July 15	1	4 ft.	4 ft.	1/2 pt.	Thin to two or three; protect from beetles.	Cucumber
Egg Plant, seed.	Black Beauty, N. Y. Purple.	June 1st	1/2	3-6 in.	15 in.	1/2 oz.	Richest, moist soil; keep off potato beetle.	Egg Plant, seed.
Egg Plant, plants.	Black Beauty, N. Y. Purple.	June 1-20	1/2	2 ft.	30 in.	25	Richest, moist soil; keep off potato beetle.	Egg Plant, plants.
Leek	American Flag	April	1	2-4 in.	15 in.	1/2 oz.	For best results, mulch about stalks. [five feet.	Leek
Melon, musk.	Noted Gem, Emerald Gem, Hoodoo	May 15-June 15	1	4 ft.	4 ft.	1/2 oz.	Manure and sand in hills; pinch back vines at	Melon, musk.
Onion	Cole's Early, Sweetheart, Halbert Honey.	May 15-June 15	1	6-8 ft.	6-8 ft.	1/2 oz.	Same; protect from bugs (also musk melon).	Onion
Okra	Prizetaker, Danver's Globe, Ailsa Craig.	April	1/2-1	2-4 in.	15 in.	1/2 oz.	Keep clean from weeds! Top-dress with ni-	Okra
Parsley	Perfected Perkins, White Velvet.	May 15-June 15	1/2-1	2 ft.	3 ft.	1/2 oz.	Hoe frequently.	Parsley
Pepper, seed.	Emerald	April-May	1/2	4-6 in.	18 in.	1/2 oz.	Soak seed 12 hours before planting. [ground.	Pepper, seed.
Potatoes, main	Hollow Crowned (Improved)	April	1/2	3-5 in.	18 in.	1/2 oz.	Deep soil; frost improves; store or leave in	Potatoes, main.
Pumpkins	Ruby King, Chinese Giant.	June 1st	1/2	3-6 in.	15 in.	1/2 oz.	Very tender; start in strong heat; rich soil.	Pumpkins
Rhubarb, plants	Irish Cobbler, Green Mountain, Uncle Sam (Noroton Beauty).	June 1-20	1/2	3 ft.	3 ft.	25	Cultivate frequently; hill up slightly.	Rhubarb, plants.
Salsify	Norwood, early	April 15-June 20	4-6	13 in.	30 in.	1/2 pk.	Manure under hills; pinch back vines.	Salsify
Squash, summer	Large Cheese, Quaker Pie.	May 1-June 20	1-2	6-8 ft.	3 ft.	1/2 oz.	Work soil, add nitrate of soda in March.	Squash, summer.
Squash, winter	Myatt's Victoria	April-May	1	2-3 ft.	18 in.	1/2 oz.	Deepest soil; store in pits or leave in ground.	Squash, winter.
Tomato, seed.	Mammoth Sandwich	May 15-July 1	1-2	4 ft.	4 ft.	1/2 oz.	Manure under hills; keep off bugs; for wilt-	Tomato, seed.
Tomato, plants.	White Bush, Delicata, Fordhook, Vegetable Marrow.	June	1/2	6-8 ft.	15 in.	1/2 oz.	Stake up; cut off suckers; tie on paper bags	Tomato, plants.
Bean, dwarf.	Hubbard, Delicious	May 15-July 20	1/2	3-4 in.	3 ft.	1/2 oz.	Protect from cutworms. [for earliest fruit.	Bean, dwarf.
Kohlrabi	Earliana, Chalk's Jewel, Matchless, Dwarf Giant.	May 5-Aug. 15	2	2-4 in.	1 1/2-2 ft.	1 pt.	Late frosts kill; ground not too rich.	Kohlrabi
Lettuce	Red Valentine, Burpee's Greenpod, Improved Refugee, Brit-	April-July	1/2-1	6-12 in.	1 1/2-2 ft.	1/2 oz.	Used when young; cooked thoroughly, is very	Lettuce
Peas, smooth	White Vienna	April-August	1/2	1 ft.	1-1 1/2 ft.	50	Rich soil; grow rapidly; shade in July and Aug.	Peas, smooth.
Peas, wrinkled	Mignonette, Grand Rapids, May King, Big Boston, New	April 1-Aug. 1	1/2	2-4 in.	3 ft.	1 pt.	Not too rich; cultivate often.	Peas, wrinkled.
Radish	York, Deacon, Coe, Paris White.	April 10-July 15	2-3	2-4 in.	1 ft.	1/2 pt.	Better quality; bush up early. Double rows.	Radish
Spinach	Gradus, Boston Unrivaled, Quite Content.	April 1-Sept. 18	1/2	2-3 in.	18 in.	1/2 oz.	Sow every ten days. Mix land-plaster with soil.	Spinach
Turnip	Rapid Red, Crimson Globe, Chinese.	April-Sept. 15	1	3-5 in.	18 in.	1/2 oz.	Cover with straw for wintering over.	Turnip
Beet, early	Swiss Chard Beet, Long Season, Victoria.	April-Sept.	1/2-1	4-6 in.	15 in.	1/2 oz.	Store for winter. Use when small.	Beet, early.
Broccoli, early	White Milan, Petrowski, Golden Ball	April-June	2	3-4 in.	15 in.	1 oz.	Start under glass, February, and set out.	Broccoli, early.
Brussels Sprouts	Edmund's Early, Early Model	April	1/2-1	1 1/2 ft.	2 ft.	25	See Cauliflower; is harder.	Brussels Sprouts.
Cabbage, early	Early White French	April	1/2-1	1 1/2 ft.	2 ft.	35	Better after sharp frost; treat like spinach.	Cabbage, early.
Carrot	Dwarf Scotch Curled	April	1/2-1	1 1/2 ft.	2 ft.	35	See cabbage; excellent quality; keep all win-	Carrot
Cauliflower	Wakefield, Glory of Enkhuizen, Early Summer, Succession,	April	1/2-1	1 1/2 ft.	2 ft.	35	ter on stalks. [frequently.	Cauliflower
Corn, early	Savoy	April	1/2-1	1 1/2 ft.	2 ft.	35	Harden off before setting out. Rich soil; hoe	Corn, early.
Onion Sets	Golden Ball, Early Scarlet Horn.	April	1/2-1	2-3 in.	15 in.	1/2 pt.	Deep soil; thin out; store in sand for winter.	Onion Sets
Peas	Burpee's Best Early, Snowball, Sea-foam, Dry Weather.	April-May 15	2	3 ft.	3-4 in.	2 pt.	Like cabbage; tie leaves or paper over heads	Peas
Crops in Sec. II.	Golden Bantam, Peep o' Day, Cory.	April 1-May 1	2	2-4 in.	15 in.	1 pt.	Start in April on sods under glass. [to blanch.	Crops in Sec. II.
Beet, late.	Succession, Danish Ballhead, Drumhead Savoy, Mammoth	July-August	2	3-4 in.	15 in.	1 oz.	Rich soil; top-dress with ashes or nitrate.	Beet, late.
Broccoli	Rock (red)	May-June	1/2-1	2 ft.	2 1/2 ft.	25	WARNING: Firm seeds and plants in dry	Broccoli
Brussels Sprouts	White Plume, Golden Self-blanching, Winter Queen.	May-June	1/2-1	2 ft.	2 1/2 ft.	25	soil. Destroy all weeds early. Cultivate sur-	Brussels Sprouts.
Cabbage, late	Broad-Leaved Batavian, Giant Fringed	May-June	1/2-1	2 ft.	2 1/2 ft.	25	face of soil, weeds or no weeds, every ten	Cabbage, late.
Cauliflower	Gradus	May-June	1/2-1	2 ft.	2 1/2 ft.	25	days—as nearly as possible. Fight bugs and	Cauliflower
Celery, seed		May-June	1/2-1	2 ft.	2 1/2 ft.	25	beetles, or—take the consequences.	Celery, seed.
Celery, plant		May-June	1/2-1	2 ft.	2 1/2 ft.	25	Sow in finely prepared bed; keep clean; trim	Celery, plant.
Endive		May-June	1/2-1	2 ft.	2 1/2 ft.	25	off to make stocking plants.	Endive
Peas, late		May-June	1/2-1	2 ft.	2 1/2 ft.	25	Blanch by tying up leaves or covering with	Peas, late.
Crops in Sec. II.		May-June	1/2-1	2 ft.	2 1/2 ft.	25	shingles.	Crops in Sec. II.
		May-June	1/2-1	2 ft.	2 1/2 ft.	25	Ground apt to be dry; firm newly set plants.	
		May-June	1/2-1	2 ft.	2 1/2 ft.	25	the short vertical lines of this record heading	
		May-June	1/2-1	2 ft.	2 1/2 ft.	25	strip to the bottom edge of the table and the	
		May-June	1/2-1	2 ft.	2 1/2 ft.	25	horizontal line just below this note to the right	
		May-June	1/2-1	2 ft.	2 1/2 ft.	25	to complete the rectangle.	

¹In the vicinity of New York City. Each 100 miles north or south will make a difference of 5 to 7 days later or earlier.

²This is for sowing the seed. It will take three to six weeks before plants are ready. Hence the advantage of using the seed-bed. For instance, you can start your late cabbage and afterward thinned to the best plants.

To use this table to best advantage, first cut which should be cleared off by the 10th of July.

³Distances given are those at which the grow-

⁴ing plants should stand, after "thinning." Seed in drills should be sown several times as thick.

⁵Best started in seed-bed, and afterwards transplanted; but may be sown where wanted right, giving, on the blank paper or mount be-

low it, a space for your own notes. Prolong



Orderliness is one of the essentials in the vegetable garden for appearance sake as well as for convenience. The racks at the left are for tomato vines



A row of quick-growing castor beans supplies a screen that will secure privacy in the small garden



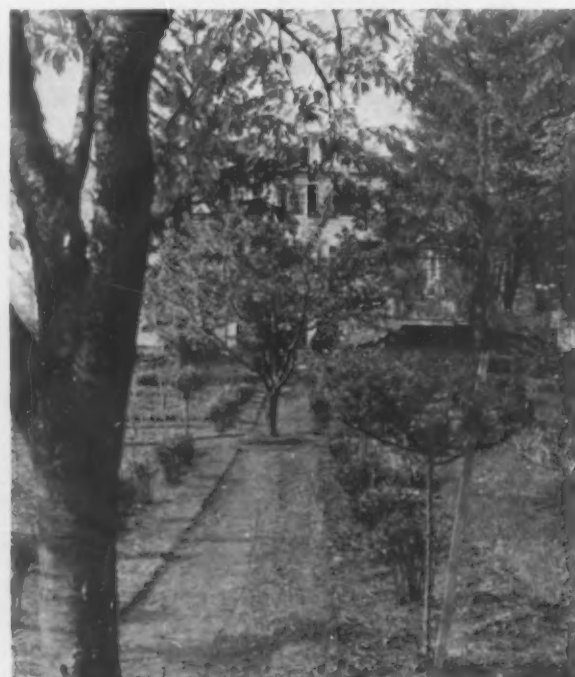
Another model of neatness. Space your rows in multiples of a definite unit so as to save constant readjustment of the wheel hoe



Perhaps a tool-house is beyond you just now, but have a dry place for tools and keep them bright



Tomato vines trained on a wall lattice save space



In this old Connecticut garden fruit trees are set on the path axis where their shade is acceptable



Pulverize the soil by a backward-and-forward motion of the rake

(Continued from page 244)

make a list of the vegetables you want in your garden and the amount (in number of rows) of each. This will take only a few minutes; and it will not require many more to rule off your garden plan accordingly. Be careful to keep crops that remain the entire season in one place and tall-growing things like corn to the north of low ones, like beans. This will give you a planting plan similar to the one illustrated in the January issue. The advantage to

be derived from the plan is that you will know exactly what will be required for your garden during the entire season. Mount this plan along with the Guide and Record on a large sheet of cardboard or stiff paper, and your campaign for the whole season is mapped out; and in addition you have a convenient and easily kept record of the garden work, which will assist you wonderfully in planning next year's garden to produce maximum results and minimum waste.

From your planting plan and the table you will know just what seeds to order, and this should be done at once. You will know also just what vegetable plants you will need. If you can, get them directly from the man who grows them, as they will be in better condition and you will have a larger stock from which to select. Don't pick out the largest and greenest. Take the stocky ones, that have been well hardened off. Even if a few leaves are purple there is no harm done.

With the seeds in hand and the plants procured, and the soil in seed-bed and plant-bed properly enriched and prepared, you are ready to begin the planting of your garden. Make up your mind first of all to have every row straight as a string. Get a stout cord of suitable length and mark off the rows by means of this. It may take more time to line them off in this way instead of putting them at random, but you will be saving time because of the greater ease with which weeding and hoeing, especially wheel hoeing, may be accomplished. Besides this the appearance warrants the delay.

The matter of seed-sowing is, of course, an important one. The seed should, as a rule, be sown at a depth of about five times their diameter. They should be covered evenly, either with the hoe or by drawing the back of a rake across the rows. The row should be firmed on top lightly with the back of the hoe, to show

where it is, in order that cultivating may begin before the seeds come up, and each variety should be tagged, using a garden label or strip of lath or shingle. If the soil is dry, firm the seed in the drill before covering, with the ball of the foot or hoe blade. For more detailed instruction in regard to seed-sowing read carefully the Garden Department on page 270.



The setting of plants is no less important—and no less frequently performed in a careless way. Perhaps it would be better to say a wrong way, for the inexperienced planter is more than likely to take too much care in setting out plants. He handles them as though they were glass, cutting them carefully out of the box or breaking the pots in which they grow, in order that they may not be injured. He excavates a neat little hole with the trowel and places a plant gingerly in it, filling the soil in

gently and possibly heaping it up about the stem in order to make the plant stay upright. And after all this care, they wilt in the noon sun and half of them die! "Beginner's luck" is not frequently met in gardening. If you want your plants to live and "take hold" at once, you must dispense with these trained-nurse methods. First of all, you should have your soil in such fine condition that you can make holes with your hand or with the dibble. Secondly, if they are at all tall and green, with the leaves inclined to flop, shear off the upper half of the leaves. Then set them in the soil to about half the length of the stem—more, if they are spindling or long-stemmed. With the thumbs and backs of the fingers press the soil around them evenly; press it down hard! Then, when you get to the end of the row, unless the soil is very damp, go back over the row and press down each plant still more firmly by placing the balls of the feet close to the stem and letting your weight come evenly upon both sides at once. After the plants are so set, rake the whole space over evenly to restore the soil mulch of fine loose earth on the surface. Plants so set will live. If the ground is so dry when setting that they must be watered, water before all the soil is put about them, or in the holes before planting, not on the surface. If the planting is followed by very hot, dry weather, protection may be given by placing a half sheet of newspaper over each plant, like a miniature tent and holding it in position with stones or earth. If manure or fertilizer is applied in the hill, or directly to each plant, see that it is thoroughly mixed with the soil before wetting the plants; otherwise it is likely to burn the roots.

Different vegetables, because of their different habits of growth, are planted in different ways—some in hills, some in rows, some in drills. The accompanying Guide indicates the usual method of growing each of the ordinary garden vegetables. In hills, which are usually several feet apart each way, several seeds are planted and sometimes thinned out to two or more of the best plants—as with cucumbers and melons, or all left, as with corn. It was formerly the custom in hill culture to draw the earth up into a sort of mound or hill about the plants, but this practice has rather given

(Continued on page 277)



In transplanting your plants from the seed-bed do not be afraid of hurting them





With the knowledge gained by a very little study of grass seed properties you will know what to sow in sunny and in shady places to give an evenly covered lawn

Grass Seed Mixtures and How to Use Them

THE SIMPLICITY OF THE APPARENTLY COMPLEX MIXTURES OF LAWN SEEDS—WHAT TO USE FOR SHADY, HILLY AND MOIST PLACES—HOW TO HAVE A REALLY GOOD LAWN

BY LUKE J. DOOGUE

Photographs by Henry Fuerman, N. R. Graves and others

SO much has been written on the subject of lawn-making that about everyone interested in this work is fully competent, theoretically at least, to carry through the process of land renovation and preparation, whether it be for a small lawn or an area consisting of acres. The subject along these lines has been very exhaustively treated, but, strange to say, the equally important subject of grass seed has been rather neglected. While many amateurs can talk freely on the preparation of the land, they are not so confident when treating of grass seed. It seems strange that this is the case when so much depends on the suitability of the grass seed to the land for the making of a successful lawn. The only reason, as far as I can see, why people are not versed in this matter is that they have been frightened by the botanical names of grasses, which seem wholly unsuitable, and too difficult of pronunciation, for such commonplace things. There is, however, just as much individuality in a plant produced from a grass seed as in the choicest plant in a greenhouse. One kind of grass seed will produce a low-growing plant while another grows high; one wants a moist situation, another a dry one; some will germinate in the shade, others will not, and so on through the list. If a person knows each kind and its possibilities and requirements he will be able to choose the grass best suited for his wants, and by careful trials arrange the mixtures with better success than the man in the wholesale house who is obliged to guess at what is best for his wants. Start out, then, in

the primer class and tabulate some of the best grasses used for lawns and tag them with both their names, the botanical and the common ones.

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

Red top—*Agrostis vulgaris*.—Shows results more quickly than blue grass; will thrive on a sandy soil; fine in combination with blue grass.

English rye grass—*Lolium perenne*.—Grows quickly and shows almost immediate results; good to combine with the slow-growing blue grass.

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

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

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

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

Wood meadow grass—*Poa nemoralis*.—Good for shady places; is very hardy.

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

White clover—good for slopes; not to be recommended for a lawn.

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



Take apart your lawnmower before the spring rush starts to clean and oil

Now, with so much as a reference library, you will have sufficient knowledge of the kinds of seeds to draw from to make combinations that will fit any situation. I would further suggest that you go to a wholesale house and get a sample of each of these seeds and examine them. Get just a little of each in an envelope. Make a comparative examination of the seeds, holding a little in the palm of the hand. As you look at each seed repeat its name a few times and recall its characteristics, and you will be surprised to find that on the second or third trial every name will suggest itself the moment your eyes rest on the seed. With a knowledge of the seeds you can then go to your dealer and tell him what you want—not necessarily what he thinks you want. You are then a better judge than he is.

It is worth while following the subject farther, for the results

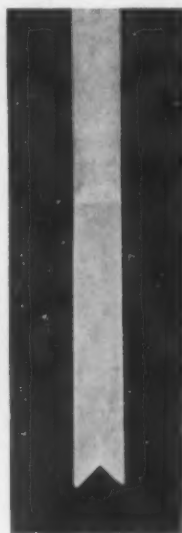


For steep banks, white clover, creeping bent, sheep fescue and Rhode Island bent, with the old stand-by, Kentucky blue grass, will fill the bill

rye passes, the red top continues to cover, while the blue grass grows sturdier each day until it crowds everything out by virtue of its own strength. Use twelve pounds of Kentucky blue grass, five



Here is a coarse mixture of many things, including probably a large quantity of "sweepings"



A flat-bladed knife, notched for weeding



Dandelion appears along the edge. Deep digging with a knife by hand is the only way to get it out

will more than repay the trouble. Test the seeds. Make shallow boxes and fill them with loam and sow each kind of seed just as you would on a lawn. Put a label at the head of the box and on it the time of sowing the seed. Do this with as many as you can. Then watch and make notes of the time it takes for germination. Note this and also the character of the blades. Having finished this you will have a very liberal education in the subject of grass.

Should you not care to do as suggested above you will be dependent on others to get what you most need. If you should go to a dozen people and ask them to suggest a combination of seeds they would all give them readily to you, but no two proportions would be alike. If you should ask for a single grass the majority would suggest Kentucky blue grass. For a single grass there is nothing better suited for all conditions. There is this objection to it, however: it is not a nervous man's grass. You cannot plant it today and have a lawn next month. If you can afford to wait, sow Kentucky blue and your patience will be well rewarded. It makes a permanent lawn.

To introduce the ready-made lawn, use a combination of Kentucky blue, red top and English rye. The blue grass is slow, but the rye and red top produce speedier results. The first month will see the newly seeded space a carpet of green. In time the

pounds of red top and three pounds of English rye grass to the bushel, and sow three and one-half to four bushels to the acre. This makes a reliable combination.

It is common to hear people asking for grass that will grow in shady places, but it is always difficult to determine the degree of shade. A place may be shaded and yet suitable for growing grass, or it may be so shaded that no grass known could be made to germinate there. In places where there is no heavy dripping and where the ground is not absolutely dark, use the following:

(Continued on page 278)



A scheme of garden paths that saves labor in mowing, as the lawnmower may be run directly over the stones, leaving no edges to be trimmed



The white foxglove is an invaluable harmonizer for the June border, being particularly effective as a background for Sweet William

Color in the Flower Garden

THE ONLY WAY IN WHICH THE AMATEUR MAY HOPE TO AVOID THE CLASH OF INHARMONIOUS COLORS IS BY A PLENTIFUL AND JUDICIOUS USE OF WHITE FLOWERS

BY ADELINE THAYER THOMSON

Photograph by the author and others

THE element that finally determines the success or failure of a garden is the color harmony between the flowers—or the lack of it. No greater problem, however, confronts the gardening enthusiast. The amateur, thinking that a satisfying color scheme can be developed only after years of intimate study among the flowers themselves, frequently fails to make even the effort towards such a far-off ideal. The well seasoned garden enthusiast, too, is apt to become careless and even discouraged when, time after time, his flowers fail to come true to type, spoiling the carefully planned effect he has worked out; or important elements in his composition refuse to thrive.

It seems rather hopeless, does it not? And yet there is a solution of the problem for the veriest tyro—a sure way out of the whole difficulty: *Use white-flowering plants in profusion.* A judicious mixture of white masses among the colors will reconcile the most inimical neighboring plants, and will show off to the very best advantage those blooms which, by reason of their delicacy of coloring, are thrown into obscurity by blatant companions.

Both annual and perennial classes are rich in white-flowering types. After using many of these

in my garden, however, I find that some of the varieties combine characteristics making for practical usefulness in color adjustment with rare decorative quality and attractiveness in a greater degree than do others. For convenience in planting, these varieties are named in connection with the month of flowering.

The early spring display among the hardy plants, it will be remembered, is painted in shades of pink, purple, magenta, and yellow. A color scheme full of beauty, to be sure, under tasteful treatment, but when carelessly blended presenting only a tangled mass of warring discord.

Four splendid white-flowering perennials that are warranted, if planted generously, to keep the garden in accord throughout April and most of the month of May, are blood-root, *Arabis alpina*, *Iberis*, and *Phlox subulata*. For the latter half of May, two white types of the German iris—Florentine Alba and Bridesmaid—give invaluable service. Not only are these varieties useful in reconciling the many-hued blossoms of their own stately tribe, but grouped among columbines of too contrasting shades, or companioned with the lovely but trying pink pyrethrums and peonies, these white irises give very pleasing results.



A long and prolific flowering season is the useful attribute of the Shasta daisy in separating warring colors

The scarlet Oriental poppy, possessing such striking decorative qualities, but so often ruining entire planting schemes because of clashing combinations, may be used with perfect safety if *Valeriana officinalis*—garden heliotrope—is massed in nearby profusion. The wealth of cool green leaves, and the tall, fleecy flower spikes yielded by this old-time June favorite, act as a foil for the startling brilliancy of the poppies, and rather enhance than detract from their glory. Valerian is also useful among peonies, inclining towards the cerise coloring. Another rare treasure for the June pageant is that grand early-flowering phlox—Miss Lingard. The wonderful trusses of bloom held high above dark foliage bring the exquisite purity of Miss Lingard always into conspicuous notice, and the most unruly colors offer no terrors when they are placed under the guardianship of this grand harmonizer. Two other hardy plants, adapted for practical help among the gay June blossoms, are the chaste Madonna lily—useful among the delphiniums and spiderwort—and the white foxglove—invaluable with plantings of Sweet William and for making harmonious background effects.

July is the trying month in the hardy garden or border. Many of the perennials, having completed a rich harvest of bloom, are cut back to the ground in order that a second flowering period may be attained later. The plants coming into flower, too, are deeper in coloring and more trying to place in harmonious relations; the shades of orange, chrome, blue and cerise largely predominating. If real beauty is realized during this time, the key unlocking its success is the employment of white flowers; white flowers used not sparingly, however, but in quantities! Among the plants yielding white blooms for the July garden none are more decorative or desirable than the glorious white forms of the Japanese iris. Eclair



In August the starry white nicotiana comes to the rescue, together with the ever-useful sweet alyssum



Eclair and Gold Bound are white varieties of the glorious Japanese iris that will help to prevent discord in July



No collection of plants will clash if *Clematis paniculata* masses its snowy bloom in the background



Even the trying combinations that the Oriental poppy produces may be made welcome in combinations with *Valeriana officinalis*

and Gold Bound are standard varieties that are hard to equal. The Shasta daisy possesses a long and prolific flowering season and is very satisfactory for general massing effects among the conflicting colors of this time, and for group planting also, among the scarlet *Lychnis*, *Lobelia cardinalis*, and the yellow *Coreopsis* and *gaillardia*. *Gypsophila paniculata*, fairly smothered under its harvest of tiny white flowers, adds, too, a decided charm to this midsummer display. Crowded in among the posies here, there and everywhere, an atmosphere of soft coloring is diffused by this plant that is almost ethereal in character. *Achillea* the pearl, and campion are two other hardy varieties for this trying time, as also the two annuals, Empress candytuft and sweet alyssum.

Perennial phlox is queen of the August clans. Jeanne d'Arc, Bridesmaid and White Lady are exquisite white types that cannot be too highly recommended. *Pyranthus uliginosus*, a rank grower perfecting hundreds of large daisies, tones and softens the burning yellow hues of the *Helianthus* and golden marguerite, now in full flower. The annual nicotiana is a useful and happy plant for massing wherever a place may be found for its starry blossoms. Princess Alice, and Madam Rivoire—white types of the ten-weeks-stock—the Queen Victoria snapdragon, and the many kinds of white asters, are annuals too, without which no August array of blossoms is complete.

September brings a rich supply of white feathery hardy asters, and that charming woody wild plant—the boneset; both being unusually graceful and delightful for mingling among the deep purples and yellows borne by the flowers of early autumn. A fine harmonizer, as well, is the hardy vine, *Clematis paniculata*. White verbenas, asters, Japanese anemones and chrysanthemums from now on also may be relied on to keep the peace.



By all means invest a few dollars in a combination wheel hoe, hill and drill seeder, cultivator and plow combined



With a double wheel hoe you can cultivate both sides of a row of plants at once and as quickly as you can walk

Garden Tools That Pay Their Way

THE IMMENSE SAVING OF LABOR THAT MAY BE BROUGHT ABOUT BY A JUDICIOUS INVESTMENT IN THE RIGHT KINDS OF GARDENING IMPLEMENTS

BY FREDERIC DE ROCHEVILLE

Photographs by E. R. Rollins, the author and others

IF all people who have no gardens of their own knew how the labor of gardening has been lessened by modern implements this year, there would be several hundred thousand tons less of stale and wilted vegetables carted, hauled, stored, handled, jounced about, and delivered to and through the market.

Your modern gardener is not necessarily bent at the knees and bowed at the shoulders, with knuckles the size of a stump-rooted carrot. He may even, if he is fool enough to prefer style to comfort, perform many of the garden operations that erstwhile were drudgery, in creased trousers and a clean white collar.

While some garden tools have been improved and developed out of all resemblance to their original forms, others have changed little in generations and in all probability will remain ever with us. There is a thing or two to say about even the simplest of them—especially to anyone not familiar with their uses, and so I shall go through the whole list.

