

but what lies beneath the style?

Many people speak of the 1939 Lincoln-Zephyr as the most beautiful yet built. That is true. This car has never been handsomer. It is the style leader of today!

But style alone does not set a car apart as this car is set apart. What lies beneath? Why is the 1939 Lincoln-Zephyr still unique?

It is because the distinctive combination of features in the Lincoln-Zephyr is not to be matched in any car, at any price!

Beneath the graceful streamlines, in all closed types, is a bridge-type framework of steel trusses -to which panels of steel are welded. Body and frame are unified in a single structurerigid and safe. This is the only car of its kind.

The Lincoln-Zephyr V-type 12-cylinder en gine has a brilliant record of performance on all roads. And it gives 14 to 18 miles to the gallon! This is the only medium-priced "twelve."

Yours to enjoy, also, is the flowing ride of the Lincoln-Zephyr. Passengers sit "amidships." Hydraulic brakes, new this year, offer gentle, even stops under all conditions. Springs, axle assemblies and engine are completely rub-ber-insulated from the body-frame unit. The result is greater quiet in a car already quiet. As you consider any new car this year, look deeper than style! Judge every feature. Over 60,000 Lincoln-Zephyr owners admire a car as modern in every way as in appearance!
beneath its outward beauty


A combination of features that makes the Lincoln_Zephyr the only car of its kind. 1-Unit-body-and frame-steel panels welded to steel trusses. 2-V type 12 -cylinder engine -smooth, quict power. 3-14 to 18 miles to the gallon. 4-High power-toweight ratio -low center of gravity. 5-Passengers "amid-ships"-modern comfort for six in chair-height seats-the gliding ride-direct entranceto floor of car-high visibility. 6-Hydraulic brakes.
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STYLELEADER FOR 1939

# HOME BUILDDERS HEL.ISS <br> DO YOU EXPECT TO BUILD a new home - or modernize your old one within the next few months? . . . Hundreds of ideas and a wealth of valu- 

 able information about home building products are available to verified home builders - at one fell swoop - through Home Owners' Catalogs . . . This helpful book will be sent by mail, prepaid - without cost or obligation - to those who comply explicitly with the restrictions given below.Home building materials, equipment and furnishings, made by prominent manufacturers, are comprehensively described and beautifully illustrated in Home Owners' Catalogs.
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RESTRICTIONS - Home Owners' Catalogs will be sent only to owners who plan to build or modernize - homes for their own occupancy within 12 months, east of the Rocky Mountains, costing $\$ 4,000$ or more for construction, exclusive of land. Every application must be accompanied by a personal letter giving (1) description of proposed home, (2) when you will build, (3) location, (4) expected cost, and (5) name and address of architect, if selected. Every application will be verified by a Dodge representative.
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## DOAG IIIRIT

Twenty-Four Hour Guard

Vigilance may be an engaging virtue, but occasionally we slip into the mood of anticipating whispers at night, a tread on the floor below, or a feeling of inevitable danger as the children leave for play. We forget, for a moment, how to appreciate the purely amusing, but fortunately the cure is far more reassuring than prescience might ever be. The world of dogs gives it to us in the form of a beautifully sleek, very real and loving guard, the Doberman Pinscher. The Doberman brings a new calmness to the home. He quiets real and imaginary conversations at midnight, unaccounted noises, and few are the intruders, who dare match wits with this twenty-four-hour watchman. Best of all is the sight of children and dog as they depart together for school or play.

Those who have never owned a Doberman have missed the expression of intense devotion and alertness as, in one fleeting second, the Doberman responds to danger. There is always that delicate sense of discrimination, too, that recognizes the false warning from the true, and is capable of handling either situation in an effortless and almost miraculous manner. There is the keenness and fire and the kind of spirit found in all great guard dogs. We have watched him at play; seen how very gently he "nosed" out from under the body of the youngest child, and how he has taught children much of understanding, kindness and loyalty.

Long ago, we discounted the bugaboo about the supposed unreliability of the breed. We have found that those who shout it loudest are those to whom the Doberman is least known. One of the primary attributes of a companion and watch dog is tractability-the ability of the dog to


Apolda's watchman and dog catcher would probably never have recognized the Doberman, as we know him today, the epitome of grace, and vivacity. Ch. Jockel von Burgund from the kennels of L. R. Randle


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## DOAG IIIRT

acknowledge and act on commands. And the whole heritage of the Doberman, one of Germany's six police breeds, has been founded upon this quality.

Doberman history is short-just half a century in the making, but the apparent "newness" of the breed can detract nothing from its standardization and perfection. German fanciers have a knack of concentrating on grace and intelligence, and their dogs are testimony of the care and foresight given breeding. It was in those years in the latter half of the nineteenth century, when the dog fancier began to realize that a top-notch dog just didn't happen, that the city of Apolda in Germany had a strange, crusty old watchman and dog catcher. Among other possessions acquired in the course of his varied occupations, Herr Doberman had a dog named "Schnuppe." In some strange, inexplicable fashion it was Doberman's name that was given the breed, although his dog, according to accounts, bore little if any resemblance to our Doberman of today.

It is the opinion of those who have made extensive inquiry into the breed's origin that he is a cross, probably, between the old German Shepherd and the black and tan, smooth German Pinscher, now nearly extinct. A mixture of hunting dog blood, too, perhaps. There is still another theory that the Rottweiler, Great Dane, Smooth-haired Pinscher were used in the development of the Doberman.

With the establishment of the Doberman Pinscher Club of America early in 1921, the breed has been fostered and seen its popularity grow. Through the efforts of this association, keen interest has been maintained. This is shown by the increase in the number of those who own Dobermans. (Continued on page 4)


Right now we catch a suggestion of the vivacious personality of these three young Dobermans. Note the uncropped ears, which are set on high, not too wide apart and of medium size. Owned by Colonel Colyar Dodson

## - COCKER SPANIELS If you want a small dog with excellent manners, stea character and sound health, select a Cocker Spaniel We offer them in solid and parti-colors, bred from the best of stock a that is reasonable for those who want a smart, healthy pupy as a pet in the home or a huntsman in the field. MARJOLEAR KENNELS

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Now I can take cars or leave 'em alone - and I haven't been off my feed for months. That BOOK'S got something. If's free to you at drug and pet stores Sergeant's doc milicies

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## DDOG IIIR'I

(Continued from page 3)

If you want to know a good Doberman Pinscher when you see one, here's his portrait as a judge would sketch it. The head is well-proportioned to the body, suggesting a long, blunt, powerful wedge. The top is quite flat, forehead extending with only slight depression to the ridge of a nose which should be straight or slightly curved. The cheeks are flat, lips close; full, strong jaws; dark, keen medium-sized eyes, well placed ears and a muscular neck, slightly arched, complete this part of the picture.

As a whole the Doberman should give the impression of a dog of medium size, square in proportion as viewed from the side. The standard permits a height at the shoulder of from twenty-four to twenty-seven inches in the males and from twenty-three to twenty-five inches in the females. The dog is compactly built, muscular and powerful. Above all, he should never be coarse, but elegant in appearance with a proud carriage and great nobility. The back of the typical Doberman is built along short, firm and muscular lines. The chest is well developed and deep, reaching at least to the elbow. The tail should be docked. In walking, the gait should be free, balanced, vigorous and true. The coat is short, hard, tailormade and close to the skin with the color black, brown or blue with rust-red, and with sharply defined markings.

In summing up the character and qualities of the Doberman, we remember the words of E. von Otto, of Bensheim, who wrote-"Pleasant in manner and character, faithful, fearless, attentive and a reliable watchdog. Sure defender of his master, distrustful toward strangers, possessing conspicuous power of comprehension and great capacity for training. In consequence of his characteristics, physical beauty and attractive size, an ideal house dog and escort."


Among the endearing qualities of the Doberman is its devotion to its own hearth and home. Here is the best of 103 Dobermans at the recent Specialty Show, Chicago. Ch. Rigo v. Lindenhof owned by Ray Soldwell


Just write to the addresses given for any of the interesting booklets listed here and in Section II. They're free unless otherwise specified.

## Travel

THE GREAT WHITE FLEET'S new folder maps out three exciting winter cruises to the Caribbean and West Indies. It's packed with pictures of some of the places you'll visit, scenes aboard ship, and valuable information to help ou plan your cruise. United Fruit Co., Dept. G-1, Pier 3, No. River, N. 1 .
SOUTH AMERICA is a 26 -page booklet of itineraries, photographs and facts about South American travel by land, sea and air. Among the high spots mentioned are the Chilean Lakes, Inca Land, Lake Titicaca, La Paz and Iguazu Falls. Amprican Express Co., Dept. G-1, 65 Broadway, N. Y. C

CUBA, the Land of Romance and Rhumba, beckons you in this colorful booklet. Here is a guide to the best in estaurants, night clubs, Casino life, to routes for touring, fishing, racing, and the finest of Cuba's beautiful beaches. sion, Dept. G-1, Paseo De Marti 255, sion, Dept. G-1

WINTER Mediterranean Cruises. Three folders describe three exciting cruises, starting on January 28, February 4 and 15, aboard the modern Conte di Savoia, Roma and Saturnia, with itmeraries that include shore excursions in the lands along the Mediterranean. Italian Line, durt G-1, 22 Firm Als, N.
VISIT JAPAN pictures the sports and theatres of Japan-its sights and scenery. It posts you on coming attractions -the proper clothes to wear-the currency of the country-its travel facilities. It includes specimen tours, with costs. Japan Tourist Bureau, Dept.

YOUR TRIP TO EUROPE is a $200-$ page travel-book-of-knowledge-a most informative pocket-size volume packed with facts to help you plan a tour of Great Britain and the Continent-and to guide you step by step through Europe. Send 25c. Hamburg-American
Line, Dept. XC-4, 57 Broadway, N. Y.C.

## Building and Home Equipment

WESTERN PINE CAMERA VIEWS shows the versatility of Western Pinestheir beauty of grain and texture-their uses in mouldings, carvings, stairs. It is a portfolio of fine photographs, of great interest to builder or remodeler. Western Pine Assn., Dept, 56-J, Yeon Bldg., Portland, Oregon.
COMFORT THAT PAYS FOR ITSELF is an efficiency story, showing in graphic pictures the actual savings brought about by treating your house to a heatproof, fireproof blanket of rock wool -and your family to greater living comfort in all seasons. Johns-Manville, Dept. G-1, 22 E. 40 th St., N. Y. C. BURNHAM HOME HEATING HELPS will help you decide which type of heating system is best suited to your needs. It expresses an impartial view of the various types of heating systems and the burning of various types of fuel. Burnham Boiler Corp., Dept. G-1, Irvington, N. Y.

WHAT PERMUTIT Water Conditioning Will Do for You is a lively dissertation on hard water-on the gummy film it leaves on your skin and hair; and what it does to the laundry, water pipes the problem in an eletric anter to the problem in an electric automatic water softener for your home. The Permutit Co., Dept. G-1, 330 W. 42nd

HUMIDIFY answers the question of how to condition the air of your home or office-to keep it moist and healthful all winter long. It shows a whole line of attractive Walton Humidifiers, from a portable table model to a handsome duplex cabinet. Walton Laboratories, Dept. G-1, Irvington, N. J.

## Furniture and Homefurnishings

MODERN FURNITURE is a charming loose-leaf portfolio showing room settings and individual pieces designed in the modern manner, for the graciously livable American home. It offers an individual decoration service for those who may be re-decorating or furnishing a new home. Send 15c. Modernage

ACHIEVEMENT is a little history worth reading-a story of the potteries that make fine Syracuse China. It tells of their pioneering in perfecting the manutacture of the vitreous, strong type of tableware known as "American China". Onondaga Pottery Co., Dept.
G-1, Syracuse, N. Y. G-1, Syracuse, N. Y.
WHAT'S NEW IN HOUSEWARES catalogs the very latest in equipment for kitchen, pantry, closet and bath, as well as a host of fascinating accessories for entertaining-all ideal as gifts and for your own home. Booklet G. HAM57th St., N. Y. C.

TOAST-O-LATOR. An important little folder tells of the new and revolutionary utomatic dectric toaster that keeps the bread constanty in motion, and makes toast as you like it-thick or than, dark or light. Ms rast, economeal and chan, Co., Dept. G-1, Ampere, N. J.

## Miscellaneous

LUGGAGE PRESCRIPTIONS lines up smart, durable and commodious Oshkosh travel gear for long and short journeys-for trips by land, sea and air. You'll find everything from overnight cases to wardrobe trunks. It's a complete picture-and-price catalog, suggesting exactly the right luggage for every purpose. Oshkosh, Dept. G-1, 10 E. 34 th ST., N. Y. C.

WHAT IS SMOKED TURKEY? Pinesbridge Farm tells of a delectable dish to add piquant flavor to holiday menus, or make a perfect gift for a gourmet. Known for years in America's finest homes and most exclusive clubs, it is now available in somewhat larger quantities. Pinesbridge Farm, Dept. $\mathrm{G}-1$, Ossining, N. Y.
(as the supply of many of these booklets is limited, we cannot guarantee that inquiries can be filled if received later than two months after appearance of the review)

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## WESTERN PINES*

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How quickly you form an attachment for walls like these of Western Pinesl Yet lovely as they are at first, a new loveliness comes with age. For the passage of time serves to mellow these woods; to soften and deepen their friendly tones to a glowing, quiet beauty. And this is only one of many ways in which the Western Pines can fit gracefully into your home-bringing a character, delight and durability all their own.

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Inside My Garden Gate A looseleaf

## GARDEN NOTEBOOK

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Subject index and 300 pages for notes, clippings, record of successes, blooms, and the growing habits of your plants. Invaluable to amateur or professional A charming and thoughtful gift. . or
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tive bronze, lead, tive bronze, lead,
marble, terra-cot ta, stone and composition
request. <br> Galloway Pottery on display <br> Erkins Studios}

Established 1900
123 East 24th St., New York



Nostalgic reminiscence of New Orleans' historic French Quarter is this beautiful magazine rack. The design is copied exactly from a graceful motif in one of the elaborate, lace-like balconies which grace the Vieux Carré. $5^{\prime \prime} \times 13^{\prime \prime} \times 14^{\prime \prime}$ in antique green bronze, it costs $\$ 10$; you order it from Hinderer's Iron Works, 1607 Prytania Street, New Orleans, La.


For your friends who flee the January freezes, a basket deluxe to speed them on their way. Crammed with caviar brandied peaches and cherries, crêpes suzettes, pâté, Stilton in port, wild strawberry jam, candies, nuts and cookies, the huge wicker basket, gaily beribboned, costs $\$ 28.50$ from Vêndome, at 415 Madison Avenue, New York City

Our own find for devotees of five-suit bridge these exquisite card cases holding two complete decks. They are made of Chinese brocade, in various soft col ors touched off with gold or silver. Snap fast enings of jade or carne lian, linings of plain silk. Case and two five suit decks cost $\$ 5$ from Yamanaka, 680 Fifth Avenue, New York City

Your youngest's drive way hopscotch and tricycle riding need have no fears for you if you mark your entrance with a warning sign. Good at night, too, for the letters shine brightly in the headlights of a car, sav ing your privet corners from destruction. $15^{\prime \prime} \times$ $30^{\prime \prime}$, two stakes includ ed, it costs $\$ 15$ from the Garret Thew Studios, Westport, Connecticut


## |R.ROIII

If you are interested in any of the things shown on these pages, kindly send your checks or money orders directly to the shops. In each case, the address of the shop is listed for your convenience.


To newcastle, not coals, but cigarettes, carried most attractively in this tiny coal scuttle. There are two sizes, the smaller about $41 / 2^{\prime \prime}$ long, the larger about $5^{\prime \prime}$ long. Both of beautifully fashioned sterling silver with ebony handles. The smaller costs $\$ 6$; the larger \$8; may be ordered from Black, Starr \& Frost-Gorham, 594 Fifth Ave., New York

Neatest trick of the year, we think, are adjustable picture frames, "Braquettes". All you need is glass to fit the picture and the sliding frame does the rest. Either to hang or to stand on a desk, there are any number of finishes; rubbed maple, for instance, is $\$ 5.50$; white leather, $\$ 3.50$. From Tulsa Lee Barker, 382 Park Avenue, N. Y. C.

For champagne tastes and a champagne pock. etbook, for your gilded friend who "has every. thing", give squab knives and forks. (Also most convenient for toying with a young broiler!) These delicate little instruments are only $8^{\prime \prime}$ long, stainless steel with very elegant stag handles. $\$ 30$ for six knives and six forks; Hoffritz, 551 Fifth Avenue, N.Y.C.

No wild ducks these, but just tame enough to add a humorous note to your garden pool. They are piped to throw a sparkling stream of water from their bills; their height is $10^{\prime \prime}$, wing spread $8^{1 / 2} 2^{\prime \prime}$. In antique green bronze, they cost $\$ 30$ each; in lead, $\$ 20$. They are imported models and come from Erkins Studios, 121 East 24th St., New York City

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The time is ripe, we think, for the return of a little garden sentimentality. And so we show you this winsome child, offering her bunch of juicy grapes. After an old Italian statuette, she stands $24^{\prime \prime}$ high, in gray Pompeiian stone. Piped for fountain use, \$35. It may be ordered from Pompeiian Garden Furniture Co., 30 East 22nd Street, New York City

Fine foods demand fine background, and your special petit pois garnis will take on a positively celestial aura in this sterling vegetable dish. The delicate pattern is called "Della Robbia", exquisitely hand-chased, and the dish measures $7^{\prime \prime} \times 10^{\prime \prime}$. Priced at $\$ 25$, you can order it from Julius Goodman, 43 South Main Street, in Memphis, Tennessee

Over a white New Eng. land barn swings this weathervane: "Smoky" and his mate, manes and tails flying to the four winds. About $30^{\prime \prime}$ long, in black wrought iron, without name plate, $\$ 8$. With single-line name plate (up to 10 letters) $\$ 11.50$; with double-line plate (up to 16 letters) $\$ 13$. Additional letters 30c each. Carlisle Hardware, Springfield, Mass.

Three in one for a tiny apartment is this little item. For it works three ways, depending on which set of legs you choose: long legs for a coffee table, short legs for breakfast in bed, no legs for a cocktail tray Tray and two sets of legs, in mahogany or walnut, are priced at 87.95; in maple 87.50 , from 'Liza's Gift Shop. New Market, Virginia

For a tailored lady who yet loves the luxury of fine bed linen, this satin blanket cover. Its only adornment is delicate fagoting insertion; it comes in white, eggshell, tearose, nile green, ice blue or peach. The single bed size will cost you $\$ 8.95$; the double bed size costs $\$ 9.95$. Order from McGibbon, 49 East 57th Street, New York City


## 18010



HERBAL CUISINE. Our resolve for the New Year, to turn out a dinner to be likened by experts, perhaps, to a Beethoven symphony-in other words, to cook with herbs. Resolve inspired by the three little boxes you see above: Savory Seeds, Bouquet Garni Herb Bags, and Herb Chest. Savory seeds are just what you think-sesame, poppy, mustard, dill, cummin, coriander, celery, Russian caraway and anise, to be shaken, one or two varieties, into a pepper grinder and thence into the boiling pot. The bouquets garnis are little cheesecloth bags, each with an assortment of herbs to flavor the pot-au-feu. And the herb chest contains envelopes of various aromatic leaves, and a chart. $\$ 1.50$ a box. "Oddities by Jean McKay", 872 Madison Avenue, N. Y. C.


OVER THE COCKTAILS, cultivate a quiet mind in the assurance that your hors-d'euvre are things of joy and beyond reproach. Joha ham, for instance, delicate and aromatic of flavor, cured for five to six weeks with traditional Teuton skill. Or Strasbourg pâté, made by the famed Edouard Arz-ner-blended with Périgord truffles and packed in convenient tins. For the ham, 79 c per pound for 7 to 10 pounds. For the pâté, 9 -oz. tin, $\$ 3.50$. Rahmeyer's, 1022 Third Ave., N.Y.C.


ELEGANT NOTES for your tinkling charm bracelets are antique English fob seals, once proudly adorning the flowered waistcoats of Georgian dandies. The four shown above are a few of a large assortment, in gold or plate, set with various semi-precious stones finely engraved with old family seals. In gold plate, small-sized seals are $\$ 3$ to $\$ 6$, large-sized $\$ 6$ to $\$ 10$. In solid gold, small size $\$ 6$ to $\$ 10$, large size $\$ 10$ to $\$ 20$. They're all one-of-a-kind pieces. Order an assortment from Waldhorn, 337 Royal St., New Orleans, La.


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American history comes to life on these cocktail plates. Bordered in bright and pastel colors, the subjects, in brownline etching, include the Mayflower, Drafting the Declaration of Independence, Betsy Ross' House, and so on. In Syracuse China, they are $4 \pi / s^{\prime \prime}$ square, cost $\$ 2$ for six in assorted colors from Onondaga Pottery, Syracuse, New York

$\mathrm{T}_{\text {HE mixings, the trim- }}$ mings and all, to go anywhere at a moment's notice, are in this traveling cocktail kit! Fitted in the striped linen case ( $15^{\prime \prime} \times 91 / 4^{\prime \prime} \times 5^{\prime \prime}$ ) are four silver-plate, goldlined cups, two silverplate flasks ( 14 oz . and 10 oz .), a silver plate shaker and a Thermos ice container. The works, $\$ 35$. Scully \& Scully, 506 Park Ave., N. Y. C.



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## IN THE NEXT ISSUE

FEBRUARY, the shortest month in the year, has for the last two years witnessed unprecedented newsstand sales of House \& Garden. This is because our great Portfolio of Houses and Plans makes its appearance as the Second Section in February. Now we believe our February 1939 Double Number, containing a bigger and better portfolio than ever before, will considerably outsell the same issue in the two previous years. We thought you ought to know this if you are planning to buy your copy on the newsstands. You had better place your order now.

HOUSES AND PLANS are, of course, of fundamental importance to readers of House \& Garden. They represent a subject that never loses its interest. It does not seem that we can publish enough photographs of houses or enough drawings of floor plans. However, we know that there are many other interests we must cover in this magazine. And in the First Section of our February issue, we give full attention to some of the most important of these.

THE WESTERN WORLD'S FAIR opens February 18th and the Golden Gate International Exposition, to give it its full name, will be noted for its decorative excellence. We are fortunate, therefore, in being able to present exclusively in the February issue of House \& Garden, 4-color pictures of the most exciting high spots of the Exposition.

WE ARE ALSO featuring in the First Section a Portfolio of New Furniture. This furniture has been selected for 1939 showing by the great furniture manufacturers of the country. Our portfolio will help you to select the right piece for the right place. And it will illustrate the newest and most important style trends. Other color pages in this issue will be devoted to New Color Schemes for Bathrooms. These pages show new bathroom equipment and decorative materials as well as unusual color schemes.

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## FLOWER PRINTS

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EMBARRASSMENT OF TOOLS. Life becomes bewildering to a gardener when he puts his nose into a catalog of gardening tools. We did the other day, and this was what we found: 10 kinds of knives for pruning, 11 for budding, 6 for grafting, 14 kinds of spades, 13 kinds of gadgets for making and repairing lawns, 9 kinds of trowels and weeders, some of them looking like mediaeval instruments of torture, 12 kinds of hoes, 11 kinds of cultivators and 10 kinds of rakes. And yet, in this embarrassment of tools, each gardener eventually has one pet trowel or hoe that he wouldn't swap for all the others in creation.


PICK-UPS FOR FLOWERS. Japanese flower arrangers, who are up to all kinds of tricks to make their flowers behave properly, revive drooping water lilies by pumping into their stems a liquid made of cloves boiled in tea. For languid lotus they use -of all things-soap and water.

WINTER READING. To the question, "What do gardeners do when they can't garden?" the answer is simple-they read about it. By January their outdoor gardens have been inactive for a good two months in the North and yet these horticultural fanatics are steeping themselves in the lore of gardening.

For Winter reading, take one subject and pursue it. Say plant exploring. Read the books of David Fairchild, E. H. Wilson, Reginald Farrer and Kingdon Ward. Read them and turn in a report to your garden club on them.

Or you might choose to study an individual. There was Humphrey Marshall, for instance, one of our 18th Century gentlemen botanists and he is well worth looking up. His claim to remembrance lies in the fact that his book, "Arbustum Americanum," was the first truly indigenous botanical essay published in the Western Hemisphere. Some still consider it our very first nursery catalog.

A NEW YEAR WISH. House \& Garden wishes its readers so many good things in the New Year that even this entire page could not contain them all. Peace is the first-peace between all men everywhere. Then health. Then a lightening of our burden of senseless anxieties. But most of all for renewed courage and fresh desires that can never grow old. We hope that the New Year will bring to its readers the spirit of the rapturous welcome Francis Thompson gave to Spring-

For lo, into her house
Spring is come home with her worldwandering feet,
And all things are made young with young desires.

HUMAN BOOK. We rise to tell the collected assembly that life commences all over again once you have read the first few paragraphs of Page Cooper's "All the Year Round". A combination cook book, gardening book, manual for parents, wives and husbands, and general guide, counselor and friend to those who want to enjoy country living, this chubby little volume is sheer, unadulterated delight. As it is written in small pieces for each day, it can be consumed the way you would nibble through a dish of salted nuts.


TWO FOR ONE. Somewhere in the Scriptures are promised particular favors for those who make two blades of grass grow where one grew before. This was once taken seriously by a wholesale dealer in a New York produce market. He claimed that he could qualify in this respect, as a benefactor to the human race. "When a Long Island farmer drives up to my establishment," he explained, "and consigns for sale twenty-five baskets of spinach, I take them to the back of the store, and, when the farmer has gone, dump out the spinach, shake it up and make fifty baskets of the consignment."


PILGRIMAGES. Whereas in other lands and in true Chaucerian style, men wait until "Aprille with his shoures soote" arrives to start on pilgrimages, here we go South to meet the Spring. Alert southerners are already busy tidying up their "yards" and houses to receive the hordes of visitors from all over the country.

The Natchez Garden Club conducts its eighth annual pilgrimage from March 20th to April 2nd inclusive. New Orleans displays its houses in a glorious Spring fiesta from March 12th through the 19th. Another Natchez group-the Pilgrimage Garden Club-opens the doors of its members from March 4th to the 19th. Besides these is the Mobile Azalea Trail. It is said that the local silver cornet bands in all these heavenly spots will be busy during the next few weeks practising "The Yanks Are Coming."

STREET NAMES NO. 672. A subscriber from Chicago reports that Milwaukee has a Kinnickinnic Avenue, evidently a product of hiccuping burgers. New Canaan, Connecticut, has a Frogtown Road and the nearby Vista, a Phlox Lane. There is a Roast Meat Hill Road in Killingworth, Connecticut, and a Tea Kettle Spout Road in Mahopac, N.Y. And, lest you think town-namers forgot their Bible, Connecticut has a town called Sodom and, just across the line, Massachusetts has its Gomorrah.

SABBATH KEEPING CLOCKS. In 1774 Benjamin Willard was advertising "Musical Clocks that go by Weights and play a different Tune each Day in the Week, on Sundays a Psalm Tune." How far we have declined from that pious standard! We have clocks that show their dials by night, clocks that run by electricity, clocks to fit every period style and every vagary of modernistic simplicity, but tell me, Sirs, where can I get a clock that will play a different tune each day of the week and a Psalm tune on Sundays?

## FURNITUREFASHIONS. While House

 \& Garden makes no claim to omniscience, it ventures to prophesy from its contacts with the markets, and the leading designers and decorators, the following trends in furniture: (1) that painted furniture will shortly become fashionable and (2) that, in contrast with the contemporary popular pinks and greens, the new color in decoration will be yellow.

First prize winner in our 1938 Awards in Architecture. Plans and other pictures on pages 17-19.

# Iwirlds in In Irditecturre 

## Pize winners in House $\mathscr{A}$ Gaiden's Second annual contest

TTwelve times a year House \& Garden places before its readers a carefully chosen and representative selection of the most significant and best-designed new homes in America. These homes vary as widely in size and cost as they do in geographical location, but all of them have had to measure up to our high standards of architectural merit. In order to promote the maintenance of these standards and to encourage sound advances in the architecture of the home, the House \& Garden Awards were inaugurated.

These prizes, consisting of cash awards totaling two thousand dollars, are presented to the architects of those houses which are adjudged best of all the houses published in House \& Garden during the year. In order to insure that this judgment is impartial and highly competent, we invite a Jury of outstanding architects to review all the homes published, giving their critical attention to the planning and design of each. This professional Jury then awards the prizes.

Obviously, the task is not an easy one. Where there is such a high percentage of out-
standing homes, it is difficult to isolate certain individual designs for special commendation. Furthermore, the problems peculiar to the design of a small home, as compared with those encountered by the architect of a larger one, make direct comparison of the two types infeasible. We therefore divide the houses into two classifications: homes of seven to ten rooms inclusive comprise Class I, while those of six rooms or less form Class II. Each of these classes is judged separately, and equal prizes are awarded the winners in each.

It seems appropriate at this time to acknowledge the splendid support this program has had from the architectural profession. House \& Garden's efforts to further the cause of good design and good construction have gained for us the active cooperation of leading architects from coast to coast, resulting in a real advantage to our readers. Because the Awards in Architecture are based on all work published during the year we are able to present monthly to our readers photographs and plans of homes of exceptional character, quality and practicality.


KENNETH KASSLER


PHILIP T. SHUTZE


WILLIAM W. WURSTER


EMIL. J. SZENDY
kenneth kassler, 33 , winner of 1st Prize in Class I, was born in Colorado. He went East to Princeton for college and, except for a year spent in Europe, has remained there ever since. His new home wins for him his first major award in a national contest.
philip t. shutze, 48 (2nd Prize, Class I), represents the old Atlanta, Ga., firm of Hentz, Adler \& Shutze. Their fine traditional work includes many public buildings in the South. william wilson wurster, 42 , winner of 1st Prize in Class II, is a native Californian. Dur-
ing twelve years of work on the Coast a succession of notable home designs has stamped him as one of the most outstanding and original architects practising in the U. S. today. emil J. szendy, 41 (2nd Prize, Class II), of New York, has done much towards converting the old farmhouses of Bucks County, Pennsylvania for literary New Yorkers. honorable mentions. Class I: Will Rice Amon, New York; Frederick L. R. Confer, Berkeley, Cal.; Willis Irvin, Augusta, Ga.; Class II: Richard J. Neutra, Los Angeles, Cal.

## The Jury's findings are reported below and on the following eleven pages

House \& Garden was fortunate in securing as its Jury for the 1938 Awards three outstanding architects whose composite judgment brought to the deliberations a broad and completely unbiased point of view:

Royal Barry Wills of Boston, who has made a most enviable reputation as a designer of homes in the tradition of Colonial New England. His work is characterized by a scholarly, thoughtful and sensitive use of the Colonial idiom combined with plans which are skillfully drawn for modern living. Mr. Wills has won more than fifteen awards.

Otto Teegen of New York, whose broad experience both in modern and traditional design caused him to be retained by the New York World's Fair 1939 as Coordinator in the construction of the Town of Tomorrow. This will be a center of interest for all home-owners, present or prospective, when the Fair opens at the end of April.

Edward D. Stone of New York, who, as one of the best-known modern architects in America, has made many notable contributions to contemporary architecture in the design of both large and small residences. Though primarily concerned with the evolution of the modern home, Mr. Stone has great respect for sound local tradition and his work, whether in the North or in the South, is always harmoniously conceived.

The process of selecting the prizewinning designs for the House \& Garden Awards in Architecture is comparable to the
steps every prospective homebuilder takes, or should take, in determining what is the best design for his future home. But whereas you may have specific individual requirements which your home must satisfy, our Jury had, in each case, to start with a completely unprejudiced viewpoint, to consider the owner's requirements and finally to decide how well those requirements had been met.

The Jury in reality based their decisions upon the fundamental principles of sound home planning which should be found in every good house-irrespective of style, price or size. It was particularly interesting to note the way in which they gave first consideration not to the elevations of the houses to be judged, but to the plans.

In reading through their comments on the prize-winning houses in the following pages, it will be noticed that they emphasize throughout the livability of the houses selected. Remember that they were judging, not "show houses" or imaginary architectural designs, but actual homes, occupied by clients who in many cases took the trouble to write in and tell House \& Garden how very satisfied they were with their new homes.

The Jury was particularly impressed by the high quality of planning and design shown in the smaller houses in Class II. This is heartening news for those who want only a small house, yet insist upon obtaining that good taste and efficient design which an architect alone is trained to provide.


THE JURY ARRIVES AT A VERDICT. (LEET TO RIGHT) ROYAL BARRY WILLS, OTTO TEEGEN, EDWARD D. STONE


ABOVE: SEEN FROM THE SOUTH. PLANS ON NEXT PAGE
BELOW LEFT: TERRACE WALL ON THE NORTH OF THE HOUSE, BELOW RIGHT: FRONT ENTRANCE


## $[\sin x$

## ITORS LIKED THIS HOUSE BECAUSE:

 plan is well-organized and compact without ng cramped. On the first floor the only areas letely closed off by doors are the kitchen and ry, the studio being isolated for real privacy. e cinder concrete block used on the exterior is d in an original fashion. Terrace walls carry me motif through into the garden.e ample closets are all fitted with carefully drawers and clothes-hanging equipment.
ovision has been made for future enlargement. tudio could be converted into a bedroom and (water is already piped to the sink), the porch sed to form an extra room.
corative art (see pictures opposite) and new mas (see data below) are both intelligently used.

## IE JURY SAID

. Teegen: "The scale of the moldings on the ete blocks used as a surface material may seem e fine, but they achieve a character which is sting and novel. The glass block at the base living room windows is disturbing and unsary, since more than enough light could be ht into the room through the windows. This of hoase should be the answer for those who like to build a really modern house yet canear to say good-bye to tradition."
. Stone: "An almost perfect plan for the job it has to do. I like the skillful way in which the ect has handled new materials, and his original ent of the exterior walls."

Wills: "A quite perfect plan, well adapted to To me, the design exhibits a certain confusion ught. It seems to be modern with a traditional ver. The interiors are good, but the corrugaon the exterior seem entirely contrary to the of the house."

## UCTION DATA

r: Alpha. copper-covered steel roof and structural floors: H. H. Robertson. window sills and door s: Aluminum. steel sash: Hope's. plate glass: Pittsglass block: Corning and Owens-Illinois. garage Kinnear. boller: U. S. Boiler. heating controls: apolis-Honeywell. heating grilles (except 2nd fl.) : ndent. fireplace damper: H. W. Covert. brass pipe: bath and plumbing fixtures: Crane. refrigerator ectric stove: Westinghouse. kitchen cabinets, sink ounter tops: The Accessories Co. cork tile: Cork ion Co. linoleum: Armstrong. interior walls of room and master bedrooms: Flexwood, U. S. Plyinterior walls of bathroom: Micarta, Westinghouse. are: Ostrander \& Eshleman. paint for cinder block: nia Stucco. paint for woodwork: Pratt and Lambert. ing: Pecora. heating engineer: Kraemer Luks. Landarchitect: Daniel Lenker. decorators: Steese \& Em-



THE EDITORS LIKED THIS HOUSE BECAUSE:

- it is a triumph in traditional design. Greek Revival is a comfortable style too seldom attempted nowadays, and even less seldom carried through with such skill and grace.
- its straightforward plan is well-arranged, without tricks, and with adequate closets.
- it has been designed with studied refinement of detail. Typically distinguished items: the dignified semicircular porch, the fine entrance doorway, the round-headed dormers.


## AND THE JURY SAID:

Mr. Teegen: "The judges took into account that this house was in the South where spaciousness is more prevalent than in the North and where the sun is brighter and the climate milder. With the exception of what seems to us northerners a rather disproportionately spacious hall, the plan composes very well. The house has charm. To use old materials in a traditional manner and yet obtain distinction is certainly an achievement.

Mr. Stone: "Its traditional design is certainly well-suited to its location in the South. This is an extremely pleasant and livable home, of which the owners may well be proud."
Mr. Wills: "A good Greek Revival type. A carefully studied design. But two false chimneys seem a little strong."

THE INTERIORS SHOW SKILLFULLY DETAILED PLASTER WORK AND TRIM

concrete: Signal Mountain Portland Cement. brick: Oconee Clay Products Co. cast stone: Elkan Stone Tile Co. structural steel: Bethlehem Steel Co. standing seam tin roof: American Rolling Mill Co. plaster: U. S. Gypsum Co. insulation: Johns-Manville Co. plumbing: Crane Co. heating: Sunbeam Heating \& Air Conditioning Co. tile work: American Encaustic Tile Co. linoleum: Congoleum-Nairn, Inc. kitchen cabinets: Curtis Cos., Inc. garage doors: Overhead Door Corp. painting: Pratt \& Lambert, Inc. weatherstrips: Chamberlin Metal Weatherstrip Co., Inc.


Shichilecto, Hentz, Addler of Shutye
Orener, Niss. E. D. Nafier, Nilledgeville, ©Pa.




## shchited, William Widson Wuister • Owner, Mr. R. R. Sing, Altherton, Cat.

## THE EDITORS LIKED THIS HOUSE BECAUSE:

- it has a strikingly original quality of design. Here is a small modern house with a classic dignity seldom achieved by far more expensive and ambitious homes.
- its compact plan wastes a minimum amount of space on circulation (a rare attainment. in single story houses), yet at the same time affords a sense of spaciousness.


## AND THE JURY SAID:

Mr. Teegen: "A plan with a quality pertaining especially to southern climate. One feels that it has an openness which would allow all the rooms to be instantly flooded with air and light whenever one wished. The relation of the rooms is admirable and waste space has been cut to a minimum without curtailing the owners' freedom of movement. The exterior has a simplicity and dignity which invites rather than forbids, as do so many stately things. This house is one of the best examples I have seen of modern American architecture. It is encouraging to see that we may, after all, work out our own solution without borrowing wholesale from the philosophies and standards of other nations and ages."

Mr. Stone: "A splendid piece of work with a quality of real distinction seldom found in the small home. This design speaks for itself; it needs no further commendation."

Mr. Wills: "Light and fresh, with dignity-a rarity in the small house. Delightful!"

Richt: A detailed view of the south porch, with the entrance driveway and an orange grove in the background

Below: The front entrance court on the north side of the house. The two wings suggested as future additions would follow the lines of the two walls which screen this paved courtyard. The eastern wing would add a maid's room and bath, the western one a new master's bedroom and bath. The service porch would be converted into a lavatory


## THE EDITORS LIKED THIS HOUSE BECAUSE:

- it solves an individual, but not unusual, problem in a neat and unassuming fashion. During the Winter Mr. \& Mrs. Lindley use the house for occasional country weekends. In the summer it is turned over to their two sons. The only more or less permanent resident is the caretaker, which explains the unusually large "maid's room".
- it makes expert use of traditional materials. The fine multicolored stone walls, the black slate roof and the white painted woodwork are typical in this part of the country.


## AND THE JURY SAID:

Mr. Teegen: "Because it told its story so quietly and simply, this plan made an immediate impression on the jury. It seems to achieve everything for its purpose with the minimum of effort and waste space. It is good to see a small job so well done."

Mr. Stone: "A very competent plan, satisfying all the requirements. The elevations do not seem to me as interesting or original as those of Mr. Neutra's design (p. 27)."
Mr. Will.s: "Nice use of stone in combination with wood. A good plan for its purpose. Detail, typical and well-executed. The first floor bath is, in my opinion, too exposed."

Auchitect, E®mil If. Syendy. Oumê, Ni. E®. K. Lindley, Eீuainna, Pa.


Left: The entrance front faces east but a large screened porch jutting out on the south provides cool extra living space in the Summer. Below Left: The living room, like the two second floor bedrooms (with three exposures for coolness), is paneled with pine. This gives the house an air of comfortable informality

CONSTRUCTION DATA
insulation: Reynolds Corp. plaster: U. S Gypsum Co. plumbing fixtures: Standard Sanitary Mfg. Co. exterior paint: John W.
Masury. heating: Jeddo-Highland Coal Co.


ARCHITECT, W. IRVIN. OWNER, MR. F. E. BEANE, JR., WRIGHTSVILLE SOUND, N. C.
This characteristic southern plan, marked by a typically spacious hall running through from the front to the back piazza, is based on the design of a fine ante-bellum country home belonging to the owner's grandfather. The formal room arrangement includes the traditional parlor and a well-segregated kitchen wing. One member of the jury found the fenestration a little crowded, but all agreed that the house was eminently worthy of its magnificent setting


ARCHITECT, F. L. R. CONFER. OWNER, MR. J. T. HANNAN, HAPPY VALLEY, CAL.
The first consideration in the planning of this home was to bring ample sunlight into all the rooms and to take advantage of a fine view down the valley. The mild climate and a spacious lot eliminated the usual objections raised against such an extended plan. The jury found it to be an excellent design of its type, pleasant and livable, well-adapted to the site. One small criticism: the conflict in size and location between the kitchen and dining room bays


## ARCHITECT, W. R. AMON. OWNER, ALEXANDER HOUSES, INC., NEW CANAAN,CONN.

The jury considered this a good example of the traditional plan brought up to date to accommodate modern equipment. The utilization of all available space and the very compact layout of the service area is especially noteworthy. The heater and laundry room on the first floor saves the cost of a cellar, and there is ample storage space easily accessible in the attic. The pleasant character of the exterior is embellished with good traditional detail

## U10



## ARCHITECT, R. J. NEUTRA. OWNER, MR. F. E. DAVIS, BAKERSFIELD, CAL.

The jury agreed that this house did its job in straightforward fashion. They admired the arrangement of the open plan and the interesting play of voids and solids in the elevation. This springs from the architect's use of wide overhangs to shield the large window areas from too much Summer sun. There was criticism raised against the chimney, and also against what seemed to be an overabundant provision of second floor terrace space for this size house


Professional standing is developed by thorough training at Lowthorpe School


Firsthand experience in horticulture is attained through individual work in the large up-to-date greenhouse built with funds given to Lowthorpe by members of the Garden Club of America


Good practical "dirt-gardening" throughout the full growing season is an important feature of the training. Here students are at work in the perennial border of the school

"L"DY-GARDENERS" have always been well-known and much admired as a very hardy, flourishing and colorful species. But it is still unusual and interesting to find that many women are actually turning their talents into a respected professional standing as landscape architects. Going professional is always a serious business and it is only through study and training that the good gardener loses her amateur standing and becomes a full-fledged landscape architect.

The opportunity for this type of professional study was first presented to women by the Lowthorpe School, established in Groton, Massachusetts, back in 1901. The school was founded, logically enough, by an enthusiastic woman gardener, Mrs. Edward Gilchrist Low, and it was through her own efforts and those of her friends and the early graduates that the school became widely known. The gardens created by those who had studied at Lowthorpe attracted such attention that within a few years these women had made an important place for themselves in the profession.

Lowthorpe today is very different from the original school. It has constantly adapted its training to meet the demands of the profession as it has widened its scope during the last thirty years. Women landscape architects who in the early days were called in to advise politely on the use and arrangement of annuals and perennials are now responsible for the development of large estates, parks, playgrounds and subdivisions all over the country.

If the proper environment is an important factor in training, the charming old New England town of Groton should be counted as the first asset of Lowthorpe. Here the school is comfortably housed in an informal group of buildings surrounded by large grounds. In addition to the Colonial house which was the original school, there is now a separate drafting room, modern dormitory, conference rooms, library and a large new greenhouse which was built from a fund given to the school by the Garden Club of America.

The gardens, flower borders, lawns, terraces, trees and shrubs and the valuable collection of plant materials are continually being developed by the students and serve as a perfect laboratory for study and experiment.

The Fall and Spring terms are held at Groton so that the students can have the full growing season in the country with their hands in the dirt, both figuratively and literally. The advantages of being able to build a garden project as planned and watch it develop with the seasons are obvious to anyone who has tried to visualize landscape in the three dimensions.

In the dead of Winter when the gardens are buried in snow, from January through March, the school is held in Boston. Here the emphasis is on the "book and paper" part of the training. Design, freehand drawing and study of the horticul-


In the drafting room at Lowthorpe, students learn the principles of good landscape design. Here they develop their abilities in making working drawings for future clients


The old-fashioned, stylized plan seems most appropriate for this Herb Garden designed by a senior student. The garden was developed on the School grounds at Groton
tural sciences are intensively carried on at this time, and the school is fortunate in having at its disposal the libraries of the Massachusetts Horticultural Society and the Arnold Arboretum, and certain facilities of the School of Architecture at the Massachusetts Institute of Technology.

A glimpse of the actual work involved and the subjects studied is both tempting and suggestive to the practical gardener. The training is planned along three main lines: design and construction problems developed in the drafting room, practical experience with growing things outdoors and scientific study in the greenhouse.

The importance of excellent design is stressed throughout the entire three years of the course. This is studied from the theoretical, historical and practical angles, and it is, of course, linked with practice in drafting, perspective and freehand drawing. The big basic problems of landscaping are handled in courses in geology, topography, road-making, drainage and grading and the social responsibilities of the profession are considered in Community and City Planning.

An intimate firsthand knowledge of plant materials is assured by the special courses on each class of materials and the work in Horticulture and Ecology. Skill in combining plant materials comes from intensive training and trial-and-error practice in Plant Design throughout the course. Since good landscaping bears a definite relation to architecture, the student must understand the fundamentals of both architectural construction and design. And finally, in preparation for the hard realities of dealing with clients and contractors, there are courses in estimating and problems of professional practice.

These studies indicate a rough outline of the process of becoming a professional landscape architect, but they can only suggest the pleasure and satisfaction which come from creating, revising, developing and criticising landscape problems under experienced instructors in the most congenial surroundings. The Lowthorpe faculty is made up of professors from Harvard University and Massachusetts Institute of Technology, graduates of Lowthorpe and a group of wellknown horticulturists.

For the many women who want intensive study and practice in horticulture rather than professional training in landscape architecture, Lowthorpe now offers a special course just in horticulture. No training in design is offered in this course as the emphasis is on horticultural practice and research outdoors and in private and commercial greenhouses. Graduates in this course are prepared to be of valuable assistance in offices of landscape architects as Plant Specialists.


Gracious dignity and repose mark the broad vistas of this large estate which was designed by a Lowthorpe School graduate, Isabella Pendleton Bowen


An imaginary development for the Lowthorpe School grounds at Groton is carefully shown in this scale model which was built by the students under the supervision of two Seniors


This lovely garden combines interesting architectural features with beautiful planting. By Mary P. Cunningham, a landscape architect


Vivid contrasts are the keynote of this dining room in Sloane's "House of Years" exhibition. Dusty black walls are background for white plaster torchères in palm leaf motif. The furniture is of white oak of special design, and the hooked rug pale orchid green with Greek key border. The chairs are covered in zebra stripe linen

## Furr IIlililidith

A review of W. \& J. Sloane's New York exhibition

Decorating ideas ripen before the snow flies. For months we have been dashing from one exhibition to another estimating the harvest which turned out to be a bumper crop. One fruitful field was W. \& J. Sloane's "House of Years" with its two new apartments by Ross Stewart, one done in the grand manner with antiques and especially designed pieces and another smartly built around furnishings of more moderate cost.

The four photographs on these two pages illustrate some of the new ideas in this exhibition where the startling and unorthodox use of color and material provides new highlights in decoration. For example, the dusty black walls in the dining room (shown on the page opposite) act as a foil for the white plaster lighting fixtures, light wood furniture and the orchid green of the draperies and rug. The dressing room at the right has copper rose ceiling and walls to match one wall of the adjoining bedroom. Here the gaily colored peasant decorations and the spacious cupboards add a distinguishing note. The cupboards have a built-in effect but are in reality detachable-excellent for apartment house dwellers who move occasionally. They have various sized drawers to accommodate all the diverse items of a wardrobe. The conical pile of butter-tub boxes with peasant decorations may be used as hampers and hatboxes.


DRESSING ROOM WITH PROVINCIAL CHARM


Sparkling with all-mirrored walls, this very feminine dressing room in the luxurious apartment has a pink ceiling, a blue floor. Glass shelves are stacked with pink towels and a glass Victorian lamp encases a pink ostrich plume. And as a capricious climax, before the mirrored dressing table is a huge candy pink fur pouff


An 18th Century foyer features a copy of an old English paper in blue-green and white. The mirrored panel is flanked by deep plum hangings, and the classic linoleum floor is blue and white. Two tiny Biedermeier chairs each side of the recess show seats upholstered in bright lemon yellow fabric

## Illtar inilet

Decoration keeps pace
with fashion, and two
new couturier colors
brighten a Winter table

"MAYFLOWER", SYMPHONY IN VIOLET, ROSE AND PURPLE

"DRAPE", WITH GRACEFUL SWAGS, FINELY ENGRAVED

Fashion and decoration run side by side in the race for new trends. Fashion sometimes forges ahead, decoration later leads by a length. Decoration, you remember, won the Victorian sweeps, in a brilliant revival of tufted satin chairs, wax flowers under glass, and all the delightful bric-a-brac of that lush period. But won only by a nose, for close upon its heels was fashion, perching pink ostrich tips on upswept coiffures, nipping in waists and spreading wide crinolines.

Now fashion again takes the lead, and the pink and violet wave bids fair to engulf our wardrobes. Decoration follows closely after, and House \& Garden predicts tables like the one opposite, echoing with its deep violet and pink the glowing colors of your newest Paris import and your newest corsage.

A shell-pink cloth spreads its soft, bright color over the table. It is Fallani \& Cohn's sheer Italian linen, finely shadow-embroidered; at Maison de Linge. The chairs were designed for Charak by Tommi Parzinger, talented young Viennese artist. They are American Modern in style, in blond wood, covered in dull pink leather. This soft pastel leather, incidentally, is real news in upholstery this year.

Silver is Lunt Silversmiths' "Festival", a chaste, slim-handled sterling design with delicate floral motif at the edge. At top on this page is a close-up of this silver, showing in detail its slender lines, admirably suited to modern settings. It can be had at Ovington's.

The china carries the color theme of the entire table, Spode earthenware in a late 18th Century design called "Mayflower". It has the typical gadroon shape of Georgian silver, is bordered in pale violet and centered with deep rose and purple flowers. Its unusual coloring and fine drawing make this pattern an excellent example of the dignity and beauty of the underglaze prints found in fine English earthenware. Service plates are shown on the table, and at the left on this page are covered soup tureen, open vegetable dish and platter. From John Wanamaker.
"Drape" is the apt title of the glassware, a new pattern by Fostoria featuring a finely engraved design of graceful swags. The stems are delicately fluted. On the table are shown water, champagne and wine goblets; at lower left on this page are a water pitcher, goblet and seven-inch salad plate. From F. \& R. Lazarus, Columbus, Ohio.

And finally, since this is the time of year when violets are most alluring and can be had in every shop, in a glorious splash of stained-glass color, we have piled the centerpiece on the table with masses of double and single violets, purple and lavender, with pink half-blown roses. They are arranged in a high antique crystal épergne with two low compotes flanking it (only one can be seen here), in fine Waterford cutting. The épergne and compotes are from the English Antique Shop, the violets and other flowers in the centerpiece are by cour tesy of the Florists' Telegraph Delivery.


Violet and pink, smart couturier colors, inspire our charming dinner setting

## ? ? ? ? ? ? ? ? ? ? ?

William Pahlmann, modern Merlin of decoration, conjured up these rooms at Lord and Taylor's in New

York. To date they are the high-water mark in fantasy

"The Leopard in the Drawing Room" this room is titled, for at the far end an ivory-white chest has simulated ocelot doors; patent leather chairs flank it. Gilded Roman helmets, heroic in size, form spectacular bases for the porphyry-topped end tables


Back in the "necklace" room, this exuberant Venetian commode, painted pink and white like a frosted birthday cake. Above it are two intricate, manybranched sconces, once brass, now for fancy painted chalk-white. Constance Spry arranged the bouquet


Is it floor or is it wall? For pickled walnut in herringbone pattern runs right up to the ceiling! Striped canvas covers the two large chests with their gilded iron bases. Beetle green is the color of the other two walls and those blinding side chairs

"The Nürnberg Stove that is a Mural" is the title of this Baroque music room. Facing the trompe $l$ 'ceil wall, a kidney-shaped sofa in tufted white damask, behind it an oval table, with gray granite base, top painted in simulated lapis lazuli finish



Our Portrait living room revives yellow and combines it with green and tobacco brown

Yellow, so long obscured by the more exotic pinks, reds and violets which have held the center of the stage, is in for a revival. And in the charming country living room opposite, sixth in our series of Portrait Rooms, Mrs. Truman Handy, of the New York firm of Thedlow, Inc. has used all the new "tobacco" shades which have begun to make a striking re-entrance, and which you will see more and more this season. There is something fresh and cheering about the whole room, with its 18th Century backgrounds treated with modern clarity and simplicity, with color combinations from the sunny part of the spectrum-ideal for country living.

The wallpaper presents the color scheme and sets the informal and slightly provincial mood of the room. It is Imperial Paper's "Spring Chintz" design and Mrs. Handy has used it above a white dado on three sides of the room. The fireplace side of the room is paneled in white, broken by bookcases. The books are covered with jackets made of marbleized bookbinding papers in colors which harmonize with the rest of the room. From Tamm \& Co.

The furniture was chosen by Mrs. Handy for its graceful and modified traditional lines. The sofa group at the right is flanked by a pair of bleached wood chairs, delicately scaled. All the upholstered pieces in the room are made by Mueller. The occasional tables-coffee table, tier tables, window table with sunken plant holder, the sofa tables and desk (not shown) -are from Imperial Furniture's Jeffersonian group. They are in a soft, old world mahogany finish.

The floor is covered with a tobacco brown pebbly frieze carpet from Masland. It reaches from wall to wall and is bordered in a double row of multicolored wool fringe, in green, brown and white, arranged to stand up around the baseboard.

The draperies are a heavy white fabric, bordered in yellow silk and looped back on either side of the triple bay window with tie-backs of wide cartridge folds of yellow silk. The glass curtains are shadow-striped ruffled organdie, Kenneth Curtains, from Bartmann \& Bixer. They are draped back with large cotton bullion cords and tassels. The sofa and chairs by the window are upholstered in quilted cotton fabrics. All drapery and upholstery materials are from F. Schumacher; all trimmings and fringe around the rug, from E. L. Mansure.

The lighting fixtures on either side of the fireplace are a pineapple motif in antique brass. These and all other lamps in the room are from Lightolier. The andirons are from the Center Brass Works. Other accessories are from Thedlow.


Faltboating in Germany
Down the Mosel River Toward Coblenz. It is high noon. Wurst and zwieback and fruit are tucked into a canvas sack in the stern of the boat but the girl in the bow longs for a drink. Preferably a drink of Muenchener in the beer garden to the left of the bridge.

The boy smiles knowingly but he does not stop. The boat glides around an immense curve and the ruins of Marienburg Castle glisten on the hilltop. Below, a fisherman is mending his nets. Beside him, two white geese are wabbling uncertainly on the deck of a deserted ferryboat. Without a word the steersman heads across the river to beach the faltboat on a grassy spit. The girl is jubilant to see him pull a bottle of Piesport from his rucksack and follows him up the path that leads to the Cloister ruins of Stubben. There, among the tumbling walls, they pause for a glimpse of the winding Mosel. And then in an old fireplace they roast wurst and Wismer apples for lunch.


Following the Caledonian Canal to Inverness. The father has tied the motorboat to a rock among the rowan flowers. The mother is pleading with young Angus to eat his picnic lunch, to enjoy the aged beauty of Invergarry Castle on the promontory.

Angus watches the postman making his rounds in the village across the canal. He waves to the painter who has just saluted him from a ladder in front of a white cottage set in flowering broom. But he finds it very tiresome to sit in a field of heather and munch a biscuit. He wants to get back to the boat to announce the route: "Enter Loch Lochy!" "Enter Loch Oich!", just like that. There will be more villages to pass through this afternoon. Bigger bridges. Higher precipices. Dogs will bark and white ducks will scatter at the sound of the motor. Finally there will be that one big moment that Angus has counted on. He intends to call "Enter Loch Ness!" and then get right down on his knees at the side of the boat and look hard for the monster.