There are tools for use in every phase of horticultural operations; for preparing the ground, for planting the seed, for cultivation, for protecting crops from insects and disease, and for harvesting. It is with the first three of these only, however, that the present article deals.

First of all comes the ancient and honorable spade, which, for small garden plots, borders, beds, etc., must still be relied upon for the initial operation in gardening—breaking up the soil. There are several types, but any will answer the purpose. In buying a spade, look out for two things: see that it is well strapped up the handle, in front and back (see illustration), and that it hangs well. In spading up ground, especially soil that is turfy or hard, the work may be made easier by taking a strip not quite twice as wide as the spade, and making diagonal cuts so that

one edge of the spade at each thrust cuts clean out to where the soil has already been dug. The wide-tined spading-fork is frequently used instead of the spade, as it is lighter and can be more advantageously used to break up lumps and level off surfaces. In most soils it will do this work as well as, if not better than, the spade, and has the further good quality of being serviceable as a fork too, thus combining two tools in one. It should be more generally known and used. With the ordinary fork, used for handling manure and gathering up trash, weeds and so forth, every gardener is familiar. The type with oval, slightly up-curved tines, five or six in number, and a "D" handle, is the most convenient and comfortable for garden use.

For areas large enough for a horse to turn around in, use a plow. There are many good makes. The reversible type has the advantage of turning all the furrows one way, and is the best for small plots and sloping ground. It should turn a clean, deep furrow. In deep soil that has long been cultivated, plowing should, with few exceptions, be down at least to the subsoil; and if the soil is shallow it will be advisable to turn up a little of the subsoil at each plowing—not more than an inch, in order that the soil may gradually be deepened. In plowing sod it will be well to have the plow fitted with a "coulter," which turns a miniature furrow ahead of the plowshare, thus covering under all sod and grass and getting them out of the way of harrows and other tools to be used later. Where drainage is poor it will be well to break up the subsoil with a subsoil plow, which follows in the wake of the regular plow, but does not lift the subsoil to the surface.

The spade or spading-fork will be followed by the hoe, or hook, and the iron rake; and the plow by one or more of the



A type of hand-weeder that the author has found most convenient

various types of harrow. The best type of hoe for use after the spade is the wide, deep-bladed type. In most soils, however, this work may be done more expeditiously with the hook or prong-hoe (see illustration). With this the soil can be thoroughly pulverized to a depth of several inches. In using either, be careful not to pull up manure or trash turned under by the spade, as all such material will quickly rot away in the soil and furnish the best sort of plant food. I should think that our energetic manufacturers would make a prong-hoe with heavy side blades, like those of the spading fork, but I have never seen such an implement, either in use or advertised.

What the prong-hoe is to the spade, the harrow is to the plow. For general purposes use one that is adjustable; and for ground at all mellow it will be the only one necessary. Set it, for the first time over, to cut in deep, and then for leveling, it will leave the soil in such excellent condition that a light hand-raking (or, for large areas, a good smoothing harrow) will prepare it for the finest of seeds, such as onions and carrots. Of disc harrows there are a great many makes. The salient feature of the disc type is that it can tear up no manure, grass or trash, even when these are but partly turned under by the plow. For this reason it is especially useful on sod or other rough ground. The best and most convenient harrow for putting on the finishing touches, and for leveling off and fining the surface of the soil, is the lever spike-tooth type. Any of the harrows mentioned above (except one or two makes of smoothing harrows), and likewise the prong-hoe, will have to be followed by the iron rake when preparing the ground for small-seeded garden vegetables. Get the sort with what is termed the bow-head (see illustration) instead of one in which the head is fastened directly to the end of the handle. It is less likely to get broken and easier to use. There is quite a knack in manipulating even a garden rake, which will come only with practice. Don't rake as though you were gathering up leaves or grass. The secret in using the garden rake is *not* to gather things up. Small stones and lumps of earth, and so forth, you of course wish to remove. Keep these raked off ahead of where you are leveling the soil, which is accomplished with a backward-and-forward movement of the rake.

The tool-house of every garden should contain a seed-drill. Labor which is otherwise tedious and difficult is rendered by it mere play, and it is done better. The operations of making the row, opening the furrow, dropping the seed at the proper depth and distance, covering immediately with

fresh earth, and firming the soil, are all done at one swoop and as fast as you can walk! It will even drop seeds in hills, nor is this all: it may be had as part of a combination machine, which, after your seeds are planted—with each row neatly rolled on top and plainly visible—may be at once transformed into a wheel-hoe, that will save you

as much time in caring for your plants as the seed-drill did in planting your seed. With this equipment hoeing drudgery disappears.

The attachments which may be had for such an implement are so many and so varied in usefulness that it would require an entire article to detail their special advantages and methods of use.

The catalogues describing them will give you many valuable suggestions; and other ways of utilizing them will discover themselves to you in your work.

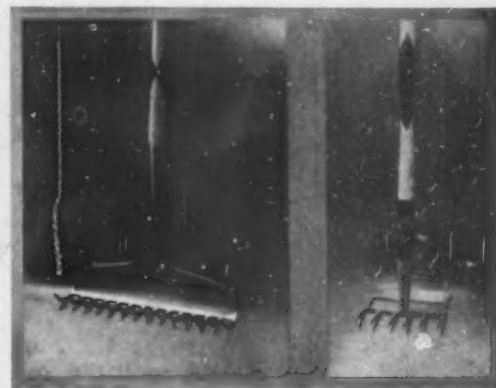
Valuable as the wheel hoe is, however, and varied in its scope of work, the time-tried hand hoe cannot be entirely dispensed with. An accompanying photograph shows four distinct types, all of which will pay for themselves in a garden of moderate size. The one on the right is the one most generally seen; next it is a modified form which personally I prefer for all light work, such as loosening soil and cutting out weeds. It is lighter and smaller; quicker and easier to handle; next this is the Warren, or heart-shaped hoe, specially valuable in opening and covering drills for seed, such as beans, peas or corn. The scuffle hoe, or scarifier, which completes the quartet, is used between narrow rows for shallow work, such as cutting off small weeds and breaking up the crust. It has been less frequently needed since the advent of the wheel hoe, but when crops are too large to admit of the use of the latter, the scuffle hoe is still an indispensable time-saver.

There remains one task connected with gardening that is a bugbear. That is hand-weeding. To get down on one's hands and knees in the blistering hot dusty soil, with the perspiration trickling down one's nose, and pick small weedlets from among tender plantlets, is not at all a pleasant recreation. There are, however, several sorts of small weeder which lessen the work considerably. One of the many types is shown herewith. One type or another will seem preferable, according to different conditions of soil and methods of work. Personally, I prefer the one illustrated for general use. The angle blade makes it possible to cut very near to small plants, and between close-growing plants; while the strap over one finger leaves fingers free for weeding without dropping the instrument.

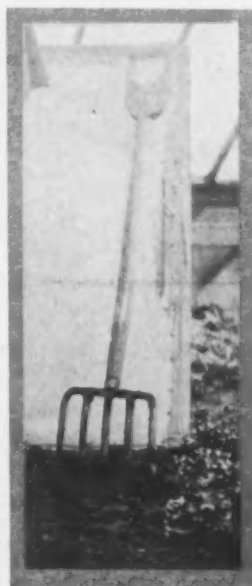
There are two things to be kept in mind about hand weeding which will reduce this work to the minimum. First, never let the weeds get a start, for even if they don't increase in number, if they once smother the ground or the crop you will wish you had never heard of a garden. Second, do your hand weeding while the surface soil is soft, and the weeds come out easily. A hard-crust soil will double and treble the amount of labor required.

When garden tools are such savers of labor, it would seem needless to suggest that they should be carefully kept in repair and always bright, clean and sharp. But such advice is needed, to judge by most of the tools one sees. Always have a piece of cloth or old bag on hand where the garden tools are kept, and

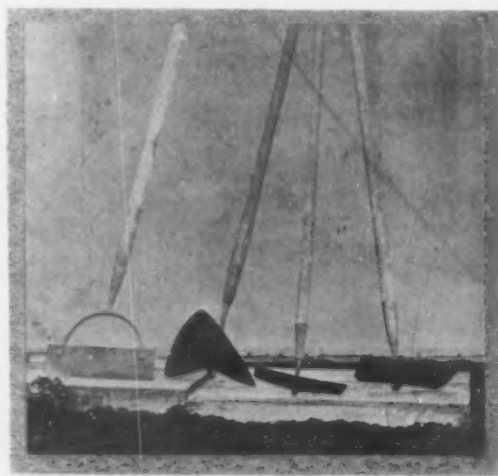
(Continued on page 280)



Select a bow-head rake rather than one in which the teeth-bar is fastened directly to the shaft. At the right is the prong-hoe



The spading-fork deserves to be better known



Four types of hoe: the scuffle, the heart-shaped, the short and the common hoe



You can grow ivy in boxes out in the garden, bringing them up on the porch when the vines have made sufficient growth



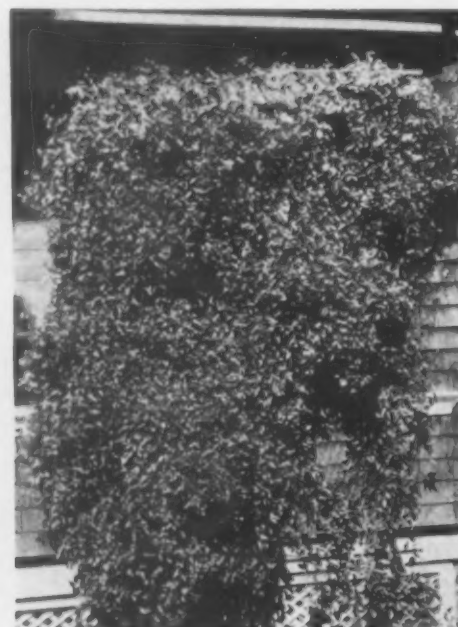
Boxes of ivy have been placed on the stone wall of porch, from which the vines hang down to drape the wall inside and out



The morning-glory is not exacting as regards soil or site



English ivy has been trained upon the trellis of this loggia from boxes of rich moist soil



The only trouble with clematis is the bareness of its lower branches, which should be screened



Clematis Jackmani comes in purple, red, blue and white

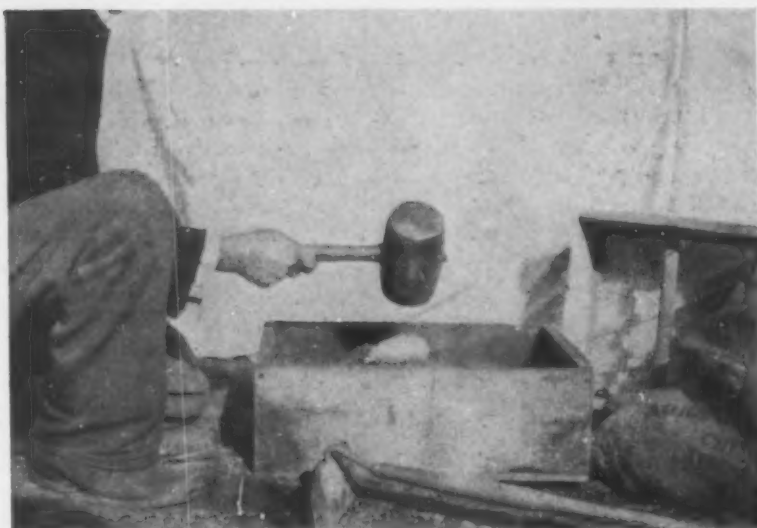
PORCH VINE SUGGESTIONS



An interesting treatment of the wall at the back of a porch—a surface that is too frequently neglected



A variety of trellis treatments may be worked out with lath, painted white or stained green



In order to be able to supply your garden soil with the elements of plant food it really needs you will have to keep a record of production under various conditions, and then mix your fertilizers in the proper proportions to suit. Break up all lumps and mix the ingredients by hoeing in a box

The Fertilizer Problem and the Amateur

WHAT SORT OF PLANT FOOD THE GARDEN SOIL NEEDS—WHEN AND HOW TO GIVE IT—MIXING YOUR OWN FERTILIZERS—SOME CONVENIENT FORMULAE

BY M. ROBERTS CONOVER

Photographs by the author

THE garden soil is not an inexhaustible storehouse from which toothsome vegetables are yielded year after year with no return of plant food. The time spent in cultivation and planting is an investment yielding return in proportion to the hidden resources of the soil—and these resources are directly affected by the crops produced therefrom.

Too frequently the amateur gardener feels that the whole fertilizer problem is solved for him if he dumps a cartload or two of old manure over the garden, in the fall or in the spring, and lets it go at that. And in the majority of cases it will serve to stimulate a fairly presentable growth. If, however, you want to excel in your garden activities and really produce a maximum of yield and quality you will need to investigate this matter of fertilizers further.

You will find that a timely and judicious application of one of the chemical fertilizers—the immediately available kinds of plant food—will supply just that most needed element that the plant craves. Instead of reaping the average commonplace crop you will have entered the record class. Such a desirable result, however, can follow only after the amateur is willing to spend a little time and study on this problem of plant foods and plant stimulants.

As a general principle those garden crops which have the greatest nutritive value remove from the soil a greater amount of plant food than those lower in the scale of foods. To this, beans and peas are exceptions. These nourishing vegetables leave the soil richer in nitrogen and do not require supplies of soil nitrogen during their growth.

Nitrogen, potash and phosphates must be supplied to the garden soil before it is taxed for another crop, and while the proportions of these chemicals favorable to good plant growth may be ascertained, gardening is not so exact a science that all the elements applied can be accounted for in the soil or in the crops.

The elements of plant food removed by growth are returned to the soil in the various kinds of animal waste—manure, different forms of bone, etc., in mineral compounds, green manures, and a

very small proportion in the unedible parts of vegetable growth which enter into composts.

The elements contained in these substances are released as plant food, rapidly or gradually according to the form in which they are applied. On garden soil where rapid growth and two or more crops are demanded, fertilizers which decompose quickly are absolutely essential. Of the various kinds of animal waste, poultry manure ranks first in this respect, if it has been kept under shelter and its nitrogen preserved by layers of earth and dustings of land-plaster during its accumulation.

A garden fertilized by being spread with twelve tons of this manure to the acre will surpass in its yield an equal area dressed with stable compost.

Stable manure is valuable for later effect after decay has liberated its elements. When applied fresh it is very injurious to delicate plants. If, however, it is thoroughly mixed with the soil by plowing and harrowing, this trouble is obviated. In this form it is beneficial to plants after three or four weeks. Old rotted manure is used in direct contact to plants without injury. If in addition to a heavy dressing of manure, quick-acting fertilizers are applied as they are needed by the plants, the garden soil is well stocked for a season's cropping.

The use of green manure has an effect somewhat similar to the compost. It is supplied by planting some such crop as rye or clover upon the soil, allowing it to grow to a height of several inches and plowing it under. This replaces in the soil the elements used in growth and improves its mechanical condition by supplying humus. Leaves and tobacco stems have excellent fertilizing qualities also.

Quick-acting fertilizers whose elements are in proportions suited to different vegetables are procured from dealers at prices averaging about three cents a pounds, and these give satisfactory results with judicious use. These may be distributed along the row beneath the seed, mixing well with the soil, or such fertilizers may be worked into the soil at one side of the vegetables after they have begun growing. Nitrate of soda, used to stimulate

plant growth, is applied by a sprinkling on the surface of the soil beside the plants. It must not touch the foliage and it should not be covered, as its tendency is to work downward.

Fertilizers that are readily available as plant food are more expensive and, merely from an economical standpoint, their composition should be suited to the individual needs of the plants. For instance, beans and peas do not need nitrogen, but they do want lime and potash. Beets want all three elements in abundance. Turnips require phosphates in large proportions and potatoes and fruits require potash.

By keeping a careful record of the conditions which attend certain results, the gardener can learn to know the deficiencies of his soil and thus give it the plant food it requires. To do this one will need to prepare his own fertilizers. In handling fertilizers one should wear gloves to protect the hands from poisonous or caustic ingredients. The various fertilizing substances which have formed into lumps must be reduced at least to the consistency of coarse salt by pounding or sifting before they can be mixed. In mixing, the ingredients are spread in layers and then turned over with a shovel or hoe until evenly distributed.

Nitrate of soda, especially, and other chemical fertilizers besides, should be used as soon as possible after their purchase, as they lose value by contact with the air.

Nitrate of soda, when applied alone, has an immediate effect upon growing plants—it will not remain in the soil, but works down through it with no benefit to plant growth if applied before



One of the greatest and at the same time cheapest ways of fertilizing the garden is by sowing rye or clover in the fall and plowing it under when several inches high



Broadcasting a compost of stable manure over the soil will do much good usually, but do not consider it the beginning and end of the fertilizer problem

it can be taken up by the root system.

The following fertilizers are adapted to the peculiar needs of certain vegetables: For sweet potatoes, in quantity to fertilize one-twentieth of an acre, eight pounds of muriate of potash, two and one-half pounds of available phosphoric acid, twenty pounds of acid phosphate and twelve pounds of nitrate of soda. This is mixed with the soil before the plants are set.

For asparagus, one part sulphate of ammonia and two parts muriate of potash, applied in the row over the crowns, using about fifty pounds on one-twentieth of an acre.

For tomatoes, on a similar area, five pounds of nitrate of soda, eight and one-half of bone tankage, five pounds of acid phosphate and six pounds of muriate of potash, will furnish the right proportions for growth on ordinary garden soil.

Onions require heavy feeding. Twenty pounds of nitrate of soda, fifteen pounds of muriate of potash and twenty pounds of bone meal make a suitable mixture. Two applications, just before planting, and at the side of the

row about a month later, give satisfactory results.

In soil supplied with nitrogenous material, the fruit trees and bushes will mature fine crops of fruit if early in the season they are given a fertilizer of two parts muriate of potash and three parts ground bone, using eight hundred pounds to the acre.

But whether you choose a liquid or solid, chemical or natural mixture, one of the greatest factors for success is continual activity. After it is spread see that it is so thoroughly turned that it



Apply nitrate of soda along the sides of rows, when the plants need an immediate stimulus



Some of the chemical fertilizers are applied in the rows before the seeds are sown

Grow Your Own Fruit

III. THE CARE OF TREES AFTER THEY ARE SET OUT—INSECT AND FUNGOUS PESTS—WHEN THEY APPEAR AND HOW TO COMBAT THEM MOST EFFECTIVELY

[Mr. Rockwell's series of articles that appeared last year in these pages, under the title "Grow Your Own Vegetables," met with so many expressions of appreciation that we are doubly glad to follow it with three articles on an equally important phase of the home garden. The first article, which appeared in the February issue, took up the important matter of selecting the varieties best suited to the needs of the home orchard; the second article, in March, told how and when to plant, prune and cultivate.—EDITOR.]

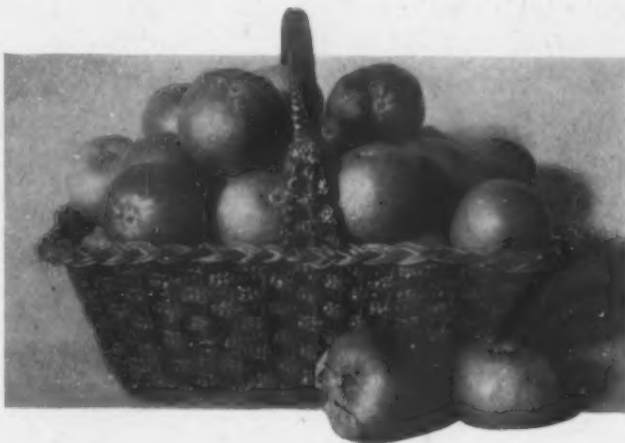
THE day has gone, probably forever, when setting out fruit trees and giving them occasional cultivation—"plowing up the orchard" once in several years—would produce good fruit. Apples and pears and peaches have occupied no preferred position against the general invasion of the realm of horticulture by insect and fungous enemies. The fruits have indeed suffered more than most plants. Nevertheless there is this encouraging fact: that though the fruits may have been severely attacked, the means we now have of fighting fruit-tree enemies, if thoroughly used, as rule are more certain of accomplishing their purpose and keeping the enemies completely at bay than are similar weapons in any other line of horticultural work.

With fruit trees, as with vegetables and flowers, the most important precaution to be taken against insects and disease is to have them in a healthy, thriving, growing condition. It is part of Nature's law of the survival of the fittest that any backward or weakling plant or tree seems to fall first prey to the ravages of destructive forces.

For these reasons the double necessity of maintaining at all times good fertilization and thorough cultivation will be seen. In addition to these two factors, careful attention in the matter of pruning is essential in keeping the trees in a healthy, robust condition. As explained in a previous article, the trees should be started right by pruning the first season to the "open-head" or vase shape, which furnishes the maximum of light and air to all parts of the tree. Three or four main branches should form the basis of the head, care being taken not to have them start from directly opposite points on the trunk, thus forming a crotch and leaving the tree liable to splitting from winds or excessive crops.

If the tree is once started right, further pruning will give little trouble. Cut out limbs which cross or are likely to rub against each other, or that are too close together; and also any that are broken, decayed or injured in any way. For trees thus given proper attention from the start, a sharp jack-knife will be the only pruning instrument required.

The care of the old orchard is more difficult. Cutting out too many of the old, large limbs at one time is sure to give a severe shock to the vitality of the tree. A better plan is, first, to cut off—close—all suckers and all new small-growth limbs, except a few of the most promising,



BY F. F. ROCKWELL

Photographs by E. F. Hall and others

which may be left to develop into large limbs; and then as these new limbs grow on, gradually to cut out (using a fine-tooth saw and painting the exposed surfaces) surplus old wood. Apples will need more pruning than the other fruits; pears and cherries the least. Cutting back the ends of limbs enough to keep the trees in good form, with the removal of an occasional branch for the purpose of letting in light and air, is all the pruning they will require. Of course trees growing on rich ground, and well cultivated, will require more cutting back than those growing under poorer conditions. A further purpose of pruning is to effect, indirectly, a thinning of the fruit, so that what is grown will be larger and more valuable, and also that the trees may not become exhausted by a heavy crop.

In trees that have been neglected and growing slowly, the bark sometimes becomes hard and set. In such cases it will prove beneficial to scrape the bark and give a "wash," applied with an old broom. Whitewash is good for the purpose, but soda or lye answers the same purpose and is less disagreeably conspicuous. Slitting the bark on trunks and largest limbs is sometimes resorted to, care being taken to cut through the bark only; but such practice is objectionable because it leaves ready access to some forms of fungous disease and to borers.

Where extra fine specimens of fruit are desired, thinning is practised. It helps also to prevent the tree from being overtaxed by excessive crops; but where pruning is thoroughly done this trouble is usually avoided. Peaches and Japan plums are especially benefited by thinning, as they have a great tendency to overbear. The spread of fruit diseases, especially those not in the fruit itself, is also to some extent checked.

Of fruit-tree enemies there are some large sorts which may do great damage in short order—rabbits and field-mice. They may be kept away by mechanical protection, such as wire, or heaping the earth up to a height of twelve inches about the tree trunk. Or they may be caught with poison baits, such as boiled grain in which a little rat-poison has been mixed. The former method for small gardens is little trouble, safer to Fido and Tabby, and the most reliable in effect.

Insects and scale diseases are not so easily managed: and that brings us to the question of spraying and of sprays.



A spraying outfit is an absolute necessity. If you have few trees a small brass tank of knapsack type will do

For large orchards, the spray must, of course, be applied with powerful and expensive machinery. For the small fruit garden a much simpler and very moderate-priced apparatus may be acquired. The most practical of these is the brass-tank compressed-air sprayer, with extension rod and mist-spray nozzle. Or, one of the knapsack sprayers may be used. Either of these will be of great assistance not only with the fruit trees but everywhere in the garden. With care, they will last a good many years. Whatever type you get, be sure to get a brass machine, as cheaper ones made of other metal quickly corrode from contact with the strong poisons used.

The insects most commonly attacking the apple are the codlin moth, tent-caterpillar, cankerworm and borer. The codlin moth

visible and may be wiped out with a swab of old bag or burned with a kerosene torch. Be sure to apply this treatment before the caterpillar begins to leave the nest. The treatment recommended for codlin moth is also effective for the tent-caterpillar.

The cankerworm is another leaf-feeding enemy and can be taken care of by the Paris green or arsenate spray.

The railroad-worm, a small white maggot which eats a small path in all directions through the ripening fruit, cannot be reached by spraying, as he starts life inside the fruit; but where good clean tillage is practised, and no fallen fruit is left to lie and decay under the trees, he is not apt to give much trouble.

The borer's presence is indicated by the dead, withered appearance of the bark, beneath which he is at work, and also by small

amounts of sawdust where he entered. Dig him out with a sharp pocket-knife or kill him inside with a piece of wire.

The most troublesome disease of the apple, especially in wet seasons, is the apple scab, which disfigures the fruit, both in size and in appearance, as it causes blotches and distortions. Spray with Bordeaux mixture, 5-5-50 or 3-3-50 (see formulae below) three times just before the blossoms open; just as they fall; and ten days to two weeks after they fall. The second spraying is considered the most important.

The San José scale is, of course, really an

insect, though in appearance it seems a disease. It is much more injurious than the untrained fruit-grower would suppose, because indirectly so. It is very tiny, being round in outline, with a raised center, and only the size of a small pin head. Where it has once obtained a good hold, it multiplies very rapidly, makes a scaly formation or crust on the branches, and causes small red-edged spots on the fruit. For trees once infested, spray thoroughly, both in the fall, after the leaves drop, and again in the spring, before growth begins. Use lime-sulphur wash, or miscible oil, one part to ten of water, thoroughly mixed.

Sour cherries are more easily grown than the sweet varieties, and are less subject to the attacks of fruit enemies. Sweet cherries are troubled by the *curculio*, or fruit worm, which attacks also peaches and plums. Cherries and plums may be sprayed, when most of the blossoms are off, with a strong arsenate of lead solution, five to eight pounds to one hundred gallons of water.



Spray cherry trees when most of the blossoms are off, with arsenate of lead solution, 5 to 8 pounds to 100 gallons of water. Sour cherries are more easily grown than the sweet varieties.

lays its eggs about the time of the falling of the blossoms, and the larvae when hatched eat into the young fruit and cause the ordinary wormy apples and pears. Owing to these facts, it is too late to reach the trouble by spraying after the calyx closes on the growing fruit. Keep close watch and spray immediately upon the fall of the blossoms, and repeat the spraying a week or so (not more than two) later. For spray, use Paris green at the rate of one pound, or arsenate of lead (paste or powder—less of the latter; see accompanying directions) at the rate of four pounds to one hundred gallons of water, being careful to have a thorough mixture. During July, tie strips of burlap or old bags around the trunks and every week or so destroy all caterpillars caught in these traps.

The tent-caterpillar may be destroyed while in the egg state, as these are plainly visible around the smaller twigs in circular, brownish masses. Upon hatching, also, the nests are obtrusively

In addition to this treatment, where the worms have once got a start, the beetles may be destroyed by spreading a sheet around and beneath the tree, and every day or so shaking or jarring them off into it, as described below.