In and Around the Island of Walcheren. Four Americans in a Frisian scow are ready to lower their sail and motor up to a quay at Middelburg. It is Thursday, market day.

The four yachtsmen step onto the bank and stroll toward the square where peasants from all over Zeeland are gathering for the market. Girls gay in coral and lacy headdresses. Cheese porters conspicuous in straw hats of blue, red, yellow and green. They follow a street lined with Gothic houses, pass a silversmith shop, a pottery, a pretty garden. They watch bright milk cans drawn from one polished stoop to another by fine dogs. The street widens and leads to a wharf. A covey of fishing boats is weighing anchor. The wind is fair. The temptation to get under way is too much for them. Back in their boat, they motor a short distance down the canal. The wide estuary of the Schelde calls for full sail and lowering the winglike leeboards. Ahead lies the North Sea with Holland to starboard and Belgium to port.


Down the Rance River to Saint Malo. Yesterday Jeannot stepped off the Paris train at Rennes. She had pushed her canoe past a succession of arched bridges, past long rows of poplar trees. Kilometers alone seemed important.

This morning it's a different story. The boat drifts slowly with the current. Jeannot watches the Breton housewife spread her white lace coiffes on the bushes to dry. She listens to the untrained voice of a farmer as he sings a Gallic air. A baker passes close to the riverbank wheeling large discs of bread to a nearby village. At the thought of food, Jeannot grasps her paddee. This noon she wants to slip into the vieux port of Dinan. She can leave her canoe, walk up the crooked street of Jérsual and dine royally on lobster ad l'armoricaine in a simple restaurant on the Promenade. Between courses she can enjoy a view of the towers surrounding medieval Dina or of the Rance as it sweeps toward Saint Malo where she will be tomorrow.


Along the East Shore of Lake Geneva. The little steamers that ply through the deep blue waters of Lake Geneva never change. Each year they get a new coat of paint. Each morning they raise a white flag with a red cross to indicate that meals are served on board. Then the pleasant roundup begins.

But the twenty miles from Vevey to Bouveret are never quite the same. After you've memorized all the hotels and villas and churches and mountains, there is still variety in the passengers. There are those who scramble for a front seat under the awning; those who lean over the rail to see Byron's house at Clarens; those who exchange anecdotes as they pass the Castle of Chillon. Waiting for the steamer at Montreux is an English woman in an afternoon dress and a cartwheel hat. Beside her stands a mountain climber from Glion with alpenstock and rucksack. At Bouveret you can stroll along the pier and watch the strong current of the Rhone River as it churns into the Lake.


Among the Borromean Islands on Lake Maggiore. We are at Stresa. The morning sun is drawing the mist off the Lake. And as we settle comfortably on the terrace of the hotel, we mentally hang up a "do not disturb" sign for the day. The sun grows warmer. Then like some bright mirage, three islands loom across the water. We feel the urge to explore them.

We rent a boat down by the pier. A strange piratical craft, part gondola, part scow. We stow a flacon of Chianti in the shade of the rough canvas canopy and get under way. Stresa-its whitewashed houses and Alpine backdrop fade behind us. At one end of the Lake the cupola of a 16th Century church is silhouetted against the sky. Soon we slack sail and nose into the tiny wharf at Isola Pescatori. Fish nets are drying on the beach. Unpaved paths lead to stucco doorways with one or more pairs of rubber fishing boots standing in front of each dwelling. The whole village breathes a simple, dateless existence. From an ancient church in the center of the island we hear the chanting of midday Mass. To the right, at the edge of the Lake is a vermilion colored hotel. And from the open entrance comes the unmistakable announcement that there is fresh fish on the luncheon menu.


Courting that sought-after illusion of space, Mr. Hocking chose soft pink beige tones for the walls, textured draperies and upholstery fabrics of his living room. White fur rugs accent the chocolate brown linoleum floor. The fireplace is almost a room in itself, for those mirrored side panels open, as seen in the top picture, to reveal shelves for china, glass and linen. Lower panels, opening from the side, conceal more shelves


Two commodes in pickled oak stand at each side of the living room doors. Outwardly alike in design, one of them (extreme left) houses complete bar equipment, and the other is a good-sized desk ingeniously fitted with more convenient lower shelves

Grand color combinations-mix them or match them to suit yourself. Enamel-ware is proverbially easy to clean and very spick and span looking. New pots have tight-fitting covers and are shaped to fit electric range units. Black bottoms conduct heat quickly and save a considerable amount of fuel. Good cooks usually demand enamel pots for cooking eggs and sauces since there is no discoloration.

## ALUMINUM

Aluminum pots are made in different weights for different uses, Heavy cast aluminum is just the dish for waterless cooking, turning out bright-colored vegetables full of vitamins. Lighter weight utensils are easy to handle for general use. Cakes and pies can be browned "to a turn" in aluminum pans. There are many special pots in aluminum: asparagus cookers, French fryers and triple cookers.

## GLASS

Looking through glass simplifies potwatching. These clear shining pots and pans are well-designed for use and very easy to clean. This cleaning problem is especially welcome to those who constantly must use hard-water because mineral deposits will not accumulate on glass. Casseroles and baking pans should be used as ovenware, but pots, pans and kettles are safe and dependable for top-stove cooking.

## STAINLIESS STLELL

The selection of stainless steel is a long-term investment that pays steady dividends in good cooking and easy upkeep. This material conducts heat so efficiently that it actually saves both time and fuel. For large kitchens there is a complete selection of big utensils, substantially made for heavy duty. For average use, good stainless steel is now available in various sizes at a new low price.


## POI'shois



# "lail Fondurue" 

## A tempting discourse on

## cheeses together with numer-

ous recipes by Jeanne Owen


THE AUTHOR CONCOCTS A STEAMING FONDUE


MRS. OWEN SELECTED THESE EIGHT CHEESES FOR HER RECIPES

$\mathrm{U}^{\mathrm{t}}$the hilly, narrow, crowded rue d'Amsterdam in Paris, past the Gare St. Lazare-a tiny shop bears the legend h. androuët, maître fromager. (Master Cheesemonger is the best translation-and what a title!) This proud maître lists one hundred and ninety-seven cheeses, their seasons and their vintages. Cheeses from many countries and from all the provinces of France-a list that leaves one in a state of complete bewilderment after reading it and recognizing so few of the names.

Cheese is a serious business with Monsieur Androuët. So serious, in fact, that he will not sell one out of season; or, should a very choice specimen be at its best on a certain day, a card placed in the window announces:-
"This day M. Androuët recommends -_"

A tiny shop it is-dark and cool. A precipitous spiral staircase leads one to les caves where the cheeses are stored and where they may be tasted with the wine that "makes the happy marriage". An equally steep and spiral staircase leads to the floor above and to a dining-room where fondues, cheese dishes, and cheese trays displaying numerous varieties (all properly labeled) are served to discriminating luncheon guests.

For those whose education in these matters is at a standstill there is no need to be ashamed, for there are two gracious young women who will explain everything on the menu without impressing one with the burden of their superior knowledge in such matters; nor is there even a taint of that snobbishness of tone which usually reduces the novice to the level of the earthworm. Should one venture into the unknown and choose a fondue, Mademoiselle with an amiable desire to be of assistance will explain just what it is, how it is eaten-quickly before it thickens or be-
comes stringy-and demonstrate the exact twist necessary in dipping the bread into the molten mixture and safely conveying the very hot melted cheese to the mouth with as much grace as possible. We are afraid this is not a "party" dish.

Here we find la fondue served in all its varieties. The Piedmontaise made with white wine and truffles, the Neuchâteloise to which kirsch is added, and the classic of Brillat-Savarin-which to many of us seems more like scrambled eggs with cheese than a fondue. In fact, Dr. Gottschalk, an erudite gastronome and brilliant writer, points out that M. BrillatSavarin was a philosopher, not a technician, and any recipe that begins by "weighing the eggs" is discouraging even at the very beginning.

When M. de la Reynière wrote in 1803 of the conventional al fresco lunch (known as "pique-nique" to his countrymen), he included, among the delicacies to be packed in the baskets: "chickens, galantines, a fine turkey, a good ham, fruit, macaroons and-cheese for the gentlemen!" Yes, indeed, the ladies might demolish a chicken wing with polite appetite or nibble a sweet, but cheese was food reserved for men.

Times have changed and the ladies need not be timid about confessing a taste for cheese. So la fondue it is and as such we take it. There are endless varieties but suppose we serve the simpler ones first. These cheese dishes are an excellent solution for Sunday night supper and not too much of a chore. Care must be taken in the cooking and remember that intense heat or over-cooking makes it tough and stringy. Always freshly prepared, these dishes must not stand while that extra cocktail is being served.

The variety of cheese in some dishes is a matter of (Continued on page 52)


PAUL STEVENSON, AT BELLOWS, INC., WEIGHS HER SELECTION


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## "Useful Articles Under Five

## Dollars", traveling exhibit

Originating in the Museum of Modern Art in New York, a new show, "Useful Articles Under Five Dollars" is touring the country. It brings vividly before our eyes a new and distinctive art which machine production has created. An art which derives beauty from mechanically perfect finish, absolute functionalism of design, and a delight in the unadorned material itself.

Modern designers have fostered this art. And twenty-four hours a day we thank them for the bright ideas they have put into useful form. For the hook in the spoon handle which keeps it from sliding into the pot. For the electric iron, its plastic handle shaped to our hands. For beetleware glasses which bounce gaily off the hard wood floor and are picked up uncracked!

We praise the convenience, precision and durability of these objects, but seldom, if ever, do we praise their beauty. Part of the exhibition, shown above, reveals how charm and utility can be combined. At top, for instance, graceful vases of Shellflex bend and never break. Cellophane cases keep dust alike from the kitchen mixer and your Sunday hat! Ashtrays, large and small, sacrifice ornament for the weight and clarity of crystal, for the opaque color of pottery. Wire glove and stocking dryers dry faster, are more attractive than old wooden ones. A traveling iron folds flat, saves space. Clear Lucite makes two hangers, one for furs, the other for gowns. A two-handled chopper saves unmeasured "elbow-grease". Earthenware casseroles are fireproof, glow with color. That red rubber dish-drainer, top right, will guard fine china against your heavy-handed Bridget. And many a sigh of vexation is smothered by the screw-top bottle opener!

# The Chirldener's Sialendill' 

Unless you have a greenhouse or plant window, gardening this month is mostly a matter of planning

1The greatest dream-books ever written are seed catalogs. Dream, but don't write final orders without planning garden work for first six months.
9 In your seed and nursery orders, try some of the novelties. Are your fruits old-fashioned? Have you heard that nut-growing is a coming hobby?
7 Repot cactus, using 2 parts sand, 2 loam, 1 crushed pot crocks, $1 / 2$ leafmold, 1 quart bone-meal and 2 quarts lime to a bushel. Water Christmas cactus.
4 Provide passion vine with something to climb, pinch out stray growths. Give vine a cup of manure water and watch for flowering. Spray foliage often.
5 Red spider is as natural on pandanus as fleas on a dog.
J They-the spiders-look like red pepper. Rout them with the full force of your sprayer.
6 Calla lilies are heavy eaters and relish a top-dressing of some house plant fertilizer once every ten days. Their botanical family name is Zantedeschia.
7 Buy roots of French endive and force them in a dark cellar. Fill a box with $2^{\prime \prime}$ of soil at bottom and remainder sand. Keep moist. Plant every two weeks.
0 Any day, when the weather is not too cold to make work0 ing outdoors unpleasant, prune fruit trees. Head back, cut off suckers, let in air.
9 Choose a windless, warmish day to spray fruit and shade trees and shrubs with lime-sulphur or miscible oil to eradicate scale pests. Grapes, too, can be pruned any day now. If you are not experienced at this job have someone show you or study a grape book. Cut back to produce new wood.
The African violet or Saintpaulia resents water on its leaves and consequently should be watered from the bottom. Try some of the new color varieties. Gloxinias can be potted now, using a mixture of 1 part sharp sand, 2 loam, 1 humus, $1 / 2$ dried cow manure and 1 quart of bone-meal to a bushel.
After a heavy snowfall, give the children the job of knocking snow off evergreens. Have them do this before the snow freezes and breaks the boughs.
When geraniums show buds, give them each half a cup of weak manure water. The same potion may be administered to Aspidistras with success. Sawing wood is at once a Winter pastime and exercise and it is not to be despised. Wives should feed husbands well after a day on the wood pile. In the greenhouse make cuttings of fuchsias, heliotropes and Stevias from young wood and give hydrangeas gentle heat to bring on bloom by Easter. If you have never kept a garden record, start one now. Even in Winter the countryside reveals domestic life and beauty which are worthy of note. Another Winter diversion is making a garden scrapbook from magazine clippings. As you read them again you refresh your mind on many a new idea.

19About this time of year garden clubs usually conduct lecture courses and the wise amateur will have many a chance to become rich in garden wisdom. If you are going in for grafting fruit trees, cut the scions now from new wood, tie in bundles, label and store in a cool space till Spring. In stirring the surface soil in potted plants, do it gently. Many feeding roots lie near the surface and shouldn't be gouged out.
Inspect the garden for low spots that evidently need drainage and make a note to supply it when the ground is open. Paint garden furniture. Bring single tulips into a warm place now to begin forcing. Oxalis bulbs can also be given sunlight, plenty of water and a modicum of fertilizer.
24 About this time Christmas poinsettias drop their leaves and flowers fade. They are going to rest. Put away in a cool place and repot next Spring. If your plant window begins to look a little bleak, invest in a couple of Primulas which the florists are displaying now. Try Primula sinensis. And if you determine to keep these Primulas for a long time, water them from the bottom every day and keep them from direct sunlight and heat. Willows, poplars and lilacs are desirable locations for borers. Inspect these trees and shrubs and cut off infested branches of willows and poplars. Set children the task of keeping the bird stations wellstocked with food. Even rabbits may be lured from gnawing hedges by fruit scraps. Lily-of-the-valley pips can be forced into flower within two weeks. Plant 20 in a $6^{\prime \prime}$ pot and keep warm and dark until shoots are $3^{\prime \prime}$ high.
Inspect dahlia tubers and gladiolus corms. Remove rotted parts and dust cut surfaces with sulphur. Try testing seed on blotting paper for germination.
3 A subject for your meditation on this last day of January might be to the effect that although gardeners have three patron saints, no flowers are named for them. These worthy patrons are St. Phocas and St. Fiacre and St. Dorothea. Here is a chance for our novelty hybridizers to gain immortality!

## Family or Formal -

 This eloup strikes a happy note!
## "VERSATLE"

 is the word for Campbell's Cream of Mushroom.Smooth as a silken symphony, welcome as an oft-repeated thematic melody, it is equally popular for parties and for the family's regular meals, guests or not.

When it comes to the table, wisps rising from its fragrant depths, there is no denying its regal appearance. It has the look of luxury. Your spoon confirms bright expectations, and you murmur, for want of a better word, "Delicious!"
into farm-sweet cream, so thick that it will hardly pour, go lots of ter der, tasty mushrooms to impart their distinctive flavor. Dainty slices are then added, to give the final touch to as gay a dish as you could hope to see. Here is truly royal fare. Why not have this soup soon for luncheon or dinner?

COOK FOR THE
RED.AND.WHITE

CREAMOFMUSHIOOM


TO BUYERS and business executives of department stores, gift and specialty shops, this message is of particular importance.

At the coming Spring Trade Fairs - to be held in Leipzig, Germany, March 5 th to 10 th - more than 9,500 exhibitors from 34 countries will display the latest offerings and newest creations in every conceivable line for your inspection. Your own particular line will be completely covered so that your attendance will enable you to know what's new, six months ahead of your stay-at-home competitors.

Advance indications already point to an attendance of more than 305,000 buyers and executives from 72 countries. Most of these men have attended Fairs in Leipzig before. They return each year because they know from experience the competitive advantages to be gained by regular attendance.

You, too, will find a visit to the Fairs most profitable. If you will write on your business or professional letterhead for Booklet No. 38 and tell us the lines in which you are interested, we will be glad to show you what the Fairs have to offer you ... your business. Your inquiry involves no obligation. Just address Leipzig Trade Fair, Inc., 10 East 40 th Street, New York.

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## A DECORATOR REMODELS

Mrs. lucy drage, well-known Kansas City decorator, bought this little house some twelve years ago, but its history goes back much further than that. Tradition has it that the original house on this site was built by a retired Swedish farmer about fifty years ago But after three remodelings (the most recent one is pictured below and opposite) there is little of the original house still remaining intact.

Extra rooms have been added, existing rooms have been divided and windows have been enlarged, so that a once undistinguished house has been con-
verted into a most individual home, surrounded by a little garden and neatly enclosed by a picket fence.

The garden itself carries through that feeling of artistic cosiness so consistently evidenced throughout the house. A striking wrought iron pergola originally surrounded an elevator shaft, and was designed by the late famous architect, Stanford White.

This is typical of the interesting details in both the house and garden, each contributing to the creation of hat individual charm which is always the mark of a real home.


Before. A simple little house ready to have its face lifted


After. The dining room has had a glass brick bay added and the kitchen window beyond has been fitted with a modern casement. Mrs. Drage has been wise enough to retain untouched the neat white-painted exterior, only making those changes necessitated by the interior alterations. On the second floor is a studio apartment topped by a small private tower

A DECORATOR REMODELS


Before. The living-room-to-be is ready for the plasterers


After. The metamorphosis is complete. Firelight glints softly on the peach and coral rozes in the brown cretonne covers. The flames are reflected a gain in the pale peach carpet before they strike more sharp y against the coral velvet hassocks. And the sunlight dances brightly on the lemon yellow walls


Before. The kitchen has old equipment, is poorly lighted


After. It is revivified with modern equipment and a new window. More than this, ur der Mrs. Drage's skilled direction, it has blossomed out in a Swedish color scheme of dull faded pink and rose, soft g een, yellow and just a dash of vermilion. There is Swedish china on the blue shelves, and a striped runner gives special character to the linoleum floor

## How to Cure

MCold Wouth Bedroom

## by Crawford Heath

HAS it ever occurred to you what scant protection the walls of your you and Perhaps, you'venevergivenit a thought. Yet, I'll wager that your house has one failing in common with most housescold rooms that simply won't heat up as they should-drafty rooms that are as uncomfortable as they are unhealthy.
If your house has been built several years, you are apt to place the blame on your antiquated heating system. If the house is relatively new, you begin to wonder if you got what you paid for
In a majority of cases, the culprit is none other than Mother Nature herself. If you've ever tried to warm yourself before the open hearth of a drafty cottage on a cold fall morning, you have an exaggerated picture of the competition most heating systems encounter every winter day!


Far-fetched? Not at all. If your house is a conventional building, all that stands between you and the great outdoors is a $3 / 4^{\prime \prime}$ layer of plaster, held in place by some form of lath . . . a four-inch hollow drafty air space . . . a thin layer of sheathing ... and, nailed to that, an even thinner ing ... and, nailed to that, an even th
coating of shingles or clapboards.

## Causes of Heat Loss

During the winter, the wall spaces around your house fill with cold air. Since plaster is porous and transmits heat, the warmth of your house seeps through into these air pockets. And what is worse, the more the wind blows, the faster this whole wasteful process occurs-one of the chief causes of cold, drafty rooms.
Now let's look in your attic. All that usually divides house from sky is a thin veneer of shingles. Since warm air rises, the heat from your rooms is sucked into the attic space and, again, vanishes into the cold air above.
In summer, the process is reversed. As the sun beats down on your walls

and roof, they heat up quickly-often to $150^{\circ}$. This heat seeps through the hollow wall and attic spaces into your rooms. At night the stored-up heat escapes very slowly. That is why it takes so long for your rooms to cool off. And what can you do about it?

## Keep Heat Where It Belongs

 Fortunately, Mother Nature has also created the cure-a fluffy substance developed in laboratories and blown from molten rock out of man-made volcanoes - Johns-Manville Rock Wool. It is fully described in "Comfort that Pays for Itself," an interesting brochure-yours for the asking. As the ideal insulating material for walls and attics, with its millions of tiny air cells, J-M Rock Wool is an efficient barrier to the passage of heat or cold! The surest cure for cold rooms.More houses are insulated with J-M Rock Wool than with any other product of its kind
As pioneer in the business of curing cold houses by means of a unique yet simple method of blowing the Rock Wool through a hose into empty attic and wall spaces, Johns-Manville is equipped, from the standpoint of products and experienced service, to bring you year-round comfort that pays for itself. J-M Insulation saves up to $30 \%$ of the usual fuel costs, reduces summer heat up to $15^{\circ}$. Why not let J-M Rock Wool Home Insulation stand between you and the weather?



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WHIIII IIIIIT HIHETI

## IIIEES AII FOODS

Notes on a wine cellar and what to eat and drink"a department written by the Editor-who is also<br>President of the New York Wine and Food Society

Definition: In England the frequent halting for refreshment is given the unlovely name of "pub-crawling". In Northern Italy, so Walter Starkie explains in his "Waveless Plain", the phrase to describe the action of a wanderer with a palate for varied wines who goes from tavern to tavern tasting the mellow vintages of Lombardy is called -curiously-"shadow-chasing".

Punch for New Year's Day. Instead of the orthodox Ol' Southern Gentleman's Egg Nog, why not kick over the traces on New Year's Day and offer your guests something different? Say Brandy Punch. The following recipe for Brandy Punch, which makes a libation both subtle and potent enough to please all hands, is calculated for a crowd. It can be made in smaller quantities by reducing the ingredients. These ingredients are: 3 quarts of Brandy, $1 / 2$ pint of Jamaica Rum, 1 gallon of water, the juice of 6 lemons, 3 oranges sliced, 1 pineapple pared and cut up, 1 gill of Curaçao, 2 gills of raspberries, Falernum to taste, and ice. Mix the Brandy, Rum and Curaçao. Add the water, ice, Falernum, lemon juice and fruit. Let it stand and serve very cold.

Apropos of this New Year opener, here are a few general rules for the proper making of punches. When cold punch calls for water, add it first and the other ingredients afterward. Even sparkling water should be added first. The other ingredients-the spirits, the fruits, et cetera-should be mixed 3 or 4 hours beforehand and allowed to blend. In making hot punches, add the hot water or hot tea last.

Orange Bread. There may be better foods in the world, but Orange Bread can deservedly take a place in the top flight. And, lest you have missed it, here is the recipe for one loaf: I cup of wholewheat flour, 1 cup of white flour, 2 cups of bran, 2 tablespoons of baking powder, 1 of soda and 1 of salt, $13 / \neq$ cups of sour milk, 1 egg wellbeaten, 1 cup of prepared orange. The prepared orange is made by grinding up the peel as it is after the juice has been extracted (a good by-product from the breakfast orange juice). To one cup of peel add 1 cup of sugar and $1 / 2$ cup of water. Let these simmer an hour. The loaf should be baked 60 to 70 minutes in a moderate oven.

Caribeean Cocktall. When two or three Caribbean wayfarers are gathered together, they eventually fall to talking about what drinks they have enjoyed and when they recount these libations, they invariably come around, with much nostalgic lip-smacking, to the Queen's Park Hotel Super Cocktail as it is served in the hotel of that name at Port of Spain, Trinidad. Here's how it's made: Fill a shaker half full of crushed ice and add $3 / 4$ cocktail glass of Jamaica, Barbados, St. Croix or Demerara rum,

4 dashes of grenadine syrup, 4 dashes of lime juice and $1 / 2$ liqueur glass of Italian vermouth. Shake well and serve.

More On Bacon. A note on bacon in these columns a couple of months back drew from a Chicago gourmet the reminder that I hadn't written a panegyric on Canadian bacon. True. Canadian bacon deserves a special place in the realm of good eating. It shouldn't be made commonplace by eating it every day. It should come to the breakfast table occasionally and unheralded, like the toot of an English horn in a monotony of muted symphonic strings. Broil it slightly, of course, and serve as the perfect accompaniment to scrambled eggs and toast. And if with the toast comes along a jar of bitter (real bitter) orange marmalade and coffee freshly made, then that breakfast will be remembered for many days.

Madeiras. Some one has asked, "Tell me in a nutshell all about Madeiras." It would have to be a Gargantuan nutshell to tell all, and even then some would dribble over the edges. Madeira was so closely associated with fine 18th Century American living that it seems a pity to let this enchanting vinous heritage be forgotten.

First of all, Madeira is a fortified wine and has been fortified since about 1750 and, since fermentation is retarded in fortified wines, young Madeiras were sent on sea voyages to mature them. In many instances, Madeiras were known by the names of the families who imported them. Thus Rainwater or Habisham was so named for a Savannah family and to this day a light dry type is so called. Gradually the names Sercial, Boal (Bual) Vidonia and Malmsey became fashionable-the names of grapes grown in Madeira from which the wine was and is blended. In one process Madeiras differ from other wines: the new wine or Vinho Claro is treated with heat from $100^{\circ}$ up to $160^{\circ}$, after which it is called Vinho Estufado. After being racked and rested, it is called Trasfugado Vinho, at which point it is fortified and passes into the state called Vinho Generoso. Finally the various Vinhos Generosos are blended and the finished product left to mature.

Bual Madeira is often served for an apéritif; with soup, a Sercial; at the end of the meal, a rich type. Between the dry Sercials and the rich Malmseys can be found a varied range of wines to please an equally varied range of tastes. In the kitchen, Madeiras serve a great diversity of purposes: the making of sauces, the flavoring ot soups and Newburgs, and the enlivening of desserts.

Negus. In old books you read about Negus. This was Port or Sherry mixed with hot water, lemon and spices. It was invented by Col. Francis Negus who died in 1732.

Richardson Wright


## mas

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taste. A mild American Cheddar; a sharper cheese, the English Cheddar; a more mature, the Italian Provelone; and Parmesan. For the chafing dish, prepare all the ingredients and put them on a tray for the dining room table. Stir all cheese dishes with a wooden spoon.

## tomato fondue

Skin and remove every seed from two medium-sized ripe tomatoes. Chop the "meat" of the tomato very fine. Put it in a small dish and stir in half a teaspoonful of dried sweet basil. (If you are among the fortunate who have the basil growing in pots on the window sill, cut up six or eight fresh leaves and use that instead of the dried.)

Rub the chafing dish with a clove of garlic, then melt two tablespoonfuls of butter in the dish and when the but ter begins to bubble-do not let it get brown-add the tomato. Simmer it in the dish for six or eight minutes, add paprika to taste, and half a wine glass of dry white wine. No salt for the present as the cheese may be sufficiently salty. After the mixture has simmered once more and is well-blended, add two cupfuls of freshly grated Cheddar cheese. Keep stirring and when the cheese is melted and well-blended with the tomato mixture, serve very hot on toast in individual plates. This will make four servings.

## tante marie's fondue

Melt two tablespoonfuls of butter in the chafing dish. Add two scant tablespoonfuls of flour and blend well. Slowly add one cup of milk and stir constantly as it thickens. If too thick, add a little more milk. It must be the consistency of thick cream. Add paprika and a pinch of cayenne. Two cupfuls of freshly grated cheese, one of Parmesan and one of Gruyère, adding the Parmesan first-the Gruyère may get stringy if cooked too much. Do not let it boil after the cheese is added but keep it just hot enough to melt the cheese. Then add yolks of three eggs mixed with three tablespoonfuls of cream. Keep stirring till quite hot, and as a final touch, put in a pinch of fresh. ly ground nutmeg. Serve in heated ramekins with small cubes of toasted bread which are dipped into the fondue to be coated with the cheese by the individual guests.

This recipe serves six and must be well-timed and made with care.
we quote the classic fondue of brillat-savarin
"Take as many eggs as are required for the number of your guests and weigh them; a piece of good Gruyère weighing a third and a piece of butter weighing a sixth. Break and beat up the eggs in a casserole, add the butter and the cheese grated. Set the casserole over a brisk fire and stir with a wooden spoon until the mixture is suitably thick and soft. Salt, or none, according to whether the cheese is more or less old, and a strong dose of pepper. Send for your best wine, and let the same be roundly quaffed-when you will see marvels."

SWISS FONDUE
For those who wish to experiment in regional cooking:

Switzerland, the home of Gruyère and Emmenthal, looks upon this robust dish as the perfect midday meal.