Do not spray peaches. For the curculio, within a few days after the blossoms are off, take a large sheet of some cheap material to use as a catcher. For

FRUIT	PEST	REMEDY	TIMES TO APPLY AND WHEN
Apple	Apple-scab	Bordeaux 5-5-50, or summer lime-sulphur spray	3.—b B O—a B F—f 14 d. (See key below.)
	Apple-maggot or Railroad worm	Pick up and destroy all fallen fruits	
	Borer	Dig out or kill with wire; search for in fall and spring	
	Codlin moth	Arsenate of lead, 4 in 100; or Paris green, 1 in 100	2.—a B F—f 20 d.
	Burlap bands on trunk for traps during July	Same as above	
Cherry	Cankerworm	Same as above, also wipe out or burn nests	Late fall or early spring.
	Tent-caterpillar	Lime-sulphur wash; kerosene emulsion (dilute 5 times) or miscible oil (1 in 10 gal.)	2.—When leaves appear. b B O.
	Blister-mite	Arsenate of lead or Paris green	4.—b B O—a calyx closes—f 15 d—f 15 d.
	Bud-moth	Same as above	1.—a B F. 3 times a week.
Peach	Leaf blight	Bordeaux 5-5-50	
	Curculio	Arsenate of lead, 8 in 100. Curculio catcher (see Plum)	
	Black-knot	Cut out and burn at once (see Plum)	
	Fruit-rot	Pick before fully ripe. Spread out in cool, airy room	
Pear	Borer	Dig out or kill with wire	3.—When fruit is half grown—f 10 d—f 10 d.
	Yellow	Do not spray. Catch on sheets (see Plum)	1.—b buds swell, fall or early spring.
	Curculio	Summer lime-sulphur; open pruning; pick rotten fruit	
Plum	Leaf-curl	Bordeaux 5-5-50; lime-sulphur wash	
	Blight	Cut out diseased branches; clean out sores; disinfect with corrosive sublimate, 1 in 1000; paint over	2.—b B O—a B O—f 14 d.
	Scab	Bordeaux 5-5-50, or summer sulphur (see Apple)	1.—After fruits set.
Any	Blister-mite	Same; also thin fruits so as not to touch (see Cherry) also have neighboring trees cleaned up	a B F—cool mornings—3 times a week.
	Curculio	Jar down on sheets stretched beneath trees and destroy	Late fall or early spring.
	San José scale	Lime-sulphur wash, kerosene emulsion, 5 times diluted; miscible oil, 1 in 10 gals.	May or June, when whitish lice appear.
Any	Oyster-shell scale	Kerosene emulsion	

Remember that the efficiency of spraying must depend upon the thoroughness in applying the spray. Cover every inch!—even if you have to go over trees two or three times at each application. With proper nozzles and force, on good days, once should be sufficient

What Planting Does for a House

IN THE INEVITABLE HASTE TO SECURE IMMEDIATE EFFECTS IN YOUR PLANTING, DO NOT OVERLOOK THE PERMANENT THINGS IN FAVOR OF THE QUICKER-GROWING TEMPORAL ONES

BY GRACE TABOR

Photographs by N. R. Graves, E. S. Bates and others

WHATEVER else it may do besides, planting first of all turns a house into a home. This is surely its first great function. Who does not remember in childhood, certain houses that were extravagantly admired and others that were cordially detested? Were not the former "snugly" in the midst of flowers, with Missouri currant—oh! delectable scent of paradise and fairyland commingled—hovering near? And were the others—the hated places—not devoid of these things absolutely? Surely they were—as bare as a billiard ball of any kind of planting. Or, as the plaint went then, with small noses tip-tilted, they had "no bushes in the yard."

And how many places now have no "bushes in the yard!" More now than ever, it seems; and what a sense of impermanence, of moving-vans, such places hold. The unplanted house is eloquent of flittings—of the temporary occupant, the rent payer who reasons that he will not long abide—maybe—and therefore why sow for an-

other to reap? Nasturtiums and sweet peas, perhaps, yes—but foxgloves and hollyhocks, peonies and bridal wreath? Never!

Leave, then, the nasturtium and the sweet pea vine for him who carries but a summer. They serve him well and, doing this, are not to be despised; but something else will serve the "home"

better. Indeed the very word has a sound of fixedness and permanence that demands permanence and dignity in all that compose it.

The craze for immediate effects is, of course, a recognition of this demand. The feeling is instinctive that without planting that makes a decided "front" there is a vital lack. But the craze defeats the fulfillment of the craving which prompts it, because it leads to so much temporary planting, in the hope of securing the "immediate effect." We are tired of mushroom abodes, redolent of their newness; how refreshing the quiet old house, with its sweet old garden, is. "Go to," say we, "we will have one, *right away*," and out we go to set about it. Thus in the



Vines will bring immediate results, but they are not the only essentials



Hollyhocks may be sown this summer for next season's bloom, or you can set out young plants from a nursery this fall

permanent things and for permanence, if it is to establish a home. And every day spent on temporary work is a day lost, in that it delays the permanent.

It is a very great mistake to suppose that temporary planting is necessary, even for immediate effect. Some temporary things may be used, of course, with good results, but after one season's growth even vines of this sort are unnecessary. Right selection will establish a very excellent result within the space of two years. And this will be a result that will last and will continually improve. Neither is it necessary to buy phenomenally large or high-priced specimens in order to secure such a result.

Let me say right here, however, that stock bought from any but the highest-class nurseries is a poor investment at any price—though it by no means follows that all high-priced nurseries furnish high-class stock. Good stock from a good nursery means stock that is heavily rooted and bushy. It is never a matter of the height of a shrub, but rather always a matter of root and branch quality. And the same is true of trees.



Foxgloves for permanent planting will come from seed sown this summer

midst of the furious speed at which things move, this desire for something solid and unchanging itself gets to rushing. We must duplicate the aged, over night.

But that is just the trouble; in the rush we do not duplicate—we only imitate—and poorly at that. The flowers of today are not the flowers of yesterdays and tomorrows, and the use of them even in the most lavish quantities, will never make them seem so. Planting must be done with

make the complete home.

But vines must be used of course—quantities of them—not only because they will bring the immediate results, but because they are a part of the permanent effect toward which all planting is aimed. The omission of vines cannot be made up by any other planting. They are an essential to every kind and style of house, regardless of its architecture or cost. Only—they are not the *only* essential. Let us not fail to remember that.

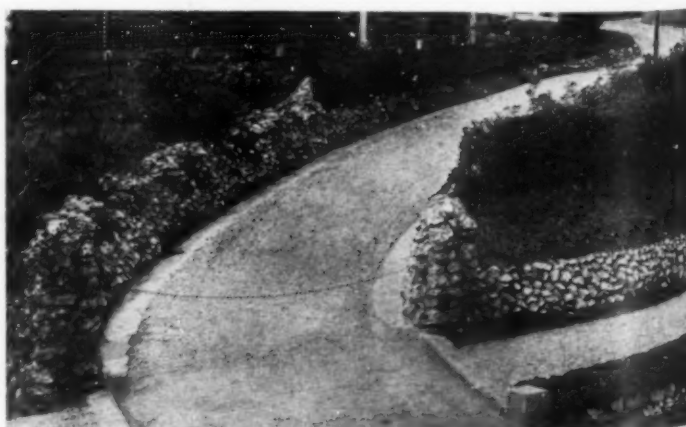
The quickest-growing of all permanent vines is *Pueraria Thunbergiana*—or perhaps the catalogue may give it as *Dolichos Japonica*. Commonly we may call it Japanese Kudzu vine, if that is easier. Strong and densely rooted clumps of this send up a growth that reaches forty or fifty feet often, in a single season. It may die to the ground in winter, though it is not so likely to after it becomes well established and an old plant. This climbs by twining, therefore it will not adhere to a surface, but must be given a trellis or something to grasp.

Boston ivy grows with a fair degree of rapidity, and will certainly never be ranked by any other wall covering. It is one of the essential vines, anywhere and everywhere. Trumpet creeper—*Bignonia radicans*—is a familiar old climber that sticks tight and travels fast and far—and is disapproved by some because it works its way under shingles sometimes. A fair degree of watchfulness will prevent this; however, there is another rapid-growing flowering vine that may be used instead if one is not willing to watch out. This is the Japanese Actinidia. Get *Actinidia arguta* for high climbing. It blossoms in June and has greenish-white flowers.

Shrubbbery immediately around the base of a house is not usually advisable. It is likely to grow, in time, out of all anticipated proportions, and it makes the walls damp and chilly. There are



Compare the barren, cold appearance of this newly built house with the later picture of the same place a few months later



And notice the transformation that this rock-bordered entrance drive has undergone in the picture opposite



Already the vines have started to clothe the stonework of the lower story and the dormer trellises. Aymar Embury, II, architect

(*Berberis Thunbergi*) is also suited to the same sort of location.

Flowers must be used in great quantities to be pleasing against a house; the mixed border is not effective here. And very sturdy, strong-growing flowers should be chosen, like Sweet Williams or hardy chrysanthemums. The former will blossom the second year, from seed sown in the ground where the plants are to remain, or the plants themselves may be set out in very early spring or, better still, in autumn. Spring transplanting retards and diminishes the bloom that year of any summer-blooming plant, if it does not eliminate it altogether.

Sweet Williams seed themselves, besides spreading at the ground, and some gardeners recommend preserving only the young seedlings each season, thus keeping a fine and vigorous stock on hand. Once started—and they start as easily as grass seed—there will never be a lack of this dear old flower in any garden. Indeed, it is likely to embarrass with its abundance—but neighbors are usually glad of the surplus.

Chrysanthemums may be raised from seed, but the plants must be purchased for immediate results. As they blossom late in the summer, and on until snow and freezing rains actually destroy them, they will give a very satisfactory effect the first year if planted early in the spring. The transplanting does not interfere with their blooming, as summer intervenes and they have a chance

a few shrubs, however, which may occupy such a position as an outside corner or the blank space of a wall where there are no windows. The deutzia is one of these, the varieties *gracilis*, *Lemoinei* and *corymbiflora* all being under four feet in height. These flower successfully, so that the blooming period is carried over two months. Deutzias will do well in shade, which gives them additional advantage as a plant for use near the house. The Japanese dwarf barberry

to settle and grow.

The false chamomile or *Boltonia* is effective against the house or used anywhere in masses, just as shrubbery should be used. It is indeed a very excellent substitute for shrubbery, ranging in height, in its varieties, from two feet all the way to six or seven feet. This blooms in summer and autumn and will give results the first year, from early spring planting, equal to a shrubbery border in its third summer. By

using it in quantity before a shrub mass and scattered through it as well, this first-year effect is obtained; then when the shrubs themselves arrive at a suitable size the plants of *Boltonia* may be massed elsewhere. It is of such strong and vigorous growth, however, that it is often planted with shrubbery to furnish late summer bloom. The flowers are daisy-like, in white and a lavender-pink form, and are produced by the thousand from August on. There is also a semi-double variety—*Boltonia laevigata*.

Plume poppy (*Vaccinia cordata*) is a still heavier and more shrubby-growing perennial, which may be used in the same way as the *Boltonia*. This has large, bold foliage and reaches a height of six or even eight feet with its blossoms, which are not in the least like poppies, but are very tiny and massed in large trusses at the ends of the tall flower stems. It grows rapidly and spreads by suckering, and one season's growth produces a sturdy plant—hence it is an admirable substitute for shrubbery while shrubbery is growing, and is permanent as well.

Clumps of the yellow day lilies, with the sweet breath of old gardens which they bring, go a long way toward establishing the new. Indeed all fragrant things seem particularly adapted to do this, and the use of them cannot be too much encouraged. Nothing is more easily grown than day lilies, and they are amiable enough to adapt themselves to all conditions of light and shade as well as practically every

(Continued on page 288)



In the rush for immediate effect do not overlook shrubs. The deutzia in three varieties will carry bloom over three months



There are few things that seem to belong so absolutely one to another as stone walls and vines



Red cedars will contribute an effect of age that few things give in almost any soil

Effects That May Be Had With Shrubbery This Year

PRACTICAL SUGGESTIONS FOR THE MAN WHO WANTS TO MAKE HIS HOME GROUNDS AS ATTRACTIVE AS POSSIBLE THIS YEAR—WHAT TO PLANT AND HOW

BY ROWLAND COLLINS

Photographs by E. J. Hall, W. C. Egan and others

WHILE shrubbery plantings are intended to adorn their surroundings through all the years of their growth, all shrubs do not accomplish this the first year. With careful planning and wise selection, however, gratifying effects may be secured from the start. For immediate effect, shrubs of beautiful form and foliage are the dependables until the plantings are ready for bloom. Plants which require rigid pruning or are of scraggy habit must be excluded or concealed until growth makes them presentable.

The great peril in working for immediate effect is that of close planting. Ultimately this results in dwarfing and unsymmetrical development of some kinds of plants. With evergreens whose beauty depends upon perfection of form, contact with other specimens causes bruising of the foliage, which does not recover from such injury as does that of deciduous trees.

Plants of variegated foliage and diverse foliage forms are a great boon to the gardener who must have quick results.

The dwarf Japanese maple groups are very lovely, and since their vivid coloring is an all-season characteristic, they are immediately effective. A group of several varieties of this brilliant-hued shrub is autumnal in effect and is particu-



The Japanese maples are wonderfully attractive for shrubbery massing, and of course the effect is immediate

larly pleasing when so placed that the eye in traveling from somber masses of evergreen is caught and held by their shades of crimson and gold.

The golden Japanese maple (*Acer Japonicum, aureum*) is deep yellow, mottled with green. It is a little more expensive than the other varieties. The *Acer polymorphum atrodisssectum* has drooping branches and deeply cleft, lacy foliage. The foliage of the *A. p. lacinatum, rubrum*, is of the same color and still more delicate in shape. *A. p. scolopendrifolium* is silver green, and the *A. p. variegatum* is variegated, with pink, rose and light green edged with white.

These maples are hardy, and while they enjoy fertile soil are not exacting as to location. Plants two and three feet in height may be bought for one dollar and fifty cents. They should be planted about four and one-half feet apart where soil is moderately fertile, and six feet apart in very rich localities.

Evergreens are very useful in solving the problem of immediate effect; in fact when planted near deciduous plants of unpleasing form, their bold symmetrical outlines divert attention from their unlovely neighbors. The groups given are merely suggestive of



A shrub that is valuable for foliage as well as for bloom is the purpl-leaved plum (*Prunus Pissardi*)



There are few shrubs more beautiful than our common elder. Try four-foot specimens of the golden-leaved variety

what may be accomplished with evergreens of various forms and contrasting color.

Group Number One is a triangular planting using the American arbor vitae near the center of the triangle slightly toward the apex, two specimens of the blue juniper (*Juniperus stricta*) each, midway between the lower angle and the arbor vitae, two of the dwarf golden arbor vitae, Geo. Peabody (*Thuja occidentalis, aurea*), each, at a lower angle of the plan, and one specimen of the dwarf bushy pine (*Pinus mughus*) at the apex. If possible, procure specimens from two and one-half to three feet high and plant them four feet apart.

Group Number Two is an elliptical one, useful at a carriage turn. It employs Koster's Colorado blue spruce near the center, with the Douglas golden juniper of low-spreading habit at one side, and the golden weeping retinospora (*R. filifera aurea*), of low wide habit, at the other side, and four specimens of the dwarf arbor vitae (*Thuja occidentalis nana*) at equal distances around the outer edge of the ellipse. The Colorado blue spruce should be six feet from the nearest specimens.

Group Number Three is intended to form intermediate masses between tall trees and lawn. It consists of the golden-leaved retinospora (*R. pisifera aurea*), eventually tall and spreading, two of the Norway spruce, three of the American arbor vitae, and, in the foreground, a Siberian arbor vitae (*Thuja occidentalis Siberica*) conical in form, dark in foliage and of slow growth, and two or three of the Tom Thumb arborvitaes (*T. occidentalis Ellwangerana*), of broad compact form and light green foliage.

Group Number Four comprises Nordmann's silver fir, two specimens of hemlock spruce, one of the variegated arbor vitae (*T. O. variegata*), green and light yellow, and two of the Sabin juniper (*Juniperus Sabina*), rich dark green. The spruce and silver fir should be seven feet apart at least, and the lower-growing specimens from four and one-half to five feet apart.

The arbor vitae, dwarf pine, the low growing junipers and box, are very useful for plantings near the foundations of



A shrubbery group of junipers, barberries, holly, yuccas, hypericums and other elements, well massed



The hydrangea may be kept low to induce larger blooms or it may be allowed to assume a tree-like form

dwelling, in nearly any kind of soil.

Evergreens that are to be planted in April should be put in the ground as early in the month as possible. They should be moved with a large clump of earth held in place by sacking.

When aiming for immediate effect with deciduous shrubs the hardy hydrangea should be included. Stocky, well rooted plants will bloom this year in July and continue through the summer.

The weigelia is also valuable for early effect. The late-blooming varieties, *Weigelia candida* and *Eva Rathke* should bloom this year. The variegated weigelia bears pink flowers in June, but if bloom is not secured the first year, it is valuable for the beauty of its foliage alone. Being rather dwarf, it should be well to the front of shrubbery masses.

The dwarf azalea and the Chinese privet are ornamental for their foliage. The azalea is evergreen. When established these plants are June bloomers.

The *Azalea Mollis* will bloom this year if the plants are strong. It is of dense habit and blooms in May. If there is a moist shady place be sure and plant this azalea there.

The late August-flowering *Hypericum Van Fleetii*, or golden lace, will flower this year, bearing masses of yellow blossoms until frost.

Two other shrubs valuable for foliage characteristics and ultimately for bloom are the golden-leaved elder (*Sambucus nigra, aurea*) and the purple-leaved plum (*Prunus Pissardi*). Get specimens from three to four feet in height and plant them in the center or toward the back of the group.

Good-sized plants of the Chinese Matrimony Vine (*Lycium Sinensis*) thrive easily in any spot, and because of their graceful drooping form make pleasing contrast with other shrubs. Where vines are necessary to produce a harmonious effect or for screening, the rambler roses and the Wichuriana or memorial rose can be depended upon for rapid growth, throwing out shoots fifteen or sixteen feet long. The plants to be set should be at least three years old to insure the strongest growth.

In setting the plants be sure that the roots have not become dry and shriveled. It is better to set moist roots into a rather dry

(Continued on page 292)



Evergreens make an immediate showing in your planting scheme. Move them with a good ball of earth bound to the roots



The helichrysum is the best of the old-fashioned everlasting

Annuals That Should Be Better Known

AMONG THE FLOWERS THAT BLOOM THIS YEAR FROM SEED SOWN NOW OR NEXT MONTH THERE ARE MANY DESERVING SORTS THAT ARE TOO FREQUENTLY OVERLOOKED

BY H. S. ADAMS

Photographs by Nathan R. Graves

DID you ever peer through a garden gate and wish that you might go inside? If you have, you can imagine the feelings of certain flowers. They want to go into your garden, but—you haven't asked them. At this moment they are looking wistfully from the pages of some catalogue or other and hoping that another spring will not pass without the longed-for invitation to come into your garden. Won't you consider at least one of these unbidden guests this year and offer it a welcome? In beauty it will give you out of the abundance of its heart, and all it will ask will be decent bed and board.

I have in mind, especially, certain of the annuals. Everyone grows annuals as a matter of course; for no matter upon what plan of permanence the garden be builded, there always is needed a quantity of these flowers of a single summer's life, to fill in the chinks and add to the glory of color. But the average gardener is prone to forget that the common annuals are not such because they are the best; the only reason why the list is not longer is because some of the others have been so grossly neglected that they are not generally known.

How many, for example, have ever tasted the joys of salpiglossis? I can name two communities in which mine were the only ones to be seen. Yet here is one of the most beautiful of all annuals. Moreover, it offers a unique and singularly fascinat-

ing study on account of the marvelous colors and markings of the blossoms. It has the common name of painted tongue, which, as compared with the botanical name, is merely going from bad to worse. However, that does not alter the beauty of the blossoms—something like a petunia in form, but a little smaller. There are half a dozen kinds worth growing—rose, scarlet, purple and white, each with veins of gold, and also primrose and

crimson. As forty cents will cover the cost of the entire collection it is more satisfactory to plant them all, each variety making a better display by itself. It is an admirable flower for cutting; so any surplus plants may be placed in rows on the edge of the vegetable garden or in some out-of-the-way place. The kinds mentioned are all the improved type, but there is an Emperor strain of mixed seed that makes a still finer showing for specimen plants. The salpiglossis has no cultural difficulties; the one thing to bear in mind is that the seed should be sown early under glass—a sunny window will do for any annual if there is neither greenhouse nor coldframe—in order that the bloom may set in while the summer is young; it will continue until frost.

Then there is the everlasting. Only the other day some one asked me if I knew it. Dear me, it was in many an old garden when I was a lad. It was highly prized in those days—in winter as well as summer, for it was plucked from the garden to adorn the parlor mantel when there were no flowers outside other than the snow flowers. I hope that it is banished forever from the parlor mantel, but I do miss it in the gardens that I wander through. What we always called the everlasting in New England is the helichrysum, though actually this is only one of several kinds of immortelles. It is the best of them

all for the garden as it is the most decorative. The globular straw flowers range from white through yellow to a deep red, and are borne high above good foliage. For color it is wisest to plant the varieties separately; ten kinds are offered for fifty cents in one of the imported collections. A rich soil is best and the seed must be sown early under glass to insure the full period of bloom. Another good everlasting, plentiful enough in graveyard wreaths in winter but little known in the garden, is the xeranthemum. It grows about three feet high, and the double blossoms—rose, purple or white—have an outer row of elongated rays. A third everlasting, the gomphrena, always has been called bachelor's button in our part of the country, but fortunately may be designated by the less confusing name of globe amaranth. Beware of the "red" variety; it is a rich solferino that will fight with anything save white. Of the old kinds the white is the safer. The new *nana compacta* type of either is excellent for edgings, as it grows only a foot high; the other runs above two feet. The yellow variety, *aurca superba*, is also a useful annual. If it seems desirable to add to the home aggregation of dust-gatherers, these everlastings must be picked before the blossoms are fully ex-



The almost-forgotten globe amaranth is worth taking up again



The larger centaureas here are sweet sultans, an annual too little seen nowadays



Salpiglossis, or "painted tongue," is attractive particularly on account of its veining

ting, as it lasts a long time in water. Give it a sunny spot. The seed may be sown in the open ground, but I find it is far preferable to use a coldframe. There is also a rich orange African daisy waiting expectantly. This is *Dimorphotheca aurantica*, which is a very showy low bedding plant.

One of my delightful flower memories of Paris in early summer is a small pansy that was used in prodigal quantities to edge borders and walks with a solid color. For years this tufted pansy,



There is no daintier garden annual than schizanthus with its orchid-like flowers

panded and dried by hanging, heads down, on a line of string.

One of the most precious of the newer annuals that is making woefully slow progress is the African daisy (*Arctotis grandis*). There cannot be too many stars in the garden, and this flower supplies some that are novel as well as beautiful. The blossoms, which rise on long-

branched stems from a clump of handsome, silvery foliage, are white with a centre of soft blue, which shade reappears on the underside of the petals. This is a true "day's eye," the blossoms closing at night and in cloudy or rainy weather. It is a profuse bloomer all summer long, surviving even the early frosts, and is fine for cut-

for such it was, has been a prime favorite in Europe, but over here the general run of flower-lovers appears to think that the only pansy is the one that spends its beauty as a rule before the hot weather comes. Here is a deplorable omission from the home garden. While the blossoms are smaller, the tufted pansy is superior to the common type for color effect, as the plants, if well cared for, are a compact mass of bloom. Furthermore, they are

invaluable for a pansy succession, since they are at their best after the others begin to peter out, and they bloom through the entire summer. There are admirable yellow, lilac, purple and white varieties. Any one of them is better than a mixture, for garden color notes, but an expenditure of forty cents for all four will be money well laid out. For June bloom sow the seed in April under glass. Usually this flower is called the viola, but that is a

wretched name; all of the pansy and violet tribe are violas.

Lately the old-fashioned sweet sultan (*Centaurea imperialis*) has had a place among the elect in the windows of the Fifth Avenue flower-shops in New York. But who knows it in the garden? Not many. Nevertheless it is among the very choicest of annuals, and so easy to grow that it is only essential to remember that the plant has a marked peculiarity; it so dislikes the "dog days" that the seed must be sown early—say April, under glass—in order to secure perfect bloom before the weather gets too hot. You may have it in purple, rose, lilac, lavender or pure white; and again, any one of these varieties is better than a mixture. The handsome yellow sweet sultan, also known as Grecian cornflower, is *Centaurea suaveolens*. It is very fragrant and, like the other kinds, is excellent for cutting. Another *Centaurea* that should be better known is the basket flower (*C. Americana*). This is a glorified "ragged sailor," three feet high, but the blossoms, which are sometimes four inches across, are more like the thistle in form. It is extremely effective as a cut flower.

The schizanthus, or butterfly flower, is another annual that has been knocking in vain at most garden gates. And it is so dainty—myriads of orchids crowning a mass of finely cut foliage, one might say of a bed of it. The large-flowered, dwarf variety, which has a wide range of delicate
(Continued on page 292)



The old-time "mourning bride," or scabiosa, is one of the best annuals for cutting



This little-known daisy from South America is low of growth and has flowers of the richest orange. Fine for bedding



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

A Wood and Willow Screen

A FOLDING screen of unusual beauty has recently been made by the designer of a style of furniture that is recognized as being decidedly out of the ordinary. The screen is about six feet in height and has three sections, but instead of having a solid covering of leather or some heavy material, they are filled in with willow, woven in such a large mesh that a most delicate openwork effect is produced.

Each section of the screen has three willow panels of graduated size, the largest at the bottom. The frame is made of ash, a wood with a beautiful grain that takes stain readily, and that may be done in silver gray, brown, green, or any color that is desired. The screen has the rather unusual advantage of fitting in well with furniture of practically every description, without appearing too heavy for a summer room or too light for the more solid-looking furnishings of a winter apartment. Done in a silver gray with the willow left the natural color, it serves the purpose for which it is designed and at the same time gives an impression of lightness and grace that is most satisfactory. If intended as a more substantial piece of furniture it may be done in some dark color to match the fittings of the room, the willow stained as well as the wood, and a lining of thin silk put in to give it more body, and to make it quite opaque.

Hints on the Care of Wood Floors

THERE is no reason for distress over the care of wood floors, if they are properly "finished" when laid. A natural wood floor is easily kept in perfect order, when common sense is used and the following hints observed:

Frequently wipe the floor with a dampened, *not* a wet cloth, and do not use hot water.

Never touch the floor with a scrubbing brush, nor with a broom.

Never use a washing powder of any kind, or a cleanser. If it is so soiled that it needs more than cool water, use a little castile soap, and wipe it dry with a chamois.

To remove any waxy substance that castile soap will not dissolve, use a woolen cloth dampened with kerosene, and rub off quickly.

Never touch any floor, or other varnished object, with kerosene, except in an emergency as above described.

Bathroom Suggestions

IF your bathtub is not provided with a "safety rail," it is a good plan to place a strong metal or wooden towel rod on the wall, from twelve to eighteen inches



An uncommon but attractive screen of ash and willow lattice work. It readily adapts itself to any color treatment

above the rim of the bath. See that the screws penetrate the wood behind the plaster. The soapy slipperiness of the tub has been responsible for many accidents in the past; the guard rail will give a safe hold, and prevent falls.

If economy is necessary in planning the bathroom floor, have it of hardwood oak, Georgia pine, maple or birch—the cracks carefully filled in, and the whole stained, waxed or oiled. A wooden floor that is not as waterproof as it is possible to make

it, is a poor investment, for it is impossible to keep it from being wet or splashed.

A window of leaded translucent glass is more sanitary than curtains. The glass will cost from 75 cents to \$3.50 per square foot, depending upon the design and the locality. Send the window-sash to a trustworthy manufacturer, with your idea for color scheme and design, and the price per foot you wish to pay. Let him send you sketches for your approval or criticism. The sash can then be returned to you with the glass neatly fitted in, ready to set in the window-frame.

House Plant Fertilizer

MANY housewives thoughtlessly throw away the bones that accumulate in the kitchen when these are just what is needed for the health of their plants. Burn the bones in the "second hole" of the range, and when quite white pound them to a fine powder. Mix a teaspoonful or so (according to size of pot) in the soil around the plants, and watch results. This powder contains potash salts, which furnish an excellent fertilizer for the plants.

A Handy Bungalow Kitchen

A PROBLEM of the small kitchen is to provide a generous table space. One of the features of a carefully planned bungalow is a table two by six feet, closed in below for use as a cupboard. The height, thirty-two inches, was a point that had to be impressed on the builder's mind. The top is made of North Carolina pine, the same kind that was used in the flooring. Two doors open into the roomy closet beneath, which contains many bulky articles that are too clumsy to go into the regular kitchen closet, besides cooking and laundry utensils that would have been hard to dispose of without this generous storage space. Hooks are fixed to the sides, as well as to the under part of the table top, so that the closet can be used for numerous small articles as well. The top is protected with one large piece of thick linoleum. Above this the ample space allows for various shelves for things

that are to be kept within reach. A high shelf, six inches wide, is filled with preserve jars containing dry provisions, such as cereals, tea, coffee and dried vegetables. Below a wider shelf holds the cannisters containing flour and sugar. A home-made set of shelves occupies the end of the table; this is for dishes frequently used. The neat appearance of the table is assured by means of the little curtain attached to the lower shelf. This can be drawn aside when the entire space is needed, or can be closed to screen dishes that are waiting to be washed, bottles or other odds and ends that must be temporarily set aside till a more convenient time for cleaning.

Next to the table is a convenient closet, measuring two by three feet and running from floor to ceiling. A unique feature is the double door. The lower closet, six feet in height, is built for the ordinary kitchen utensils that are not to be kept exposed to view. The upper part, with a separate door, is built for utensils that are seldom wanted, this arrangement protecting them from exposure to dust by the constant opening and shutting of the door.

Closet and table cupboard, together, occupying as they do the north side of the room, form an air cushion to keep out the cold, the house being simply a shingled bungalow with no cellar under this part.

The remainder of the north wall is occupied by the door, leading to the porch and the refrigerator closet. The east wall accommodates the door into the cellar, a high chest of drawers, containing many necessary odds and ends, such as hardware and small gardening articles. Next to this are the openings into the dining-room built-in sideboard. In addition to the usual door for the passing of food and dishes to the sideboard shelf, is another door, measuring twenty by twenty-

five inches, just below, providing a most convenient method of reaching the contents of the lower part of the sideboard, which has, also, the usual low doors on the dining-room side.

Following next, the first thing on the south side of the kitchen, is the door that opens into the other part of the house. The adjoining room being somewhat dark, light was admitted by a novel method. The door is of the type that contains five horizontal panels. The three upper panels were removed and replaced by glass, at a cost of about two dollars. These glass panels, with a thin curtain, add very much to the attractiveness, from both sides of the door. A point was made of hanging the door on the side that made it a screen for the kitchen, instead of exposing all kitchen operations to anyone in the next room, every time the door was opened. This point was found to be worthy of notice in other parts of the bungalow, in spite of established custom, from the builder's point of view, as to the side for the hinges and the swing of the doors.

A high warming closet for the range cost an additional twelve dollars, but was well worth it in drying utensils and warming food.

A space to the right of the range was reserved for fuel, next to this are the porcelain wash tub and the enameled iron sink, with no woodwork near either to become unsanitary. Above these runs another six-inch shelf, with more glass jars of provisions; underneath are hooks to hang small utensils, hidden from view and protected from dust by a wide piece of bordered shelf oil cloth. A large window on the west, completes the circuit of this eight by thirteen kitchen. A passage about four feet wide runs through the center of the room, so that it is not necessary to take more than a few steps to reach any article wanted. A larger or differently shaped room would cause more waste of energy.

The House Telephone

THE intercommunicating telephone is proving quite a factor today in household economics, and rapidly doing away with the necessity of call buttons and speaking tubes. In business houses and hotels, we have long been familiar with the system which put us in personal touch with different sections of the building; but many of us have not thought of the possibility of utilizing this very sensible plan right in our own houses.

With the old-time speaking tube, which is still a feature in many houses, there is always dissatisfaction, and the tube connection is with only one place—usually the kitchen; and most often out of commission. With the call button, while it serves the purpose of summoning help, it wastes much time and energy on the part of the servants who must travel up and down stairs at every call, whether service is required or only an order to be given.

An intercommunicating telephone es-

tablished in a home puts every important room in connection with the other, if desired, and also connects the garage or stable with the house—an important item thoroughly realized by those who enjoy it.

In a house where only one maid is employed, or where there is none, a telephone communication between the front and back door and the upstairs hall (where the matron of the house is) will save many fruitless journeys up and down when she is alone. Another convenience of an intercommunicating telephone is its use as a fire-alarm, which may be quickly rung in every connected room, without loss of valuable time. A station in the hall near the maid's room is a necessity when one maid is kept, so she may be called at any moment.

An interior house system is in continual use; and instruments are apt to be installed in places where they are subject to sudden changes of temperature; therefore it is advisable in installing to select a high grade system—not necessarily the most expensive, but the best. There are several good systems which are inexpensive, and when once installed they work satisfactorily without the necessity of constant repair. A service to connect two rooms may be installed as readily as one which connects a dozen. The cheaper method is to have all instruments connected with the same circuit; but this is not quite as satisfactory as being able to call without a signal code.

The cost of installing an intercommunicating system varies from \$6.00 to \$20.00 per station, depending upon the size of the installation, and the quality of equipment selected. The fixtures may be secured to match the finish of other fixtures in the room. Two rooms only may be connected or two dozen.

The cost of maintenance of the automatic telephone is practically nothing, if good instruments are installed.



The kitchen table is placed in one corner and made a fixture by building cupboards in the waste space beneath it



The two doors between, the stove and chest of drawers, give access to the built-in sideboard in the dining-room



Garden Suggestions and Queries



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

The Garden Month

"April showers
Bring May Flowers,"

but April hours, spent in the garden bring May lettuce and June peas and other good things for the table.

We are, indeed, confronted by a wilderness of things which all seem to demand immediate attention. It is hard to know what to do first. Sometimes an hour's thought will accomplish as much as a week's work; and that is a good principle to keep in mind just at this season of the year. If your planting plan has been made out, as it should have been many weeks ago, you have already the right start. At least you know definitely what you are going to set out to do. The next step in increasing the results of your labor is to apply it systematically—make a list of the many things you have to do, in the order in which they should be done. This may seem a very unimportant matter, and very likely you will think that you can carry it all in your head just as well. Take my word for it that you can't. It will require but a few moments to make out such a list, and it will at least assure your getting everything done, and getting each thing in order. Isn't that worth the trouble? As a matter of fact, however, it will save trouble. Keep this list in use, and put down every garden matter that will need attention as you go along; and check off the ones attended to, with the dates. If this list is kept for use another year, it will prove invaluable as a guide to next season's operations. The dates especially are of value in this record. For instance, if you got your lima beans in too early and had them frozen, you will have a guide to refer to. As a suggestion to beginners the following list is given:

Clean up all litter in garden for compost heap—March 10.

Engage man to plow—March 16th.
Have manure delivered.
Get two bags fertilizer and 50 pounds nitrate of soda—March 20th.
Put soda on rhubarb and asparagus, and loosen up soil—March 28th.
Set lettuce plants outside frames.
Set out early cabbage and cauliflower—April 1st.
Note: Heavy frost on 3rd. Cabbage not injured, but cauliflower lost. Sow onions (make seed-bed especially fine).
Transplant tomatoes.



Sow small seeds from the packet, shaking them directly into the drill when there is no wind. Cover at once

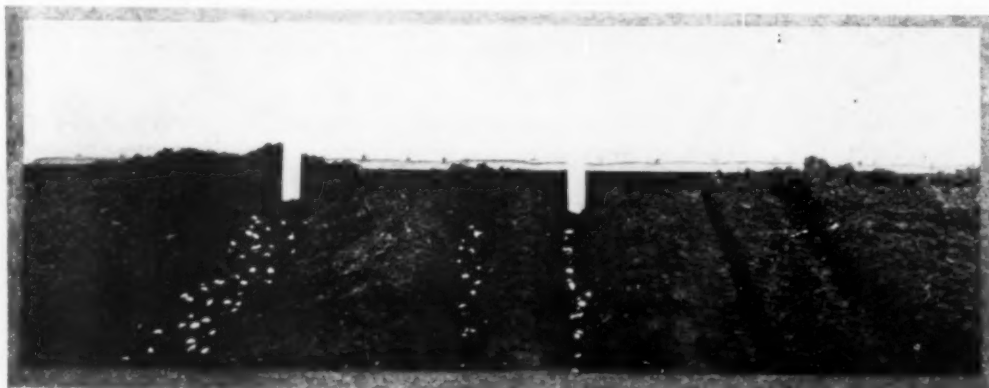
And so on, with the dozens of other things you will find to think of and do. All this, of course, may seem dry enough, when you are impatient to get into the garden itself, but it will pay.

About Sowing Seeds

You must not be so impatient that you do the work in a hurry and fail to do it properly. Gardening is not all easy work, even if it is all play. The sowing of seeds, if you have no seed drill, is one of the most tedious jobs, but also one of the most important. It will require care and patience. In the first place, be sure to have your seed bed in the very finest condition you can possibly get it. Read the suggestions on page 244 of this issue of how to put it in shape. Then, when you are ready to plant, take with you to the garden a good stout line, a hoe, an "onion" hoe or other very small one, and an iron rake. If the ground is not fresh, rake the strip you are going to plant over again and then stretch your line for the first row. Set it straight, even if you have to move it at one end or the other several times. Remember you are marking off for the whole garden. Of course, the depth of the drill will depend upon the sort of vegetable to be planted. For lettuce, radish, turnip and seeds of similar size it should not be more than one-half of an inch deep. If you haven't a very small hoe for making such drills use a sharpened stick, rather flat, so as to leave a clean V-shaped drill; the earth will fall back if a pointed stick is used. Then tear off a small corner of your packet of seed and scatter thinly and evenly in the little drill. The number of seeds to be put in

a given length of drill will vary with the vegetables planted, but as a rule for seeds of this size there should be several to every inch of row.

And now we come to the most important trick of successful seed-sowing: *Firm the seed into the soil.* Unless the ground is very moist, as it sometimes is early in the spring or late in the fall, this



Four types of drills: 1—Broad furrow 2 in. deep. 2—Double furrow or one row, 3 in. deep. 3—Half in. drill for small seeds. 4—Inch drill for medium seeds

should always be the rule. After the seeds are scattered in the row, with the ball of the foot or with the narrow-bladed hoe mentioned above, press lightly but firmly down upon every inch of drill. Don't push the little seeds too deep, but don't be alarmed if they are for the most part out of sight when the operation is finished; they will come back into sight much more surely and quickly than if left lying loose in a hot and dry soil. This "firming," remember, is done before the seeds are covered in the drill. Many of them will be covered by this process, but after it fill in level with the surface soil, either by drawing the hoe along the edge of the drill, with the blade at an angle of forty-five degrees to it, or by raking lightly across the rows with the back of the iron rake. Parsnips, salsify, etc., should go in about one-half inch.

So much for the smaller seeds. Peas and beans and corn require different treatment. They should go in from one to three inches deep, and if in single-row drills, these should be from six inches to a foot wide; but it is usually almost as quick, and more satisfactory, to sow in double rows, with the twin drills from six inches to a foot apart. This usually gives a more even stand, and it is much easier to keep the weeds in the row cleaned out. Bush beans should be put in about two inches apart in the drill, and peas scattered, especially for the first sowing, so that there will be at least a score to every six inches of a double drill. If the soil is at all dry, don't forget to firm!

Beginning to Fight the Weeds

IF April "opens up" well, you will have many seeds breaking ground by the first part of May—and among them the intruders, weeds. They seem to come out of the sky with the spring rains. Don't let them get a start. As soon as your seeds are planted, if you can see the rows, start the wheel hoe, with the "rake" attachments, or, if you haven't a wheel hoe, the iron rake between the rows. Don't wait for the weeds to appear—you'll have trouble enough in the rows, where you can't get at them now. A few radish or turnip seed, which germinate in a few days, scattered along the drills of lettuce, and parsnip, and onions, will mark the rows quickly, and so be of assistance. Get an ounce extra to use for this purpose. Remember that you can destroy more weeds now in ten minutes with the iron rake than you can a few weeks later in five hours with a hoe. For further suggestions about modern methods of fighting weeds, read the article on modern garden tools on another page.

In the Vegetable Garden

IF they have not already been attended to get your poles for beans and brush for peas ready. Lay the pea brush out in a flat pile, and put some boards and heavy stones on it so as to flatten it out, and thus leave more room in the rows for cultivating and picking. Now sow first plantings

of beet, carrot, leek, onion, parsley, parsnip, salsify, kohlrabi, lettuce, peas, radish, spinach, turnip, cabbage for plants to be set out later, also brussels sprouts, cauliflower and celery. Set out started plants of asparagus, rhubarb, beets, cabbage, cauliflower, lettuce and onions. Be sure all these are well "hardened off" before going into the open ground. If you have not raised your own plants, buy them early enough to keep out-of-doors a few days and nights before setting out.

In the Flower Garden

MOST of the seeds and plants for the flower garden will produce as quick and more certain results if not put in before next month. There are some exceptions; first of all, sweet peas, which should go in right away, if not already planted, in a good, deep, well-drained, well-manured trench. Tramp the manure in well, cover with two inches of fine soil, plant the seed and cover with two inches more, leaving a depression of two to four inches to be filled in later, but be sure to put it where water will not collect and flood it. Don't sow too thickly—not as thick as garden peas. Cornflowers, hardy pinks and primroses are other seeds that may go in now. But don't neglect the preparation of the soil just because the seeds can wait. Have plowed or dug under, a good dressing of rotted manure, and let the plot lie in ridges until you need it next month. Let it stay rough, and smooth it off as you need it. Make a plan of the flower garden and get a dozen or so packets of annuals to sow later. You can get wonderful results from a dollar or two in seeds.

In Greenhouses and Frames

DON'T let your outdoor work take all your attention from the things under glass. See that everything in the frames is given room and air—if neglected they will "run up" in no time to spindling and in-

sect-covered plants, next to worthless.

Don't waste your empty frame space. Get the cabbage and lettuce plants out of them as soon as possible—before you're ready to set them out and then if there is any room not demanded by peppers, eggplant and tomatoes, start melons, corn, and cucumbers at once, planning to leave a few plants of the latter permanently in each frame. The cucumbers and corn may be started on sod, or in boxes or pots, as suggested in the gardening article on another page.

The Value of Cosmos

FEW of the ordinary bedding annuals mingle well with larger growing species. Others may be beautiful in themselves or fine *en masse*, but of little value in the mixed border. The feathery cosmos, however, is the exception. Of all the flowers that bloom, it has no rival in giving the softening touch to all that grows beside it.

The tropical *ricinus* loses none of its dignity if the delicately-cut foliage and dainty white pink or crimson flowers play hide-and-seek amid its giant leaves. Indeed finer combination of plants for a mixed border would be hard to find. Also cut-and-come-again sunflowers with cosmos to fill the irregular spaces between the taller sunflowers, field-corn and *ricinus* is an effective and useful combination, as the individual habit of growth of each is such that they virtually support each other.

If cosmos predominates it gives an artistic cloudlike effect above white asters placed in the foreground. The color scheme is fine if kept in yellow and white only; but it is a matter of taste whether the warming touch of pink or crimson cosmos be given, or simply the white in profusion for the landscape effect. Cosmos is beautiful as a specimen plant but a combination is more satisfactory.



Cosmos is of value in the mixed border. It fills up irregular spaces and harmonizes with a variety of colors

Ingenious Devices

LABOR-**SAVING** SCHEMES AND SHORT CUTS IN THE HOUSE AND IN THE GARDEN

Celery in Tiles

AN ingenious celery grower has resorted to the following clever method of cultivation. He plants his seed in double rows in a trench according to the usual practice and when the plants have become 8 in. in height he makes use of the tiles. These are the common terra cotta, vitrified or glazed pipe tiling so frequently seen in general use. Select for the celery covers, pipe preferably of four inches in diameter. This can be easily broken into cylinders of convenient length. If the collar joints of wider diameter are left on, they should be put into the earth so that they are at the bottom. The tile is placed over the celery and the outside entirely banked with earth. A hole is left running down through the dirt outside the tile. The plants should be watered through this so that the water will reach the roots directly. If it is poured inside the tile it will cause the celery to discolor and rot. This precaution, as well as that of banking the earth about the cylinder to prevent its becoming overheated from the sun, are the only essentials for success when using this method. Its benefits are apparent, in that it enables one to grow long, clean stalks of celery which are blanched quite white for their whole length. Another advantage is that the concrete acts a little like a coldframe and helps to produce ripened celery earlier than the old way.

H. P.

A Gardener's Use for Old Tin Cans

THE two- and three-pound cans that are thrown away as soon as the contents are removed, may be made to serve the gardener in a profitable way. Melt both ends and along the side seam; they will then have to be held in shape by tying a string around each one. Push them down in the hotbed so that the upper rim is an inch above the surface, then plant the seed of melon and cucumber in them. The seed will germinate and grow in the hotbed, and when the weather permits the cans may be taken up with the dirt that is in them and also the plants that have grown therein, and set in hills previously prepared for them. The string is cut, and the relaxing can is lifted out, leaving the plant undisturbed by the process of transplanting. Melon plants cannot be moved without sufficient dirt adhering to the roots to prevent the breaking of any of them, and this plan gets around that difficulty. When no longer needed the cans may be rolled one within the other and stored away for another year. They are also valuable to place around plants which are susceptible to the ravages of the cutworm, by pushing them an inch into the soil.

H. F. G.

Utilizing the Space Above the Radiator

AT last the unsightly and much-in-the-way radiator serves another purpose than that of diffusing heat. How often have we longed to put it somewhere out of the way, and utilize its space for a bookshelf or other piece of furniture. Now there comes a shelf supported on brackets which may be firmly attached to the radiator, and made to hold heavy weights. The brackets are made in different weights and styles, to correspond with the various designs in radiators. The platform which rests on the brackets, is at a sufficient distance above the radiator to be free from heat, and any number of shelves may be installed above.



When the celery is covered with the pipe, bank the soil well up about it, leaving but a few inches above ground

Glue Oilcloth on Kitchen Tables

INSTEAD of tacking the oilcloth cover on the table or cabinet top glue it firmly. This, together with an application of good varnish two or three times a year will insure doubled or trebled service from ordinary table oilcloth

M. E. S. H.

For Creaking Doors

THE bathroom door had developed a persistent and annoying creak. I literally drenched the hinges with oil in an effort to stop it, but still it complained distressingly. An investigation revealed a chafed spot on top of the door. This was rubbed with soap, literally lathered on. The creak then stopped as if by magic.

M. E. S. H.

For the Casement Window

THE casement window is apt to prove a great nuisance unless one provides for its adjustment in a simple and effective manner, which will lock it securely at any desired point without removing the wire screen. There are several such devices on the market, and the best of them work easily from the inside, either under the sill or through the screen. No one plans casement windows to swing inward nowadays, for they interfere much with hangings and shades, as well as occupying too much space when open.

One adjuster is a simple mechanical device, which is hidden by the inside sill or stool of the window, assuring a firm clutch on the window; and when closed or open the device acts as a lock. The only part visible in the room is the operating handle, which folds back under the projecting sill when not in use. Jointed rods alone are visible from the outside.

The adjuster which works through the wooden frame of the screen or storm sash has only a small lever and wheel visible from the inside, and is simplicity itself to operate, with nothing to get out of order.

The simple features of the new-fashioned casement adjusters make it possible, even for a child, to open and close the windows, without interference with wire netting or storm sash, and they do away with the annoyance of rattling, when closed and open.

K. N. B.

Supporting Tomato Vines

ASPLENDID support for tomato vines will be found in the common fruit crates. Some of the long slats should be taken from the sides and the crate placed on end over the plant when quite young. Then, as it grows it adjusts its leaves and branches to fit the frame, supporting itself without any tying. Windstorms and beating rains can do it little damage, and the plant will do so much better when thus guarded that the small amount of expense and trouble will be well worth while.

L. McC.

A Lasting Stove Polish

WHEN the polish has been burned off the stove it is very often difficult to replace the black polishing surface, and when the ordinary liquid or soft polish is used there is small probability of succeeding. The blacking can be put on, but when rubbed to a polish it quickly disappears, leaving the stove as red and unsightly as before. To succeed with this work take a piece of blacking that has hardened in the box, and after wetting the spots to be treated, rub on the polish with vigor, and after a time enough will adhere to permit of a shine of great brilliancy.

A. D.

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Paper Crop Profits

By GEORGE ETHELBERG WALSH

THE country boys have always been depicted as yearning for city life, and unquestionably the trend of our population has been townward, but offsetting this in recent years has been the growing desire among city-born boys to get back to the country. The dream of running a Western ranch or owning a farm is strong today in the minds of thousands of boys who are tired of the restrictions of city life. Moreover, a good many city dwellers are wearied of the "strenuous life," and when they can lay aside sufficient money they purchase a country home for pleasure and profit.

Anything which will induce city boys and men anxious for country life to locate on farms and gardens in a proper way should be encouraged, but the conditions should be fairly and squarely understood and faced. The notion that farming is "dead easy" according to modern scientific methods has deceived many. "Paper profits" is largely responsible for this. It is easy to figure out on paper unusual profits from the most common crops, and then to multiply them by ten, twenty or a hundred to show that any man can become wealthy in a short time. The full capacity of our soil has never yet been definitely measured. Science has sought to show that under intensive culture and the most favorable conditions present-day crops can be doubled and trebled. Experimental farms of small size have demonstrated that the yield of each acre of land under the most ideal conditions could surpass anything anticipated today. But we have not yet reached the stage of development where we can take the ideal experiment farm of a few square yards as a standard for field culture on a ten or twenty acre farm. Those who figure on "paper profits," however, frequently make this fundamental error, and then in their disappointment condemn the whole system of modern scientific farming.

For instance, at one of the agricultural experiment stations a small test garden was planted with Gibraltar onions, a new and most excellent variety. They were planted three to every eleven inches in the row, with rows fourteen inches apart. That would make about 12,000 plants to the acre, and from the high yield obtained on this small test garden upward of 2,000 bushels should be harvested from an acre if the high average held. These onions sold at the rate of \$2 per bushel, which would give \$4,000 gross receipts from an acre of ordinary onion land. Had the new Welsh onions, which sell as high as \$3 and \$4 per bushel, been planted instead of the Gibraltar, the returns would have been between six and eight thousand dollars per acre.

What a good many may fail to notice in this crop report is that the season, soil, and culture were all ideal, and that it

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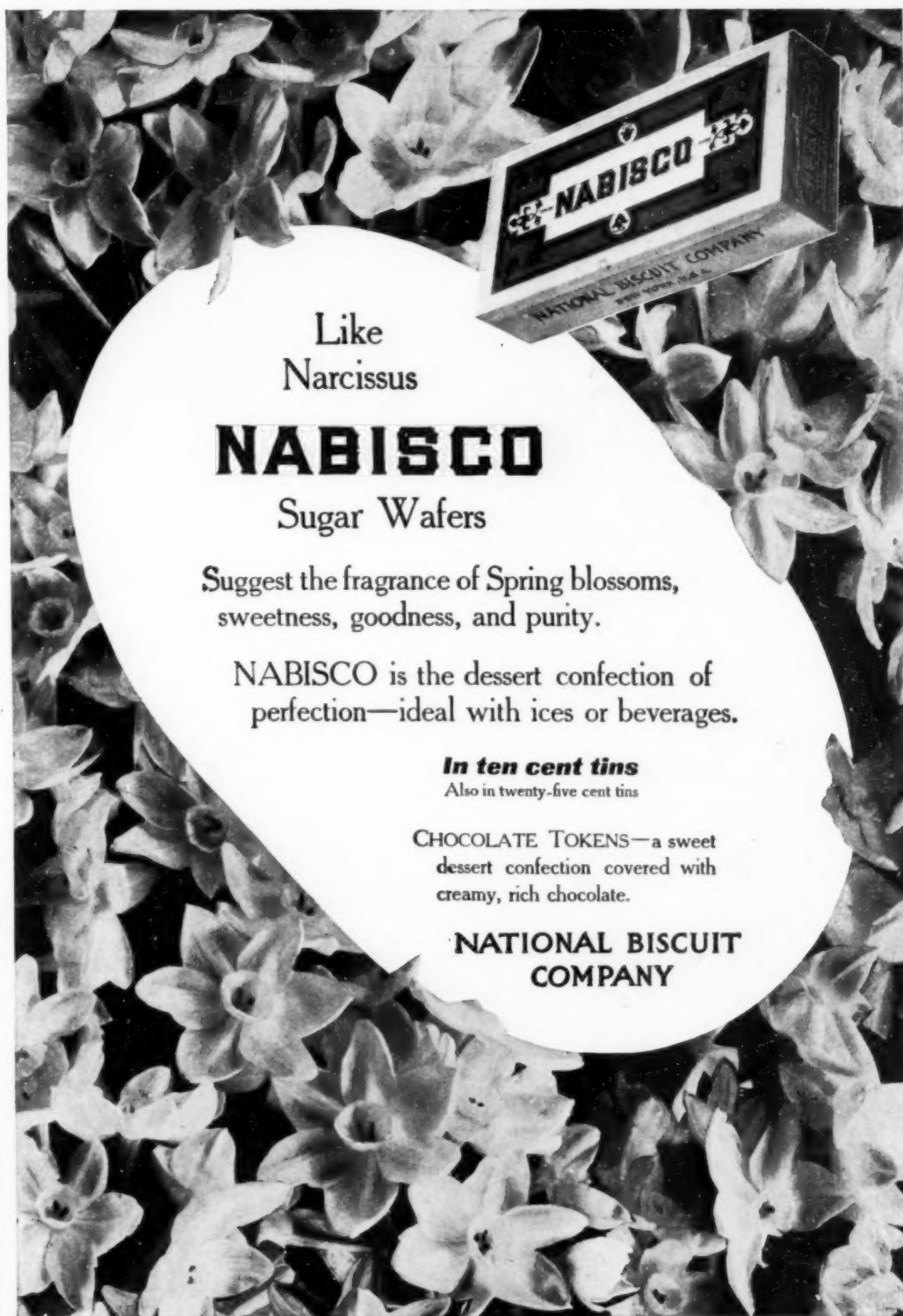
would hardly be possible to secure similar results on an acre of land, nor could two seasons be depended upon to yield the same results. Moreover, prices fluctuate so that \$2 to \$4 per bushel for onions would represent only the unusual years. Nevertheless, such paper profits can be figured out without stretching the truth, but like all paper profits they would prove very misleading in actual practice.

In our Northern States several thousand quarts of strawberries are raised on an acre of good land, but around Norfolk, Virginia, it is not unusual to raise from five to eight thousand quarts to each acre. In some parts of the South ten thousand quarts have been raised, which if sold at 10 cents a quart would return a thousand dollars an acre, or at 20 cents two thousand. Taking the latter as a standard, it is easy to figure out \$40,000 gross receipts on a 20-acre strawberry farm. If only one-fourth of the returns represented net profits a strawberry farmer would prove a pretty good commercial success.