To serve in the real Swiss fashion, put the spirit lamp in the center of the table and the fondue in an earthenware casserole and let each person dip his toast on a fork in the community dish. It becomes a game; any one who loses a piece of toast in the dish pays for an extra bottle of wine. Very informal.

One-half pint of cream or dry white wine. Two tablespoonfuls of butter. One-half pound of Gruyère (or Swiss) cheese cut in cubes. Put the cream and butter in a pan with the cubes of cheese and stir till the cheese melts and bubbles. Add beaten yolks of two eggs if cream is used. If white wine is used add a teaspoonful of kirsch.

Keep it hot on a spirit lamp and eat quickly as the cheese is apt to toughen if left standing.

## welsh rarebit

The rarebit is sure to rear its head whenever a collection of cheese recipes puts in an appearance. It is an old favorite and joins the procession of egg-nogs and fruit cakes in the number of traditional recipes.

Melt one pound of freshly grated cheese-mild or sharp according to taste-with two tablespoonfuls of butter in the top of a double boiler. When it begins to melt add slowly, stirring constantly, half a glass of good ale. Blend it carefully with the cheesethen add paprika, a generous pinch of dry mustard, and when the mixture is creamy, add two egg yolks that have been broken and mixed with a little ale. When very hot, serve on slices of toast arranged on a warm platter.

This can also be served in individual egg dishes and put in a hot oven for a few moments to brown. This recipe will serve six.

## monte cristo sandwiches

These may be cooked at the table in a chafing dish as well as in a skillet over the stove, and will keep the hostess up to the minute with the party.

Prepare thin slices of white bread, well-buttered. Put a slice of cooked ham and one of cheese on a piece of the buttered bread. Then a piece of the buttered bread on top and press it down. Trim the edges and cut into narrow sandwiches. Put them on a plate and have ready two well-beaten eggs to which have been added two tablespoons of milk, salt and paprika. When needed put sufficient butter in the chafing dish (or skillet) to fry the sandwiches. Dip them in the egg mixture, coating both sides, fry in the butter-the ham side first as the cheese must melt last. Cook these as they are wanted and serve immediately on a hot plate.

## anchovy cheese canapés

Provide two six-ounce packages of cream cheese. Mash with a silver fork (Continued on page 53)

## "LA FONDUE"

(CONtINUED from page 52)

and add two egg yolks. Mix well and add one small white onion, grated. $\mathrm{D}_{0}$ not chop the onion as there must be no small pieces in the mixture. Stir in two teaspoonfuls of anchovy paste and cayenne to taste. Spread rather thickly on small rounds of toast, heaping toward the center. Put the cheese-spread rounds of toast on a baking sheet and place it under a hot broiler. Watch carefully. They must rise or puff slightly and come out a light golden brown.

These can be varied. If the anchovy paste is not to one's taste, add two tablespoonfuls of a sharp cheese to the creamy mixture-grated, of courseand finish as above.
ham rolls
Ham and cheese always make a happy combination.

Fry in butter two small white onions, finely chopped. Add one tablespoon finely chopped parsley, half a cup of toasted bread crumbs, half a cup of minced ham, and half a cup of freshly grated Parmesan cheese. Season to taste with Spanish paprika which is sweeter than the Hungarian. No salt-as the ham and cheese will be sufficiently salty. Bind all this with two egg yolks to which have been added two tablespoons of milk. Divide in six parts and spread the mixture on six slices of cold boiled hamthen roll each slice. Place them very close together in a shallow baking dish, cover with cheese sauce and bake till very hot. Sprinkle with buttered bread crumbs and put for a moment under the hot broiler before serving them.

## cheese sauce $\AA$ la stisse

One tablespoon of flour mixed with two tablespoons of melted butter. When slightly cooked add half a pint of sour
cream-and then three tablespoons of grated cheese. A sharp cheese is best. Remove from the fire and beat in thoroughly one raw egg yolk.
hot cheese canapé southern style
Six strips of broad Virginia bacon cut in half and fried evenly till crisp. Set aside on paper napkin to drain. Four thick slices of luscious ripe toma-toes-the center slices-rolled in Virginia white water ground corn meal and fried in the bacon fat. Pepper to taste and place cooked sliced tomato on rounds of toast; then three of the short strips of bacon on the tomato. Top with a fairly thick slice of American Cheddar cheese and put under the broiler to melt. Serve immediately.

## fromage ì la truffle

For sheer luxury, if you are giving a buffet supper and would like to go the reputed gourmets one better, try truffled cream cheese.

Three six-ounce cakes of cream cheese slightly salted and mashed with a silver fork. Add half a cup of heavy cream very slowly, beating it in with the fork.

Three large truffles peeled, sliced and cut in strips. Fold the pieces of truffle in the cream cheese, being careful not to break the truffle into bits. Pile high in your most beautiful glass dish and leave in the refrigerator till needed. Prepare this at least three or four hours before it is needed in order to let it harden a little and allow the perfume of the truffle to permeate the cheese. Serve very thin Romany wafers with this. A dry chilled sherry or a chilled Moselle as an apéritif goes beautifully with this cream cheese and adds to a very unusual dish.

## HOUSE \& GARD:N'S BOOKSHELF

Flower and Fruit Prints of the eighteenth and early nineteenth centuries, their history, makers and users, with a catalogue raisonné of the works in which they are found. By Gordon Dunthorne, M.A. Chicago : Donnelley.

During the past five years the interest in flower and fruit prints has grown from an artistic curiosity to a widespread cult. There always were a few appreciative souls to whom the plates of Andrews and Mary Lawrance and Redouté were precious works to collect and have about them. Then decorators took up flower prints with ever increasing enthusiasm. Today scarcely a room in good taste but exhibits some examples of this art. And now the cult reaches its apotheosis in this superb and scholarly book by Gordon Dunthorne, long recognized as the leading authority on this subject.

Mr. Dunthorne has been generously open-handed with both his learning and his presentation. His "Flower and Fruit Prints" will stand for many years to come not alone as the definitive work on the subject but also as one of the most beautiful examples of the bookmakers art ever produced in this coun-
try. No economies have been permitted, no corners cut. Here is a book as beautiful in itself as the prints it extols.

French prints inspired designs for wallpapers, toiles and chintzes. English prints were more botanical and served more as examples of the graphic arts and as records of the plants cultivated in England. They began in 1720 with John Martyn's "Historia Plantarium Roriorum", which contained 50 colored mezzotints, each dedicated to some wellknown gardener or botanist. Eight years later came Robert Furber's series-a catalog in the grand manner, the plates of which were copies by artists and carvers and lady embroiderers, and those who found painting water colors to be a genteel art.

The French, it seems, did not produce any botanical prints until the last quarter of the eighteenth century. Italy produced only one, a set of eight large folio volumes containing 800 plates which took 21 years to publish.

The eighteenth century and the first quarter of the nineteenth saw a constant spate of flower and fruit print books, and books teaching the art of painting flowers and fruit. Mr. Dun-
(Continued on page 56)


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## THE BOOKSHELF

thorne is particularly happy in describing these. He also shows how these artists revived dried flowers so that they could be faithfully painted.

The French print-makers all stemmed from Spaendonck-flower painter at the Jardin du Roi-Redouté, Turpin, Pointeau and Madame Vincent. They used the stipple engraving process which Redouté brought to France from England. Redoute's work reached its zenith in "Choix des plus belles fleurs", 1827 which contained six famous camellia plates. Prevot's plates, some of which together with other famous English and French plates, appeared in House \& Garden and were made primarily for china and fabric designs.

One excellent chapter is devoted to Dr. Robert Thornton and his "Temple of Flora", one of the most ambitious of the English print books. Another discusses Samuel Curtis' "Beauties of Nature" and his rare monograph on camellias illustrated by Clara Marion Pope, for which 70 plates were projected but only 30 finished-to our great loss. Mr. Dunthorne describes how to tell the good Thornton plates from the poor. His chapter on the various techniques employed by the flower-print artists is a schooling in itself.

The second part of the book is a catalog of all eighteenth and early nineteenth century works in which flower and fruit prints are found with descriptions of the characteristics of each fruit, artist, publisher and engraver. The thoroughness of Mr. Dunthorne's researches is indicated by the fact that this section contains no fewer than 30,000 identifications. It will prove invaluable for collectors and students.

It is difficult to disagree with Mr. Dunthorne or to find him missing a point. The notes on nature printing, drawing, books and periodicals are of more than passing interest. He suggests that Robert Sayer's "The Florist", which appeared in 1760 with 60 plates accompanied by instructions for coloring them, was the first of these drawing books. We wish he had considered Crispin de Passe's "A Garden of Flowers", 1615, which was a color-it-yourself publication. Also, it might have been well, apropos of nature printing, to have remembered that Jane Colden's "Flora", the earliest American botanical manuscript, was illustrated by nature printing, which her father, Cadwalader Colden, described in his letter to Gronovius in 1755. Another description of it was written by that curious and picturesque physician-botanist, John Coaksley Lettsom. And did not William Curtis, founder of the Botanical Magazine, find his daughters of great help in making water color flower studies for the early plates?

This superb book is illustrated with 37 plates in color and 42 in black and white which, alone, would cause it to be prized by all who find delight in these prints.
Editor's note. The following corrections in credits and prices are from Section II of the December Issue: P. 13. The crystal breakfast tray is from Benduro and was designed by Paul A. Lobel. P. 15. The sterling shell by Gorham retails for about $\$ 30$. P. 19. The star-studded tablecloth is from Personality Decorating Co. P. 34. The poker chips are from Mark Cross.


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## The Gardener's Yearbook, 1939 <br> COPYRIGHT 1938, THE CONDÊ NAST PUBLICATIONS, INC.

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In ground that has been worked before, use a digging fork.


Slant the spade and you cheat the soil. Drive it straight down for a thorough preparation.


If the soil is rocky, you must break it up first with a pick.


In special beds, layer compost or peat through soil and mix.


Hardpan at the bottom must be loosened thus with a spade.

# The soil as you find it, and how it can be changed to serve the demands of many kinds of garden plants 

THE good gardener looks at the earth first. Upon it depends much of his success with plants. He looks at its color. Has it a greenish cast? Then it evidently is sour and needs lime. Is it clayey and in lumps? Then it needs to be loosened by deep digging, drained by sand and opened by manure. Is it sandy? Then it must be bound by manure or peat moss.

This much he sees at a glance. But there is more to see. An alert gardener looks into the chemical composition of his soil. An analysis is made with a soiltesting set, which indicates the degree of acidity or alkalinity of his soil, upon which figures he calculates how to correct the condition and alter his earth to suit the needs of his plants.
the soil plants need. The majority of cultivated flowers, shrubs and vegetables thrive best when growing in earth that is neutral in its chemical reactions and slightly alkaline through the presence of lime. Should the soil test indicate an acid condition, then correct it by adding slaked lime.

If you want to convert alkaline soil to acid, dig in oak leafmold, soil from beneath pines and laurels, or sprinkle the ground with aluminum sulphate at the rate of one-half lb . to the square yard. The plants requiring acid soil are the broad-leafed evergreensazaleas, laurels, leucothoe, rhododendrons-the heathers and a large number of our native woodland flowers, including arbutus and lady-slippers.

In general, however, the gardener's problem is to keep the soil neutral. His soil must contain nitrogen, phosphorus, potash and lime, each of which contributes to the well-being of plants.

Nitrogen, the most valuable element, stimulates vegetative growth. Its quickest acting form is nitrate of soda. Phosphorus, the second essential necessary for most vegetable and flower crops, is supplied by basic slag, ground phosphates and bonemeal, each of which is slow acting. Potash, given by a muriate of potash and wood ashes, is essential for the root crops-beets, carrots, turnips and such. Lime supplies calcium essential to most plants and is often washed out of the soil by rain. It also quickens other soil substances into activity. It is usually applied in the form of a dusting of ground limestone.

FERTILIzERS AND COMPOST. Some fertilizers both build up the texture of the soil and add to its chemical content. Barnyard manure, for instance, adds to the texture and gives certain amounts of nitrogen, phosphoric acid and potash. Its usefulness has never been superseded. Commercial fertilizers, on the other hand, accomplish their purpose and yet add nothing to the texture. We cannot expect everything to come out of a single bag, but in well-balanced commercial
fertilizers we do find the foods essential for general plant growth for at least one season.

The soil can also be enriched by planting it to a cover crop of vetch, rye, soybeans or buckwheat which is then turned into the soil to rot, thus adding both texture and certain chemicals, especially nitrogen. The same and more is given by compost. You can tell a good gardener by his compost pile.

A compost pile is not a family dump. It is not the suitable disposition for thorny rose cuttings, branches of trees, broken china and the general refuse from the house and the garden. The ideal compost pile is made by building up alternate six-inch layers of sod and manure to about five feet high, six feet broad and as long as materials allow. A sprinkling of a complete fertilizer or superphosphate is added to each layer to help decomposition. Any vegetable matterexcept diseased leaves and stalks which should be burned-can be layered in this pile. Lacking sods, leaves wet down and covered with soil, together with other garden refuse, will compost easily, although oak leaves, which are acid, should be composted alone. The rotting of grass cuttings and leaves can be speeded by a patented composition. In making a compost pile, as the little illustration on the opposite page shows, leave a basin in the top. This catches rain water and keeps the pile damp. In dry seasons water the pile. Cover its slanting side with soil to prevent leaching. To stop objectionable odors, sprinkle over the pile a dusting of acid phosphate.

Turn the pile twice a year so that the various elements are well-mixed. By the second year, decomposition and mixing have reached the ideal stage and the finished product can be dug into beds and borders or screened and raked into surface soil.

HUMUS. Gardeners are always talking about humus. What is it and what does it do to the soil? The abovementioned compost heap is the most fruitful source of humus, which is nothing more than rotted vegetation. It supplies both food and soil texture, the latter by making the soil spongy so that it retains moisture. Peat moss does the same, only it does not contribute food. It is a soil conditioner.

Humus and peat moss, then, are dug into clay soils in order to open them up and supply sponges that will hold moisture. Together with sand and ashes, they will bring a clay soil up to good tilth. To a sandy soil, on the other hand, humus and peat moss add these sponges so that the dampness and food in the soil won't leach away.

You rarely can put too much humus into soil, but, unless the beginning gardener is careful, he is apt to overdo organic fertilizers. Follow the directions. Nitrate of soda is parcelled out gingerly and is put
alongside and not in contact with roots. Don't sprinkle it on the leaves. Bonemeal can be spread at the rate of a pound for every fifty square feet. It should be forked in lightly. Lime is dusted on until the ground is merely powdered with it, and then it is raked in.

Take these precautions because, after all, the plant cannot consume fertilizers in the form in which you apply them. They must be in solution and they get in solution by contact with dampness in the soil.

The easiest assimilated fertilizer is manure water. It is made by hanging a bag of manure-fresh or dried-in a barrel. This tincture is then weakened to the color of tea. Wet the ground around the plants first and then apply the manure water.

SOIL DISTRIBUTION. It is impossible to give a formula for soil conditioning that would be applicable to all parts of the country because in different sections the soil, as it is found, differs radically.

The gardener in the Midwest usually has to condition a heavy clay that is rich in lime. Those who live along the Appalachian Range have part clay and part limestone. The Hudson Valley and much of New England is clay, sand and gravel mixed. Long Island, much of New Jersey, Virginia, and sections of New England such as Cape Cod, have a light sandy soil.

Most virgin, unworked soil, whether in the Hudson Valley or New England, is usually sour and should be enlivened with a cover crop and lime before actual gardening commences.

Indeed, the work one does before actual gardening begins will indicate not only the success of the garden but also the intelligence of the gardener. That leads us to our second aphorism: the good gardener, having looked it the earth, starts digging it.
digging. The amount of physical work concerned in soil preparation for planting depends on the nature and condition of the soil. Gardens that have been built up with manure and compost year after year need only an honest forl ing.

Beds for flowers, especially if they are to be undisturbed perennials, thould be prepared so thoroughly that for several years they will need only surface cultivation and surf ice feeding. This means going down two feet. Pile the top soil on one side, pile the second spit or spade-depth of soil on the other, and get down to what lies beneath. If it is rocky, break it up with a pick. If it is hardpan, dig it deep with a spade and heap some of it on top.

Next, throw into he bottom of the trench top soil, sods and manure and the roughage from the compost pile. Tramp them down. Then more manure and the second spit. Finally the hardpan mixed with a


Why all this talk about soil preparation? To bring food and access to food to the various kinds of roots that will be searching for it. Also to supıly deep anchorage for plants.
large percentage of compost. Thus you are getting the rich soil where the roots can reach the food it contains and you are bringing your poor soil up to where you can improve it. Beds so dug should be allowed to settle for two weeks before planting.

Two other methods of preparing soil all the way down are trenching and bastard trenching. In each of these the excavated soil from one end of a bed is heaped to the other, leaving space to turn over the soil and mix the manure and compost in it. You finally fill the last excavation with the soil from the first. In trenching, the gardener digs down two spits and in bastard trenching only one. But whatever form this digging takes, it is essential that the manure be well-mixed, not merely placed in layers.

When should soil be dug? Wise gardeners do most of it in Autumn. Dig the vegetable garden, say, in late October or November. Leave it rough. During the Winter, snow and ice and rain break down these clods so that in Spring you have merely to condition the top soil by a good raking.

In any garden digging, whether with spade or fork, drive it down straight. To slant is to cheat.
IMPROVING SANDY SOIL. To improve porous, sandy soils, dig out the beds two feet. Remove all gravelly subsoil and replace with this mixture: one-half good loam, one-fourth rotted manure, one-fourth leafmold or commercial humus. Top dress the bed with bonemeal, wood ashes, or a general fertilizer. In Fall, mulch it with four inches of cow manure, leaves and compost which is to be forked in the following Spring when the top surface can be treated with nitrate of soda at the rate of a quarter pound to a square rod.

In clayey soils, gravel and sand are essential elements to add in addition to the mixture suggested.

Soon the gardener learns that certain plants thrive best in certain soils and he supplies them. Roses, for instance, do best in a heavy soil with a preponderance of clay. Peonies and dahlias prefer a light humus soil. Most of the wild iris want moist humus. For sweet peas you can never prepare the soil too deep. For lilies and gladiolus you avoid manure unless it is very well rotted.

Lrve sorl. A soil is "dead" or "alive" according to the available amount of plant food it contains. The plants that are placed in it will prosper or fail accordingly. In preparing soil, we are making an accommodation for roots-for the delicate beard-like roots of cress and bluets, for the stem and bulb roots of lilies, for the rambling rhizomes of tall bearded iris, for the deep-reaching anchors of Oriental poppies. We are setting food where those roots can reach it. We are also air conditioning the soil.


Here are shown the proportions and components of ideal soil together with the aids to make it so. Add missing elements or those necessary to correct the chemical conditions.


Manure or compost should be used generously in the Spring.


Spread the manure evenly and work the soil well through it.


Bonemeal or lime is sprinkled on the soil and then raked in.


One purpose in cultivation is to change the soil's position and supply food to the roots.


Top-merely a dump; bottom, a well-prepared compost heap of sod, manure and green refuse.

# Dust mulches and drainage-Plants for pools and damp spots-Useless and useful watering-Chemical gardens 



In damp spots drain the beds with stones or ashes and sod.


Watering through tiles placed at regular intervals in a border


Flood watering a flower bed with hose laid over a board.


Lawns should be either sprinkled a long time in one spot or flooded to reach grass roots.


A good sprinkler is needed to maintain lawns in dry Summers.

PLants, like some Hollywood stars, live on a liquid diet. Besides sunlight, water in the soil becomes the most important single factor in plant cell structure. It is also necessary because plants like their food in solution. It has been estimated that an average of 400 ounces of water must be supplied to a plant for every ounce of dry material it produces. Supplying water to soil and conserving moisture in the upper two inches of the soil are essential.

Deep digging, as explained before, makes it possible for the fine feeding roots to penetrate the soil in search of moisture and food. Further, moist soil encourages the growth of micro-organisms which break down residues of vegetation and manure into suitable plant food.

A dust mulch, made by cultivating the top soil, serves as a blanket to keep the soil below it damp during the dry days of Summer. This is especially useful in rose beds and in vegetable gardens (see pages 33,38 ) where a scuffle hoe will often save more moisture than a hose can supply.
drainage. Excess of water is just as bad as too little. Consequently, in some sites and in particular beds, drainage is necessary. Lines of tile pipe laid two to three feet below the surface and leading to a low point for outlet or ending in a dry well of stones can drain an entire property. The tiles are laid herringbone fashion to a trunk drain. The purpose is not merely to take away excess moisture from the surface during rains so that water will not lie on top, but also to attract water coming from below which is rising above the natural water level.

In making rose and lily beds it is customary to excavate to three feet, filling the lower eight inches with stones or steam ashes over which a layer of rough rods is laid. Then the soil is piled in above this. Give the same drainage base to paths, thus preventing frost from throwing them out of level.
brooks and pools. Some plants thrive in water itself, some seem to enjoy a seasonal flooding, others want constant dampness at their roots. The lay of the garden and the presence of dampness will determine the plants to thrive in it, unless the owner's purse is expansive and he can afford to make major changes. For example, if there is a brook, pool or spring on the place, here is the ideal spot for waterloving plants. The style of planting should be naturalistic and therefore the best style to copy is a nearby brook and the best kind of plant material to use is that which grows there. Refinements on the bank, such as primrose walks, are a matter of taste.

The other type is the garden pool which, in size and design, is measured by the size and architec-
ture of the property and the owner's purse and ambitions. It can range from a formal pool where aquatic plants grow expansively, down to a barrel sunk in the soil to hold one or two water lilies. It can be cement lined or lined with lead. It can be deepat least three feet to accommodate the boxes for lilies-or be shallow to the depth of three or four inches, in which case it is merely a decorative mirror.
water-loving plants. Those that enjoy water can be divided into the two general groups: water plants or aquatics, and bog plants.

Among the aquatics are: Acorus gramineus variegatus, striped sweet flag from Japan; Aponogeton distachyus, cape pondweed, from the Cape of Good Hope; Brasenia Schreberi, water shield; Caltha palustris, marshmarigold; Iris laevigata, Japanese iris; I. pseudacorus, yellowflag; I. versicolor, our native blueflag; Limnanthemum nymphoides, floating heart; Nelumbo lutea, yellow American lotus; $N$. nucifera, Hindu lotus in its white or pink forms; Nuphar advena, spatterdock; and Nymphae, water lilies, using either the hardy American sorts such as $N$. odorata in white or pink, N. tetragona, the pigmy water lily, $N$. tuberosa, the magnolia water lily; or else the tender hybrids that produce gorgeous shades of purple, blue and pink.

Other aquatic plants to try according to location are Orontium aquaticum, golden club; Peltandra Virginica, arrow-arum; Pontederia cordata, pickerelweed; Sagittaria, arrowhead; Scirpus, bulrush; Typa latifolia, cattail; and Zizania aquatica, wild rice.

Of this list, Japanese Iris seems to appreciate flood water in Spring and up to the time of its July flowering, after which it does not demand so much water. The tender water lilies are planted in boxes filled with rich soil and manure after the frosts are well gone. They are brought indoors and stored for Winter. All on this list flourish in sun.
damp soil plants. Of the foregoing list there can be planted in boggy places the sweet flag, marshmarigold, Japanese iris, common yellowflag and the blueflag, arrowhead and pickerelweed. Additional plants for such locations are: Aruncus sylvester, goatsbeard; Arundo donax; giant reed; Eupatorium purpureum, Joe-pye weed; Filipendulum palmata, Siberian meadowsweet; Habenaria fimbriata, large purple fringed-orchid; $H$. psycodes, the small purple fringed-orchid; Lilium canadense, Canada lily; Lobelia cardinalis, cardinal-flower; L. syphilitica, large blue lobelia; Lythrum salicaria, purple loosestripe; MimuLus ringens, Alleghany monkey flower; Miscanthus sinensis, eulalia; Myosotis scorpioides or palustris, true forget-me-not; Osmunda

regalis, royal fern; Rhexia Virginica, common meadowbeauty; Sarracenia Drummondi, Drummond pitcher plant; and $D$. purpurea, common pitcher plant; Senecio ligularia, groundsel.

Among the irises, besides those listed above, the Spuria section thrives best in damp soil and so do the Siberians, as their roots indicate, and Louisiana iris, I Forresti, Hexagona, longipetala and Verna. Also some of the gentians and most of the primroses and many of the lilies if well-drained.

Perhaps the highest refinement of water supply is the scree, beloved of rock gardeners. Perforated pipes laid beneath a bed of sand and gravel simulate underground alpine water courses in which so many of these higher rock plants thrive.
watering. The watering of plants and lawns falls into two distinct classes-the useful and the useless. While an amateur may think he is being useful when waving a hose over a flower bed in dry times, he is doing little more than refreshing the foliage. To some plants this is necessary, as in the case of newly planted evergreens. And the full force of the hose directed to the underside of Summer phlox will dislodge and discourage red spider.

Useful watering is a slower and more intelligent process. The purpose is to get the water down into the soil, as close to the feeding roots as possible. This means a thorough drenching of the soil. It can be conducted there by long spraying, as on lawns, or for trees and shrubs by making a basin around the trunk into which quite a quantity of water can be poured, or by a water sword (see illustration) or by sinking tile end-up at intervals in a border into which a stream can be run.

Still another method, especially for rose beds, is to lay the hose without nozzle on a board or brick and let the water run from this and spread over the bed. In vegetable gardens either a permanent or movable overhead sprinkling system is provided or else shallow irrigation ditches are hoed between the rows and water allowed to run into them. For lawns use a sprinkler and keep it on one spot until the ground is thoroughly saturated. Better still, you may indulge in one of the patented underground watering systems such as the type shown here.
chemical gardening. The newest phase of gardening is growing plants in tanks of water into which are introduced solutions of chemicals which are readily assimilated by the feeding roots of plants suspended in the liquid. In this method are demonstrated the first and fundamental principles of plant feeding. The future of this style of gardening has many possibilities.

Lefr: Trees and shrubs may be watered with a water sword or else a basin may be left around the trunk into which a quantity of water is poured and rain water is effectively caught.
 by hand. Others are swung mechanically from side to side. In this way a wide area is sprinkled with the least effort.


In this type of water sprinkler both farther spots reached by the fan are watered and also the immediate area alongside the perforated pipe. A strong force of water is required.


Permanent installation for lawn watering consists of pipes laid underground with nozzles set just at the soil level so that they do not interfere with grass cutting or lawn rolling.


For vegetable gardens a permanent overhead watering system is advisable. Like the water fan this type sprinkler slowly swings from side to side until the entire area is well-drenched.

# How heat and light help plants grow - Plants for shady places - Summer mulches - Shade and winter protection 



Transpiration of moisture is a function of leaves aided by sun or artificial heat under glass.


Seedlingsshould be shaded from the sun by slat covers raised above the frame or seed bed.


A house made of cheese cloth to temper the sun's heat and prevent attack of insect pests.


The dust mulch is a blanket to prevent sun from absorbing soil moisture that feeds the roots.


Dust mulches are made by cultivating top soil or laying down a coat of peatmoss or leaves.

So FAR we have seen how earth, air and water play their essential parts in plant growth. With sun, we reach the fourth necessary factor. As with the other three, so with sun-the gardener makes it serve his purpose or else he adapts his plans and work in an effort to thwart its insistent power.

The heat of the sun can be both friend and enemy to the garden. It can parch the soil through evaporation. It can wither plants through forcing excessive transpiration. It can scald in both Summer and Winter. Without its warmth in the soil or a warm equivalent, seeds cannot sprout or growth push upward or leaves acquire their healthy quota of green coloring. The gardener conserves both sun and shade. He plants trees where shade is needed and he cuts them down to let in beneficent sunlight.
transpiration and evaporation. When the sun's heat draws water from the soil, we call that evaporation. When it draws moisture from the leaves of a plant, we call the process transpiration, for leaves transpire through their pores. The humble sun-flower, for instance, is calculated to transpire a quart of water a day and a healthy oak tree's transpiration will run up to tons in one year.

Understand transpiration, and you grasp why it is necessary to cut back the foliage of newly-planted trees on one hand and to shade seedling plants on the other. If the sun has evaporated the dampness in the soil, then the leaf's supply of water is lowered thus diminishing the size of the pores in the leaves and checking transpiration which causes the leaf to droop.