But similar remarkable paper crop profits can be worked out nearer our own homes. Potatoes offer a pleasant solution to the question of how to "get rich quick" in farming. Ten years ago the average yield of potatoes was about 150 bushels to the acre; but today through the efforts of our agricultural department it is not unusual for farmers to average 300 bushels to the acre. It is true that there are a great many one-hundred-and-fifty-bushel farmers toiling away in the old ruts, and it may prove quite impossible to convince them that others raise 300 bushels to the acre; but they do, nevertheless, and some twice three hundred and more. At the experimental farms near Ottawa, Canada, from 600 to 772 bushels of potatoes were raised on an acre, or rather they were raised on a small plot of land at this ratio. With potatoes at \$2 per bushel gross returns of over \$2,500 per acre can be figured out on paper without trouble.

But if one's land is not adapted to potatoes, strawberries, or onions, suppose we take turnips, mangles, parsnips, peas or beans. A little figuring based upon what has been done on test plots at the agricultural stations will not in any way discourage the beginner in his visionary schemes. Field beans are sowed in rows, and at harvest time they are picked and shipped to market. A quart of salable beans in the pods for every foot length of drill is not high, and if drills are two feet apart returns of one or two thousand dollars an acre can be shown. At one of the experimental stations beans were raised on a test plot which at five cents a quart would make returns at the rate of over \$2,500 per acre. At another station 2,000 bushels of mangles were raised per acre, which at the rate of \$1 per bushel would certainly make a fancy showing for this common crop.

Illustrations could be multiplied showing the possibilities of agriculture under the most ideal conditions of planting and growth with market rates for the produce



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abnormally high, but unless the nature of the soil and climate, the careful, intensive culture given to the crop, and the selection of seed, fighting of insects, and the cost of fertilizing, are all considered the reports of the wonderful crops will prove a snare and delusion instead of an intelligent incentive to better work. Farming is a business, and those who have succeeded in it are usually men who apply as much talent and progressive work to it as a merchant does to his business in the city. There is the "strenuous life" on the farm as well as in the city, but it is different in character rather than in degree.

The editor of an agricultural weekly recently took a dinner at a select restaurant in New York, and while waiting to be served made a critical examination of the prices charged for the different fruits and vegetables. He figured out that at the printed rates on the menu card the fruits and vegetables that an ordinary farmer's family of six would consume at a meal would cost between \$15 and \$18. Carrying the estimates further he discovered that if the farmer sold all his fruits and vegetables at the same price charged the patrons of the restaurant he could easily receive in gross receipts from \$20,000 to \$25,000 per acre.

Thus we find an exaggerated example of what paper crop profits could be made to show. It may not be more absurd to reason this way than for many owners of stocks and bonds to figure up their imaginary paper profits, but for the sake of the beginner in farming it is highly undesirable that any such misleading statistics should be taken without their proper qualifications. If the exodus from our cities to the country is based upon such ideas of paper profits there will shortly follow more farm foreclosures than those which made Kansas famous a dozen years ago. There will also be a returning tide within a few years of sadder and wiser men. Enthusiasm in farming is highly desirable, but not when it dethrones reason and common sense. Every time there is published a report of enormous rates of profits per acre in fruits or vegetables hundreds, and possibly thousands, figure out the result, and multiply it by ten, twenty or a hundred. According to such arithmetic there seems no earthly reason why the owner of ten or twenty acres should not become independently wealthy within a few years.

While there is no Eldorado in farming there is a good opportunity for a man to make a living and lay something aside each year. There is no easy road to success in cultivating the soil or in running a ranch, but there is a certainty of success where intelligent and persistent hard work is exchanged for it. Modern science has revolutionized farming and gardening, but it has not made it a fit occupation for the fool. It has rather raised it up to the standard where men of ideas and progressive energy can meet it half way and find pleasure and profit in winning out. Nature is a hard task-master until you

win her secret, and then she may be coaxed to yield her hoarded treasures less grudgingly. Natural fitness and training are as essential as self-denial and work in farming as in any other line of business.

The danger of haste to get rich applies to farming as aptly as to high finance in the cities. Paper crop profits are real evils of the day. They strike at the root of a good many of the failures in the country. When large profits are once figured out on paper, it is difficult to accept the actual ones with any degree of satisfaction. The disappointment is apt to sour and discourage the beginner.

The Month's Activities

(Continued from page 249)

way to level culture, principally for the reason that the level row, represented by the base of a triangle, exposes less soil surface to the drying action of sun and air, than the two sides of the same triangle in the mound method. In very damp soil, hilling may sometimes be beneficial. Plants in rows are usually several inches to a foot apart—sometimes two or three, as with beans or cabbage. The word drill is often used interchangeably for row.

After planting comes the work of guarding against plant enemies.

In localities where cut-worms—soft, fat, brown worms from one-half to one and one-half inches long—are known to do mischief, they may be fought in one of the following ways. They eat at night and keep out of sight in the daytime, but can usually be found somewhere within a few inches of the plant last cut, and just below the surface of the soil. As any plant cut is usually entirely ruined, it is better to prevent their doing any mischief than to kill them afterwards. Cylinders made of light cardboard, stiff paper or old cans with the bottoms removed, placed about the plants and an inch or so into the soil, will keep them away, or they may be trapped by placing pieces of shingle or small board about, to make shelters under which they hide; or by strewing about bran or grass, with a few drops of molasses and a very light sprinkling of Paris green mixed in. If this bait is applied two or three days before seeds come up, or plants are set, the worms will not be likely to cause any trouble. I go to this length in advising how to combat these pests, because I know from experience how discouraging it is to carefully set out a row or two of thrifty looking cabbage or tomato plants, only to find half of them, a morning or two later, cut off clean, with the severed tops lying there uneaten!

When once your seed is in the ground, and your plants set out, don't feel that there is nothing to be done for a few weeks. Within twelve hours after you have stuck in the last tag and hung up the garden rake, seventy-three and one-half million weed seeds have begun to sprout! Don't give the weeds a start. Begin cultivation at once. Don't make the mistake of

Women Do Not Paint

but they should know something about the paint their painters use.

"I suppose in nine cases out of ten it is the wife who first suggests that the house is looking shabby and needs repainting," said a friend of the Dutch Boy the other day.

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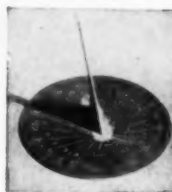
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cultivating with the idea of merely keeping the garden free from weeds; this should be of secondary importance only. Cultivate because cultivation makes things grow! Remember that plant food must be available before it does your plants one iota of good. Every time you stir the soil you help to change stored-up plant food into available plant food; you cook a meal for the things in your garden. More than that, it breaks up the little soil tubes through which water escapes from the garden into the air, and thus keeps the moisture where it will help feed your plants—for every grain of food they get must first be dissolved in water. Read the tool article on page 254, and the Garden Department, for further hints in regard to early cultivation.

I have been speaking about the garden of vegetables; but most of the principles involved apply as well to the making of the flower garden. Flower seeds are generally much smaller than vegetable seeds; and in sowing be careful to cover them with very finely sifted soil, and plant where they will not be washed out by heavy rains. It is a good plan to have a seed-bed especially prepared, in which to start the seed, short rows, only a few inches apart. When they are well up, thin out; and later transplant on a cloudy day. Don't let them stay too long in the seed-bed, or they will send down long, thick main roots, known as tap-roots, and then will not readily stand the operation of being moved and replanted.

[Next month's continuation of this article will take up further details of the flower garden, also the matter of special cultivation for vegetables and the campaign against plant enemies.—EDITOR.]

Grass Seed Mixtures and How to Use Them

(Continued from page 251)

Kentucky blue grass, wood meadow grass, various-leaved fescue and crested dog's tail. Use thirty-five per cent. of the first two and fifteen per cent. of the last two.

For conditions that require a quick-growing grass, and something that will bind and make a holding upon slopes under difficult conditions, the following is recommended: Kentucky blue grass, 30 per cent.; R. I. bent, thirty per cent.; creeping bent, twenty-five per cent.; sheep fescue, ten per cent., and white clover, five per cent. This is one of the places where white clover is an essential. Under these conditions it fulfils its mission perfectly. While all the named kinds may not flourish, there will be enough to make the work successful.

The turf on a putting-green must be dense and low and tough enough to stand a lot of rough usage. A combination of Rhode Island bent and creeping bent is about the best thing for this purpose. To check up, just refer back to your schedule and see what it says of these grasses.

The soil on a putting-green should be of a sandy nature. This keeps the grass

stunted through lack of much food, and consequently better fits it for its purpose.

Never buy grass seed by the bushel. Buy it by weight or stipulate that there shall be so many pounds to the bushel. It will cost you a high price, but it will be far cheaper in the end than to buy something inexpensive that has more than a third of sweepings and useless bulk. You certainly lose nothing by buying the very best seed that your dealer can offer you.

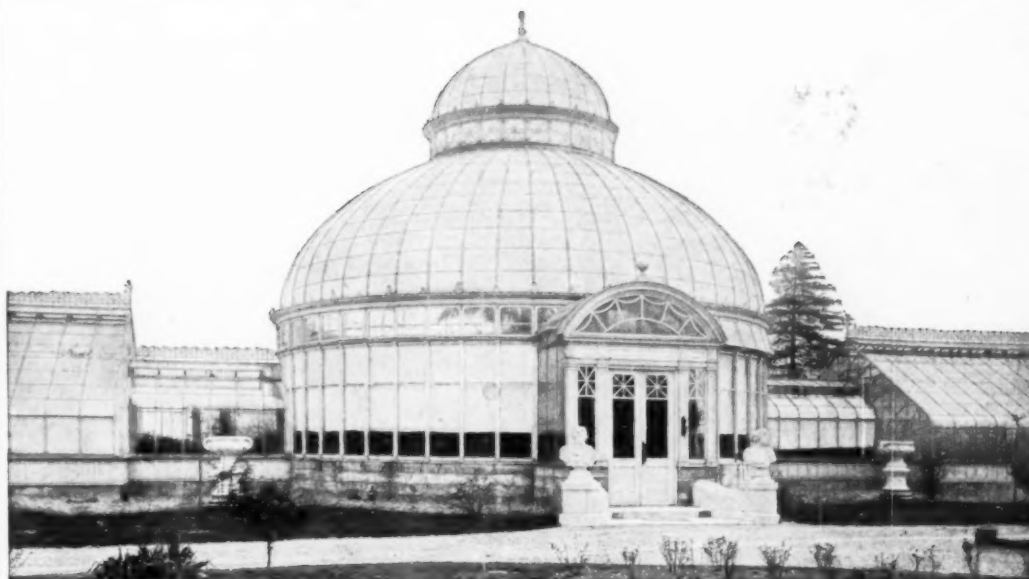
Don't be ashamed to ask for samples before buying, and also get samples from a number of places and compare the different seeds. Spread them out in your hand and see if they are clean and without chaff. A seed with a large proportion of dust and chaff is not worth buying. It should be your consideration to see whether you are getting what you pay for. If you show evidences of knowing the proper goods you will receive a most respectful hearing from the tradesman. Don't balk at the price of re-cleaned seed. It means that you are going to get something for your money. It is worth much more than the seed sold in bulk that is not re-cleaned.

After you have succeeded in getting the right kind of seed don't think that this means that the preparation of the soil to receive it can be slighted. Have your soil as deep and rich as possible, and keep in mind the fact that a roller is a most useful implement to have about the place and to use frequently on the lawn. Good seed, good soil and a good roller are a combination that will produce results that will last. If you want a lawn you must work for it.

Watch for the weeds, and when they appear dig them out and sprinkle grass seed on the spot they were dug from. Watch particularly for crab grass. It keeps so close to the ground that the lawn-mower does not touch it. Before it goes to seed take a rake and tear it out. If you wait until it seeds, the crop for the next year will have been already planted. It is a terrible pest in the lawn and must be fought hard. In the fall it leaves great patches of bare ground where it has grown. In removing dandelions go down deep for them, otherwise you make many where there was only one.

A lawn should be cut just as often as it needs it. You cannot make a hard-and-fast rule for this. Cut and roll the lawn often. In extremely hot periods don't set the knives of the mower too low. Raise them a little to avoid exposing the roots of the grass too much. Let your first cutting be early, and the last one so that the grass will not be left too long for the winter. And don't forget that the roller is a good thing to push over the grass frequently.

When a lawn needs moisture it should be given in a practical way, so that you neither fool yourself nor the lawn as to the efficiency of the operation. Ordinary sprinkling will not do, for the simple reason that the water will have evaporated before it has had a chance to get near the roots of the grass. Hours with a sprinkler doing its prettiest will not answer. On



Erected for H. J. HEINZ, Pittsburg, Pa.

Build Your Greenhouse U-Bar Way



Build it that way because it has a complete steel frame of U-Bars which makes it possible to do away with the heavy framing members necessary in other houses. That's why U-Bar houses are lighter; and the lighter your greenhouse the more and better flowers you can grow. And it costs less to grow them. This very lightness so essential for a return on your investment likewise makes them the attractive houses they are.

Circular Palm Houses like this one have never been attempted with other constructions—it is distinctly U-Bar.

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A carnation interior. Note the lightness of construction.

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ARE always sharp, because they have crucible tool-steel blades, hardened and tempered in oil. The kind of steel used in making all high-grade cutting tools. No other Mowers use this grade of steel; that is why "Pennsylvania" Quality Mowers have been in a class by themselves for 35 years.

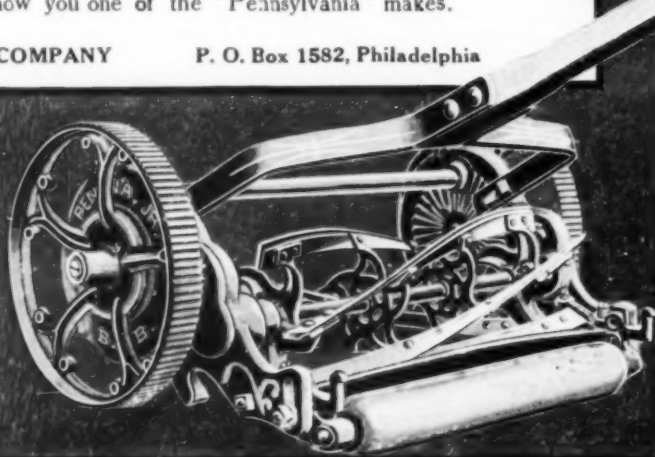
If you want an *actual* self-sharpening Mower, that will do thoroughly first-class work almost indefinitely, without the constant expense of re-grinding, ask your hardware dealer or seedsman to show you one of the "Pennsylvania" makes.

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the word
PETRIFAX
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name
are on
every
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can.



a deep-soil lawn the roots are well down, and the only way to have the water reach them is to let it run from a hose lying on the grass, for hours at a time. Any one having a pretty lawn-sprinkler may not believe this, but it can be easily proved. In cases where the soil on the lawn is shallow the roots, being high, may be reached by the sprinkler process, but it is a good rule to follow with the open hose. As a little test try the following: In a dry time, after the sprinkler has been working over hours, dig up a small piece of the lawn and test the depth to which the moisture has penetrated. You will find that it has gone down but a few inches, and the next day's sun will take up all this water in a couple of hours.

In using fertilizer great care should be used not to overdo it. If you have a deep soil that is rich in humus, you will need but little in the way of fertilizers. An application of Canada hard-wood ashes in the spring will be all that is necessary to help the soil and give color to the grass. The ashes sweeten the soil while stimulating the growth of the grass. In buying these ashes insist on having a guaranteed amount of potash. Otherwise you may get as low as a half of one per cent., and in some cases you cannot find a trace of potash. The potash is what you want for the soil.

Nitrate of soda, applied in liquid form, produces quick results. Use it before a rain in the dry form—about 175 pounds to the acre, or dissolved, three pounds to 100 gallons of water. As said above, fertilizers are not necessary for many years if a lawn has been properly made, but the inducements to use them are so convincing that a large amount of money can be thrown away in just this way.

Garden Tools That Pay Their Way

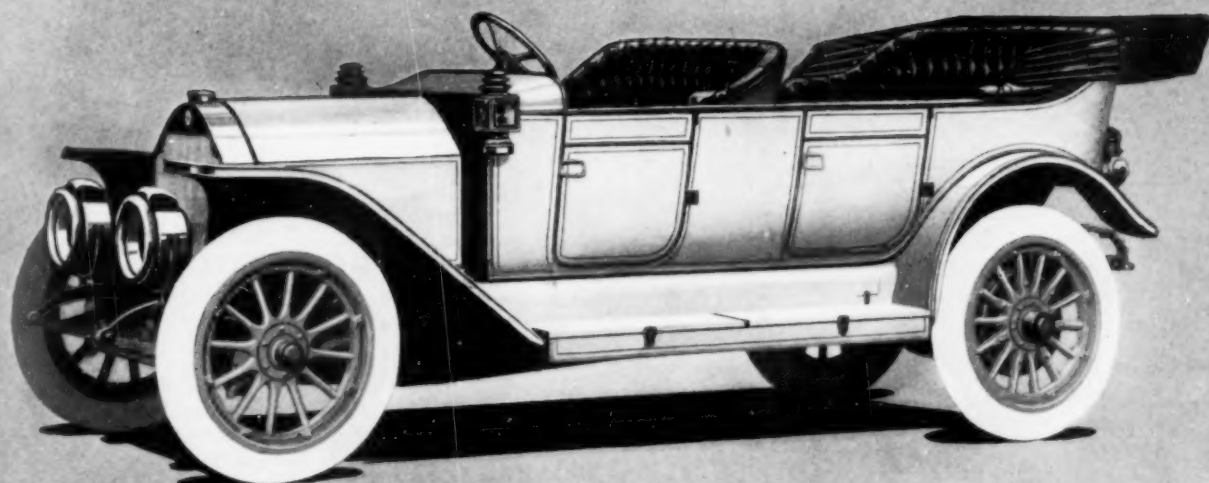
(Continued from page 255)

never put them away soiled and wet. Keep the cutting edges sharp! There is as much pleasure in trying to run a dull lawnmower as in working with a rusty, battered hoe. Have an extra handle in stock in case of accident; they are not expensive. In selecting hand tools, always pick out those with handles in which the grain doesn't run out at the point where there will be much strain in using the tool. In rakes, hoes, etc., get the types with ferules and shank one continuous piece, so as not to be annoyed with loose heads.

Spend a few cents to send for some implement catalogues. They will well repay careful perusal, even if you do not order this year. In these days of advertising, the commercial catalogue often contains matter of great worth, in the gathering and presentation of which no expense has been spared.

As a final word to the intending purchaser of garden tools, I would say, first, thoroughly investigate the different sorts available and when buying, don't forget

(Continued on page 282)

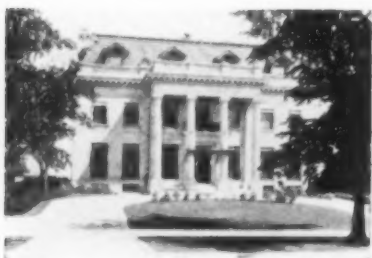


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are built in many sizes and kinds to supply perfect refrigeration for every purpose as described in the following illustrated booklets: No. A. H. Built-to-order for Residences, No. 87 Regular Models for Residences, No. 48 for Hotels, Clubs and Institutions, No. 72 for Florists, No. 67 for Grocers, No. 59 for Meat Markets. The one you are interested in will be sent free on request.

McCray Refrigerator Co.

293 Lake Street

Kendallville, Ind.

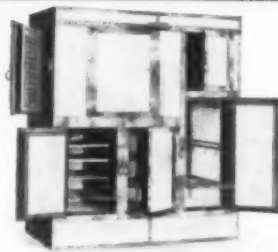
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give; in preserving individual flavors and aromas; in imparting a delightful thirst-satisfying coolness that makes the good things better and the crisp things snappier, more appetizing and deliciously stimulating.



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Your Garden Terrace, Hall and Conservatory will be beautified by appropriate selections from the Galloway Collection of Terra Cotta and Pottery.

The material is strong and durable in the severest climate. The workmanship and designs have artistic value.

The 1911 Collection contains many new flower pots, vases, sun-dials, benches, etc., for outdoor and indoor use. Catalogue will be mailed upon request.



GALLOWAY TERRA COTTA CO.
3218 WALNUT ST. PHILADELPHIA

(Continued from page 280)

that a good tool or a well-made machine will be giving you satisfactory use long after the price is forgotten, while a poor one is a constant source of discomfort. Get good tools and take good care of them. A few dollars a year, judiciously spent for tools that are afterwards well cared for will soon give you a complete set, and add materially both to your garden profit and your garden pleasure.

Grow Your Own Fruit

(Continued from page 261)

the work can be more thoroughly done, especially in uneven ground. After the sheet is placed, with a stout club or mallet, padded with a heavy sack, or something similar, to prevent injury to the bark, give a few sharp blows, well up from the ground. This work should be done on a cloudy day, or early in the morning—the colder the better, as the beetles are then inactive. If a considerable number of beetles are caught, the operation should be repeated every two or three days. Continue the treatment as long as any beetles are to be caught. Peaches are troubled also by borers, in this case indicated by masses of gum, usually about the crown. Dig out or kill with a wire, as in the case of the apple borer. Look over the trees for borers every spring, or better every spring and fall. Another peach enemy is the "yellows," indicated by premature ripening of the fruit, and the formation of stunted leaf-tufts of a light yellow color. This disease is contagious and has frequently worked havoc in whole sections. Owing to the work of the Agricultural Department and the various State organizations it is now held in check. The only remedy is to cut and burn the trees, and replant, in the same places if desired, as the disease does not seem to be carried by the soil.

Pears are sometimes affected with a scab similar to the apple scab, and this is combatted by the same treatment—three sprayings with Bordeaux. For a blight which causes the leaves suddenly to turn black and die, and also kills some small branches, and produces sores or wounds on large branches and trunk, cut and burn all affected branches and scrape out and clean all sores. Disinfect all sores with corrosive sublimate solution—1 to 100—or with a torch, and paint over at once.

Plums have many enemies, but fortunately they can all be effectively checked. First is the *curculio*, to be treated as described above. For leaf-blight—spotting and dropping off of the leaves about mid-summer—spray with Bordeaux, within a week or so after the falling of the blossoms. This treatment will also help to prevent fruit-rot. In addition to the spraying, however, thin out the fruit so that it does not hang thickly enough for the plums to come in contact with each other. In a well kept and well sprayed orchard, black-knot is not at all likely to appear. It is very manifest wherever it starts, caus-

(Continued on page 284)

ANDREWS SEPTIC SEWAGE DISPOSAL

The Andrews System OF SEWAGE DISPOSAL

Is by Septic Tank, as shown in the illustration. Cess-pools are no longer tolerated by sanitary science. They are the cause of much sickness, but the Septic Tank is a scientific method of sewage disposal in which the bacteria that cause disease destroy the dangerous elements in the sewage and in the end destroy themselves.

We have a patent Steel Tank, all complete, ready to bury in the ground and connect to.

Send Plans or Rough Sketch of your house and grounds for FREE ESTIMATE.

From Factory to User

Andrews' Big Book on Heating, Plumbing and Air Pressure Water Supply sent FREE. Please send names of two parties who might buy.

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Can be used in House and Garden

Aphine is a concentrated liquid spraying material easily diluted with water. It can be applied to foliage, flower, fruit or vegetable.

"We know of no insecticide which has more quickly demonstrated its efficacy than the recently introduced Aphine, which, in the course of a comparatively short time, has become a talisman among horticulturists of unimpeachable veracity and unquestioned skill."—*"Horticulture,"* Boston, Mass., Nov. 6th, 1909.

"Our outdoor roses were badly infested with aphids. With the first application of Aphine the pest was entirely destroyed."—John McLaren, Superintendent Golden Gate Park, San Francisco.

"I have given Aphine a very thorough trial on plants infested with aphids and find it works successfully; in fact, have found nothing that compares with it."—E. B. Southwick, Entomologist, Dept. of Parks, New York City.

"I have used Aphine on orchard trees and ornamental plants infested with scale, green and white fly, thrip, mealy bug, etc., and found, in every case, that it completely destroyed the pests in question, with not the slightest harm to the subjects treated. It is without doubt the finest insecticide I have ever used."—William Munro, Supt. to C. T. Crocker, San Mateo, Cal.

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Gallon \$2.50—Quarts \$1.00 Pint 65c Half Pint 40c

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Aphine Manufacturing Company
MADISON, N. J.

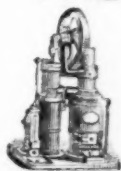
The Water Question Settled.

We probably know more about water-supply questions than you do, for we have spent seventy years in learning.

Forty thousand customers have followed our advice, and put in Reeco Pumps—and they are glad.

We will show you what can best be done in your own case, after studying your water-supply and the needs of your establishment. Then you will be told what you need, and what it will cost.

The beauty of the Reeco Pumps is that they do the work without tinkering, bother, or repairs. They are everlastingly "on the job," and "making good"—if you'll pardon expression slang.



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\$2,000.00 in Prizes For the Big Game Fish FIELD AND STREAM

"America's Magazine for Sportsmen," is offering 203 Prizes for the Biggest Fresh and Salt Water Game Fish Caught During 1911

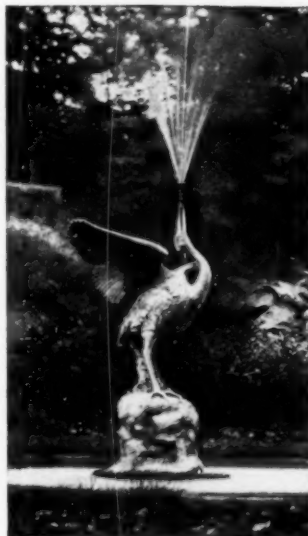
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List of prizes and conditions of contest published each month in FIELD AND STREAM. As you will want to read the accounts each month of How, When, Where and with what tackle these big fish were killed, we are going to make you a special introductory offer of a three months' trial subscription to FIELD AND STREAM, together with the 1911 Angler's Guide, the best book on fishing published, telling how, when and where to fish, including the latest Game and Fish Laws for 1911 and a five-foot split bamboo bait casting rod, All for \$1.00

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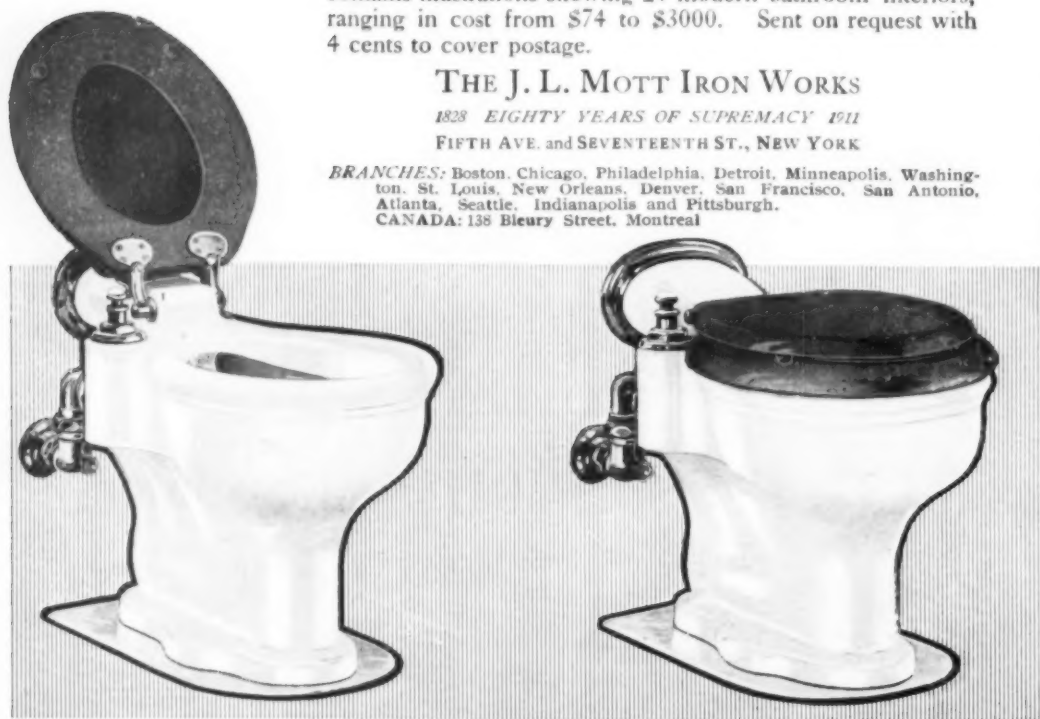
contains illustrations showing 24 modern bathroom interiors, ranging in cost from \$74 to \$3000. Sent on request with 4 cents to cover postage.

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"SCALECIDE"
Will positively destroy SAN JOSE SCALE and all soft bodied sucking insects without injury to the tree. Simple, more effective and cheaper than Lime Sulphur. Not an experiment. One gallon makes 16 to 20 gallons spray by simply adding water. Send for Booklet, "Orchard Insurance."
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(Continued from page 282)

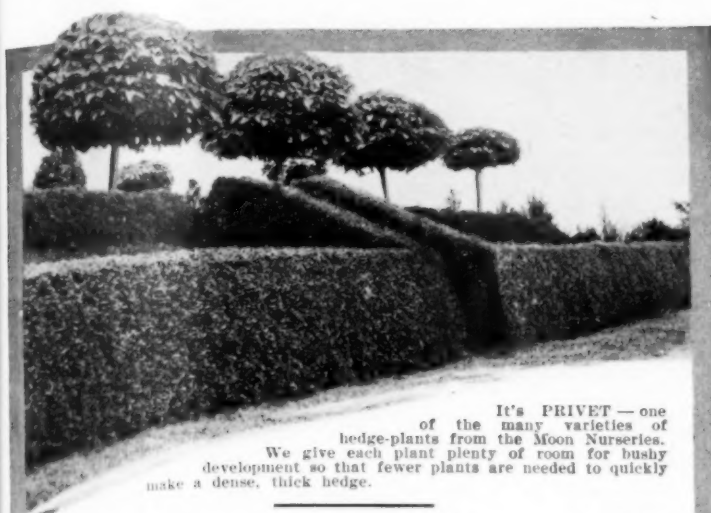
ing ugly, black, distorted gnarls, at first on the smaller limbs. Remove these and burn immediately, and keep a sharp watch. As this disease is supposed to be carried by the wind, see to it that no careless neighbor is supplying you with the germs.

As will have been seen from the above, spraying poisons are of two kinds; those that work by *contact*, which must be used for most sucking insects and germs and fungous diseases; and those that poison internally, used for leaf-eating insects. Of the former sorts, Bordeaux mixture is the standard, although within the last few years it has been to a considerable extent replaced by lime-sulphur mixtures, which are described below. Bordeaux is made in various forms. That usually used is the 5-5-50, or five pounds copper sulphate, five pounds unslaked lime, fifty gallons water. To save the trouble of making up the mixture each time it is needed, make a stock solution as follows: Dissolve the copper sulphate in water at the rate of one pound to one gallon. This should be done the day before, or at least several hours before, the Bordeaux is wanted for use. Suspend the sulphate crystals in a cloth or old bag just below the surface of the water. Then shake the lime in a tub or tight box, adding the water a little at a time, until the whole attains the consistency of thick milk. When necessary add water to this mixture if it is kept a considerable time; *never let it dry out*. When ready to spray, pour the stock copper sulphate solution into the tank, in the proportion of five gallons to every fifty of spray required. Add water to amount required. Then add stock lime solution, first diluting about one-half with water and *straining*. The amount of lime stock solution to be used is determined as follows: At the drug-gist's get an ounce of yellow prussiate of potash dissolved in a pint of water, with a quill in the cork of the bottle so that it may be dropped out. (*It is poison.*) When adding the stock lime solution as directed above, do so until the prussiate testing solution when dropped into the Bordeaux mixture *will no longer turn brown*. Add a little lime to be on the safe side. All this sounds like a formidable task, but it is quite simple when you really get at it. Remember that all you need is a few pounds each of quick-lime and copper sulphate, an ounce of prussiate of potash and a couple of old kegs or large pails in which to keep the stock solutions.

Lime-sulphur mixtures can be bought or mixed by the home orchardist. They have the advantage over Bordeaux that they do not discolor the foliage or affect the appearance of the fruit. Use according to directions, usually about one part to thirty of water. These may be used at the same times, and for the same purposes as Bordeaux.

Lime-sulphur wash is used largely in commercial orcharding, but it is a nasty mess to prepare, and must be used in late fall or winter. For the home orchard one

(Continued on page 286)



It's PRIVET—one of the many varieties of hedge-plants from the Moon Nurseries. We give each plant plenty of room for bushy development so that fewer plants are needed to quickly make a dense, thick hedge.

DO your planting now. We can help you to do it quickly and inexpensively with our splendidly developed specimens. We've had thirty-nine years' experience.

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Crop, Fall of 1910, brought \$48,000, orchard only 8 years old.

The only large sweet chestnut in the world. Bears the second year. The nuts average 1 to 2 inches in diameter—and 3 to 5 nuts in a burr.

United States Pomologist, G. B. Brackett, says "The Sober Paragon comes the nearest in quality to the native chestnut of any of the cultivated varieties that I have examined. It is of large size, fine appearance and excellent flavor."

Testimony from growers, commission merchants, Forestry Experts, etc., given in our free booklet, together with prices and particulars.



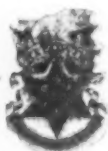
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Preserve your food better and use less ice than other makes because of their wonderful one-way circulation of pure, cold, dry air, which is constantly forced around the articles stored, purifying and cooling every inch of the refrigerator.

A cheap refrigerator costs nearly as much as a good one at the start. It endangers your health, wastes ice, and spoils food, and is worn out when a Baldwin high-grade Refrigerator is in its prime, and many Baldwins in constant use for 35 years are still giving the utmost satisfaction.

BALDWIN DRY AIR REFRIGERATORS

Are lined with snow white opalite glass 7-16 inch thick; vitrified porcelain or metal. There are 150 styles in stock. Specials made to fit your space.

Don't experiment, buy a lifetime of satisfaction, not a term of annoyance. Ask your dealer to show you a Baldwin.

Write today for beautiful catalogue.



The Baldwin Refrigerator Co.
38 Lake Street, Burlington, Vt.

(Continued from page 284)

of the miscible oils now advertised will be found more satisfactory. While they cost more, there is no time or expense for preparation, as they mix with cold water and are immediately ready for use. They are easier to apply, more comfortable to handle, and will not as quickly rot out pumps and spraying apparatus. Like the sulphur wash, use only during late fall and winter. Kerosene emulsion is made by dissolving Ivory, soft, whale-oil or tar soap in hot water and adding (away from the stove, please!) kerosene or crude oil: proportions, one-half pound soap, two gallons kerosene. Immediately place in a pail and churn or pump until a thick lathery cream results. This is the stock solution; for use dilute with five to fifteen times as much water, according to purpose applied for; on dormant fruit trees, five to seven times; on foliage, ten or even fifteen.

Of the poisons for eating insects, arsenate of lead is the best for use in the fruit orchard, because it will not burn the foliage, as Paris green is apt to do, and because it stays on longer. It can be used in Bordeaux and lime-sulphur mixtures, thus killing two bugs with one spray. It comes usually in the form of a paste, though there is now a brand in powder form, which I have not yet tried. This should be worked up with the fingers (it is not poison to touch) or a small wooden paddle, until thoroughly mixed, in a small quantity of water and then strained into the sprayer. Use, of the paste forms, from one-quarter to one pound in twenty gallons clear water.

Paris green is the old standard. With a modern "duster" it may be blown on pure, without burning, if carefully done. Applied thus, it should be put on during a still morning before the dew goes. It is safer to use as a spray, first making a paste with a small quantity of water and then adding balance of water. Keep constantly stirred while spraying. If lime is added, weight for weight with the green, the chances of "burning" will be greatly reduced. For orchard work, one pound to one hundred gallons water is the usual strength.

The accompanying table will enable the home orchardist to find quickly the trouble with, and remedy for, any of his fruit trees, and should be kept for reference.

The quality of fruit will depend largely upon the care used in picking and storing. Picking carelessly done, while it may not at the time show any visible bad results, will result in poor keeping and rot. If the tissue cells are broken, as many will be by rough handling, they will be ready to cause rotten spots under the first favorable conditions, and then the rot will spread. Most of the fruits of the home garden, which do not have to undergo shipping, will be of better quality where they ripen fully on the tree. Pears, however, are often ripened in the dark and after picking, especially the winter sorts. Apples and pears for winter use should

(Continued on page 288)



AN ORDINARY SHADE UP ONLY A FEW MONTHS AND ALREADY CRACKED.



A BRENLIN SHADE, WON'T CRACK. WON'T FADE.

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Window Shades Won't Crack Won't Fade

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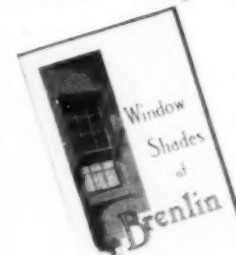
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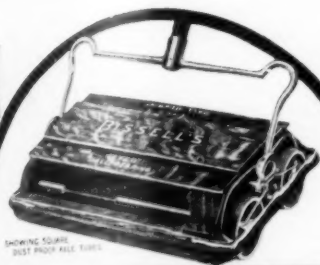
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Gardeners who understand up-to-date methods and practice are in demand for the best positions.

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Never before have Ball Bearings been successfully applied to a carpet sweeper, the great obstacle being to bring the cost within the reach of the masses. This we have at last accomplished, and are able to offer a genuinely efficient Ball Bearing sweeper at a price that brings it within the range of every household.

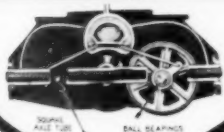
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Largest and Only Exclusive Carpet Sweeper Makers in the World.

End view of sweeper with one wheel off, showing end of SQUARE Axle Tube and method of applying BALL BEARINGS to Driving Wheels which are forced tightly against the brush pulleys, thus insuring a positive rotation of the brush. SQUARE Axle Tubes permit a free vertical as well as lateral action of the Axle Rods and Wheels and allow the sweeper to adjust itself to all grades of carpets. (1)



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are used everywhere; will plow, hoe, cultivate, hill and weed the garden; any boy can operate them. Our QUALITY tools give many years' dependable service. Prices, \$2.50 to \$12. Write for FREE Anniversary Catalog, describing all IRON AGE Garden and Farm Implements, including potato machinery, orchard tools, etc.

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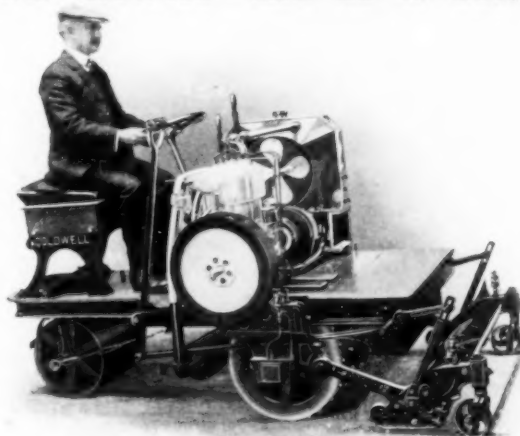


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The National Magazine for Architects, Owners and Builders

In the Architectural Record, which is invaluable to those who expect to build or make alterations, there are also illustrated and described the numerous building specialties that add very much to the comfort, convenience and value of the modern home, without materially increasing the initial cost. This information should surely SAVE YOU MANY DOLLARS.

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WORCESTER, MASS.

(Continued from page 286)

be kept, if possible, in a cold, dark place, where there is no artificial heat and where the air will be moist but never wet, and where the thermometer will not fall below 32 degrees Fahrenheit. Upon exceptionally cold nights the temperature may be kept up by using an oil stove or letting in heat from the furnace cellar, if that is adjacent. In such a place, store loose, on ventilated shelves, not more than six or eight inches deep. If they must be kept in a heated place, pack in tight boxes or barrels, being careful to put away only perfect fruit; or pack in sand or leaves. Otherwise they will lose much in quality by shriveling, due to lack of moisture in the atmosphere. With care, they may be had in prime quality until late in the following spring.

Do not let yourself be discouraged from growing your own fruit by the necessity of taking good care of your trees. After all, you do not have to plant them every year, as you do vegetables, and they yield a splendid return on the small investment required. Do not fail to set out at least a few this year with the full assurance that your "satisfaction is guaranteed"—by the facts in the case.

What Planting Does for a House

(Continued from page 263)

sort of soil. Fall planting of the tubers will insure blossoms the following summer usually, but the growing plants may be set out in the spring and even small ones will blossom the first year. The two varieties, *Hemerocallis flava* and *H. fulva*, will carry the bloom over a period of from seven to eight weeks, beginning about the first week in June. *Hemerocallis fulva* is not fragrant, however, and for it the variety *Thunbergi* may be substituted. This has not quite so large and showy flowers sometimes as *flava* but it is very like it, only later-flowering. *Hemerocallis flava* is three feet high, *Hemerocallis fulva* and *Thunbergi* from four to five.

Hollyhocks, foxgloves, columbines and Canterbury bells are a few of the standards which come easily from seed. They may be started indoors and transplanted in the spring or sown in the border during the summer to furnish the next summer's bloom. These belong to the great class of perennials which must be set out—if bought from a nursery—in the autumn, in order to secure the next season's bloom. Spring planting unsettles them for that summer and accomplishes nothing in the way of time saving.

Among shade trees the fastest-growing is perhaps the catalpa; and this is, too, one of the most showy, with large trusses of white flowers covering it in July. It is adaptable to almost any soil and its shade is very dense, as the large heart-shaped leaves overlap.

Everyone knows the merits of the poplar as a rapid-growing tree, but unfortunately many affect to despise it. It is true that plantings of poplar alone are not de-

(Continued on page 290)

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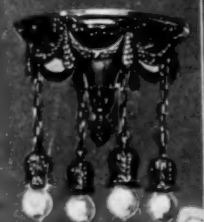
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The designer, being a native of California, has imbibed the spirit of the true bungalow art; not only thru association, but also by actual construction. This art has been applied in adapting the bungalow to the requirements of the northern climates.

The book is bristling with interest and suggestions for the builder of either a suburban cottage or a city residence.

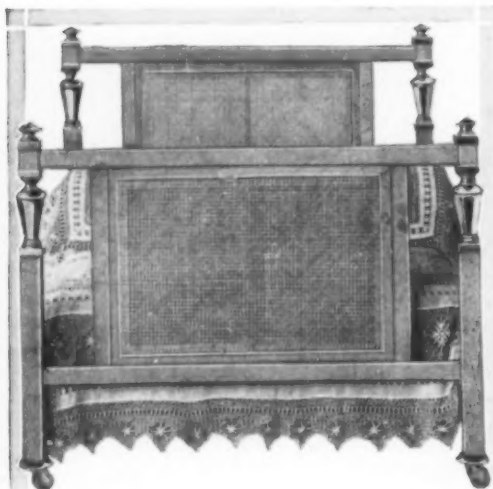
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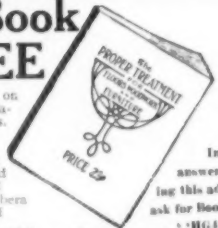


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"The Wood Finishing Authorities"



In answer-
ing this ad,
ask for Book
"H-4"

(Continued from page 290)

nothing. Order plants to be delivered May first. Once set in place they will need no further attention.

With the suggestion that the business man plant a few shrubs for winter cheer—the sumach and the barberry, for instance, I will leave him to his exceedingly light labors and his most abundant rewards.

Effects That May Be Had With Shrubbery This Year

(Continued from page 265)

soil than dry roots into a wet, soggy soil. The soil should be moderately moist, however. When there is delay in setting plants keep them in a cellar with moist earth at the roots. If they have dried very much, it will be helpful to let the roots of roses and such plants soak in tepid water for an hour before planting.

Have the soil rich with leaf mould, well rotted manure or bone-meal not prepared with acid. After the plants are set give them water about the roots.

The soil should be kept loose above the roots of shrubbery until they have become mature plants, at least.

When planting shrubbery near hedges, it is well to protect it from hedge roots by sinking planks in the soil on the hedge side to a depth of two feet.

Applications of soot about the blooming plants have a tendency to deepen the color.

Annuals That Should Be Better Known

(Continued from page 267)

shades, is the best for the garden and, though it comes into flower very quickly, it is well to give the seed a little start of the season. The schizanthus is especially valuable for filmy effects—to lend lightness to the garden.

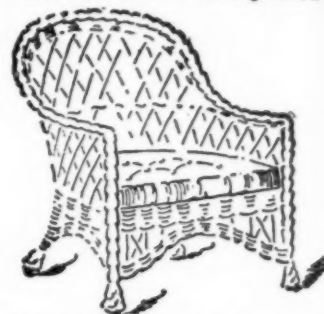
I should be the last one to drive the common morning-glory from the garden, for I shall ever regard it as among the loveliest of all annuals. But there are far greater glories of the dawning day. Most magnificent of all is the *ipomea*, known as the Japanese morning-glory. In Japan it is one of the chief cultivated flowers, being grown a great deal in pots for immense specimen blooms. The superb coloring of the blossoms, as well as the greater luxuriance, makes it vastly superior to the ordinary type. Notably beautiful are the deep blue and solferino varieties with a wide margin of white and the ashes-of-roses shade. The pity is that reliable seed is somewhat a matter of chance; I, myself, have had both the best and the worst of luck. So far as I can see the sole solution of the problem is to keep on trying until you secure a superior strain and then save your own seed from the choicest blooms. Any failures will be lost sight of in ultimate success. A nickel will buy a package of mixed seed, but half a dollar for a collection of nine varieties is a sounder investment.

(Continued on page 294)

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A Rowe Hammock has hung for 8 or 10 summers on a porch within 200 feet of the Atlantic Ocean. Last season a visitor referred to it as "your new hammock." 40 years' experience shows that Rowe's Hammocks give 10 years of continuous out-of-door service. As far as the signs of wear go, you can't tell whether a Rowe Hammock has been used 6 months or 6 years. It is made by sailmakers on the model we supplied for years to the U. S. Navy. It is made from duck that is 60 per cent. to 200 per cent. stronger than that in others, and sewn with thread that is twice as strong. It has sewing and bracing that no other maker has learned the need of. It is handsome, but severely plain—no showiness, just solid merit. Our Khaki is permanent in color, will not soil clothing. A very few first-class stores are licensed to sell our hammocks. If not conveniently situated, you should buy direct from us. Delivery prepaid, ready for hanging.

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When sending your order, please state what time during April you wish us to make shipment.

3 Plants	-	-	-	\$1.50
6 Plants	-	-	-	2.50
12 Plants	-	-	-	4.50

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The many possibilities in grouping Japanese Maples may be appreciated by observing the distinctive result secured by this bed.

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Every one Meehan-grown—not one imported

Where bushy, vigorous Japanese Maples are wanted, with foliage of a richer, more intense scarlet, there are no finer plants than those now growing on our nurseries. This present grand collection has been raised after over thirty years of experience in growing this particular class of stock.

In America we are the leading growers of Japanese Maples, and our stock is in great demand by nurserymen and dealers, as well as among property owners.

All experienced gardeners know the shortcomings of imported plants and how far superior are our freshly-dug, bushy, vigorous specimens. They are accustomed to the climatic conditions of this country, which cannot be said of stock raised in Japan.

This Spring our big collection is in fine condition for moving, and Spring, as you know, is the very best period in which to transplant Japanese Maples.

The largest plants we have are at least twelve years old, and all have been frequently transplanted, pruned and looked after.

Two years ago we sent some to England, and we have a note to the effect that they surpass any there in their rich coloring and general vigor.

Every property, however limited, has room for one, as they occupy little space, and many large properties can make showy displays by grouping them.

Here are the sizes. Place your order at once and we will guarantee you'll be pleased with the plants.

Blood-Red Japanese Maples

1½ to 2 feet—\$1.25 each, 5 for \$5.00, 25 for \$20.00.

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Plant a Japanese Maple Group

Very few people know the decidedly beautiful effects possible in combining various varieties of Japanese Maples in a group.

The crimsons, greens and yellows always harmonize. Set a group out on your lawn and you'll be delighted with the effect.

Here is a fine selection for the purpose:

- 2 Japanese Blood-leaved Maples 2 to 2½ ft.
- 2 Golden-leaved Japanese Maple 1½ to 2 ft.
- 1 Green Polymorphum Maple 3 to 4 ft.
- 2 Red Fern-leaved Japanese Maples 1 to 1½ ft.
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- 1 Ivy-leaved Japanese Maple 2 to 3 ft.

These 8 fine, well-developed specimens, from 1 to 4 feet high, for **\$13.00**

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WAGNER PARK NURSERIES, Box 611, Sidney, Ohio
Florists—Nurserymen—Landscape-Gardeners

(Continued from page 292)

Another generally overlooked morning-glory is the Heavenly Blue (*I. rubra caerulea*), which has clusters of large blossoms of the purest azure. Unfortunately this, too, is apt to leave to chance the matter of coming true. I believe that it is really a variant of *I. rubra caerulea*; in any event, I have found twice there was altogether too much "rubra" mixed up with the "caerulea" to suit me. What has come true, however, has compensated fully for all my disappointments. The Brazilian morning-glory (*I. setosa*) suffers still more from neglect. It is the most luxuriant of all the family, a single plant covering an immense wall or trellis area. The light green foliage is set off by the reddish, hairy stems and the rose blossoms, with throat of a deeper shade, are extremely showy. A fourth morning-glory that is too seldom seen is the dainty little scarlet star ipomœa (*I. coccinea*); not to be confused with the cypress vine, which is *I. Quamoclit*. I gathered my seed by a roadside in the Bahamas, but some of the seedsmen carry it. For the best results it is unwise to plant seed of any of these morning-glories in the open ground; plant under glass one inch apart, and be sure to soak the hard seeds over night in a glass of warm water. Contrary to the usual idea, morning-glories are transplanted very easily.

And dahlias; ever think of them in the light of an annual? They may be treated as such nowadays, because there is plenty of good seed in the market that will produce abundant bloom the first season and at so little expense that the plants may be left to go the way of all annuals in the fall if it is too much trouble to store the tubers. Single dahlias, which are fine for cutting, will come into bloom about the first of July if the seed is sown under glass the middle of April. That is the better course, but seed sown in the open ground in May will give plenty of blossoms in September. Though the double and semi-double dahlias are less dependable, they are worth while if only for the possibility of one striking novelty in a package of seed. I saw some last summer that, with no more care than the average annual, produced beautiful semi-double flowers in only three months from seed. Try one of the good strains at about fifteen cents a package.

Scabiosa, or mourning bride, is a half-forgotten oldtimer that also deserves a place in this list of the slighted. Plant the rose, lavender, white and claret varieties, each by itself, and you will have something quite distinct in the way of garden beauty and one of the most satisfactory annuals for cutting.

Everyone who sees the gorgeous wall-flowers of England's springtime wants to grow them here. They will stand the winter in some places north of Virginia, but the best way around the difficulty is to plant some seed of the "annual" kind—the

(Continued on page 296)

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The Green's direct-to-you Catalogue price of these trees is \$4.36, but others would charge you much more—now for \$3.48.

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This is one-third off our regular catalogue price—and the varieties I note them: Abundance, Barbank, Gueli, Bradshaw, one each; Shropshire Damson, Lombard, York State, Niagara, 2 each. Twelve trees—all largest best stock, and at this special price of \$2.35.

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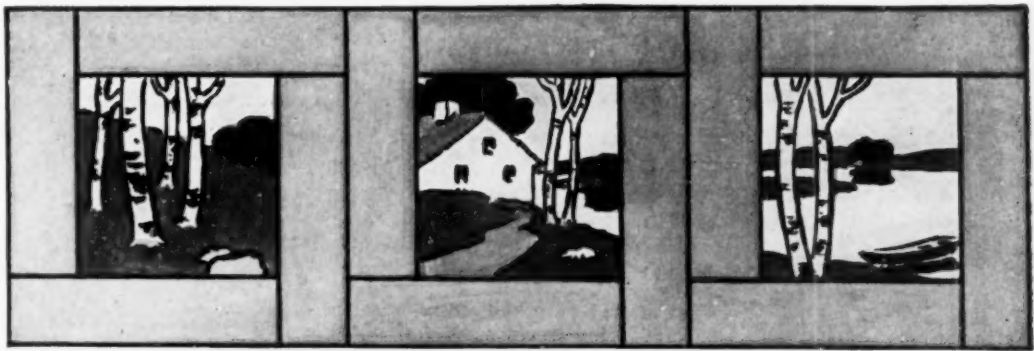
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I wish every reader of HOUSE & GARDEN who is interested in growing hardy plants might have this book, as it makes friends for me everywhere, and I would like to count you among them.

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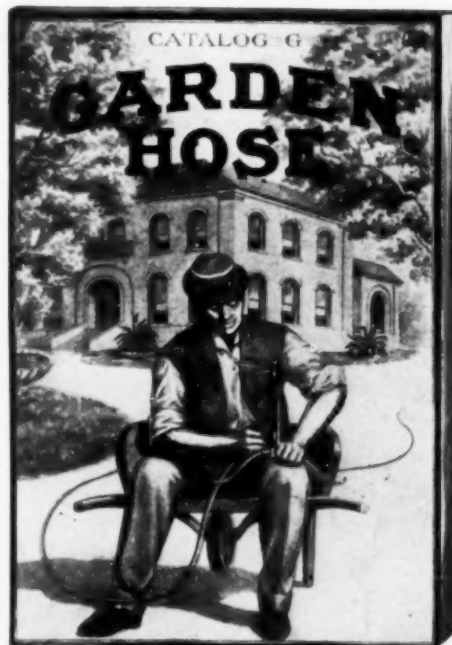
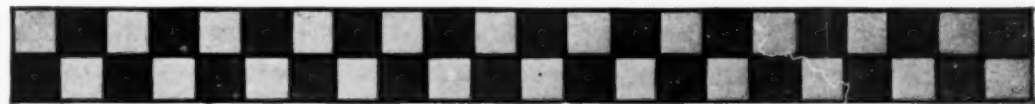
and the walls and floors of the kitchen and laundry.

We have prepared four booklets:

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which we send free to home builders. You would do well to read them before perfecting your plans.