Seed pots and flats are covered with paper to conserve moisture in the soil while, at the same time, sun heat is warming the soil and speeding germination and root growth. When plants reach the seedling stage, they are covered either with cloth or slat frames which temper the heat of the sun.

Plants growing under the glass of greenhouses or frames are apt to become "leggy" unless shaded. On the frames a cloth will provide shade and on greenhouse glass either rolling slats or a spattering of whitewash will have the same effect.

An even more protective method of growing plants is to set them under a tent made of cheese cloth which both filters the sun and prevents assaults of many winged insect pests. Many annuals, asters especially, can be grown superbly under cloth and it will probably be found that roses that bleach in the open sun will retain their true tints under cloth.
summer mulches. In the open garden, where no such comprehensive covering as slats and cloth tents is desirable, the evaporating powers of sun heat are thwarted by mulches. The simplest is the dust mulch.

With a scuffle hoe or cultivator the top two inches of the soil are kept in an open condition thus acting as a blanket to prevent the sun from absorbing the ground moisture beneath the surface.

Some gardeners, having cultivated the soil and cleared off all weeds, then spread a mulch of leaves or grass clippings or peatmoss or buckwheat hulls. In vegetable gardens mulch paper is spread between the rows to save watering and cultivating.

The mulch for strawberries serves a dual purpose. Salt hay is spread over the entire bed in Autumn. In Spring this is rolled back. The soil is cultivated and a fertilizer worked in and then the straw is laid between the rows and tucked under the plants. Thus, when the fruit sets, it ripens on the straw, instead of being spattered with soil.
trees and the house. A house is not a home until its surroundings are planted. A stretch of lawn, groups of flowering shrubs, evergreens for Winter, borders of flowers, and if to these are added trees, then the picture is complete. Apart from their noble or curious shapes, the shade of trees helps materially in keeping a house cool in Summer. They make living in gardens a comfortable habit.

On the other hand, too many trees or trees too near a house can cut off air and cause the house to become dark and damp. A temperate amount of sun and shade is required by all human beings. This must be remembered in planting trees near a house. It must also be visualized when planting them in gardens. The vegetable garden and the berry patch want their sunlight undiluted. Some parts of the flower garden thrive best in semishade and there is quite a list of plants that find almost full shade their normal habitat.

PLaNTS FOR SHADE. The question of shade resolves itself into those plants which will tolerate shade and those to which it is essential.

Those whose structure is such that they desire shade are: evergreens-rhododendrons; Taxus cuspidata, Japanese yew; Euonymus radicans, wintercreeper; Taxus Canadensis, ground hemlock. The solitary all-shade ground cover is Pachysandra terminalis, Japanese pachysandra. Among the perennialsCimicifuga racemosa, Cahosh bugbane; Eupatorium purticaefolium, snow throughwort; Astilbe Japonica, Japanese astilbe; Mertensia Virginica, Virginia bluebells; Myrrhis odorata, myrrh; and Tiarella cordifolia, Allegheny foamflower. The shrubs partial to full shade are: Amelanchier Canadensis, downy shadblow; Hamamelis Virginica, common witch-hazel; Hydrangea arborescens, smooth hydrangea; Zanthorhiza apiifolia, yellow root. The lone tree suitable for the shade of city back yards and city air is Ailanthus
glandulosa, tree-of-heaven. Among the vines we find two for dense shade: Actinidia in all its forms and Celastrus scandens, American bittersweet.

Plants that tolerate shade are much more numerous. Even some annuals-ageratum, alyssum, calendula, nicotiana, petunia and zinnias-will flower without full sun.

Bulbs that either escape shade because they are early Spring bloomers or else thrive in light shade are: Chionodoxa, glory-of-the-snow; Eranthis hyemalis, Winter-aconite; Fritillaria imperalis, crown imperial, and F. meleagris, checkered fritillaria; Galanthus nivalis, snowdrop; Muscari and Scillas in variety and among the lilies a few will tolerate light shade- $L$. candidum, madonna lily; L. croceum, orange lily; L. elegans, hansoni, longiflorum, martagon album and the Japanese speciosum.

Evergreens for semishade are: Tsuga Canadensis, Canada hemlock; T. Caroliniana, Caroline hemlock; Azaleas in variety and Leucothoe catesbaei, drooping leucothoe. The ground covers for filtered sunlight are: Ajuga reptans, carpet bugle; Hedera helix, English ivy; Lonicera Halliana, Hall Japanese honeysuckle; Lycopodium obscurum, groundpine; Lysimachia nummularia, moneywort; and Vinca minor in either white or blue, with Bowles' variety for larger flowers than the common sort.

Of the vines: Aristolochia durior, Dutchmanspipe; Humulus Japonica, Japanese hop; Lonicera Japonica, Japanese honeysuckle; Polygonum auberti, China fleecevine; Pueraria thunbergiana, kudzubean; Wisteria in variety; and the annual vines, Cobaea scandens, in either white or purple, and Echinocystis lobata, mock or wild cucumber.
perennials for light shade. Because of their natural homes, many of the ferns and wild flowers are accustomed to light shade. When they are transplanted to the garden, they should be given the same conditions. Besides these are the cultivated perennials: Aconitum or monkshood, Thalictrum or meadow rues, Dicentra or bleeding hearts, Hosta or plantain lily and Corydalis all in variety; Campanula persicifolia, peachleaf bellflower; single peonies in variety; Phlox divaricata, blue phlox; Phlox Miss Lingard; Tradescantia Virginiana, Virginia spiderwort; Astilbe simplicifolia, star astilbe; Convallaria majalis, lily-of-the-valley; Geranium Ibericum, Iberian cranesbill; Heuchera sanguinea, coralbells; Iris pumila, pumila iris; and I. cristata, crested iris, Oenothera fructicosa, common sundrops; Primula vulgaris, English primrose, and violets in variety.
roses and rock gardens. Because of our hot Summers, we should temper the sun with light shade in many parts of the garden. Roses, for instance, require sun and yet they will grow and flower and their flowers hold their colors if at all times of day they are not subjected to merciless sun rays.

Exhibitors of roses and other flowers who find that the heat of the sun will bring their buds into full bloom before they are cut for the show, shade each bud. An inverted paper cone on a light stake or a Lily drinking cup serves the purpose admirably.

It is also possible to make rock gardens in
semishade. The list of plants for shady rockeries, much too long to reprint here, includes 118 perennials and bulbs and 21 kinds of ferns. Some of these thrive in the ordinary rock garden soil of loam, leafmold and sand and others require a soil with acid reaction, wellfurnished with rotted oak leaves and sand.

Shrubs in shade. The increased interest in flowering shrubs promises to make this form of gardening quite fashionable. In England it has already taken hold. Gardeners inevitably will want to know what shrubs will thrive in semishade. The list includes the cockspur thorn, Crataegus crusgalli; weeping golden bell, Forsythia suspensa; Winter honeysuckle, Lonicera fragrantissima; the common sorts of lilacs; the single and double Kerrias; E. H. Wilson's famous beauty-bush, Kolkwitzia amabilis; Ligustrum amurense, Amur privet; Henry honeysuckle, Lonicera Henryi; the flowering raspberry, Rubus odoratus; Japanese spirea, Spirea Japonica; and Vanhoutte spirea, S. vanhouttei; cutleaf stephanandra, S. incisa; and mapleleaf viburnum, V. acerifolium.

SUN IN winter. Although it may allow him to extend his outdoor work beyond the usual season, an open Winter is not to a gardener's liking. Extraordinarily warm days melt the soil around roots and the succeeding cold hardens it again. This alternate thawing and freezing can work havoc with roots. Many a plant is heaved out. Consequently, in sections subject to such fickle weather, Winter protection is required to keep the ground temperature constant.
winter protection. Either before or after the ground has frozen, perennial beds can be mulched with leaves, peatmoss, salt hay or glass wool held in place by pine boughs or chicken wire and occasional boards. Before this mulch is applied, soft crown plants, such as foxgloves, should have a protection of a strawberry box or light twigs which will prevent the mulch from matting over their crowns and causing rot. Delphiniums can be surrounded by a six-inch collar of coal or wood ashes. The softer perennials in the rock garden are surrounded by stone chips. Over eremuri place a peach basket so that early Spring growth will not be nipped by late frost.

Roses, as will be seen on page 33 are given various protections. Hybrid Teas are hilled to $8^{\prime \prime}-9^{\prime \prime}$ with the soil and the plant itself cut back to that point. Between the hills is placed manure or roughage from the compost heap, which can be dug in the next Spring. Some gardeners use a $9^{\prime \prime}$ wire guard to hold this extra soil. Leaves or boughs or both complete this covering. Standard rose trees are loosened on one side and bent over until the tip touches earth, when they, too, are heaped with earth and leaves. Climbers in extreme climates can be wrapped with cornstalks or layers of heavy paper or burlap. Some gardeners in these unfavored sections bury the canes. However, it is suggested that in less frigid sections the canes of climbers be left to face the elements unshielded. Canker, the disease of the canes, is often attributed to Winter coddling. As illustrated here, broadleaf evergreens are protected from sun scald by slatted shelters or wrapped in layers of soft, light glass wool.


Summer mulching is done by laying down strips of paper between rows in vegetable gardens.


To protect boxwood from scald by the Winter sun, use frames like this or burlap wrapping.


Glass wool is now being used for Winter covering of beds and tender plants in the North.


Glass wool used to wrap a tender shrub. It can be stored in Summer and used for years.


In Fall dig vegetable garden to ridges. Let the Winter sun and other elements break it down.

# The part it plays in the life of soil and plants－How to hedge and stake various plants against destructive winds 



Protect plants by windbreaks， walls，hedges and fences that catch the sun＇s warmth and also shelter tender growths．


On warm days in Winter the cold frames should be aired．


Air as well as sunlight aids the growth of sweet peas．


In tying plants loop the cord once loosely around the stem．

IN the last sentence on the preceding page we spoke of air conditioning the soil．Literally，that is what we do when we dig．We let in air and break up the earth so that more air can penetrate it．

Instead of being a solid，compact mass as some might think it，the soil contains an aggregation of small cavities filled partly with air and partly with water．An average garden soil in condition to make the best plant growth contains $45 \%$ mineral matter， $5 \%$ organic matter， $25 \%$ water and $25 \%$ air．With－ out that $25 \%$ of air the roots cannot thrive．Indeed， a new process of soil preparation is being tried where－ by compressed air is driven deep into the soil not only to break it up，as in digging，but also to aerate it．

AIR AND Leaves．While the tremendous，tireless ac－ tivity of roots and the soil below ground may not be apparent，nevertheless the intelligent gardener is aware of it and，in cultivation he helps all he can to keep this energy alive．He is equally aware of the part air plays above ground．Air forces can be both bene－ ficial and destructive；they can kill or prosper a plant．

Those who garden in cities know how nec－ essary it is to keep the leaves of their plants washed clean．The constant deposit of soot from the air clogs the breathing pores of leaves and they wither and die． Coal gas in the air is sure death to many house plants．

Certain plants thrive better when they are held up in the air．This erect position not only brings them maximum sunlight but also the benefit of free air circulation．Sweet peas are an example；another is climbing roses，like Mrs．Arthur Curtis James．

Air circulation is necessary in greenhouses and cold frames alike．On warm，clear days of Win－ ter the sash of frames should be raised slightly，as illustrated，and in greenhouses ventilators opened．

HEDGES FOR SECTIONS．In addition to affording air to plants，we have to protect some of them from the motion of air．And that brings us to the subject of windbreaks，hedges and walls．

Besides their aesthetic appeal and their use－ fulness in marking divisions of the garden and proper－ ty lines，hedges serve the common sense purpose of protecting plants against wind．Even low hedges af－ ford some protection．For successful growth select hedge material that thrives best in your section．

In New England，western New York and western Pennsylvania use：Ligustrum amurense， Amur privet；L．obtusifolium，Ibota privet；L．O． Regelianum，Regel privet；L．vulgare，common privet； Chaenomeles lagenaria，Oriental quince；Syringa vul－ garis，common lilac；Berberis thunbergi，Thunberg barberry；B．Mentorensis，Mentor barberry；Cratae－ gus oxyacantha or C．monogyna，English hawthorn；

C．crusgalli，Cockspur thorn；Actinidia arguta，bower actinidia；Rhamnus cathartica，buckthorn；Gleditsia triacanthos，honeylocust；Fagus sylvatica，common beech；Carpinus betulus，hornbeam；Taxus cuspida－ ta，Japanese yew；T．media Hicksii，Hick＇s yew；T． media，hybrid yew；Thuja occidentalis，American arborvitae；Pinus strobus，white pine；Tsuga cana－ densis，common hemlock and T．Caroliniana，the nobly formed Carolina hemlock．

In the Middle West and adjacent States where wind deters plant growth，hedges of some sort are es－ sential．Use the following：Caragana arborescens， Siberian pea－tree；C．frutex，Russian pea－tree；Ul－ mus pumila，dwarf Asiatic elm；Cotoneaster lucida， glossy cotoneaster；Rhamnus cathartica，buckthorn； Crataegus crusgalli，cockspur thorn；C．rotundifolia， round－leaf hawthorn；Quercus imbricaria，shingle oak；Ligustrum amurense，Amur privet；L．vulgare， common privet；Fagus sylvatica，common beech； Carpinus betulus，hornbeam；Syringa villosa，late lilac；Lonicera tartarica，Tartarian honeysuckle； Berberis thunbergi，Thunberg barberry．

California furnishes a different and more ex－ tensive list：Berberis stenophylla，rosemary barberry； B．Darwinii，Darwin barberry；Pernettya mucronata， broadleaf pernettya；Escallonia floribunda，white es－ callonia；Quercus ilex，holly oak；Lonicera nitida， box honeysuckle；Ilex aquifolium，English holly；I． cornuta，Chinese holly；Euonymus Japonicus，ever－ green bittersweet；Cotoneaster Simonsii，Simon＇s cotoneaster；Pittosporum tobira，tobira；Cinnamo－ mum camphora，camphor－tree；Raphiolepis um－ bellata，yeddo hawthorn；Photinia glabra，Japanese photinia；P．arbutifolia，Christmasberrÿ；Chamaecy－ paris Lawsoniana，Lawson cypress；Cupressus mac－ rocarpa，Monterey cypress．
other hedge material．For the area from Wash－ ington southward，much of the material recommend－ ed for California can be used，together with the fol－ lowing：Buxus sempervirens，boxwood；Taxus bac－ ata，English yew；Quercus virginiana，live oak； Ligustrum quihoui，Quihoui privet；L．lucidum， glossy privet；L．Japonicum，Japanese privet；Ma－ clura pomifera，Osage orange；Cupressus semper－ virens，Italian cypress．

Along the Atlantic coast is a stretch milder in climate because of the Gulf Stream．It runs from the tip of Cape Cod to Maryland．Here hedge plants that are doubtful as to hardiness in adjacent regions come through Winters unscathed：California privet， box honeysuckle，Japanese holly，English yew and Citrus trifoliata，hardy orange．

The soil of the trench in which a hedge is to be planted should be mixed with loam and manure．

Of the above lists, white pines and hemlocks are best for tall hedges and can be trimmed. The yews are the longest lived. Arborvitae needs tying to protect it from breakage by the weight of snow. It, too, can be sheared to desirable shapes. The hornbeams, beech and hawthorns make thick, intruder-proof hedges, besides being colorful. Honeylocust and buckthorn should be topped to keep the base covered with growth. All hedges should be thick at the base.
walls and fences. English and Continental gardeners appreciate the usefulness of enclosing garden walls much more than Americans. In addition to the privacy they afford, walls give background for plantings, furnish support to espalier fruit and shrubs, provide windbreaks and make sun traps in which tender plants can be grown. Thus many of the Bengal roses that would suffer if buffeted by winds will thrive in the shelter of a wall.

To a lesser degree fences provide protection from wind and they can be architectural, homely in the cottage manner or made of woven saplings in the French style. They are, of course, the perfect support for vines and climbing roses.
trees in the wind. New England's recent experience with a hurricane was an extreme example of what can happen to trees that are not protected against wind. Trees have two sets of roots-anchorage and feeding. Some anchorage roots spread out great distances, such as the elm's, some go straight down, such as the hickory's. Below these are the feeding roots. Consequently, the first rule in planting trees is to see that they are well-anchored. The soil must be watered in around the feeding roots so that no cavities are left.

After this, the tree must be guyed against winds that would disturb the anchorage and feeding roots before they get firmly set in the soil.
wind and branches. Two further precautions against wind are taken when trees are planted. They are trimmed back in the case of small trees so that they won't present so large a surface to the wind. This likewise reduces the amount of foliage to be supported while the feeding roots are getting settled and looking for food. It is also customary to wrap the trunks of newly planted trees to prevent sun and wind from drying the bark. Whether the trees be large or small, they are benefited by spraying with water for the first few months after being planted.

While the average amateur gardener may be able to give proper attention to the planting and aftercare of small trees, very few of them are equipped or capable of handling large trees. These should be entrusted to the tree expert.

Certainly the amateur who is unacquainted with the problems of stress and strain of branches should call in a tree expert when he has large trees. The proper cabling of wide-spread branches to prevent split crotches, the thinning out of excess limbs and the shaping of the tree should all be left to men who make a specialty of tree care.

The time to call in a tree expert is before damage is done. If you have valuable trees the in-
vestment necessary to prevent their damage by wind is a sound and sensible procedure.
staking. The staking of plants is partly a preventative measure against damage by wind and partly an aid to correct growth. In either case it is an art and the average jobbing gardener, unless he has been well-trained, is apt to be inaccurate. The same can be said for many amateurs.

Except in the case of small, newly planted trees, where the supporting stake must be obvious, the art in staking is to conceal the stake.

Begin with the lowliest forms-pinks along the edge of a border. Insert twigs between and around the plants so that the wayward flowering stems are lifted a good distance off the ground.

Go a step higher-peonies. Their natural form is a round-topped fountain. The purpose in staking them is to hold the foliage into a loose cluster, so either wire bands are used or short, lightweight green bamboo stakes and cork.

Dahlias, as will be seen on page 34 , are staked when the root is planted and the main stem tied to this as the stem grows higher. Delphiniums are either raised to one stem which is fastened to one stake or, as the illustration shows, to four, so that side branches can be supported and the plant made to assume a bush form.

Staking tall plants in a border requires skill and an understanding of how various plants grow. Above all things, don't bunch them together so that the flowering top of the plant looks-and probably is-strangled. The slim stems of meadowrue, the loose branching of Speciosum lilies, the tangle of Gypsophila, the husky branches of high zinnias, the spires of hollyhocks and Verbascums, the white fountains of Shasta daisies, the starred stems of Anchusa, the arching stems of Baptisia, the tall stalks of Rudbeckia, Michaelmas daisies and Helenium-each of these requires its own kind of support.

Another thing to remember is that a stem or branch should be given some play. Don't lash it tight against the stake. Loop the cord around the stem, cross the cord twice around the stake, finally tie the ends on the side farthest away from the plant.
more staking tricks. Never drive a stake through the center of a plant. This is apt to damage the roots. Use two stakes, one on each side. A wooden mallet is the best tool to use for forcing down the stake. Use it gently and it will not split the stake.

Various lengths and weights of stakes are available. For dahlias use a five-foot stake one inch square; for hollyhocks an eight-foot stake.

Climbing roses that stand by themselves need some support, especially the weaker, young growth which flower the succeeding year.

Bamboo rods, strings and brush are used for sweet peas, the first two when single-stem plants are raised, the last when plants are allowed to grow naturally. The stems should be tied loosely.

In staking standard roses and shrubs tarred twine should be used. Surround the stem with a felt pad before tying it in order to prevent chafing.


In tying young trees, protect the trunk with a soft pad.


Dahlias and soft plants are tied with raffia string as above.


Staking delphiniums when side shoots are grown to a bush.


Newly planted trees are wrapped and guyed in this manner.


Trees with weak crotches are chained to prevent splitting.

## Seeds



1. Before sowing seeds outdoors, smooth soil with wooden rake. 2. Narrow drills can then be made with a sharpened stick or wooden label.

# The methods of sowing seeds indoors and out-How to care for seedlings 

ASEED holds the germ of plant life. Large or microscopic, it will develop, according to variety, into a sky-raking sequoia or a creeper that hugs the ground. Its flower colors may range through the spectrum. It may differ from its parents. Its fruit may be merely beautiful or useful or possess both of these qualities.

From Nature man has learned the processes by which life springs into being. Whereas Nature is prodigal, man is economical. Whereas Nature is slow, man hastens the accouchement in many ways.

CONDITIONS FOR INDOor GERMINATION. Eight circumstances make for successful seed germination: (1) heat, (2) soil, (3) dampness in soil and air, (4) drainage, (5) darkness, (6) depth of planting, (7) sanitation and (8) artificial accelerating methods.
(1) Without heat, especially heat supplied from the bottom, seeds cannot germinate. In greenhouses and hotbeds bottom heat is available and even in ordinary houses it can be supplied. Hotbeds are heated by fresh manure or electricity. The heat must be constant and gentle, about sixty degrees. In late Spring and early Summer the heat of the sun through glass or in the soil is sufficient.
(2) Soil must be finely screened. For the general run of seeds use a mixture of $1 / 3$ garden loam, $1 / 3$ finely ground peat and $1 / 3$ sand. To this, add a dusting of powdered lime and charcoal.
(3) The soil should be dampened first and allowed to drain. After the seed is sown, it should be watered only by the finest and gentlest of sprays. A pane of glass over the pot will collect moisture and the peat in the soil will hold it. Some gardeners water their seed pans and flats by dipping them into shallow tanks.
(4) Sand affords drainage in the soil. It is also imperative that rough peatmoss be laid in the bottom of seed pot or flat crocks-
before the soil is put in. Some gardeners sow their seeds in little drills which are filled with sand. Then they cover the seeds with a mixture of sand and charcoal.
(5) Darkness is given by covering the newly sown seed pan with paper. This is removed as soon as germination is evident.
(6) A general rule for depth is to sow seeds twice their depth. Minute seeds, such as primrose, are mixed with a tablespoon of sand so that they can be sown evenly.
(7) Sanitation requires that all boxes and pans be washed clean. Soil itself can be sterilized with boiling water or by a solution of one of the various sterilizing powders. The seed itself can be sterilized by dusting with a mercurial preparation. The reason for this insistent cleanliness is to kill the spores of the damping-off disease which is so fatal to seedlings. The gardener can save much time and bother by buying sterilized soil, which is now available.

ARTIFiclal aids. We now come to the artificial methods of accelerating seed germination. These include dusting the seed with hormone powder, chipping case-hardened seeds and freezing.

In Nature seeds fall to the ground, are covered lightly with leaves and are frozen over in Winter. They germinate when the soil becomes warm. The freezing is an essential step for seeds of plants native to sections that have cold Winters. Alpine plants, wild iris, clematis and many other perennials, together with most of the hardy annuals, should be planted in frames in the Fall or Winter to receive this freezing. Alpine seeds should be exposed, and if there is plenty of snow, the germination will be quickened. It has also been found that by freezing old seeds, germination is increased. This especially applies to delphinium and other seeds that lose their viability in a short time.


On this page are shown the processes of seeds and seedlings in pots. 1. First cover drainage hole with a crock and then put in roughage.
2. Fill with soil mixture and pat down. 3. Sow seed and (4) dust over with finely sifted soil. 5. Finally label and water the top soil gently with fine spray.

When seedlings show first true leaves, lift them gently and transplant into a flat or cold frame (as indicated above in figure 6) for further growth.

3. For medium-sized drill, use a draw hoe on edge. 4. In making the wide drill for peas and large seeds, the whole width of the hoe should be used.

5. Sow lettuce and similar seeds in narrow drills direct from the envelope. 6. Onion sets are sown in medium drills and (7) bush limas are well-spaced.

8. Peas are broadcast in a wide drill, thinned later. 9. All corn, pumpkins, cucumber, melons, etc., should be sown ringwise in well-enriched hills.
seeding rints. Another trick in growing very small seed is to broadcast over the soil in a small pot and merely press down gently. Then this pot is sunk into a larger pot filled with peatmoss kept wet. Place a pane of glass over all and finally a sheet of paper.

A few large seeds can be sown in small pots. While some gardeners broadcast their seed, others prefer to sow in orderly, labeled drills. These can be marked by a sharp-edged lath after the soil is evened down. In making drills for various sizes of seeds, the depth of drill should vary accordingly. After sowing the seed, dust over some finely screened soil to cover and firm it in gently.

OUTDOOR SOWING. While annuals that are slow to germinate should be sown early and in heat if one wishes early flowering, others can be sown outdoors or in cold frames as soon as frosts are over. Here the top soil should be cleared of all stones and roughage and raked level. Seed is then sown in drills. Perennials can be raised the same way with the assurance of producing robust plants by Autumn.

Certain plants, because of the nature of their roots, resent transplanting. Such seeds must be sown where they are to grow. These include poppies and mignonette. Also, some gardeners prefer to sow the quickly growing annuals-alyssum, ageratum, candytuft and such-in their final position. If this method is followed, the annuals must be rigorously thinned out to produce good plants.

Since the method of sowing vegetables is illustrated at the top of this page, we shall not describe it further. However, here, too, are shortcuts. Melons and cucumbers can be raised in a reversed sod in a cold frame and thereby the season of fruiting is advanced. The use of small forcing frames, paper caps or electrical portable hotbeds over seed hills will also accelerate germination outdoors.
care of seedlings. The first leaves that push up are cotyledons, which have been folded within the seed. The next are the true leaves that display the characteristics of the leaf of the mature plant. When these true leaves appear, then the seedlings can be transplanted or thinned so that they may have room to develop.

Begin lifting the seedlings by a narrow stick-a wooden plant label will do-and setting them in fresh soil. This soil-it can be in a frame or another flat or pot or even outdoors-should contain some food. Add to the original mixture of loam, sand and ground peat a dusting of commercial manure worked through the soil. To prevent damping off, sterilize the soil or coat the top of it with powdered charcoal, which absorbs excess moisture.

Seedlings should be set in orderly rows spaced evenly apart and labeled. If the seedlings have been raised in a warm place, they can be hardened off by placing in a cold frame, from which they make their initial entrance into the garden when big enough.

Some seedlings are easy to handle, others are so small that they require a pair of tweezers to lift and replant. But whether large or small, it is essential that the roots are not injured and that soil is pressed firmly around them.
germination time. Most tender annuals germinate within a few days, whereas the hardier sorts-verbena especially-take their own time. Fresh seed germinates quicker than old seed. The germination of hard-shelled seeds can be speeded by soaking them in warm water for 24 hours before planting. It is a safe rule, in raising perennials, never to discard the seed flats or pans until a second Spring after the seed is sown. Vegetable seeds will germinate on an average of from 60 to $85 \%$ and they stay fresh from one to ten years.


This group shows the process of sowing in flats or boxes. 7. First crock bottom for drainage and cover it with peatmoss or compost heap roughage.
8. Having poured in prepared soil mixture, next smooth it with a flat tamper and-9-finally broadcast or sow seeds in evenly spaced drills.
10. Since most seeds germinate better in darkness and damp heat, cover the flat with a sheet of paper which excludes light and preserves warmth.

## What they indicate-How to supply their needs-Root propagation

WITH a few exceptions, as soon as a seed has germinated it starts pushing up a leaf by which it can breathe and pushing down a root by which it can feed. These roots are pointed, for they penetrate the soil by tips like a drill. Just behind these tips, looking for all the world like a brush to clean bottles, is a long cuff of minute feeding hairs which come into intimate contact with the soil particles.

Some roots are simple-the turnip and carrot, for instancesome are matted, as in the case of the water-loving iris; some grow by a tap root, as hickories; some rest on the surface as the rhizomes of tall bearded iris; others wander great distances, as the roots of elms. It has been estimated that the roots of a sunflower plant laid end to end would reach 1448 feet and present a surface area of sixteen square feet. The blazing star will penetrate to the depth of sixteen feet and the wild morning glory to seven.

CARE OF ROots. We begin our first contact with roots when we start to lift and transplant seedlings. We see not only how varied is their manner of growing, but also how necessary it is that they are kept in close contact with the soil. Air pockets around them are sure death. This is equally true of a tree and a bulb. And in planting trees and seedlings press them down into the soil. Do not have the soil heaped around their roots and expect them to thrive.