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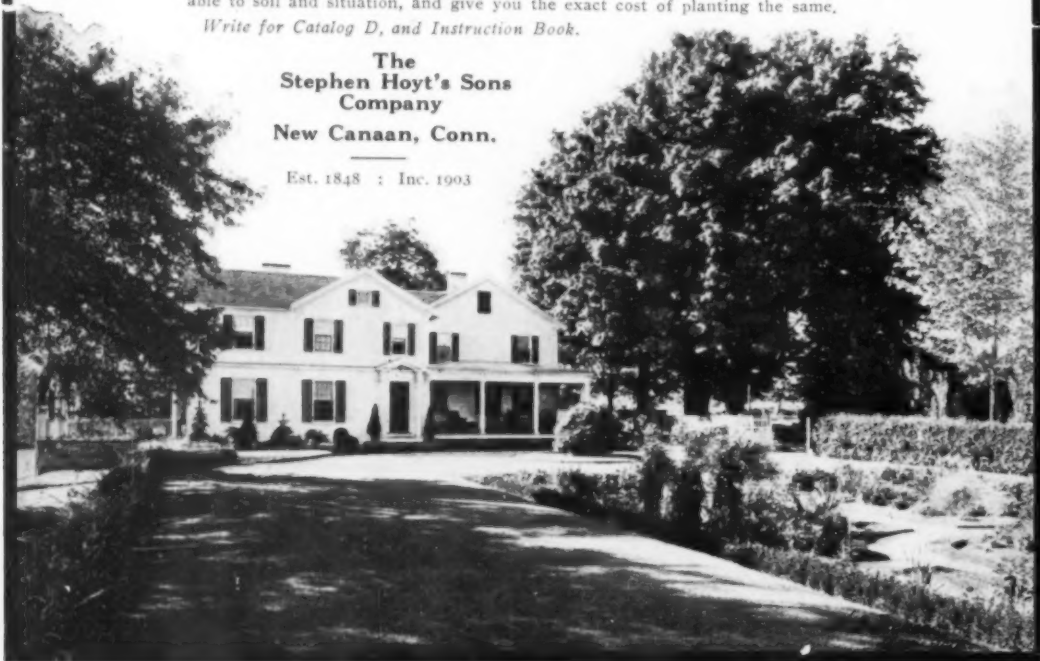
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Shipped in crated sections ready for assembling. Simple instructions are furnished that will enable any one handy with tools to quickly and easily set them up.

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1219 East 24th Street, Indianapolis, Ind.

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(Continued from page 294)

Paris Early—each year. If it is sown under glass in April there will be abundant summer and autumn bloom.

The common zinnia is a very trying individual in the garden excepting in a few really fine shades. Much more amiable is the dwarf Mexican zinnia (*Z. Haageana* fl. pl.), which furnishes such a good note of yellow without taking up much room that it ought to be used widely. I am inclined to think that this zinnia is offered under more than one name. It is distinct, however, from the ordinary dwarf zinnia.

Neither *Thunbergia alata* nor *maurandia* finds its way into the northern garden very often; both are seen less than once was the case. They should be brought out of their neglect, being invaluable for light vines that do not run up above six or eight feet. The *Thunbergia* comes in white and two shades of yellow, and the *maurandia* in white, blue, rose and lavender. In the South they are classed as perennials, but here they may be treated as annuals, sowing the seed under glass. With me the *maurandia* stands a good bit of frost.

These are by no means all of the rarely invited; but they are numerous enough to emphasize the fact that there are a goodly number of easy, as well as beautiful, annuals that, through no fault of their own, are comparatively unfamiliar garden names.

A Fast Growing Vine

WHILE waiting for honeysuckle and wisteria to decide whether they would or they wouldn't, we sowed a few seeds of wild cucumber to produce a covering over an ugly house-angle and a long stretch of siding, and since then have not felt bound to the stereotyped climbers. The vine is known as *Echinocystis lobata*. It is grateful for a helpful netting or a bit of string, but these lacking, the thousands of wiry tendrils will attach themselves alertly to anything clingable, even the most unresponsive splinter. Late in August countless dainty blossoms come; these are like the white lilac, but more feathery, and give forth, especially after sundown, a heavy honied odor. The effect of the vine over a wali or pergola in the moonlight is exquisite.

The seed pods form in September, and are exactly like a round cucumber, whence comes the name. The seeds, ripening in October, will, if allowed to drop, sprout next spring; and the vine will be well toward the eaves by the time the regular April sown seeds are waking up. This can be done by hand, too, and by sowing lightly, and warmly covering seeds any time in the fall while the ground is open, they will send up two large leaves just after the frost goes when it would seem much too early for any green things to be abroad. The wild cucumber has but one fault—and we have given it many tests, using it as a canopy over too sunny chicken and duck

(Continued on page 298)

Opal-Glass-Lined \$31.75 Oak Refrigerator

Freight Prepaid from Factory

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You buy the Wickes Refrigerator direct from the factory, at actual factory prices. You save all the dealers', jobbers' and department store profits. You get the Wickes at the price asked everywhere for ordinary "enameled" refrigerators, for which you have to pay the freight in addition.



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Height, 45 in. Width, 36 in.
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The Wickes New Constructed No. 230

is made of solid oak, to last a lifetime—perfectly joined and beautifully finished. The food compartment and door are lined throughout with OPAL GLASS, 1/16-in. thick. Our exclusive construction gives you double refrigeration from every pound of ice. Opal glass makes the WICKES absolutely sanitary.

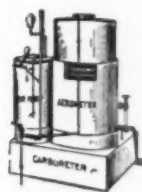
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The reputation of our furniture has been built upon distinctive features, such as, the simple artistic lines of our designs, solid construction, and a variety of custom finishes.

Our cottage furniture is especially adapted for both Shore or Country houses where a simple, harmonious and artistic effect is desired, conforming with the surroundings, and yet not sacrificing one's comfort.

Shipments are carefully crated, insuring safe delivery.

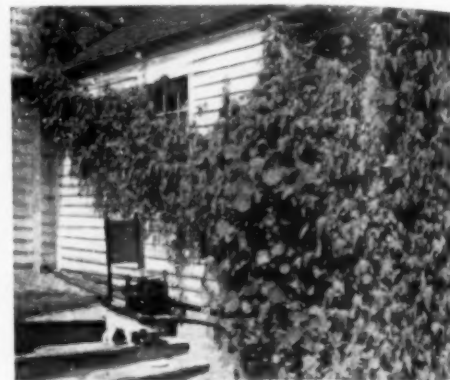
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(Continued from page 296)
runs, or covering old stumps, outbuildings and fences—it will lose its lower leaves exposing straggling stems for three feet above the roots, but to cover this defect we plant well-started climbing nasturtiums in May, which soon form a mass of green, with bright blossoms, near the ground. Another pretty effect results from the sowing of morning glories, which rival the wild cucumber in rapid growth, the bril-



With the assistance of wire netting the cucumber vine climbs rapidly.

liant cup blossoms blending well with the light green foliage of the sturdier and more densely leafed vine.

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Four Months of Strawberries

EVERY one who grows strawberries has regretted the shortness of the season during which this most luscious fruit ripens. Three weeks are about the limit of produce of any ordinary sort, though by planting early and late varieties one can extend it to four weeks. But it looks now as if we would soon be able to extend the season to four months through the introduction of a new type of plant which produces blossoms throughout the summer.

A few years ago a variety of strawberries called the Pan American was introduced to the trade. It was claimed to bear fruit throughout the summer and early autumn. The horticultural public was of course sceptical at first, but here and there a dealer tried it and was delighted to find the claims borne out by the actions of the plant. So the plants were generally offered and other people bought them. Certain seedlings of this Pan American were also introduced, notably two sorts called America and Francis and these also proved productive through a long period.

These strawberries have established their claims so well that fruit growers in Western New York were selling the fruit in the fall of 1910 in considerable quantity. The berries found a ready market at twenty-five cents a quart. Plants of these varieties are now so widely known and disseminated that they can be obtained from many of the larger dealers in fruit trees and vines.

C. M. W.



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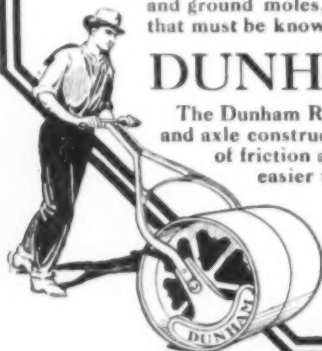
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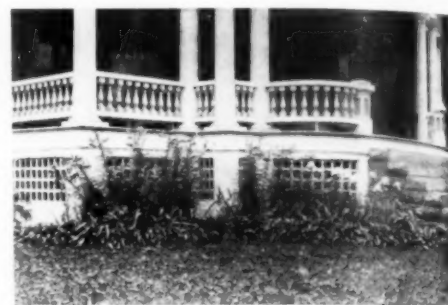
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IT is not always a matter of expense but rather the care required that prevents the planting of flowers. Especially is this true with people of means who spend their summers out of town, at lake or sea shore. They want as little trouble with the hired man as possible. To meet just such a condition the following perennial border was designed. It is located at the base of a large porch, the white woodwork of which forms a background for the flowers. Naturally, only hardy, vigorous growing perennials that could fend with weeds



A border which is attractive and keeps a sequence of bloom through the summer

were selected. The border conforms in a general way to the outlines of the porch, along the edge of the grass there is a dense row of funkias or plaitain lilies, back of which a row of German iris brings the border higher. In one angle of the porch tiger lilies overtop the iris and bring their flowers to a level with the floor of the porch. To the right of these philox takes up the color, and when the lilies are almost gone it carries brilliance far into fall. To the east larkspur hold their blue spikes against the white woodwork, which at the base of the stone steps lobelias have been tried out and found wanting, so gailardias were substituted. At the angle of the porch with the house, a clump of golden glow has been placed.

In this border there has been but one end in view, hardiness and self-maintenance and that has been achieved without any undue color clash and with a fair succession of bloom. The border faces northeast, yet a covering of leaves is all the protection required in winter

C. L. M.

What My Garden Means to Me

(Continued from page 240)

past; it runs:

A weary traveller was passing along and noticed in his path a dry, shriveled leaf. Picking it up he was amazed at the perfume it exhaled. "Oh! thou poor withered leaf, whence comest this exquisite perfume?"

The leaf replied:

"I have lain for a time in the company of a rose."



Lady Hillingdon

A Splendid, New Outdoor Rose

flowering profusely from June until frost. Color is a deep bronze yellow with orange shadings. Won the Silver Cup at Morristown for best new Rose and has secured many other certificates.

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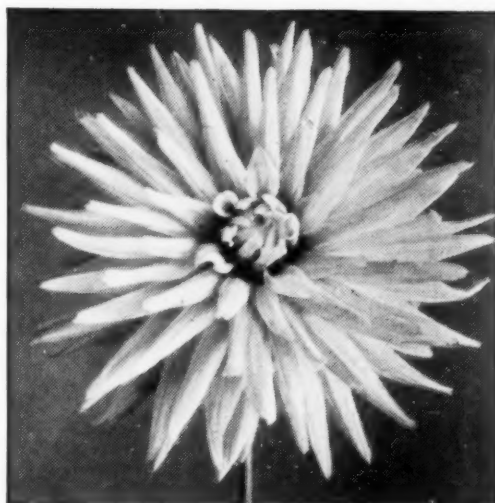
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When the early days of Spring remind you of the planting you had planned to do, but for which you have ordered no plants, let Biltmore Nursery help you. Don't put off the planting until another season—it will be just as much trouble then as now, and you'll have to wait just that much longer for the full beauty of the trees and shrubs.

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for porches and piazzas; exclude the sun; admit the breeze. Virtually make an outdoor room.

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WM. WARNER HARPER, Proprietor

About Sweet Peas

THERE is hardly a man or a woman but thinks he or she is perfectly qualified to grow sweet peas, and should there not be a good showing, they never for a moment attach any blame to themselves, but point to the season, the birds, mice, and all kinds of creeping things, both above and below the soil, as being the cause of the failure; and so failure succeeds failure. As a matter of fact it is not everyone that can grow these lovely flowers.

They do best in a fairly loamy or light soil, and I recommend that not one, but various colors, should be sown at the same time, as the result is distinctively more pleasing to the eye. I am, of course, thinking more of the man who has but a small garden, for in the gardens of professionals and "big men" it is becoming more common to keep the colors distinctive.

At any rate the ground should be in fine tilth before sowing, and a little should be raked off the top, when the seeds may be put in to a depth of an eighth to a quarter of an inch, the soil being again gently spread over the top, and the whole patted down, though not too hard. Another thing to remember is not to plant sweet peas in the same ground more than two years in succession. It may be done oftener, but it is not good practice, and disappointment has been experienced from such experiments. Moreover, if there are any insect pests in the ground, they will make havoc with the rootlets, and even the tops of the peas as they show out of the ground.

Sweet peas may be sown as soon as the ground can be worked up fine enough, and continue sowing till middle of May.

Where there are sparrows, it is well before the sprouting above the ground, to place some strands of cotton from one end to the other of the rows of seeds. Black cotton is preferable to white, as the sparrows seem to fear it more. It is also well to put the pea sticks or other arrangements which may be adopted for training the plants, up in time; and if a reasonable amount of water is supplied in a dry season, there should be a good amount of bloom, provided good seed has been obtained, and the soil kept loose on top.

W. R. G.

CROSS FERTILIZATION

THIS is an extremely interesting phase of the cultivation of this lovely flower and one whereby the grower may by care and perseverance produce something new. To those who have not looked into the structure of the pea flower, it is a little puzzling at first, as they are self-fertilized before they expand. However, we must select the flowers we are to operate upon as soon as they show their color in the bud, cut away the sepals and petals and remove the stamens; this will ensure their not being fertilized with their own pollen; then gather from the variety which we wish to cross with, some good dry pollen, carry this on a camel's hair brush

(Continued on page 304)



An Indispensable Book
for every Garden-Maker
The Garden Primer

By GRACE TABOR AND GARDNER TEALL

The Garden Primer, as its title indicates, is a hand-book of practical gardening information for the beginner, covering every branch of the subject, from preparing the soil to the gathering of the fruit and flowers. In it is set forth, without any confusing technicalities, just the information that will enable the amateur to grasp quickly the essentials of garden-making. The authors, in preparing this book, have drawn from their long experience, and in writing it assume on the part of the reader no knowledge of the subject, in order that it may be of the greatest value to the beginner. There has been great need of a book of this kind, yet, so far as we know, no volume has ever been published that treats the subject in this charmingly simple way. While dealing with first principles this volume has an equal interest for the advanced gardener, who will find much of value in the experiences of the authors, and in a fresh presentation of a subject which always abounds in new methods and discoveries.

Every branch of gardening is treated in a delightfully practical way—the growing of vegetables and flowers, the use of fertilizers, pruning, cultivating, spraying and the thousand-and-one things that every successful garden-maker needs to know. A profusion of illustrations, many of them of the most practical sort in explaining the various garden operations, make the text especially clear.

The matter is supplemented by carefully prepared planting tables, an invaluable guide to the beginner in gardening.

The Garden Primer is a beautiful 12mo volume with many half-tone illustrations. Bound in dark green cloth, tastefully decorated. \$1. net; postage 6c.

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The pictures and plans in which the book abounds are of the various types of bungalows—those adapted for all-the-year-around occupancy, for summer homes, mountain camps, and the seashore. The many superb pictures forming the illustrative features are of bungalows that have actually been built, and are the work of leading architects in various parts of the country. They have been carefully selected, so as to prove of the greatest value to the prospective builder of this fascinating type of moderate-priced house.

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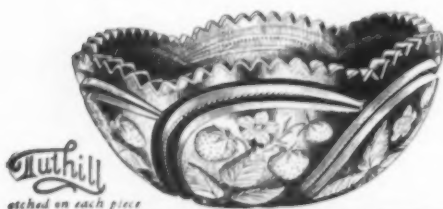
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Tuthill Cut Glass

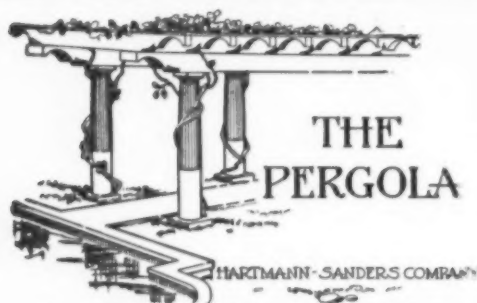
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Strokum is a finely shredded preparation incorporated with a vegetable extract harmful to the caterpillars but absolutely harmless to the trees. Strokum fills in the chinks of bark so caterpillars can't crawl under it. They won't crawl over it.

(Continued from page 302)

and brush lightly over the stigma, reverse the crosses and carefully mark and label each cross. After the seed has formed, and the outside of the pod has turned yellow, gather them and spread out in some dry airy place to ripen; and when they are real hard, store in a cool place till sowing time. Do not get discouraged if you do not get something wonderful at first; the general tendency will be retrograde, but watch keenly for some mark of distinctiveness, either in color, form or time of flowering. Having gained the desired point of improvement proceed to try to fix it by destroying for several years all those that do not come up to standard.

SWEET PEA POINTERS

The best time for picking is the early morning.

The worst time for picking is in the full sunshine.

Deep cultivated soil is one of the foundation stones of success.

Early sowing is another.

Keeping all the flowers picked and not letting seeds form is essential.

Don't grow too many, but grow them well.

Don't be afraid of a little shade; they are better for it in our hottest weather. If you want to exhibit Henry Eckford and some others at their best you must shade.

E. J.

The New York Suburbs Supplement.

(Continued from page 315)

New Rochelle, which is the first city north of the New York City Line in Westchester County, is to a large extent composed of residential parks, there being about thirty-five such communities within the city limits, all of them of a high class. New Rochelle is, strictly speaking, a residential and suburban city, and a very large percentage of its residents are in business in New York City.

At Larchmont there is an attractive little business center a few blocks east of the station, and the center of population is still further east, in what is known as Larchmont Manor, an old substantial development of very high class which lies directly on the shore. For a considerable distance along the waterfront a beautiful strip of country has been preserved as a park. Within the Manor there is what is called Horse Shoe Harbor, a small bay within which is an excellent beach, and here the residents have built a club-house for their own use.

Mamaroneck is one of the old villages, its business section being far more widely scattered. The type of development surrounding Mamaroneck is more in the shape of large estates, although there are a few small developments of lots and plots. Some of them near the water, others some two or three miles inland.

Immediately surrounding what is now called Rye Beach Park on the waterfront

(Continued on page 306)

Is it here

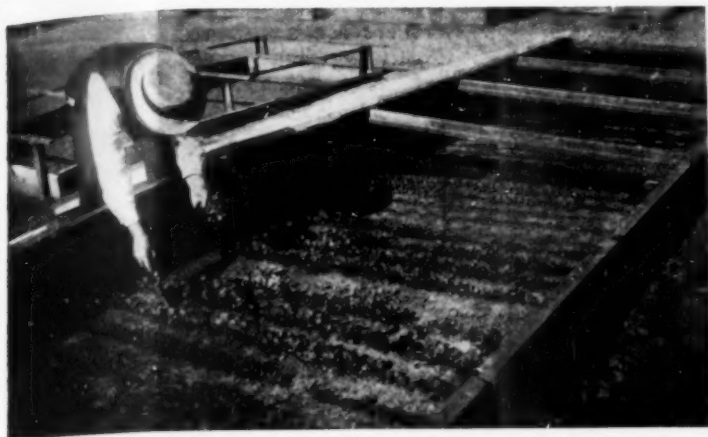


THAT information you've been looking for in regard to some particular phase of building? Probably it has appeared in **HOUSE & GARDEN**—try this index. Copies of these back issues will be mailed at 25 cents each, or if you need six, send us a dollar, and they will be sent at once.

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Decoration, Plaster Casts—Dec., '10	Porch, Sleeping—Jan., '10
English Country Houses—Jan., '11	Porch Pillows—July, '10
Entrances, Doorway—Jan., '10	Remodeling—Nov., '09; Feb., '10; Mar., '10; Apr., '10; May, '10; July, '10; Nov., '10; Dec., '10
Entrances, Garden—Mar., '10	Remodeling Farmhouses—June, '10
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Extras—Mar., '10	Roof—Jan., '10
Farmhouse, Reclaiming the—June, '10; July, '10; Dec., '10	Rugs—July, Oct., '09
Fireplaces—Jan., '10	Rugs, Domestic—Oct., '10
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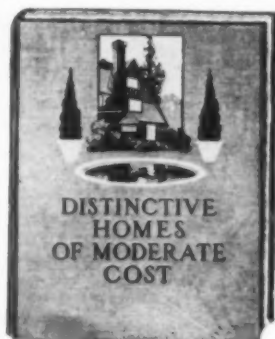
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(Continued from page 304)
there are a few restricted developments offering bungalow sites and building plots of a very unique character. Rye Beach is connected with Mamaroneck, New Rochelle and Sea Cliff, Long Island, by ferryboat. Milton Point, which lies south of the village of Rye, is famous for its beautiful residences, which are to a large extent occupied by some of the older and better known families of Westchester County. At the extreme point is the American Yacht Club.

Port Chester is to a considerable extent a manufacturing village, and the business section has a very bustling and thriving appearance. The surrounding country is more rugged and far more rolling naturally than that of the more southerly coast country, offering a greater variety of home sites. There are very few developments near Port Chester, the country being largely taken up by large estates.

It would be difficult to find a more attractive or more convenient suburban section than this Sound Shore Section of Westchester County. The transportation is most excellent, and as the New Haven trains make no stops between Mt. Vernon and 125th Street, all of the trains are fast.

New Jersey, too, offers the shore-loving citizen attractive house sites. Her coast resorts are especially well known to New Yorkers, but more as a place to spend the vacation period than as a possibility for commuters. However, if we take a maximum of one hour and a half as the limit of distance by train that one can commute comfortably, there are a number of places that can be reached. Probably the nearest of places within the suburban limits that one can find abundant opportunity for salt-water bathing, sailing, fishing and motor-boating to his heart's content, is Greenville, N. J., 4.2 miles from New York on the line of the New Jersey Central, and Bayonne, a mile further. Greenville is really a part of the municipality of Jersey City. It is less than half an hour from the business district of New York.

Bayonne derives its name from the fact that it is situated on a peninsula that separates Newark and New York bays. There is already a large suburban community in each place and many fine residences have been built. However, for the man of moderate means the rents are not much more than half those in the metropolitan district. Houses rent from fifteen to fifty dollars per month, and sell from \$2,000 upward, and building sites cost from ten to fifty dollars a front foot.

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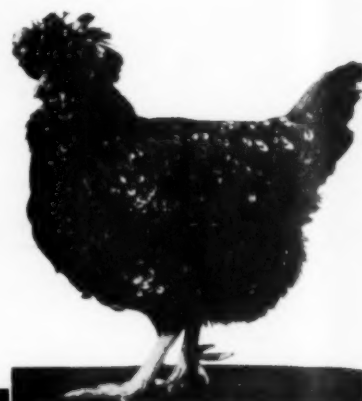
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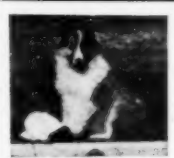
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The New York Suburbs Supplement

THE VARIETY OF SECTIONS—WHAT THE COMMUTER MAY FIND NEAR NEW YORK—
THE CHOICE BETWEEN HOMES ON THE PLAIN, IN THE HILLS OR AT THE SALT WATER

WITHIN the last few years the call of the country has drawn thousands from the confinement of city life, many to emigrate to the wide lands of the open country, many to the smaller farms of New York and New England, but the majority to the outlying districts of the big cities. Although this movement—for it is of sufficient strength and concerted action to be so termed—is characteristic of the whole country, it is very noticeable in New York, and New York may well be used as the illustration of this renaissance of desire for a more wholesome and more rational mode of life.

The desire to own a real house, so strong in all men, is certainly increased as the home life decreases. The phenomenal growth of apartments and apartment hotels may satisfy those who are weary of domestic duties, but there comes a time when the old independence feeling is again aroused, and the country is then turned to as the logical place to afford relief. The ties of business in the city limit the choice of most, but only in a degree, for under the present development of the suburban railroad service there is a great variety for the New Yorker to choose from.

Granted the wish for a country dwelling, the next thought is where, and like the good fairy in the tales, the adjacent lands stands ready to please any preference. If the prospective emigrant seeks the sea-

shore or the sound, the mountains or hills, the rivers or lakes, the level country, or even combinations of these features, he has but to name his wish, and near at hand he may find its gratification.

With so much to choose from let us make three arbitrary divisions of level, mountainous and shore country, and briefly sketch what may be had within commuting distance of Greater New York, first considering those sections whose features are neither rocky or high enough to be termed mountainous, or which do not border upon the seashore. Northern New Jersey offers us land of this character in the stretch from Jersey City to Somerville.

Along the Central Railroad of New Jersey, but fifteen miles from New York, is the picturesque town of Roselle. The broad, well-shaded streets give one the impression of neat New Eng-

land. Here the homes are unpretentious, but attractive, and all well kept. The public service conveniences are of the best, as is the case with all the towns in this section. Another attractive place is Aldene, just beyond which lies Cranford. The natural beauty of Cranford is still further enhanced by the Rahway River, which runs through the main part of the residential section. There are many very beautiful and artistic houses, whose inhabitants enjoy the pleasures of boating and canoeing, and golf on the Cranford links. The schools along this line are all of modern construction, and



The broad streets of Roselle, with their arching elms are reminiscent of New England



An interesting type of half-timber house in Cranford. Hollingsworth & Bragdon, architects.



One of New Jersey's historic roads. The Rumson Road dates from Revolutionary times

provide capable instructors. A mile further on comes Garwood, smaller in size and less pretentious, beyond which is Westfield. Here the land values are somewhat higher, and most of the homes constructed by their occupants. This suburb boasts of five large public schools besides several private kindergartens. Near by is the beautiful Echo Lake, which supplements the Westfield Country Club in giving opportunities for outdoor exercise. Beyond, the smaller towns of Fanwood and Scotch Plains act as the more modest suburbs of Plainfield, until Netherwood is reached. This is entirely a residential offshoot of Plainfield, and contains many beautiful residences. A few miles beyond Plainfield is rapidly-growing Dunellen, where a fine new sewage system is being installed. The Watchung Mountains come nearer to the towns here and give more diversified scenery. About 31 miles from New York is Bound Brook. Here one finds more of a business section and less reliance upon the city than is the case with the afore-mentioned places. There are many interesting homes here, some of them of Revolutionary origin, for Bound Brook can boast of an early foundation and long history. Scenery at this point begins to approach the characteristics of the mountain sections, and from the Watchung Mountains, back of the town, there is a fine view to be had over the surrounding country. The hamlet of Finderne lies between Somerville and Bound Brook. Somerville is the county seat of Somerset County, and has a thriving business section, besides streets of attractive residences. A feature of note is the Duke

estate, lying just beyond, which is kept open as a park for visitors.

Turning from this section, one finds somewhat similar features along the train line of the Erie, which to Suffern (32 miles from New York) traverses a farming country where there are many opportunities for the commuter to purchase acreage tracts, and either to remodel an old farm house to suit his needs or to build a new house.

Along this line the commuting traffic is very great, and the principal commuting centres are Rutherford, Carlton Hill, Passaic, Paterson, Hawthorne, Ferndale, Glen Rock, Ridgewood, Hohokus, Waldick, Allendale, Ramsey and Mawah. While nearly all of these places are cities or large towns, there is a large territory contiguous to them which still offers splendid opportunities for the commuter who wants a garden, to purchase or rent a home very reasonably. There is much beautiful scenery, and the land has advantages of being by brook and stream, or shaded by woods.

C. H. MILLER

The House in the Hills

IF the level plain and well-tended rolling lands stretch uninteresting before you, and the neat lawn and regularly set trees are a bore, perhaps the informality of the mountains will please you. In them you can hide your bungalow within some glen or perch high on some mountain summit to overlook all the land. Perhaps you think that such wishes can never be gratified near



At Bound Brook the scenery takes on the characteristics of the mountain sections. Chimney Rock Falls in the Watchung hills



Echo Lake, near Westfield, gives opportunity for water sports, unusual in inland sections near the city



The English rivers present no more beautiful panorama than the Raritan River and Canal, near Somerville

New York, and your longed-for mountain or hilltop home must wait until such time as you are independently wealthy. I can show you that your ideal landscape lies just beyond the city's doorsill, either in New Jersey, in Westchester County, New York, or along either bank of the Hudson.

Take Westchester, for instance. The lower part of the county is divided almost exactly in half by the Bronx River, which runs past Mount Vernon, Bronxville, Scarsdale and White Plains. On either side of this river there are high hills, offering most attractive building sites. Probably Bronxville and Scarsdale represent the highest type of small acreage or large plot developments to be found anywhere in the suburban section.

At Bronxville, we find Lawrence Park, which was put on the market several years ago, and has experienced a steady growth because of the high class of people who have made it their residence. A large number of New Yorkers make the Hotel Gramatan here their summer home. The surroundings of the Bronxville station are particularly attractive, in as much as nearly all of the buildings have been erected under the supervision of the same interests that promoted Lawrence Park. The houses are all of good architecture and evidence a distinctiveness and good taste. There are other attractive developments through the surrounding country which are experiencing an excellent and healthy growth. Valuations range from \$400 upward in the smaller developments, for lots 25 x 100, while acreage will average from \$2,500 to \$5,000. Acreage in the more desirable section will bring \$10,000, depending largely upon the natural advantages and distance from the station, and where all of the public utilities have been installed. One-quarter acre plots in "Lawrence Park West" sell for \$4,000.

At Scarsdale the station is surrounded by a park of several acres, which was donated by one of the



From the mountain top at Oakland, N. J. This suburbanite overlooks a whole countryside

Plains is the county seat and the business centre of Westchester County and has many features of great interest.

Nearly three-quarters of Westchester County lies north of White Plains, and with the exception of the villages along the Hudson River there are very few large communities. At Pleasantville, Mt. Kisco and Katonah, on the Harlem Division, we find three extremely attractive and thriving villages, and surrounding these, for many miles, there are a large number of beautiful estates and farms owned by New York City business men, who are daily commuters. Of less mountainous characteristics is the section along the Hudson. The land is hilly, however, and much of it is high above the river. From Yonkers to Peekskill, the eastern bank of the Hudson River runs nearly north and south, and the country is of almost the same character throughout its distance.

Yonkers is a large manufacturing centre, having a population of some 80,000 people. In the outskirts of the city there are some very high-



A typical mountain home among the cedars for which Caldwell, N. J., is famous



A stucco house on Park Street, Montclair, showing a strong English inspiration



The broad lawns at Essex Falls make a fit setting for such homes as these

class residential sections, such as Park Hill and South Yonkers. The banks of the river are very precipitous, being one continuous range of hills reaching an altitude on an average of 450 feet at a distance of something less than a mile from the water. The crests of these ridges are largely taken up by great estates of wealthy New York people, among them being Samuel Untermyer, John D. Rockefeller, William Rockefeller, Miss Helen Gould, Edwin Gould and other large property owners. At Hastings-on-Hudson, Dobbs Ferry, Irvington, Tarrytown, Ossining and Peekskill there are villages of very much the same type, varying only in population. They all lie close to the river, and are built on precipitous banks, each street lying far above the one next to it, giving each of these villages an attractive and unique appearance from the river. There are a number of developments along this country offering magnificent building sites, with splendid views of the river and at reasonable prices. Conspicuous among these is River View Manor, at Hastings, where there is an extremely high-class community of about one hundred homes, where all of the public utilities have been installed. Here lots may be bought from about \$500 upward, depending on natural attractiveness.

There is a magnificent driveway running along the crest of the first ridge above the river, known as Broadway, which for years has been the most popular thoroughfare between New York and Albany. A large percentage of wealthy people who make their home in this section travel backward and forward to the city by automobile rather than by the trains.

In contrast to the large towns on the east bank of the Hudson the west bank has settlements which for the most part rely almost entirely on New York for business, and are limited chiefly to home sites. Some



A distinctive house in the Scarsdale estates, which shows another type of the popular gambrel roof



A good example of the Southern Colonial architecture in Summit

of these towns are in New York, while others are on the Jersey side of the boundary. The Northern Railroad of New Jersey parallels the Hudson River as far as Nyack, 29 miles from New York. The best trains to Nyack take but little over an hour, and the country traversed is the top of the Palisades. All along this road there are rapidly-growing suburban towns with real country right up to their boundaries — Homestead, Babbitt, Fairview, Ridgefield, Morsemere, Palisades Park, Leonia, Nordoff, Englewood, Highwood, Tenafly, Cresskill, Demarest and Norwood are good examples. The Hudson River is near at hand and gives an excellent opportunity for motor boating and canoeing.

Farther inland in New Jersey there are various hill sections to appeal to the lovers of this type of scenery. Along the line of the Lackawanna, in Morris, Passaic and Somerset Counties, the prospective home-owner who wants real country and elevation, and who still desires to be within the commuting zone of New York with a maximum of an hour and fifteen minutes' travel, and not over thirty-five or forty miles distance will find his greatest opportunity. This road has two distinct lines running from Hoboken, with connection with New York by three ferries and by the Hudson and Manhattan tubes. The main line goes into Paterson and Boonton, and the Morris and Essex Division via Newark, the Oranges and Morristown. The junction is at Denville, which is in the heart of the mountain, lake and river section. At Summit the Passaic and Delaware branch runs to Gillette, Stirling, Millington, Lyons, Basking Ridge and Bernardsville. This last-mentioned place has a colony of millionaires, and its property values have therefore increased to a point that places it out of the reach of people of ordinary means. But at any of the above-mentioned stations between Summit and Bernardsville, there are splendid



At Nyack, stone construction covered with vines seems most appropriate to the location.



Hillside Avenue, Glenridge, is justly noted for its beautiful shade trees and well kept homes



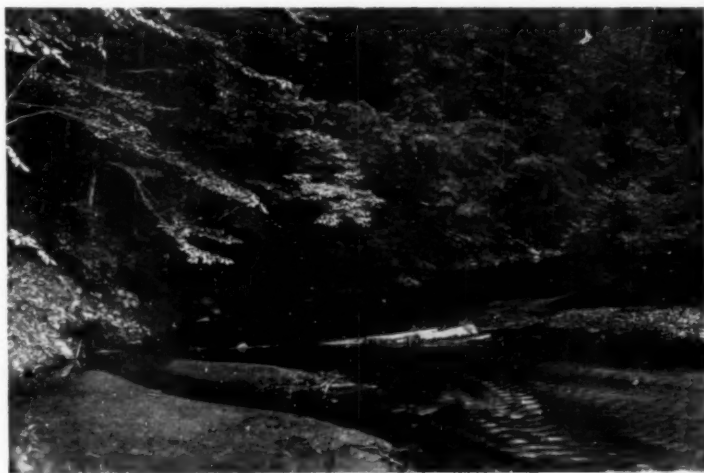
The great pleasure of a home in the hills is the wide stretch of open country that lies before one



G. B. Schley's house in Fox Hills seems to have just the right lines for a mountain home

opportunities to secure acreage tracts, farms, old houses, and so on. The country is rolling and well watered. The principal stream is the Passaic River. On the main line, the Lackawanna and the Erie run practically parallel as far as Paterson, and very little opportunity is offered up to this point for the commuting homeseeker of the type we have in mind. Beyond Paterson, however, very little development has been done, and the country is mountainous and extremely picturesque. Some of the mountains attain an elevation of 1,200 feet above sea level. Here is a virgin country that in a very few years will be taken up and settled.

It offers at present a wonderful opportunity for the homeseeker who wishes to answer the call "back to the land," but who is not unmindful of the fact that a good position in bank, counting-house or office in New York is far more lucrative than an attempt at farming. In other words, this section is almost ideal for the man who wants to live in the country and still do business in New York. A bungalow community has recently been started at Towaco, and the preliminary steps which ultimately will be land booms, have begun at other stations along this line, notably at Little Falls and Mountain View, but it still may be regarded as



Such nooks as this one in the Scarsdale estates can only be enjoyed by the man who chooses a mountain site

offering exceptional opportunities for the homeseeker.

Caldwell and Essex Falls, on the Erie, offer well developed sections to the suburbanite who is partial to mountain country. Caldwell is high up, overlooking the surrounding country, and is noted for its fine climate. Many attractive homes have been built here lately, and the picturesque streets and well-wooded hillsides present many beautiful home sites.

The country is thickly settled, and practically one continuous city all through the Oranges, and as far as Short Hills. This latter place is a model suburban community in a way, but it has

been settled for a great many years, and the values of its realty is high. Between Short Hills and Summit, a community is being developed, but the first real opportunity to secure a home in the country, as distinguished from the suburbs, and still within easy reach of the railroad station, will not be found until after Chatham, Madison, Convent and Morristown are passed.

Summit is but 20 miles from New York, and besides the many pretentious homes of the wealthy class, has opportunities for the less imposing dwelling. There is a metropolitan aspect to this town in its well regulated public works, sewage system, police de-



Mr. Lehman's house at Elberon is characteristic of the seashore homes on the Jersey coast



A home at River Edge, in sharp contrast, represents a moderate cost house well fitted for a dwelling in the hills

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The Sound harbors have many inlets which make ideal spots for a shore home



The Sound is not always a mill pond. Sometimes the coast at Rye is picturesque with breakers

partment, etc. Montclair, of course, is of a similar type, and has almost every grade of home from the cottage to the mansion.

Beyond Morris Plains there are many splendid opportunities. This is in the very heart of the mountain and lake section—the first real country out of New York that is still primitive. With Denville as a centre, mountain ranges, rivers and lakes radiate in every direction. The interesting colony of Mount Tabor, originally started as a camp-meeting ground, like Ocean Grove, but now a prosperous summer colony for New York business men, is in this territory. The houses at Mount Tabor, however, are built in a thick woods and on very small lots, and practically no opportunity is offered for the man who wants a garden and a few hens, although he does have altitude, congenial neighbors, a golf course and some other compensating things.

H. E. ANGELL

Salt Water Homes

To some, no place is deservedly a real home unless it is near enough to the salt water to hear the roar of the breakers, or to



Some are not satisfied to build unless they can overlook the real ocean, as along the Jersey Coast

provide sailing and bathing opportunities. Along the Sound shore, besides the city of New Rochelle, we find the villages of Larchmont, Mamaroneck, Rye and Port Chester, each of these offering high-class accommodations in the way of shops and stores. All of the villages are on the lines of the New York, New Haven & Hartford Railroad, which runs parallel with the coast at a distance varying from one-quarter of a mile to two miles from the shore, so that there is a strip of shore front property east of the railroad which is rapidly being taken up by builders of homes of the better class. In acreage tracts it would

be difficult to find anything truly desirable for less than \$3,500 to \$4,000; much of it is valued at \$10,000, while lots of the usually city size, 25 x 100, or about that size, will vary from \$500 to \$1,000 apiece, according to their proximity to the water. Valuations also increase as the distance from New York City decreases.

In a general way, the same sort of country prevails along the Sound shore in Connecticut. Greenwich and the Norwalks offer particularly advantageous home sites along the coast indentations, with a wide enough range of prices to suit any pocketbook.

(Continued on page 304)



Larchmont Manor has much to offer the home seekers in the attractive house of moderate size



The Sound shore is dotted with yacht clubs, where the suburbanite may indulge his love of sailing



ALLURING AND PICTURESQUE WESTCHESTER COUNTY

That the population of New York City will very soon reach five millions, with a relatively large growth in the population of Westchester County during the same period, there can be no question. The continually increasing congestion of the residence districts of the great city must naturally prove a tremendous incentive to the most desirable class of people to seek and take advantage of the wonderful opportunities afforded home-seekers by the development of satisfactory transportation facilities between the business and manufacturing districts of the city and the attractive suburban territory in Westchester County.

With the opening of the New York, Westchester & Boston Railway in the near future, the home-seeker who desires to dwell amid healthful and attractive surroundings, will no longer be restricted to the old-fashioned commuter opportunities and facilities afforded by steam railroads, to which commuter business is necessarily a secondary consideration. They will be enabled to reach distant points in a short time and at frequent intervals, as the trains will be operated on short headway and in direct connection with all of the subways at present existing and yet to be built, as well as with the several elevated lines, and will give both express and local service with an up-to-date transfer system between its express and local trains, affording its patrons the necessary accommodations to enable them to reach any destination desired in the shortest possible space of time.

Large sections of the most picturesque and desirable parts of Westchester County are being brought within quick commuting distance by the building of this road, and the management of the road, through its Bureau of Information and Department of Real Estate, is working in harmony with the real estate interests along its line and offering every possible encouragement for the building of homes and the development of the territory traversed by it. The road itself is the finest example of up-to-date railroad engineering and construction in the United States. Its roadway and structures are of the highest type. Its stations are artistic in appearance, marvels of convenience in arrangement, and hygienic in construction. The road will be equipped with the latest type of steel cars, so arranged that the smallest possible amount of time will be consumed in receiving and discharging passengers. Everything in connection with the building and equipping of this high-class rapid transit line is being done with an eye single to the safety and comfort of its patrons and to the end that the service given them will be in every way satisfactory and the best attainable by human ingenuity in the evolution of the problems of transportation.

Fortune and happiness wait on opportunity. For the opportunity consult the Bureau of Information of the New York, Westchester and Boston Railway, 65 Beaver Street, New York.

WAMPAGE SHORES

Actual Water Front

Sands Point, Long Island

Residential Plots

$\frac{1}{4}$ acre up

Clean White
Sand Beach

Deep Clear Water



A mile of water front — Manhasset Bay, Sands Point. Opposite Great Neck. Railroad station — Port Washington.

Ready This Spring

No other high class property on the market offers the buyer actual frontage on the water, there is always a road or reservation in front of the plots.

If you are looking for the most beautifully located, highest type, carefully restricted, developed property for your home, let us tell you all about **WAMPAGE SHORES**. Every essential feature of modern improvement.

S. OSGOOD PELL & CO.

542 FIFTH AVENUE, NEW YORK
TELEPHONE: 5610 BRYANT

No. 1.



Adjoining Greenwich Field Club

No. 2. This most attractive property, containing two and one-half acres of land, well laid out in lawn, trees and shrubbery, tennis court, garden. House contains well arranged living floor, and especially good domestic offices; six masters' bedrooms and three baths; four servants' bedrooms and bath. Also good sized stable-garage, with complete living apartment. Our revised list for 1911 of properties for sale and rent is most complete. Send your requirements and consult

Franklin Edson, Raymond B. Thompson Co.
Smith Building - Greenwich, Conn.
Telephone 729

Near the Greenwich Country Club

No. 1. Colonial dwelling commanding beautiful scenery in all directions, two miles from Greenwich railway station. Contains ten bedrooms and four baths; hot water heating apparatus; electric light. Also good sized stable-garage with complete living apartment. Grounds consist of five and one-half acres, two of which are well wooded, a pretty brook, formal gardens and lawns. Can be purchased at a very reasonable figure—immediate occupancy. Our revised list for 1911 of properties for sale and rent is most complete. Send your requirements and consult

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No. 2





Here is the house as it stands to-day—substantially built and well adapted for remodeling



A suggestion indicating a possible solution of the transformation problem

Walnut Grove Farm—An Opportunity in Remodeling

A FARM OF THIRTY-FIVE ACRES, WITH A SUBSTANTIALLY BUILT HOUSE AND STABLE THAT COULD READILY BE DEVELOPED INTO A MODERN COUNTRY HOME OF CHARACTER

IN Stamford township, just two miles from the town of that name, there is a farm of thirty-five acres that is going to make a country home of real distinction for the man who first appreciates its possibilities.

Stamford, as everybody knows, is one of the most attractive places within reach of New York. Situated on the north shore of Long Island Sound, it has the advantages of a beautiful harbor, well organized yacht clubs and the refreshing breezes from the salt water. Fine schools and churches, and electric express service to New York over the New Haven Road—covering the thirty-five miles in fifty minutes—are but a few of its more obvious points of attraction for the man who wants to keep in touch with New York City without the necessity for living day and night in its crowded thoroughfares.

Walnut Grove Farm is particularly fortunate in its natural advantages. The grounds are planted with stately shade trees, hardy flowers and shrubs, and an orchard of more than a hundred and fifty fruit trees—in addition, of course, to the beautiful stretches of fer-

tile meadow land that would gladden the heart of any man that feels the call of the soil surging in his veins. Just imagine the fun of transforming the little lake that is pictured below into a splendid feature of your country home—the naturalizing of colonies of Japanese iris, moisture-loving lilies, and scores of the wild reeds, marsh grasses and such things around the water's edge. Do not such creative activities as this form one of the most fascinating sides of life in the country?

The house itself is a well built structure containing fifteen rooms and ample service quarters, electric lights, heating equipment, and is within the Stamford telephone zone. There is a smaller cottage on the place that offers possibilities as a servants' lodge, also a seven-stall barn. One of the illustrations above merely suggests the possibilities for remodeling the main structure.

Write Mr. Frank B. Gurley, 56 Park Row, Stamford, Conn., for any further information regarding this splendid possibility—the whole property is for sale on reasonable terms.



Here is a good seven-stall barn that could be turned into a garage



Just imagine the possibilities of developing this spring-fed lake—naturalizing lilies, iris and other moisture-loving plants around its edge



BOUND BROOK THE PLACE TO DWELL

WE have for sale in this vicinity a number of desirable farms, gentlemen's country estates, high class suburban homes and other properties. Many of these are along the beautiful Raritan River, or in the Watchung Mountains and its foothills. Bound Brook offers the home seeker ideal express commutation, the best boating, fishing, beautiful drives and walks, well equipped country club and numerous other advantages. Permit us to send you our illustrated booklet (Bound Brook, the Place to Dwell) and additional information concerning its advantages.

CENTRAL NEW JERSEY REALTY CO.
409 MAIN ST., BOUND BROOK, N. J.



This property, at Bound Brook, 10 minutes' walk from station, 55 minutes from New York and 1 hour from Philadelphia, for sale. Grounds 100 x 165 feet. Beautiful trees, fine lawn, etc. House, 10 rooms and bath, all modern improvements. Lower floors and stairway hard wood finish. Three open fire-places. Barn is two stories. On same general lines as house, has box stall for horse and room for carriage and automobile. Price, \$8,500. For details, apply or call.

ROOM 4, 52-54 NEW ST., NEW YORK CITY.



FOR SALE

This attractive home on the best block in Bound Brook, N. J.

Surrounded by first class improvements. Three-story frame house, 12 large rooms, 2 baths, hard wood floors and electric lights; 2 story carriage house suitable for garage. Lot 110 ft. on Union Ave., running through the block about 390 ft. to Maple Ave. Beautiful shade and an abundance of fruit.

Price \$12,500

WM. H. WHITING & CO.
41 PARK ROW
NEW YORK

Bound Brook, N. J.

A pretty little home in one of New Jersey's most attractive suburbs. Two and one-half story stucco house, lot, 58 x 160, surrounded by beautiful private hedge; summerhouse in rear; first floor:—hall, parlor, dining room, butler's pantry, kitchen; second floor:—2 bedrooms, bath, den and sewing room; third floor:—1 bedroom, maid's room and attic; basement:—laundry, furnace room, maid's bath.

Price \$7,500. Terms to Suit.

Apply to N. H. BLAKE, Room 207
147 Nassau Street, N. Y.

For Sale—Gentleman's Country Seat

One and a half miles from Bound Brook Depot; about 40 trains. 22 acres lying between Macadam Road and Raritan River. Trolley passes the place. New eleven room house, three baths, large barn and outbuildings, fruit and shade. Price \$30,000. For particulars address

S. A. DUTCHER

410 E. MAIN ST. BOUND BROOK, N. J.



TO close an estate. Elegant new country residence in the heart of residential Bound Brook, within 55 minutes of New York. 14 rooms, 4 bathrooms, steam heat, gas and electric lighting, and all modern improvements. Large stable and garage, with two servants' rooms, Grounds 200 x 400 feet. For particulars apply to the executors. 18 & 20 Platt St., New York City.

Attractive East Orange House To Let for the Summer

To let, furnished, for the summer, airy twelve-room house with modern plumbing, situated in best section of East Orange, New Jersey. Auto shed on premises. Address owner, William Birdsall, 40 Prospect Street, East Orange, N. J. 'Phone 3463 R. Orange.

BEECHWOOD HEIGHTS

SITUATED in the foothills of the Watchung Mountains, an easy ten minutes walk from Bound Brook Station, 55 minutes from Broadway. More than sixty trains daily each way! The best express service out of New York, on the Central Railroad of New Jersey.

This tract, located on the main auto road between New York and Philadelphia, is desirable in every way for beautiful suburban homes. The ground is smooth and rolling, ideally located and has all of the advantageous restrictions. No property less than 100 x 200 feet, and but one house to a property. No stores or factories allowed. Macadam streets, gas, electricity and city water.

It is easily accessible to the Bound Brook Country Club, the Raritan River and the Watchung Mountains, the most beautiful range near New York. Trolley runs through the tract.

This is the cheapest proposition in New Jersey today for the seeker after a high class suburban home.

Lots 100 x 200 are from \$500 to \$700 each, according to location.

FIELD BROTHERS & HASTINGS

BOUND BROOK, NEW JERSEY

COZY COTTAGES



IN A MASTER DEVELOPMENT. All those modern features that make for comfort and livableness, and which are usually associated only with high-cost houses, are to be found, at moderate prices, in the cozy one-family "Ackerson Cottages," just completed and welcoming your inspection at—

Brightwaters

BAYSHORE, L. I.

These home-like cottages are built on plots 100x150 feet (equal to 7½ city lots), and within easy walking distance of station, lakes, yacht harbor, casino, bathing pavilion and the other attractive features of Brightwaters.

Each cottage has large living room, broad open fireplace, dining room, kitchen (equipped with laundry tubs, running water, range) with from three to six sleeping rooms, modern bathroom and spacious porch.

They are equipped with gas and electric fixtures, screens and shades. Decorations quaint and restful.

Prices begin at \$2,900, then \$3,500, \$3,600, \$3,700 and by easy stages up to \$5,900. Also a few at from \$7,400 to \$9,000.

Cottages or choice building plots may be purchased on suitable terms.

BRIGHTWATERS IS REFRESHINGLY DIFFERENT.

Families of good taste, no matter how ample or restricted their means, will find their ideal of a suburban residence place beautifully realized at Brightwaters.

Readers of HOUSE AND GARDEN are cordially invited to visit "Brightwaters" as our guests, inspect the new Ackerson cottages and see the many attractive features inaugurated in this popular development.

De Luxe Booklet C and Postcard Folder of Cottages Upon Request.

Schools, Churches, Stores and all Essentials. Please write our New York Office or telephone Murray Hill 3204 for reservations.

T. B. ACKERSON CO.

"Developers of Choice Properties and Builders of Houses of Merit."

New York Offices: 1 West 34th St.
Opposite Waldorf-Astoria.



"Edgemont Estate" At Scarsdale Station

The ideal realization of out-of-town living. A delightful home community, for all-year residence. Protected social environment, the charm of the country, all city improvements. Immediately at station, only 19 miles, on Harlem Elec. Div. N. Y. Cent. R. R.

Scarsdale Company, Owners
J. Warren Hayer, Pres.

Scarsdale, N. Y. 503 5th Ave., N. Y.
Westchester Co. Corner 42d Street



Besides unusual beauty of surroundings and exceptional train service to New York, there are many other advantages in buying a home at Scarsdale Estates



Property values up there in the Westchester Hills, too, are increasing rapidly. You are making a very profitable investment as well as buying a delightful home.

SCARSDALE ESTATES

THE HOMELAND IN THE HILLS

Whether you wish a single plot or several acres—if you are particular about the "social atmosphere" in which your family is to live—there is no more charming place for an all-the-year-round home. Write today for detailed information.

THE SCARSDALE ESTATES, Robert E. Farley, President
White Plains, N. Y. 527 Fifth Avenue, New York

Water Front

Beautiful home located directly on the shore of the Hudson at Grand View, all modern improvements, high class neighborhood, no railroad tracks nor commercial features; sweeping view of river and mountain; \$12,000.

Overlooking the Hudson

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HERE ARE A FEW OF THE FEATURES OF THE NEW YEAR

Mark Twain—Episodes from an Extraordinary Life

Five years before his death Mark Twain selected Albert Bigelow Paine to be his authorized biographer. Since that time Mr. Paine has given practically all his time to this great work. He lived in close touch with Mark Twain. In his hands were placed the accumulated letters, notes, and memorabilia of a lifetime. The result is a human document more fascinating than fiction. Through it all runs that delightful humor which characterized Mark Twain's life no less than his writings.

Arnold Bennett's First Impressions of America

Arnold Bennett is, beyond question, the most talked-of English author of the day. Mr. Bennett has written with extraordinary insight and brilliancy of various countries where he has lived—of England, of France, of Italy. Now he has come to America or his first visit to write exclusively for HARPER'S MAGAZINE. He will show us to ourselves as we really are. America and Americans will be his theme. In order that the illustrations for Mr. Bennett's articles may be thoroughly in accord with the spirit of the text the editors have persuaded Mr. Frank Craig, the leading English illustrator, to accompany Mr. Bennett to this country.

The Letters of a Diplomat's Wife

Among the most notable features of the MAGAZINE for recent months have been Madame de Hegermann-Lindencrone's reminiscences of her two visits to the court of Napoleon III. and her experiences during the Commune. Madame de Hegermann-Lindencrone is now preparing for publication in the MAGAZINE further reminiscences of even greater importance and interest. They cover her varied experiences during the Franco-Prussian War and her later intimate acquaintance with several of the continental rulers and many of the famous men and women whose names have now passed into history.

A New Serial Novel By the Author of "The Inner Shrine"

Of this most important feature of the MAGAZINE for 1912 it is only necessary to say that it marks the crowning point of the author's literary achievement. The new story is entitled "The Street Called Straight." It deals with a most modern phase of American life. It will be illustrated by Orson Lowell.

H. G. Wells on Socialism

H. G. Wells is not only one of the most brilliant writers of to-day but one of the ablest thinkers. He has written for HARPER'S MAGAZINE two articles in which he presents an absolutely new view of Socialism.

William Dean Howells in Spain

William Dean Howells has just revisited Spain after an absence of many years. What he is writing about, the country and its people, will be in his most delightful vein, for mingled with present impressions will be certain memories of an almost autobiographical sort.

Short Stories That Really Count

No other illustrated magazine of the world publishes each month so many really great short stories as HARPER'S. This year there is definite promise that in this field, where the MAGAZINE has always stood supreme, it will surpass even its own brilliant record. There will be at least seven complete stories in every number. Notable among the many famous contributors will be: RUDYARD KIPLING (a story on an unusual theme by the way), MARGARET DELAND, WILLIAM DEAN HOWELLS, JOSEPH CONRAD, NORMAN DUNCAN, E. S. MARTIN, FORREST CRISSEY, ALICE BROWN, THOMAS A. JANVIER, HENRY JAMES, IRVING BACHELLER, RICHARD LE GALLIENNE, HENRY VAN DYKE, MARY E. WILKINS, ARTHUR SHERBURNE HARDY, MAY SINCLAIR, MARGARITA SPALDING GERRY, INEZ H. GILMORE, ELMORE ELLIOTT PEAKE, JAMES OPPENHEIM.

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