On the other hand, it is often necessary to restrict root growth. This is called root pruning. We root-prune fruit trees to bring them into fruit. Likewise we root-prune a wisteria to force it to flower. Often in setting out seedlings it is wise to clip off some of the roots so that they won't exert themselves too much in getting established.

The propagation of many plants is successfully carried on by root division-peonies and dahlias, to name only two. Oriental poppies are propagated by digging up a root, cutting it into pieces about an inch and a quarter long and planting these in sandy soil till they begin to throw out leaves. The same can be done with the long, thick wandering roots of butterfly weed.
what roots tell. If a gardener will study roots, he can garden more intelligently. Why does the rhizome of a tall bearded iris lie on top of the soil? Because it likes being baked by the sun and that baking has something to do with the production of robust fans of leaves and flowers. Consequently, you plant this kind of iris in full sun. Plant it in shade, and the foliage will be poor and the flowering poorer. The same is true of other sun-loving plants.

Find a tree with a deep tap root and what does it tell? That it will withstand wind. That it wants a spot where the soil can be easily penetrated to a great depth. That this tap root is essential to growth. That the plant will often grow in dry soil because its roots can go down deep to where there is moisture.

Or consider two kinds of roots that have to be handled gingerly -blood root and eremurus. Break them and they bleed and that section of root will often rot away, eventually bringing death to the plant.

Roots, too, are subject to disease and pest attacks. Wire-worms tunnel them and must be destroyed with Cyanogas or gas lime. Ants do likewise and have to be administered an ant poison. Nematodes or knotty swellings of peony roots can be cleared up by sterilizing the soil with formaldehyde solution.-Know your roots, and you will know better how to treat the plants that grow on them.


Left: Feeding roots are covered by hairs that absorb nutriment in solution. The root grows by a tip.


Top: The right way to dibble in a seedling. Below: Wrong, the seedling roots without soil contact.


Above right: Fibrous roots of Sibe-
 rian iris indicate their desire for a damp location. Compare with rhizome of bearded iris, bottom of page.


Fruit trees and some vines can be forced into flowering and bearing by pruning their roots as shown.

Above Left: Plants with long tap roots, such as hickory trees, require a very deep preparation of the soil.

BeLow: On the other hand, rhizomes of tall bearded iris which lie on



Above: Cleft-layering is made by slitting a cane, inserting stone to keep open and then pinning down.


Lerf: Ivies root easily. Lay a stem in garden or pot soil as shown. Cut apart when the roots are formed.
BeLow: Softwood cutting to the left, hardwood to the right. Each is given its own required treatment.


# By grafting, layering and also by root-cutting we increase our plants 

UNDER stems and branches we find a great variety-the stalwart trunk of an oak, the supple canes of a climbing rose, the decorative arms of espalier fruit, the creeping fingers of ivy. Each stem or branch has its purpose and the gardener can make it serve his needs. On the trunk of a fruit tree he grafts new varieties; on the miniature trunk of a vigorous wild rose he buds the wood of a new hybrid; on an old lilac, a new one; and on an old clematis, a fresh spray of beauty. From the branches and canes of shrubs and trees and numerous perennials he propagates a fresh supply of plants that are replicas of their parents, a certainty not possible with seeds.
crafting and cutting. While both of these are the customary procedure of nurserymen, any gardener, as soon as he passes the initial stage, can adopt these methods as logical short cuts. The different kinds of grafts he may use all follow the same basic principle. He is using the vigor of the original trunk or branch to develop and bring to flower a new kind of fruit. Thereby he saves many months and years that ordinarily would be required if he had grown the new tree or shrub from seed.

Layering is the term applied to the process by which a cane or young branch is brought into contact with soil and forced to root. Once rooted, it is cut away-and you have a new plant. So the gardener pins down the canes of climbing roses and encourages the rooting of other branches by slitting them on the under side. Both methods are illustrated here. He also lays sprays of ivy in soil and eventually cuts away a quantity of vigorous young plants.

Rooted cuttings, or "slips" as old gardeners called them, fall into two classes-softwood and hardwood. The first can be made at almost any time of year according to the variety of the plant; the other is prepared, i. e., the hardwood cuttings are made in the Fall, allowed to callous over Winter and are then rooted in Spring. Sand or very sandy soil kept damp and shaded is the medium in which cuttings are rooted. A shaded frame can be used, or a double pot of the type shown on this page.

HORMONES. It doesn't take long for the gardener to discover that some cuttings root easier than others-geraniums in a few weeks and evergreens in an interminable time, if ever. The problem of speeding up the roots of cuttings and making them grow where they seemed reluctant to grow before is gradually being solved through a study of the so-called plant hormones or growth substances. These are now scientifically prepared and come in solution, powder or paste forms. Applied to the end of the cutting, they not only quicken the rooting but also assure a higher percentage of rooting.
espalier. In England and on the Continent the growing of fruit on walls is a common practice. Here, espalier fruit growing is only in its infancy. And since not many American gardens are walled, we grow espaliers in the open. The purpose of espalier fruit is not merely to make a decorative pattern of branches but also, by pruning, to develop a better quality of fruit. These espaliers come in various forms for growing-both high and low to suit garden needs.

When we wish to espalier flowering shrubs against walls and high fences to make patterns, forsythia, pyracantha and some of the lilacs are readily adaptable to this purpose.

# How to diagnose plant diseases and pests-The healthy garden - Using leaf shapes and colors 

Athough, Heaven knows, there are enough diseases plaguing roots and stems, it is in the leaf that we generally first detect plant illness and the attacks of insect pests. The leaves of a dahlia or a lilac begin to wilt, and we hunt for the stem borer. When the leaves of a delphinium begin to crinkle up, it is a sure sign that mite is attacking that plant. Leaves of a hollyhock look pale and flabby, and you'll find the red pepper dots on the underside, indicating destructive rust. The gardener's life is one of constant vigilance.
plant health. As in human beings, so in plants, a healthy constitution resists diseases to which the weak succumb. Plants growing in soil that is honestly cultivated and properly fed have a better chance to throw off diseases. We can augment these precautions by keeping the ground free from weeds and by resolutely burning plants that are heavily infected.

For its protection against insect attacks, the plant depends on the gardener. And the gardener who is to win in this warfare must be forearmed. That is, he must be equipped with a sprayer or dust gun and keep on hand an assortment of materials for each occasion and be aware, like a doctor, what cures and what kills.

Sulphur is the old specific for mildews; nicotine for sucking insects such as aphids, those Typhoid Marys of the plant world, for they spread diseases; and Bordeaux mixture or its equivalent for chewing insects. Sometimes these three are combined in one, as in Massey dust which is used on roses. The newer rotenone mixtures, made from derris and cubé root to thwart sucking insects, are proving effective and there are various solutions and combinations, coming under trade names, that prove their virtues when properly used. A shelf of these assorted poisons should be in every tool shed.

CURE and prevention. Success with any spray or dust formula as with the old specifics depends on their intelligent application. All too many gardeners merely spray or dust the upper surface of leaves, whereas the disease is penetrating the under surface. Again to prove effective, the mixtures must be made according to directions and applied at the right time. Don't blame the manufacturer for your own stupidity. Study the leaf. Find the points of infection and attack. And then concentrate on them.

But this is like locking the garage after the car is stolen. Spraying should be done before diseases appear. You must know what diseases and pests are apt to attack certain plants. If, for instance, you know that rust will attack hollyhocks, then spray the underside of the hollyhock leaves before it appears. If you know that lilacs are subject to borers, inspect your bushes regularly and at the slightest sign of the telltale trail of sawdust, go after the varmint with a wire and a tube of nicotine paste. Study these suggestions as the first step in garden vigilance. If trees appear to be attacked or in distress and you can't recognize the cause, call in a tree expert.
leaves in garden design. But we should not consider leaves merely as pathological specimens. Their shapes, colors and sizes all play a part in garden design. Look down a flower border. What gives it diversity of interest? Flowers, to be sure, and also leaves-the upstanding blades of iris, the arching fronds of peonies, the feathery foliage of baby's-breath, the planes of chrysanthemum foliage. So it is in trees and shrubs. The foliage of the ginkgo, the maple, the elm, the tulip tree, all give a garden added interest and in the shrub border there are the contrasts between the leaves of spireas, of lilacs, viburnums, rhododendrons and various bush honeysuckles.

5. Hollyhock rust appears as orange-red pustules on the stems and back of leaves. Dust with sulphur and burn infected parts.
2. The black patches on delphinium foliage indicate a bacterial infection that is caused by the broad mite. Use sulphur dust.

[^2]6. The presence of the iris borer is indicated by chewed leaves. Cut him out of the rhizome and after disinfecting the plant, reset it.

# $F_{\text {ruits and flowers }}$ 

# The varieties of flowers-Disbudding and saving seeds -The results gained by pruning-Pretty Autumnal fruits 

SFAR in this rather rapid survey of the whys and wherefores of gardening, we have managed to avoid, except when naming plants, the use of botanical terms. Now that we reach the fascinating topic of fruits and flowers we might indulge in them slightly.

To the botanist there are eight forms of flowers: catkins, such as hang on pussy-willows, poplars and birches in early Spring; CORYMBS: the shape of spirea and pyracantha flowers; cymes, that of pinks and gentians; panicles, that of astilbes and catalpas; racemes, such as the lily-of-the-valley; sPIEES, as you find in the liatris, the Kansas gayfeather; THYRSES, as in lilacs and horsechestnuts; and finally umbels, as in blue lace flower, Queen Ann's lace, carrots, onions, milkweeds, fennel and parsnips.
"RETTING UP" AND DISBudding. These catkins, corymbs, cymes and all the rest having flowered, and the flowers having been pollinated by bees, wind or the hand of man, the seed head or fruit is next produced. This marks the cycle of the plant's purpose. The reason for its flowering is to set seed and thereby perpetuate its kind.

To most of us a spent flower, unless we are saving it for seed, is not tolerated. We go around the garden "retting up"-snipping off faded flower heads. Thereby we prevent the plant from spending its energies in producing seed and we keep it producing more flowers.

Something of the same sort of discipline is laid on flowers and fruits when we prune and disbud them. We prune back the wood so that the energy of the tree or vine will turn from making wood-to enlarging and ripening fruit. We also thin out fruit, rubbing off the scrubs, so that those which remain will be larger. Again, as in Fall-bearing strawberries, we deflower plants in Spring-thus making them withhold fruiting till Fall.

In the flower garden disbudding is a common practice. We snip off the side buds of peonies, dahlias, chrysanthemums, roses, etc., so that all the strength can be devoted to making the terminal bud develop into a magnificent bloom.

SEED SAVING. Some flowers-especially annuals and the perennial columbine-are notorious mixers, so that home-saved seeds are apt not to come true the following year. These should be bought from seedsmen whose care in the field prevents crossing. However, there are many other types that can be saved. These should be planted immediately except when they ripen so late as to require their being held over till the following Spring.

Keep seeds in a tin box, each kind in its own packet, and try to store the box in a place where heat will not dry them out.

COLORFUL FRUIT. The most beautiful forms of seed cases appear in fruits. Each Autumn we realize how diverse these decorative fruits are-and so do the birds that feed upon them.

Among the whitefruits are the snowberries and Cornus racemosa. We find blue fruit on Mahonia, silky cornel, Lonicera caerulea, and on Viburnum cassinoides, dentatum, prunifolium and rufidulum. In the reds are the hawthorns, mountain ash, dogwoods, hollies, euonymus, buffaloberry, bush honeysuckles, barberries, high bush cranberries, cotoneasters and pyracantha. Orange and yellow fruits are borne by Lonicera Ruprechtiana, R. tartarica and Asiatic crabapples. The blacks are found on Canadian elderberries, privets, chokeberries, inkberries, Viburnum acerifolium, lantanoides, pubescens and Sieboldii, various cotoneasters, some of the barberries and the common buckthorn of our own countryside.

2. To get the finest peonies and dahlias, clip off side buds thereby forcing all the growth into the terminal bud for a larger flower.
4. If you want many roses, don't disbud, but if you plan exhibition blooms, snip off the side shoots with your scissors as illustrated.
6. When cutting iris, gladioli and narcissi do not shear off all the leaves. These are needed for continuing bulb and root growth.

[^3]3. In addition to pinching back chrysanthemums to make them bushier, the side buds (not terminal buds) should be rubbed off.
5. Collect seed as soon as the pods appear to be bursting. Plant immediately or put away in tin boxes until Spring planting time.

# Novelties in annuals 

# A careful survey of this year's tested varieties reveals an unusual and tempting assortment 

ONCE again a New Year brings to the gardener, along with the annual tidal wave of seed catalogs, a flood of new annuals. Which are good? Which are really worth trying? Which are the "novelties" with garden value?

These are the questions every gardener is asking himself as new garden plans are taking shape. It is my purpose here to present the more important of the new offerings in a way that may help the puzzled planter of seeds to make his selections on something better than a chance hit-or-miss basis. It has been my privilege to grow some of these new things in advance. At nurseries and trial grounds, as the result of some thousands of miles of travel, I have seen a goodly percentage of the remainder.

I make no pretense of picking out "the best". Time alone can point out the ultimate winners from this long string of starters. Here and there, among the multitude of introductions of the past season or two, the permanent treasures are beginning to stand out. Some of these I shall speak of, even though they have been mentioned in these columns before, for they are often of more value to the gardener who has not happened to make their acquaintance than are the actual "novelties", with the printer's ink not yet dry upon their pretty faces.

INTEREST centers first, as it has since the inception of the All America Selections Committee, on varieties judged by this group of experts to be, from among entries secured from all over the world, most worthy of general recommendation.

In some instances in the past the writer, in attempting to appraise new varieties "from the home gardener's point of view", has not always agreed with All America Selections. And he finds himself a bit puzzled concerning the only Gold Medal awarded in two years-that given to the new Ipomoea or morning-gloryScarlett O'Hara. (The medal was awarded last year, but Scarlett was held over for a season because of lack of seed.)

As the first approach to a really red Ipomoea, Scarlett O'Hara is of immense horticultural interest. Fourteen judges last year gave it 144 points-a very high score. As a garden flower, however, I cannot see that it has outstanding merit. Wherever I have seen it, it has been a scrambler rather than a climber. At best it needs considerable coaxing. It is, however, an early bloomer, and the flowers stay open a long time. Seed is reported scarce again this year, so if you want to make Scarlett's acquaintance, order early.

This year's highest scoring Silver Medal-annual hollyhock Indian Spring with 85 points-promises to be of genuine value to the gardener. Actually blooming in 5 months from seed, it can honestly be classed as an annual. Said to be a species from the West Indies, it produces semidouble and double pink flowers on $4^{\prime}$ to $5^{\prime}$ plants, and has attracted much attention in Europe. American reports indicate that it does well in most sections of the United States. Cutting back the main stalk after flowering-as is
commonly done with delphiniums-results in a second crop of pink semidouble or double flowers on its several lateral shoots.

ONCE again a new petunia stands near the top of the listHollywood Star, drawing a Silver Medal with a score of 78. Unlike the popular old Howard's Star, this newcomer gets its name from its long pointed petals (not from the throat markings) which make it an entirely distinct type, and one likely to be much prized for cutting. The color is a pleasing bright rose pink, with a distinctive creamy yellow throat.

Likewise winner of a Silver Medal, with a score of 65 points, is a named selection from Phlox Drummondi gigantea Art Shades, called Salmon Glory. I liked this immensely and do not hesitate to recommend it highly to House \& Garden's readers. A clear salmon pink in color with individual florets of immense size, it makes a fine showing. A robust grower, it sends up $8^{\prime \prime}$ to $10^{\prime \prime}$ stems-long enough to make a good cut flower.

A hold-over Silver Medal winner from last year, the Early Giant China Aster Light Blue, makes a new, extra-early flowering type in the wilt-resistant strains. I consider the color especially attractive, and the $4^{\prime \prime}$ to $5^{\prime \prime}$ blooms are borne on $3^{\prime}$ plants.

WITH scores of from 58 to 40 points, five other novelties won bronze medals in this year's All America Selections.
First comes a rugged little snapdragon, called Guinea Gold, $12^{\prime \prime}$ to $18^{\prime \prime}$ high, an attractive metallic orange and yellow combination in color. It is fine in the border and also excellent for cutting purposes.

The Cynoglossum or Chinese forget-me-not, immensely popular since its introduction some years ago, will be welcomed in the new compact, dwarf variety (growing but $11 / 2^{\prime}$ tall) named Firmament. Judging from the trials I saw, it runs uniform. Another excellent flower in this none-too-plentiful color is Verbena Blue Sentinel. Of the new erect growing compact type, it holds its trusses $10^{\prime \prime}$ to $12^{\prime \prime}$ high, well above the foliage, and is much better suited to cutting than most verbenas.

Marigold Early Sunshine, though winning but a Bronze Medal, is, it seems to me, one of the season's outstanding novelties. Not only is it an earlier flowering Dixie Sunshine (a very late sort), but it is one of the very earliest of all marigolds! A tremendous, long season producer with attractive lemon yellow blooms of good size, I liked it in my own garden and would recommend it for any list.

Petunia Lady Bird, a very dwarf, deep rose (almost red), and of compact growth, was held over from last year.

Five others receiving Honorable Mention were Marigold Golden Glow; Celosia Royal Velvet; Petunia Daintiness; Scabiosa Blue Moon; and finally, Zinnia Fantasy White Light -in the order I have mentioned them. (Continued on page 41)



1. Early Summer at Durham, N.C., in the garden of R. P. McClamrock of which George Watts Carr was architect. A large Vanhoutte spirea stands as focal point at the head of the garden steps. Iris flank the stairs. Eventually ivy will clothe the stone work on each side and low crack plants soften the lines of the treads.
2. Early Spring at "Paradou", Brookville, L.I. In the narrow bed, along the foot of shrubbery, shoals of Heavenly Blue grape hyacinths alternate with clumps of narcissi, separating the different varieties. Other ground covers for narcissi are pansies in contrasting shades or the greenery and blue flowers of Vinca minor.
3. Late Spring at Henderson, N.C. In the garden of J. H. Brodie the lawn is surrounded by beds to which tulips and other Spring-flowering bulbs and low perennials first give their rich colors. The bulbs are succeeded by various annuals, tucked in after the tulips are lifted, to continue effectively the garden's color succession.
4. Late Summer at Blauvelt, N.Y. In the garden of Miss Caroline Burr, the hardy climbing rose, Paul's Scarlet, flowers on a fence and its stems sprawl along the rails. Others good for fences are Excelsa, Silver Moon, New Dawn and American Pillar. Alternate these with Virgin's Bower, Clematis paniculata, for August bloom.
5. Late Autumn at Bristol, Conn., in the garden of Alex Cumming, hardy Korean chrysanthemums close the garden's flowering. For such massed plantings use large-flowered types, mingling bronzes, yellows and reds. Another combination could be pink and white. All deserve a background of shrubs, a fence or a wall.

Top: The garden of Mrs. J. D. Munger at Plainfield, N. J., furnishes an all-year setting for the house. On the axis of the living room, and crossing the end of the evergreen pool garden shown in the center photograph, is this perennial garden opening on the spacious side lawn. Ortloff \& Raymore were the landscape architects

Center: The evergreen pool garden, with its paved paths and narrow canal, is planted for both Summer and Winter effects, to be enjoyed from the house. The permanent green material is evergreens. In Spring the beds are filled with bulbs. For Summer blooms bulbs are followed by annuals-verbena and double petunias especially

Botrom: Around the entrance drive are massed rhododendrons that fringe the edge of the deep lawn. The planting here is rich and dignified. This part of the garden, free from the usual "specimen" shrubs and the ragged skirting of perennials that are so often found around entrances, maintains its beauty throughout the year



## A New England

 house brought out-ofdoors by its gardenSituated in the rolling countryside of Milton, Mass., just outside of Boston, the garden of Mr. and Mrs. Carleton Richmond is well adapted as a Summer extension of the house. The late Mary Cunningham was the landscape architect.

The north garden shown at the top of the page is just a few inches lower than the floor of the porch. It is enclosed on two sides by a tall cedar hedge and on the third by a lattice covered with clipped Euonymous radicans. Flower beds edged with the same plant are bright with bulbs, perennials and flowering shrubs. At the farther end is a lead fountain designed by Edith Cochran. A walk across the rear of the garden leads to white wooden gates and a stone bench.

The west garden, slightly lower than the rest of the grounds and placed below the windows of a sun room, is stone paved and enclosed by a low stone wall. Here stone benches make it an inviting place to linger. A round fountain is sunk in the center and tall hemlocks, dogwoods, rhododendrons, hawthorn and other flowering shrubs enclose this peaceful spot.


T He garden of Mrs. William Hanly at present tendency in landscaping which makes the garden an extension of the house. And, as the house is divided into rooms, each with its own character and purpose, so do these "rooms" of the garden have their own uses and individualities.

A house garden, directly off the indented back terrace, consists of a wide panel of turf flanked on each side by ascending plantings until they reach the height of tall shrubs at the rear. Edges are bordered with ivy, behind which are beds of Vinca minor -periwinkle. The hedges are of blueberry and clethra, an unusual combination. Other shrubs used are hollies, ink berries, laurel, low bushy lilacs, pink bush honeysuckle, privet, Wilson's beauty bush and nannyberries or Viburnum lentago.

A few steps down, and the property opens into an oval garden which is more formal in planting. Here color is added in early Spring by masses of the canary yellow cottage tulip, Moonlight, and followed by pale yellow and dark yellow lantana.

Beyond this oval is the more utilitarian cutting garden to supply flowers for the house. Charles Middeleer was landscape architect of the property.



Left: On the country place of Mrs. Geoffrey G. Whitney at Milton, Mass., the banks of the lake reach up to a fringe of trees, part of the original forest. Here a rock garden is laid out and planted to native American flowers and Alpines. This shows the approach to the woodland garden from the Alpine lawn. In the latter are broad drifts of saxifraga tunica, rock jasmine, creeping gypsophila, Alpine poppies and Cheddar pinks.

Below, left: Along the edge of the lake are damp spots in which primroses and water-loving iris and all those wildlings that enjoy wet feet can thrive. Here and there conifers and native flowering shrubs find a home above the outcropping rocks and in spots the forest itself reaches down to the water's edge. Besides these are broad areas brightened by the sun, a fit location for the naturalistic rock garden of wild flowers and low-growing plants.

Below: Even so informal a garden as Mrs. Whitney's can be disciplined to color. From this point, one looks up the Pink and White Path, wandering through the woods and along which lady-slippers, azaleas and dogwoods show their tints early in the season. In the foreground the Blue and Yellow Path begins, edged with blue hound's tongue, borage, forget-me-not, Mertensia and gromwell-with the yellow of Alyssum saxatile, Hypericums and Doronicums.




MARIGOLD EARLY SUNSHINE


PACIFIC HYBRID DELPHINIUMS

A ennials that will add distinction to our gardens this year
new annual and five per-


GLADIOLUS J.D. SEZ

IRIS JUNALUSKA


# The newer perennials 

# An appraisal, ranging from a new abelia to several new roses, shows splendid permanent garden material 

NTovelty hunting among the perennials is not quite such a free-for-all sport as it is among the annuals. One should use a rifle rather than a shotgun. A dozen of the new annuals may be tried and discarded without a second thought, to find one that will be a real addition to the garden. With perennials one is apt to step much more carefully.

Again this year the hardy 'mums take the lead in interest, with hardy asters running a close second. But before we begin to wander about among these, let us take a glance at a few less known things that might easily be overlooked.

FIRST of these is a new abelia, Gaucheri. The abelia is a shrub rather than a perennial, but it often kills back to the ground in the North, so it may well be considered here. This hybrid, with lavender-pink flowers larger than those of grandiflora, is said to be a hardier type.

Buddleia dubonnet, close on the heels of last year's pinkflowered Charming, brings still another color (almost a true red) to the growing list of varieties of this always satisfactory plant.

A larger fruited Chinese lantern plant, Physalis gigantea, comes from across the water with an R.H.S. Award of Merit to recommend it. The brilliant orange "lanterns" are sometimes developed to $8^{\prime \prime}$ in circumference.

Gunnera manicata, from South America, makes an exotic looking specimen with handsome leaves $4^{\prime}$ in diameter on stems $5^{\prime}$ high-a stately and unusual plant.

THE newest thing in the chrysanthemum family-so new that it is as yet too early to estimate its importance-is the novel race of Northland Daisies.

They are mighty interesting and they look most promising. Selected seedlings of Astrid, these single daisy-like chrysanthemums make bushier plants and heavier crowns that help in carrying them safely through the Winter. The half dozen or so varieties now offered go under such appropriate names as Viking (burnt orange), Brunnhilde (cream and pink), and Siegfried (deep yellow). All bloom early in October.

Chrysanthemum erubescens, called also the September Daisy, with single rose red flowers has already made quite a place for itself. Erubescens Clara Curtis (Queen O' Mums) is a hybrid having pyrethrum blood, but its rose pink daisy-like flowers are not borne until late September and October.

Chrysanthemum Maximum Double Marconi, claimed to be the largest of the Shasta daisies, has $6^{\prime \prime}$ or $7^{\prime \prime}$ flowers on $40^{\prime \prime}$ stems. We haven't seen it, but it sounds like florists' material.

Coming now to the Hybrid Koreans-which with their glorious displays this season fully made amends for all the failures of a year ago,-I think I would give the honors to dainty and charming Lavender Lady. In my garden this variety, in addition to its very lovely color, was one of the most prolific bloomers
over a very long season. Somewhat similar to October Girl, Lavender Lady is rather larger and of a more delicate shade. Both it and Pale Moon, a large pale primrose double-and incidentally they are lovely side by side in the border-are certainly "musts" for the cutting garden.

Other new Koreans and Korean hybrids are Rose Glow, a small semidouble of soft Oriental old rose tones, with a tendency to mat down-but so covered with bloom as to give a rug effect; Burgundy, an attractive deep-toned double of an indescribable raspberry hue that in the fashion world would be termed a "glamor" color. Roberta Copeland is a bright cherry red.

Glomero (shown in color on page 17) and Auburn are distinctive. Charming little Pygmy Gold, a dwarf type, blooms continuously a full two months. Pink Spoon will be more widely distributed this season. It is well worth growing.

Ater having been eclipsed for several seasons in popularity by the new dwarf or "mound" varieties, the tall hardy asters seem to be taking the lead again. Topping the list for this season is Beechwood Challenger. By far the best "red" to date, it is exceptionally vigorous and healthy; medium height ( $3^{\prime}$ to $4^{\prime}$ ) and September flowering. Harrington's Perfected Pink is really a deep rose pink, much truer in color than the old favorite Barr's Pink which it will undoubtedly replace. Strawberries-and-Cream, which has become very popular in Europe, opens a fairly deep pink but lightens with age, producing an unusual and pleasing two-tone effect. Sunset Glow is a soft glowing pink, desirable for its early season and good for edging accents.

Among the blues are the well-established Col. F. R. Durham, a rich dark blue, exceptionally free-flowering, medium height and quite late, September into October; and Blue Jacket, a Ballard variety of rich blue with contrasting yellow centers.

In the dwarf asters I have been again impressed with the splendid quality of Blue Bouquet. It is very late-flowering and one of the indispensables for any garden. The charming little "Baby" New England Asters-growing about 11/2'-Little Boy Blue, Little Pink Lady and Olga Keith, you will also want if you haven't yet given them a trial.

CLor, abundant color, is what we crave in our gardens early in the Spring. Bulbs give it to us of course, but they make for a lopsided garden unless balanced by other flowers. And among these, none are gayer than the creeping phloxes.

A new one that I have enjoyed immensely in my garden is $P$. nivalis sylvestris, similar in foliage and habit of growth to P. subulata, but with rosy red flowers several times as large and therefore giving quite a different effect. As to its hardiness I cannot vouch, as it hasn't been through a severe Winter in my garden.

Among the subulatas there's a whole flock of new ones, or at least new names. I haven't seen (Continued on page 45)

## Tools These four are first essentials

Granted that the gardener has a strong pair of hands-or a pair he is willing to make strong and nimble-a back that will bend and knees to kneel on, these four tools can start him off in a small garden: (1) a trowel for setting out plants, (2) a hoe for cultivating, (3) a rake for smoothing soil and cleaning up, (4) a spade to dig the soil. We use these drawings as symbols. Each of these tools may vary according to its individual manufacturer.


Eight more you soon need for speeding the work


To the foregoing four essential tools we would add what every man has in his pocket or around the house-a good jackknife and string. But he won't get far-or his work will be slowed up-unless he has eight more tools: (1) a hose for watering, (2) a digging fork with which he can also do light cultivating,
(3) a lawn mower and, by all means, buy one that runs easily and is lightweight, (4) a wheel cultivator which saves hours in

the vegetable garden, (5) a wheelbarrow, and select one strong enough to last but easy to handle, (6) a cultivator for scratching between small plants, (7) grass clippers for keeping lawn and path edges sheared, and (8) a sprayer or dust gun to fight pests and diseases. Very soon after these are acquired, the old jackknife that served for casual pruning will be supplanted by a set of good secateurs, one for flowers, a heavier one for wood pruning.

Twelve more according to size and type of garden


The size and type of garden soon determine what other tools will be necessary. (1) dibble to speed setting out seedlings, (2) draw hoe cultivator for mulches and general work, (3) long handled shovel, (4) Slim Jim trowel for rock gardens, (5) narrow hoe for working in borders, (6) pruning saw for the trees, (7) spring rake for lawn work, (8) hedge clipper, although hedges can be more easily sheared with an electrical or mechanical gadget,
(9) power motor where the lawn is extensive, (10) some kind of sprinkler that covers a wide area and doesn't have to be repaired or moved every ten minutes, (11) a good assortment of stakes, and (12) a bulb planter. Whether you have four tools or forty, keep them in condition-edges sharp, bearings well-oiled, digging tools and cultivators brushed and cleaned; sprayers emptied and washed. Be hard-hearted-don't lend any of them!

# From these dream books come the substance of gardening and the enjoyment of health and contentment through labor 

No sooner has the New Year opened its days than two crops begin springing up-new seed and nursery catalogs and a new generation of gardeners. Both are exciting. One has caught the fever to plant seed and set out seedlings; the other supplies the wherewithal-the dream, and the substance that brings the dreams to reality. They are the creators of perennial youth, these catalogs, for not only do new gardeners read them avidly but even the most hardened and experienced feel a flush of excitement. Why?

The reason for the beginner's enthusiasm is obvious-the catalog is the gateway to a new life. For the experienced gardener, it sets his feet again on familiar paths, some of which he may have forgotten. It may even open new ones he has never traveled.

It is the very nature of catalogs that they be written in the superlative. Everything is painted in glorious colors. Here and there one encounters a catalog writer who, growing realistic, may have some misgivings about an occasional item and says so. Indeed, there is a distinct effort being made to create catalogs that hew closer to the line of reality.

Whereas the beginning gardener is going to believe everything he reads in a catalog, the hardened gardener knows that the catalog is an indication of the dealer's probity and knowledge of suitable plant material. He doesn't believe all catalogs, but he does take without a grain of salt the contents of those catalogs distributed by firms which experience has taught him can be depended on. No seed house or nursery could exist a long time without probity. None can survive unless it supplies fresh and authentic merchandise season after season.

SEED and nursery catalogs should be read twice-first for the sheer delight of reading them; second, for the more practical purpose of making out an order. And there's the rub! What factors enter into selecting purchases?

Answer three questions: (1) How much land have I to plant? (2) How much time can I give to gardening? (3) How much cash outlay can I afford?

If you are a hardened gardener, you'll find the cash somehow. Gardeners are that way; they'll make any amount of sacrifices for their hobby. The question of how much space you have available can easily be determined, unless you are a person blessed with acres and unlimited help. In this calculation of how much space to plant-presuming you are making a new garden-it is better to begin in a small way and increase as years go on. Make a plan, if you will, for the complete developments, but tackle it piecemeal. Budget both your garden work and your garden expenditures. At all times be master of your garden, not its slave.

At the beginning it is difficult to calculate the time one can give to gardening because all of us have unpredictable interruptions and demands on our time. And yet, once into gardening, unless, of course, one's health does not permit, it is amazing how time will be found and how many small gardening jobs can be done in your odd moments.

These strictly practical matters must be considered and understood if one is to depend on a catalog. The seedsman and the nurseryman cannot garden for you. They can't plant the seed and
turn the soil and set the seedlings and defend them against their enemies and bring the plant to ultimate fruition. All they can do is to give you an idea of the start-a seed-and an idea of the ending-their description of the flower or fruit or vegetable in all its beauty. Your work fills in between.

Another thing to consider is what type of gardening you prefer. Roses, gladiolus, dahlias, pinks, vegetables, fruits, vines? Even on a small place you can have a little of each if space and successive crops are carefully calculated. Or you may have to decide whether you want to be grimly practical and grow only vegetables or combine these with flowers.

In that and many another sense, catalogs are bewildering to the beginner. He can learn how to garden the way most small boys learn how to swim-by diving in over his depth. Or he can study beforehand. Each year the presses spout a constant stream of gardening books. Some are authentic. Some are second-hand. Some are simple, others horticulturally high-brow. Some assume the reader knows a lot already and others assume he doesn't even know how to hold a hoe. Even the most hardened gardener learns something from books, just as he learns something from a seed or nursery catalog. By all means, read gardening books.

T4Hese pages of the Gardener's Yearbook are drawn from experience, if gardening in all its phases on seven acres for twenty years can be called experience. They are designed to help beginning gardeners and jog the elbows of the hardened as well.

Of course, it has been impossible to pack within the limits of forty pages the whole story of gardening. Except in the pages on garden vegetables I have not tried to suggest varieties. Were there more space available, how pleasant it would have been to select favorite roses and iris and poppies and lilacs and daffodils! Fruit and flowering shrubs, too, should have had more space, and the plants for rock gardens and pools. It would have been nice to say more about greenhouses and working in them; about the making and keeping of good lawns.

However, in these forty pages, as in seed catalogs, there is the matter for a thousand garden dreams and the answers to a thousand garden questions and the purposes for even many more thousands of hours of pleasant garden work.

While it is true that gardeners like to read about gardens and gardening, their highest enjoyment comes from the actual, physical work required to grow a flower from a seed, to make and maintain a good lawn, to keep rose bushes and grape vines producing abundantly and to combat the enemies that beset their plants. The joy that comes in honestly turning the brown earth, in wielding the hoe and pushing the cultivator, in carefully staking and trimming, in adding that extra pinch of enrichment which brings the perfect bloom and fruit-all these physical exertions, the swing and play of muscles, the intricate and skillful use of hands, the easy bending of the back, bring joy untold.

From these pages may you learn how and why to garden. And from your own good health may you have the renewing strength to carry on the work and enjoy the harvest.

Richardson Wright

# House \& Garden selects your vines ground covers, bulls, annu- 

 als, perennials, trees, shrubs and rock garden plantsVines

| NAME | HEIGHT | COMMENTS AND DIRECTIONS |
| :--- | :---: | :--- | :--- |
| Achimenes | $12^{\prime \prime}-24^{\prime \prime}$ | July-Sept. Good for sheltered porch boxes or brackets in semishade. |
| Akebia, Fiveleaf | To $15^{\prime}$ | Hardy climber, numerous clusters of violet-brown, cinnamon-scented flowers in early Spring. Makes good screen. |
| Bittersweet, Am. | To $15^{\prime}$ | Native, woody, hardy twiner. Orange and red fruits. Needs support. Keep underground runners removed. |
| Cardinal Climber | To $30^{\prime}$ | Annual with fern-like foliage, cardinal red flowers in late Summer. Sun, good soil. Needs support. |
| Clematis | $10^{\prime}-12^{\prime}$ | Hardy when grown properly in alkaline soil. Various colored blossoms. Large-flowered kinds especially fine. Support. |
| Cobaea | To $40^{\prime}$ | Fast-growing annual, clings to any rough surface. Large purple bell flowers. Sun, good soil. |
| Dutchman's Pipe | To $30^{\prime}$ | Hardy, twining, very large leaves and odd, yellow brown flowers. Provides dense shade. Needs support. |
| Hyacinth Bean | $10^{\prime}$ | Rich dark purplish red or pure white flowers, Good for screening porches. |
| Hydrangea, Climbing | To $40^{\prime}$ | Hardy, woody, clings to any rough surface. Large leaves and showy heads of creamy flowers. Outstanding. |
| Ivy, English | To $50^{\prime}$ | Evergreen, clings to any rough surface. May kill back in very severe Winter. Fine ground cover, also. |
| Morning-glory | To $10^{\prime}$ | Very showy annual, especially Heavenly Blue and other modern varieties. Various colors. Sun, moderate soil. Support. |
| Wintercreeper | To $40^{\prime}$ | Evergreen woody climber. Clings to any rough surface. Euonymus radicans vegetus strongest species. Spray for scale. |
| Wistaria | To $40^{\prime}$ | Unequaled among hardy vines for its May flower display. Buy only grafted plants. Needs support. |

## Ground Covers

| NAME | HEIGHT | COMMENTS AND DIRECTIONS |
| :--- | :---: | :--- |
| Bearberry | $4^{\prime \prime}-6^{\prime \prime}$ | Wide-spreading native evergreen, bronze in Winter. Red fruits. Good drainage, sun, poor soil. Buy pot-grown plants. |
| Cotoneaster | $6^{\prime \prime}-15^{\prime \prime}$ | Evergreen, glossy small leaves. Sun and good drainage. Trailing and prostrate types best for purpose. |
| Epimedium | $8^{\prime \prime}-12^{\prime \prime}$ | Unusually attractive foliage and white, red or yellow flowers. Generally evergreen. Part or full shade. |
| Ivy, English | $4^{\prime \prime}-6^{\prime \prime}$ | Excellent evergreen trailer for foliage effect. Good soil, sun or shade. |
| Juniper, low | $10^{\prime \prime}-24^{\prime \prime}$ | Needled evergreens, perfectly hardy. Especially good are Waukegan, Bar Harbor. Sun. Good drainage. |
| Pachysandra | $6^{\prime \prime}-10^{\prime \prime}$ | Evergreen, upright growing. Plant $4^{\prime \prime}-6^{\prime \prime}$ apart. Any soil, sun or shade. |
| Phlox, Creeping | $4^{\prime \prime}-6^{\prime \prime}$ | Evergreen; mass of Spring bloom. Apple Blossom and The Bride especially fine. Sun, drainage. |
| Rose, trailing types | To $18^{\prime \prime}$ | For large areas especially. Max Graf and Rugosa repens alba particularly good. Sun to part shade. |
| Sedum | $2^{\prime \prime}-10^{\prime \prime}$ | Dense evergreen mat-formers, varied flower display. Many varieties. Any soil, sun to part shade. |
| Sempervivum | $2^{\prime \prime}-12^{\prime \prime}$ | "Hen-and-chickens" type best for purpose. Numerous forms, varying leaf colors. Drainage. Any soil. Sun. |
| Thyme | $2^{\prime \prime}-4^{\prime \prime}$ | Mat formers, numerous minute flowers. Several types, mostly evergreen. Good soil, sun to part shade. |
| Vinca | $8^{\prime \prime}-12^{\prime \prime}$ | Dense evergreen, blue or white flowers. Forms superb carpets. Best in part shade. |

## Bulbs and Tubers

| NAME | HEIGHT | SEASON. | COLOR | COMMENTS AND DIRECTIONS |
| :---: | :---: | :---: | :---: | :---: |
| Agapanthus | $36^{\prime \prime}$ | July-Sept. | Blue | Showy and highly ornamental, particularly desirable in porch pots or tubs, or beside |
| Begonia,Tuberous | $12^{\prime \prime}-15^{\prime \prime}$ | June-Oct. | Various | Large, very striking flowers in many forms and shades. Plant in May. Shade or semishade. |
| Buttercup, Tall | $18^{\prime \prime}$ | June | Various | Both single and double blossoms, some of them $2^{\prime \prime}$ across. Not hardy north of |
| Ila | $18^{\prime \prime}-24^{\prime \prime}$ | Aug.-Sept. | Various | Plant in sun near the pool in April or May. Yellow form especially good; has white-spotted foliage. |
| Canna | $36^{\prime \prime}-60^{\prime \prime}$ | July-Oct. | Various | For bold display effects, boundaries, etc. Plant outdoors in May. Modern varieties have lovely colors. |
| Crocus | $4{ }^{\prime \prime}$-6" | Mar.-Apr. | Various | This, the old-fashioned "lawn" crocus, is still unrivaled for naturalizing and informal plantings. |
| Dahlia | 18"-72" | July-frost | Various | Wide variety available, from dwarf singles to huge doubles. Full sum, good soil and perfect |
| Eremurus | $72^{\prime \prime}-96^{\prime \prime}$ | June-July | Various | Very striking spires. For rich, well-drained soil. Disappears after flowering. Needs Winter |
| Erythronium | $8^{\prime \prime}-15^{\prime \prime}$ | April-May | Various | One of the loveliest of native flowers, especially the western species. B |
| Gladiolus | $24^{\prime \prime}-48^{\prime \prime}$ | Aug.-Oct. | Vari | Handsome flower spikes of many sizes and colors, for display and cutting. Sun and good drand |
| Hyacinth, Cape | $36^{\prime \prime}-60^{\prime \prime}$ | Aug.-Sept. | White | Graceful heads of large, fragrant, bell-shaped flowers. Fo |
| Hyacinth, Grape | $4^{\prime \prime}-8^{\prime \prime}$ | April | Blue, white | Delightful little early bulb, for interplanting, massing and edging. Self-sows. Plant in early Fall. |
| Lilium auratum | $36^{\prime \prime}-60^{\prime \prime}$ | July-Aug. | White | The Gold-Banded Lily of Japan. Should be planted $8^{\prime \prime}$ deep. |
| L. batemanniae | $36^{\prime \prime}$ | July-Aug. | Apricot | Another stem-rooter; plant about $8^{\prime \prime}$ deep. All lilies should have perfectly drained, good soil |
| L. canadense | $36^{\prime \prime}-48^{\prime \prime}$ | June-July | Orange | A native American species especially good in |
| L. candidum | $36^{\prime \prime}-48^{\prime \prime}$ | June | White | The widely popular Madonna lily. Fragrant. Sun or part shade. When |
| L. chalcedonicum | $36^{\prime \prime}-48^{\prime \prime}$ | June-July | Re | Will do well even in heavy soil if well drained. Plant in Fall, $5^{\prime \prime}$ dee |
| L. hansoni | $48^{\prime \prime}-60^{\prime \prime}$ | June | Orange | One of the easiest lilies, in part shade. Plant in Fall, $10^{\prime \prime}$ deep. |
| L. henryi | 60 | Aug.-Sept. | Orange | Very strong-growing and sure. Part shade. Early Spring or late Fall planting |
| L. philippinense formosanum | $36^{\prime \prime}-48^{\prime \prime}$ | Aug.-Oct. | White, tinted | Very free-flowering, somewhat resembles Regal lily. Easily grown when set about 4" |
| L. regale | $48^{\prime \prime}-60^{\prime \prime}$ | July | White, tinted | Good, rich, well-drained, leafmoldy soil in sun or part shade. Plant 9" |
| L. speciosum | $36^{\prime \prime}-48^{\prime \prime}$ | Aug.-Sept. | White | Does best in sum, with rich, lime-free, leafmoldy soil over sandy loam. Plant 12" de |
| L. superbum | 60 " | July-Aug. | Orange | This is commonly known as the American Turk's Cap lily. Plant in Fall, 4" deep. |
| L. tenuifolium | $18^{\prime \prime}-24^{\prime \prime}$ | June | Scarlet | A dainty little lily. Part shade and cool loam. Fall planting, 7" deep. |
| L. testaceum | $60^{\prime \prime}-72^{\prime \prime}$ | June-July | Apricot | Looks especially well with delphiniums or Madonna lilies. Fall planting, $2^{\prime \prime}$ deep. |
| L. tigrinum | 48" | July-Aug. | Orange | The old favorite Tiger lily. Early Spring or late Fall planting, $10^{\prime \prime}$ deep. |
| Narcissus | $4^{\prime \prime}-18^{\prime \prime}$ | April-May | Various | Do not cut down foliage until it starts to wither. Well-drained soil, sun or light shade. |
| Oxalis | $4^{\prime \prime}-6^{\prime \prime}$ | July-Sept. | Va | Fine for hanging baskets, boxes or mass bedding. Brilliant flowers above dark foliage. |
| Scilla | $6^{\prime \prime}-10^{\prime \prime}$ | April-May | Blue | Leafmoldy, well-drained soil in part shade. Pla |
| Snowdrop | $4^{\prime \prime}-6^{\prime \prime}$ | Mar.-Apr. | Whi | Generally the earliest of the Spring bulbs, wholly charming. Fall planting, $2^{\prime \prime}$ deep, part |
| Spider-lily | 18"-24" | July-Aug. | Pearly | Clusters of large, fragrant blossoms, each suggestive of amaryllis. Sun or part shade. |


| NAME | HEIGHT | SEASON | COLOR |  |
| :--- | :---: | :--- | :--- | :--- |
| Tigridia | $15^{\prime \prime}-24^{\prime \prime}$ | July-Sept. | Various | Brilliantly colorful, Sun and good drainage; same treatment as gladiolus. |
| Trillium | $4^{\prime \prime}-18^{\prime \prime}$ | April-June | Various | Especially good species are nivale (dwarf), grandiflorum, stylosum and undulatum, |
| Tulip | $18^{\prime \prime}-30^{\prime \prime}$ | May | Various | Darwin and Cottage types especially lovely. Good, well-drained soil. Plant in Fall, $4^{\prime \prime}-6^{\prime \prime}$ deep. |
| Tritonia | $24^{\prime \prime}-36^{\prime \prime}$ | Aug.-Sept. | Various | Also called montbretia. Should be much better known. Culture as for gladiolus. Sun or part shade. |
| Zephyr Lily | $10^{\prime \prime}-13^{\prime \prime}$ | June-Sept. | White, pink | Plant in clumps in foreground of border. North of Washington, lift and store for Winter. |

## Annuals

| NAME | HEIGHT | SEASON | COLOR |
| :---: | :---: | :---: | :---: |
| African Daisy | $12^{\prime \prime}-24^{\prime \prime}$ | June-Oct. | Various |
| Ageratum | $6^{\prime \prime}-18^{\prime \prime}$ | May-Oct. | Blue, various |
| Alyssum | $4^{\prime \prime}-10^{\prime \prime}$ | May-Oct. | White, lilac |
| Anagallis | $6^{\prime \prime}-12^{\prime \prime}$ | June-Oct. | Blue, various |
| Aster, China | $18^{\prime \prime}-30^{\prime \prime}$ | July-Oct. | Various |
| Babysbreath | $12^{\prime \prime}-15^{\prime \prime}$ | June-Sept. | Blue |
| Balsam | $10^{\prime \prime}-30^{\prime \prime}$ | June-Sept. | Pink, various |
| Begonia | $6^{\prime \prime}-12^{\prime \prime}$ | June-Sept. | Various |
| Browallia | $15^{\prime \prime}-30^{\prime \prime}$ | June-Sept. | Blue |
| Calendula | $12^{\prime \prime}-18^{\prime \prime}$ | June-Oct. | Yellow, orange |
| California Poppy | $10^{\prime \prime}-12^{\prime \prime}$ | June-Aug. | Yellow, var. |
| Calliopsis | $18^{\prime \prime}-36^{\prime \prime}$ | June-Aug. | Yellow, var. |
| Candytuft | $10^{\prime \prime}-18^{\prime \prime}$ | June-Sept. | Various |
| Clarkia | $24^{\prime \prime}-36^{\prime \prime}$ | June-Oct. | Rose, various |
| Cosmos | $48^{\prime \prime}-72^{\prime \prime}$ | July-Oct. | Pink, various |
| Datura | $24^{\prime \prime}-36^{\prime \prime}$ | July-Sept. | White |
| Gaillardia | $24^{\prime \prime}-30^{\prime \prime}$ | June-Oct. | Maroon, bronze |
| Globe Amaranth | $12^{\prime \prime}-18^{\prime \prime}$ | July-Oct. | Various |
| Godetia | $12^{\prime \prime}-24^{\prime \prime}$ | June-Sept. | Rose, various |
| Hunnemannia | $18^{\prime \prime}-24^{\prime \prime}$ | July-Sept. | Yellow |
| Larkspur | $24^{\prime \prime}-40^{\prime \prime}$ | June-Oct. | Blue, various |
| Lobelia | $4^{\prime \prime}-10^{\prime \prime}$ | June-Nov. | Blue, various |
| Mallow | $36^{\prime \prime}-48^{\prime \prime}$ | June-Sept. | Pink, rose |
| Marigold | $12^{\prime \prime}-40^{\prime \prime}$ | July-Oct. | Yellow, gold |
| Mignonette | $12^{\prime \prime}$ | June-Oct. | Pinkish white |
| Nasturtium | $15^{\prime \prime}-72^{\prime \prime}$ | June-Oct. | Various |
| Nicotiana | $18^{\prime \prime}-36^{\prime \prime}$ | June-Oct. | Various |
| Nierembergia | $15^{\prime \prime}-18^{\prime \prime}$ | June-Sept. | Lavender |
| Petunia | $15^{\prime \prime}-24^{\prime \prime}$ | June-Oct. | Various |
| Phlox | $6^{\prime \prime}-15^{\prime \prime}$ | June-Oct. | Various |
| Poppy | $8^{\prime \prime}-24^{\prime \prime}$ | May-Oct. | Various |
| Portulaca | $6^{\prime \prime}-10^{\prime \prime}$ | June-Sept. | Various |
| Salpiglossis | $20^{\prime \prime}-30^{\prime \prime}$ | June-Oct. | Various |
| Salvia | $24^{\prime \prime}-30^{\prime \prime}$ | July-Sept. | Blue |
| Scabiosa | $24^{\prime \prime}-30^{\prime \prime}$ | June-Oct. | Various |
| Snapdragon | $8^{\prime \prime}-30^{\prime \prime}$ | May-Oct. | Various |
| Stocks | $12^{\prime \prime}-20^{\prime \prime}$ | May-June | Various |
| Strawflower | $12^{\prime \prime}-24^{\prime \prime}$ | July-Sept. | Various |
| Sunflower | $36^{\prime \prime}-72^{\prime \prime}$ | July-Sept. | Various |
| Tithonia | $60^{\prime \prime}-80^{\prime \prime}$ | Aug.-Oct. | Orange-red |
| Torenia | $12^{\prime \prime}-18^{\prime \prime}$ | June-Sept. | Blue, pink |
| Verbena | $8^{\prime \prime}-10^{\prime \prime}$ | July-Nov. | Various |
| Vinca | $8^{\prime \prime}-12^{\prime \prime}$ | July-Oct. | Rose, pink |
| Zinnia | $15^{\prime \prime}-36^{\prime \prime}$ | July-Oct. | Various |



## Perennials

| NAME | HEIGHT | SEASON | COLOR |  |
| :--- | :--- | :--- | :--- | :--- |
| Alyssum, Hardy | $12^{\prime \prime}$ | April-May | Golden yellow | Broad, solid masses of bloom, Excellent for edging sunny borders. |
| Anthemis | $24^{\prime \prime}$ | June-Oct. | Golden yellow | Showy, daisy-like flowers for display and cutting. Easy of cultare and long-lived. |
| Arabis | $10^{\prime \prime}$ | April-May | White | Low and spreading; combines well with alyssum, as border edging plant. |
| Aster, Hardy | $8^{\prime \prime}-48^{\prime \prime}$ | Sept.-Nov. | Various | Many fine types, including new dwarfs. Indispensable in the Autumn garden. |
| Bleeding-heart | $18^{\prime \prime}-36^{\prime \prime}$ | April-June | Deep rose | Graceful and arching, especially when well established. Part shade. Appreciates good soil. |
| Bocconia | $48^{\prime \prime}-60^{\prime \prime}$ | July-Aug. | Pinkish | Vigorous grower that needs plenty of room. Use in background, since it is rather coarse. |
| Butterfly-weed | $24^{\prime \prime}-36^{\prime \prime}$ | July-Aug. | Orange | An outstanding native plant for brilliant effects in dry, sunny places. Excellent for cutting. |
| Campanula | $24^{\prime \prime}-36^{\prime \prime}$ | June-July | Various | Several types, best treated as biennials. True perennial ones best for rock gardens. |
| Candytuft, Hardy | $6^{\prime \prime}-10^{\prime \prime}$ | April-May | White | Evergreen, especially good for edging and low, broad masses. Best in full sun. |
| Chrysanthemums | $18^{\prime \prime}-40^{\prime \prime}$ | Aug.-Nov. | Various | Many fine modern types and varieties, including Korean Hybrids. Good soil, full sun. |
| Columbine | $18^{\prime \prime}-36^{\prime \prime}$ | May-June | Various | Exceptionally graceful and attractive, especially the hybrid strains. Display and cutting. Sun. |
| Coreopsis | $24^{\prime \prime}-36^{\prime \prime}$ | June-July | Yellow | Very easily grown, excellent for garden display and cutting. Keep old flower heads removed. |
| Cynoglossom | $18^{\prime \prime}$ | June-frost | Blue | Forget-me-not type flowers, especially fine during late Summer. Very good. |
| Daylily | $24^{\prime \prime}-48^{\prime \prime}$ | June-Aug. | Various | Greatly improved modern varieties give long season of bloom. Good soil, full sun to part shade. |
| Delphinium | $36^{\prime \prime}-60^{\prime \prime}$ | June-Sept. | Blue, various | Best of the tall blue flowers, especially the modern strains. Superb for cutting and display. |
| Dianthus (Pinks) | $8^{\prime \prime}-18^{\prime \prime}$ | May-July | Pink, various | Several types, mostly fragrant. Excellent for cutting. Flower freely in sun and lime soil. |
| Doronicum | $24^{\prime \prime}-30^{\prime \prime}$ | April-May | Orange | Daisy-like flowers in masses, good for display and cutting. Sun and well-drained soil. |
| Evening Primrose | $18^{\prime \prime}-24^{\prime \prime}$ | July-Sept. | Primrose | Continuous flowering in well-drained soil and sunny situation. |


| NAME | HEIGHT | SEASON | COLOR |
| :--- | :---: | :--- | :--- |
| Eupatorium | $18^{\prime \prime}-24^{\prime \prime}$ | Sept.-Oct. | Blue, white |
| Flax | $18^{\prime \prime}$ | May-June | Light blue |
| Forget-me-not | $8^{\prime \prime}-12^{\prime \prime}$ | May-Oct. | Light blue |
| Gaillardia | $15^{\prime \prime}-24^{\prime \prime}$ | June-Nov. | Various |
| Geum | $15^{\prime \prime}$ | May-Oct. | Various |
| Gypsophila | $24^{\prime \prime}-36^{\prime \prime}$ | June-Sept. | White, pink |
| Heuchera | $12^{\prime \prime}-18^{\prime \prime}$ | May-Sept. | Red, pink |
| Hollyhock | $60^{\prime \prime}-80^{\prime \prime}$ | July-Sept. | Various |
| Iris | $6^{\prime \prime}-48^{\prime \prime}$ | April-Sept. | Various |
| Liatris | $36^{\prime \prime}-48^{\prime \prime}$ | July-Sept. | Purplish |
| Lupine | $15^{\prime \prime}-48^{\prime \prime}$ | May-June | Blue, various |
| Mallow | $60^{\prime \prime}-80^{\prime \prime}$ | Aug.-Oct. | Pink, various |
| Meadowrue | $36^{\prime \prime}-48^{\prime \prime}$ | May-June | Creamy, pink |
| Monkshood | $36^{\prime \prime}-48^{\prime \prime}$ | Aug-Sept. | Blue, white |
| Peony | $30^{\prime \prime}-40^{\prime \prime}$ | May-June | Various |
| Phlox, Garden | $30^{\prime \prime}-40^{\prime \prime}$ | June-Oct. | Various |
| Platycodon | $24^{\prime \prime}$ | July-Nov. | Blue, white |
| Poppy, Iceland | $12^{\prime \prime}$ | May-Oct. | Various |
| Poppy, Oriental | $24^{\prime \prime}-36^{\prime \prime}$ | May-June | Various |
| Primrose, Hardy | $8^{\prime \prime}-15^{\prime \prime}$ | April-May | Various |
| Scabiosa, Hardy | $18^{\prime \prime}-24^{\prime \prime}$ | May-Oct. | Various |
| Shasta Daisy | $18^{\prime \prime}-24^{\prime \prime}$ | June-Nov. | White |
| Spirea | $15^{\prime \prime}-36^{\prime \prime}$ | June-July | Cream, pink |
| Stokesia | $18^{\prime \prime}$ | June-Oct. | Blue, white |
| Sweet William | $12^{\prime \prime}-18^{\prime \prime}$ | May-June | Various |
| Veronica | $8^{\prime \prime}-18^{\prime \prime}$ | June-Sept. | Blue, white |
| Viola | $6^{\prime \prime}-8^{\prime \prime}$ | April-Nov. | Blue, various |
| Yarrow | $36^{\prime \prime}-48^{\prime \prime}$ | July-Aug. | Yellow |

> COMMENTS AND DIRECTIONS
> Ageratum-like flowers on long stems, for display and cutting. Full sun.
> Graceful and airy, delightful clean color. Best in masses, sun or part shade.
> As edging or masses, or as ground cover for Spring bulbs. Sun or light shade.
> Continuous flowering, especially good for cutting. Modern named varieties much improved.
> Good for garden display and cutting. Very long-flowering. Singles and doubles.
> Clouds of wee dainty flowers, indispensable for arranging with other flowers. Effective in masses and for cutting. Tall, airy stems. Sun or part shade.
> Tall and dominating, against walls, buildings or at back of border. Singles and doubles. Full sun. Many types and varieties. Can be selected for moist or dry, sunny or shady conditions.
> Long, slender, picturesque wands of densely packed little blossoms of peculiar rosy purple color. Unsurpassed where conditions suit it. Full sun, fair amount of moisture. Enormous crêpe-paper blossoms. Superb for dominating masses. Sunor part shade. Moisture preferred. Feathery and fine for cutting. Moist, well drained soil in sun or part shade.
> For display at back of border, and for cutting. Rich, not dry soil and partial shade. Indispensable in borders or in front of shrubbery. Some varieties fragrant. Sun and deep, rich soil. Unexcelled for masses of color. Good soil, fair moisture and full sum.
> For garden display and cutting. Sandy, well drained soil, sun or shade.
> For edging, colorful ground cover and cutting. April sown seed blooms first season.
> Many new, subtle colors available in this old-time favorite. Sun and good soil.
> For edging and general early display in well-drained, not too dry soil.
> Excellent border plants for full sun and average soil. Large, showy flowers.
> Showy, daisy-like flowers, fine for display and cutting. Prefers cool, moist soil.
> Fern-like foliage and spraying heads of small flowers. Sun or shade; moist, well-drained soil.
> Very free-flowering, for border and cutting. Sun and sandy soil preferred.
> Always desirable for border and cutting, especially the newer varieties. Full sun. Graceful, slender flower spires, some very long. Sun or part shade.
> For edging and ground cover in either sun or part shade. Numerous varieties.
> Especially for broad clump effects at back of border. Full sun and well-drained, dryish soil.

## Ornamental Trees Deciduous

| NAME | HEIGHT | COMMENTS AND DIRECTIONS |
| :--- | ---: | :--- | :--- |
| Apple | $15^{\prime}-25^{\prime}$ | Usually thought of as an orchard tree, but also first-class ornamental, Good, well-drained soil and sun. |
| Beech | $25^{\prime}-80^{\prime}$ | Excellent ornamental for lawn use. Purple and European most popular. American difficult to transplant. |
| Dogwood | To $30^{\prime}$ | Superior smallish tree with white or pink flowers in Spring. Cornus florida, C. Kousa and C. florida rubra chief ones. |
| Elm, American | To $90^{\prime}$ | Best of all for framing vista, landscape view or house. Fairly rapid grower. For lawn or background. |
| Flowering Cherry | To $20^{\prime}$ | Fine Spring display of pink to white flowers. Use as specimen, in border or for mixed planting. Sun. |
| Flowering Crab | To $25^{\prime}$ | More substantial effect than preceding. Useful in many well-drained situations. Ornamental fruit. Sun. |
| Ginkgo | To $60^{\prime}$ | Spreading, picturesque tree with attractive foliage, for specimen or street use. |
| Hawthorn | $15^{\prime}-25^{\prime}$ | Good form, white, pink or red flowers and colorful fruit. Specimen or hedge use. |
| Hickory, Shagbark | To 75 | Very hardy and picturesque, with rough bark. Best in background planting. |
| Horsechestnut | To $50^{\prime}$ | Pyramidal, makes dense shade. Showy panicles of white flowers. Many species, varying heights, |
| Linden | To $80^{\prime}$ | Fine, symmetrical form providing dense shade. Specimen or screen use. Am. and European species. |
| Locust, Honey | To $90^{\prime}$ | Rapid grower in any soil. White or pinkish flowers. Best in groves or background. |
| Maple | $50^{\prime}-100^{\prime}$ | Many species, mostly tall and spreading. Fine for shade, as specimens, or along boundaries. |
| Oak | $60^{\prime}-100^{\prime}$ | Large, rugged, symmetrical form, Good for shade and as specimens. Many fine species. |
| Planetree | To $90^{\prime}$ | Often called Sycamore. Very picturesque, with mottled trunk and branches. Likes moisture. |
| Redbud | To $25^{\prime}$ | A native with deep pink flowers in early Spring. Use like flowering crab and flowering cherry. |
| Sweet-gum | To $40^{\prime}$ | Native, not reliably hardy much north of New York. Symmetrical, spreading, superb Autumn color. |
| Tulip tree | To $100^{\prime}$ | Mast-like trunk, very symmetrical form. Imposing specimen or shade tree. Yellow flowers and Fall coloring. |
| Walnut, Black | To $90^{\prime}$ | High-branching and handsome. Provides light shade. Bears crops of excellent nuts. Hardy. |

## Ornamental Trees Evergreen

| NAME | HEIGHT |
| :--- | ---: |
| Arborvitae, American | To $50^{\prime}$ |
| Arborvita, Oriental | To $50^{\prime}$ |
| Cedar, Red | $30^{\prime}-50^{\prime}$ |
| Cypress, Hinoki | $2^{\prime}-20^{\prime}$ |
| Cypress, Plume | $20^{\prime}-25^{\prime}$ |
| Fir, Douglas | $60^{\prime}-75^{\prime}$ |
| Fir, Fraser | $40^{\prime}-50^{\prime}$ |
| Fir, White | $70^{\prime}-90^{\prime}$ |
| Hemlock, Canada | To $60^{\prime}$ |
| Hemlock, Carolina | To $50^{\prime}$ |
| Holly, American | To $30^{\prime}$ |
| Holly, Japanese | $15^{\prime}-20^{\prime}$ |
| Spruce, Engelmann | $75^{\prime}-100^{\prime}$ |
| Spruce, Koster Blue | $40^{\prime}-50^{\prime}$ |
| Spruce, Norway | To $60^{\prime}$ |
| Pine, Austrian | $50^{\prime} 75^{\prime}$ |
| Pine, Scotch | $30^{\prime}-40^{\prime}$ |
| Yew, Japanese | $10^{\prime}-20^{\prime}$ |

To $50^{\prime}$
To $50^{\prime}$
$30^{\prime}-50^{\prime}$
$2-20^{\prime}$
$60^{\prime}-75^{\prime}$
$40^{\prime}-50^{\prime}$
$70^{\prime}-90^{\prime}$
To 60'

To $30^{\prime}$
$15^{\prime}-20^{\prime}$
$75^{\prime}-100^{\prime}$
$40^{\prime}-50^{\prime}$
$50^{\prime}-75^{\prime}$
$10^{\prime}-20^{\prime}$

COMMENTS AND DIRECTIONS
Slender, columnar tree, with flat, fern-like foliage. Several types. For specimen accent, windbreak or hedge purposes. Dark, rich green, suggests Italian Cypress. Uses same as for the American form.
Botanically, Juniperus virginiana. Slender tree, tending to become round-headed. Very hardy. Dry soil, sun. Dense, dark green little trees, in many forms. Hardy and excellent for intimate plantings.
Particularly desirable for mixed evergreen groups, because of its foliage form. Listed as Chamaecyparis phumosa. Handsome pyramidal tree, dark bluish green. For dry location. Very hardy.
Soft, dark green. Excellent as a specimen or in group plantings.
Pyramidal, silvery green of foliage. Specimen use, or as windbreak or background. Botanically, Abies concolor. Symmetrical, broad pyramid. Very graceful and perfectly hardy. Makes fine group or windbreak.
More dense, and even more handsome than the preceding. Superb specimen.
Fine small tree of sturdy habit. Red berries. Hardy to New York or beyond.
Botanically, Ilex crenata. Small leaves, but handsome effect. Black berries in some forms. Especially good hedge. Broad pyramid of soft gray green. Particularly recommended for single specimen use.
Silvery blue green. Distant accent, or in background mass plantings.
Dark green, rapid grower. Best for screens, windbreaks or tall hedges.
Dark, glossy green, rugged habit. Does well near seashore.
Not long-lived, but very picturesque. Withstands windy exposure and dryish locations.
Best tree-like form is Taxus capritata. Deep, dark green, fine pyramidal form. Shears well.

## A Selection of Shrubs Deciduous

| NAME | HEIGHT | COMMENTS AND DIRECTIONS |
| :---: | :---: | :---: |
| Azalea | $2{ }^{\prime}-10^{\prime}$ | Numerous species, foreign and native; not all hardy. Wide variety of blossom colors. Must have acid soil. |
| Barberry | To 5' | For borders, hedges, etc. Stands shearing well. Red winter berries. Hardy. |
| Buddleia | $6^{\prime}-8^{\prime}$ | Lilac-like spires of Summer flowers. Best in shrubbery border or at back of perennials. |
| Burning-bush | To 15' | Botanically, Euonymus europaeus. For large shrubbery border. Showy Autumn fruit. Sun or part shade. |
| Deutzia | To 5' | Graceful smallish shrub, quantities of white flowers in Spring. Specimen or shrub border. Sun or part shade. |
| Forsythia | To $10^{\prime}$ | Early masses of golden, loosely formed flowers. Upright and arching forms. Fast grower. Sun. |
| Honeysuckle | To $8^{\prime}$ | Many fine bush forms, flowers and fruits of different colors. Sun or part shade. |
| Kerria | To $8^{\prime}$ | Golden or white flowers early Summer to Fall. Makes good specimen or border shrub. |
| Kolkwitzia | To $8^{\prime}$ | Slender twigs, fountain-like form. Clouds of pale pink blossoms in late Spring. Sun, good soil. |
| Lilac | To 20' | Fine hybrids as well as original species, giving broad color range. Specimen, hedge or border use. |
| Magnolia | To $25^{\prime}$ | Spreading, semi-tree character, showy Spring blossoms of various colors. Sun or part shade. |
| Philadelphus | To $10{ }^{\prime}$ | Good form, for many locations and uses. Display of white flowers in May or June. |
| Quince, Flowering | $6^{\prime}-8{ }^{\prime}$ | Dense bush, pink to red flowers in May. Very hardy and long lived. Sun or shade. |
| Shadblow | To $25^{\prime}$ | Tall, graceful native shrub; occasionally tree-like. White, very early flowers. For masses, border or woodland. |
| Spirea | $4^{\prime}-6^{\prime}$ | Spreading, rather neat shrub, flowers white or pink. Many forms for many places. |
| Summersweet | To $10{ }^{\prime}$ | Creamy, very fragrant flower spires in early Summer. Acid soil, some shade, fair moisture. |
| Sweetshrub | $6{ }^{\prime}-8$ ' | Spicy, chocolate brown flowers in early Summer. Any soil, sun or shade. Botanically, Calcanthus floridus. |
| Viburnum | $5^{\prime}-15^{\prime}$ | Numerous good species, mostly with white or creamy flowers and ornamental fruit. For background or border. |
| Weigela | 5'-7' | Pink or rose flowers in early Summer. Graceful, arching form. Many uses. |

## A Selection of Shrubs Evergreens

| NAME | HEIGHT | COMMENTS AND DIRECTIONS |
| :--- | :---: | :--- |
| Abelia | $2^{\prime}-4^{\prime}$ | A small, graceful shrub with pinkish white Summer and Fall flowers. Good for foundations. Sun, part shade. |
| Azalea | $18^{\prime \prime}-48^{\prime \prime}$ | General character similar to other Azaleas, but evergreen. Especially Amoena, Hinamayo, Hinodegiri, Ledifolia. |
| Barberry | $12^{\prime \prime}-24^{\prime \prime}$ | Unusual and very choice for low, spreading effects. Especially Verruculosa and Triacanthophora. |
| Boxwood | To $12^{\prime}$ | Great variety of uses, from garden edging to large specimens. Sun or part shade. Winter protection in North. |
| Cotoneaster | $12^{\prime \prime}-5^{\prime}$ | Several practically evergreen species, ornamental fruits. Shrub borders, rock garden. Sun or part shade. |
| Daphne | $8^{\prime \prime}-12^{\prime \prime}$ | Dense, spreading heads of very fragrant pink flowers in Spring and Fall. Sun or part shade. |
| Firethorn | $5^{\prime}-8^{\prime}$ | Very showy, with trusses of white flowers followed by orange scarlet berries. |
| Heather | $12^{\prime \prime}-24^{\prime \prime}$ | Botanically, Calluna vulgaris. Dense, dwarf shrub, sprays of tiny rosy blossoms. Sun, drainage, acid soil. |
| Inkberry | $5^{\prime}-6^{\prime}$ | Glossy, dark foliage, black berries. Botanically, Ilex glabra, a holly. Sun or shade. |
| Juniper, Common | To | Wide-spreading, many semi-upright branches. Several forms. Sun, good drainage. |
| Juniper, Pfitzer | To | Wher |
| Juniper, Sargent | $2^{\prime}-3^{\prime}$ | Feather, spray-like, dense. Splendid for masses and foundations. Sun or part shade. |
| Leucothoe | $3^{\prime}-5^{\prime}$ | Spreading, makes large masses. One of the best low evergreens. Sun or part shade. |
| Mahonia | Arching, graceful native with small white, bell flowers. Foliage deep reddish in Winter. Sun or shade. Acid soil, |  |
| Mountain Laurel | $18^{\prime \prime}-36^{\prime \prime}$ | Thick, holly-like leaves, reddening in Autumn. Yellow flowers, grape-like bluish fruits. Part shade. |
| Osmanthus | $5^{\prime}-15^{\prime}$ | Superb flowering evergreen, perfectly hardy. Sun or shade, as specimen or massed. Acid soil. |
| Pieris | $5^{\prime}-8^{\prime}$ | Strong-growing, holly-like shrub, dark shiny, spiny-toothed leaves. As specimen or in shrubbery border. |
| Rhododendron | $3^{\prime}-5^{\prime}$ | Upright growing, racemes of creamy flowers. Japonica and floribunda especially good. Sun or part shade, acid soil, |

## Rock Garden Plants

| NAME | COLOR | SEASON | COMMENTS AND DIRECTIONS |
| :---: | :---: | :---: | :---: |
| Alyssum | Yellow | April-May | Compact, spreading to $12^{\prime \prime}$ high. A. saxatile compactum especially easy. Sun, any soil. |
| Arabis | White | April-May | Free-flowering and effective, $5^{\prime \prime}-6^{\prime \prime}$ high. Easily grown, sun or shade. |
| Aster | Various | Aug.-Oct. | Several species and new hybrids, $8^{\prime \prime}-15^{\prime \prime}$ high. Fine display in Fall. Sun, good drainage. |
| Blue Cup Flower | Blue | June-Sept. | Botanical name is Nierembergia. Plants form mats $4^{\prime \prime}-6^{\prime \prime}$ high. Profuse flowering. Easily raised. |
| Columbine, Am. | Redandyellow | May | The native Wild Columbine of the eastern states. Sun or shade, poor soil. $10^{\prime \prime}-15^{\prime \prime}$ high. |
| Cotoneaster(horizontalis) | Red fruits | Fall | Picturesque, procumbent shrub, especially good when overlapping large rocks. Sun or part shade. |
| Daphne cneorum | Pink | May \& Sept. | Dense, low, spreading evergreen, deliciously fragrant flower heads. Invaluable. Sun or part shade. |
| Dianthus deltoides | Pink, white | May-June | Known as Maiden Pink. Compact and neat, fine display. Sun or shade. Alkaline soil. |
| Flax, Alpine | Blue | May-June | Delightful small fellow, true Flax-blue flowers. Sun or part shade. |
| Grape Hyacinth | Blue, white | April-May | Several color forms, some very intense. To $8^{\prime \prime}$ high. Plant bulbs in Fall. Sun, part shade. |
| Harebell | Blue | May-June | The dainty so-called Bluebell of Scotland (Campanula rotundifolia). To 12" high. Grows anywhere. |
| Heather | Various | April-May | Dense evergreen shrublets. Many species and hybrids, many perfectly hardy. Sun, drainage. |
| Heuchera | Pink | May-Sept. | Known as Coral-bells, Airy flower sprays from cushion of basal leaves. Sun or part shade. |
| Iberis | White | April-May | Hardy Candytuft. Evergreen, makes fine low carpet. Extremely fine, especially in sun. |
| Iris | Various | April-June | Numerous dwarf and variable species and varieties. Cristata makes broad mats. Sun or part shade. |
| Juniper | Various | Year-round | Many forms of these fine needle evergreens, ranging from carpets to spires. Sun, good drainage. |
| Pasqueflower | Lilac | April-May | Botanically, Anemone pulsatilla. Flowers before leaves appear. Sun or shade. |
| Phlox, Creeping | Various | April-May | Cushion-forming, practically evergreen. Many kinds with fine colors. Sun, good drainage. |
| Saxifrage | Various | April-June | Very large family with many showy members. Sun or part shade. Refer to growers' catalogs. |
| Scilla | Blue, white | April-May | Charming little early bulbs, for massing in shade or part sun. Plant in Fall. |
| Sedum | Various | May-June | Evergreen cushions, sometimes wide-spreading. Many species. Sun or part shade, any soil. |
| Sempervivum | Various | Year-round | Compact, evergreen leaf rosettes, various color tones. Odd flower stalks. Sun, good drainage. |
| Snow-in-summer | White | May-June | Botanically, Cerastium tomentosum. To $6^{\prime \prime}$ high. Bright, silvery foliage. Dry, sunny location. |
| Snowdrop | White | March | Another indispensable little bulb, very early. Newer varieties best. Sun or shade. Plant in Fall. |
| Thyme | White, yellow | June-July | Low, flat carpets, very small, practically evergreen leaves. Sun, good drainage. |
| Tunica | Pinkish | July-Sept. | Minute foliage and flowers, makes delicate low mass. Good in crevices. Sun, any soil. |
| Veronica, dwarf | Blue | May-July | For dry, sunny spots where there is room to spread. $4^{\prime \prime}$ to $12^{\prime \prime}$ high, depending on species. |
| Violets in variety | Various | April-May | Want shade or semishade and, with some exceptions, damp acid soil. Increase by division. |

# E Vergreens Their various types and how to plant them 



Plant early Spring or early Fall.

Position before planting.


Keep in cool, shady, draftless spot until the moment for planting.


Dig hole (A) $10^{\prime \prime}$ wide and $2^{\prime \prime}$ deeper than size of ball. Loosen soil (B) in bottom of hole. If soil is poor, surround root ball with (C) well-rotted manure and garden soil in quantity.


Pack earth about roots (A) forming a wide depression $3^{\prime \prime}$ deep. Saturate soil (B). Spray with contact and poison mixture ( C ) once a month.


Examine branch tips (A) for coneshaped bugs. Cut and burn. These contain bag worms. Syringe (B) in hot weather for red spider.


Austrian pine, Pinus nigra, makes a good background.


Cypress. Lert: Dwarf hinoki.
RIGHT: Retinspora plumosa.


Yew, Taxus cuspidata.


In Winter screen (A) newly planted evergreens on exposed side. Mulch (B) to prevent freezing. Remove part of mulch in Spring.

Face best side of plant (A) towards the front. Open burlap (B). Do not remove. Cut off burlap at dotted line (C) but do not disturb.


Continue watering (A) every 10 days. Oftener in hot dry spells. Keep depression about roots to retain water. Shape and trim (B).

Tap with stick to remove snow from branches of loaded evergreens.



Yew sheared and uncut. Hemlock wind breaks. Arborvitae cut, uncut.

## Roses - first you plant them carefully



When rose bushes arrive heel them into the soil


Take two at a time in bucket of water


When planting, spread
out all incurved roots

## (1) Rich soil <br> (2) Manure (3) Drainage <br> (3) <br> 46

Rose bush and its underlying layers


The bud eye is set too low


Bud eye too high

##  <br> Thancis

Bud set at proper depth for growth

Diseases and how to combat them


Proper pruning


Prune hybrid teas at black lines and remove all the weak wood


In pruning ramblers, remove canes that have previously flowered


Winter protection for cold sections



Wrap climbers in burlap or heavy paper

## Gladiolus planting, flowering and harvesting



Thrip mixture: 1 tablespoon Paris Green, 2 lbs. brown sugar, 3 gals. water. Spray when leaves appear. Repeat spray every other week.


Also to destroy thrip, keep stored corms in paper bags or boxes with napthalene flakes, 1 oz . flakes to 100 corms. Or soak in soot water.


Soak disease-pitted corms 30 minutes to 2 hours in a 1-1000 solution of bichloride of mercury. Then drain and plant the corms immediately.


Plant large corms 9-12" apart.


Plant small corms 6-9" apart. Allow enough room, as they like full sun and fresh air.


Depths to cover corms.

## Delphiniums their care through the seasons



To sterilize seed: Put one pinch of red copper oxide or semesan in a seed package and shake till all seed is thoroughly coated.


To disinfect seeds: B. Soak them in 1 ounce of formaldehyde with 3 pints of water. Soak overnight in plain water before planting.

A. Top soil should be 2 parts leafmold, 1 sand, 1 part garden loam. B. Three parts loam, 1 part leafmold with lime. C. Drain by crocks.

Sow seed thinly $1 / 8^{\prime \prime}$ deep. Water carefully. Transplant seedlings (D) when first true leaves (not seed leaves) appear. Shade seedlings.


In each clump: A. Eliminate all but 3 to 5 stalks (heavy lines). B. Feed by holes $18^{\prime \prime}$ deep filled with bonemeal and muriate of potash, mixed.

## Dahlias aids to their success



Types: 1, cactus; 2, formal;
3 , single ; 4, pompon.


Dividing a dahlia root: Cut so that each tuber retains a piece of the old stalk. Buds form at neck of tuber and stalk. Next plant as shown.

Staking and planting: A. Drive stout stakes $6^{\prime}$ high $18^{\prime \prime}$ in ground $36^{\prime \prime}$ apart before digging holes. B. Hole $6^{\prime \prime}$ deep. C. Drainage.
D. Press tuber firmly in contact with soil. Dahlias prefer a moist loam and sand and sunny site. They need plenty of water.

As the roots sprout, gradually fill the depression with soil. E. Leave a shallow for water. Keep only one or two shoots for final growth.


Two dahlia diseases: stalk borer and stunt of the leaves.

## Peonies hints on health and growth


A. Dig away from crown and deep under to bring up the roots. Cut back old stems to within $2^{\prime \prime}$ of eye. Separate clump with sharp knife.


Standard divisions such as B, C and D carry 3,4 or 5 eyes and are best for most conditions. One-eye pieces are slow to flower.


Planting. If soil is poor, prepare (A) a hole $3^{\prime}$ wide $2^{\prime}$ deep. For drainage (B), dig $6^{\prime \prime}$ deeper. Rough manure, sods and bonemeal (C).

Surround the roots with rich loam and bonemeal. Make sure when soil is well-packed that eyes are only $2^{\prime \prime}$ below the surface of the soil.
D. To assure proper depth in planting, rub soil flat with a stick and measure from it $2^{\prime \prime}$ to the eye on the root that has been set below.


Two ways of staking: A. For small groups, a bamboo to each spike. B. For large, use interval stakes and cords.


Cut flower stem down as far as possible without hurting foliage (see inset A). Removal of foliage weakens corms for next season.

A-F. If longer stem is wanted, keep 4 or 5 leaves. Gather flowers in morning when one or two blossoms have opened. Rest will follow.

Glads and most other cut flowers should be soaked up to their necks in water when not on display. They will stay fresh longer.


Harvesting: A. Lift with care and leave in sun for a few hours in temperature above freezing. Shake off soil. B. Keep them in box.

After 5-6 weeks drying in box, remove dried soil, stems, leaves and roots. C. Grade corms into sizes. Then store in naphthalene flakes.

A. Numbers 1-3 are three stages of tying with raffia or loose cotton twine to $6^{\prime}$ bamboo stakes. B. Control mites with nicotine spray.


Cyclamen mite at work: A. Buds blackened and twisted. B. Leaf curled. C. If this stage is reached, cut down plant and destroy.


Cutworms (A) chew young plants just below surface of soil (B). Slugs (C) eat young delphiniums as fast as they appear above ground.

D. For slugs and cutworms use poison bait made of 1 qt. of bran, 1 tablespoon of molasses and 1 teaspoon of Paris Green. Thin with water.


Lift 3 -year-old clumps in early Spring and divide with sharp knife (A). Give each division (B) plenty of fibrous roots and one stalk.


Disbudding: A. When plants reach $12^{\prime \prime}$, pinch out the tips leaving only two sets of leaves remaining to grow on each of the stems.
B. At the junction of each of the four remaining leaves on each stem, a new branch will start (detail B). Best flowers are on tender growth.
C. As growth proceeds at end of each stalk, a center and two side buds appear at junction of each leaf. Pinch out all but center bud.


Fall care: Remove tops after frost has killed foliage. A. Cut off to $6^{\prime \prime}$. B. Let tuber stay in soil two weeks to ripen before lifting.


Dig tubers with care. To prevent rotting in storage: A. Dust with sulphur. B. Wrap in dry papers and store where cool and dry.

Or the clumps may be packed (C) in boxes or barrels. Cover with bran or sawdust and store in frostproof cellar to keep in prime condition.


Stems first show botrytis disease (A) with dark areas at base or below surface. Cut below soil (B) and destroy these by burning.

Spores travel to flowers and buds which darken and dry up. Dig out soil and sterilize with formaldehyde solution or Bordeaux mixture.

It is often easier, instead of sterilizing soil to (C) remove infected dirt, burn stems and foliage (D) and mulch well for the Winter (E).


Root gall (A) is another peony ailment-small globular swellings. For control, divide and immerse in water at $120^{\circ}$ before starting to plant.


Tree peonies need protection against (A) warm Spring sun which encourages premature start and (B) against cold winds. Protect leaves.

Roots (C) should be planted far deeper than herbaceous sorts- 6 " below surface. Plant in September or October and mulch the first Winter.

Tree peonies are more particular than others about lime in soil (D). Also good drainage (E) is of utmost importance to their health.

## Outdoor bulbs These bloom from March through September



Frustrating mice and moles


There are several ways to prevent destruction of bulbs by mice (which follow the mole tunnels) and by rabbits. You can plant solitary bulbs or small drifts of them in wire baskets (1), taking off the lid when growth has begun. Or you can cover tulip beds with evergreen boughs (2) to protect tender tips against rabbits. Or you can plant tulips beyond reach-1' deep.


In addition to deep planting, tulips can be protected from moles and mice by scattering a repellent through the soil (3). Moles also avoid a tulip bed that is ringed with narcissus, which are said to be poisonous to them. The stink of crown imperial bulbs will also drive them away. Then there are mole traps (4) which come in various styles-all of them useful.

amarylus wants equal parts of fibrous loam, leafmold and sand. To pot, cover the drainage hole with a crock (A), allow $1^{\prime \prime}$ space ( B ) between bulb and side of pot, neck of bulb (C) should protrude above soil. (D) Keep at $60^{\circ}-70^{\circ}$ and only slightly moist. When shoots are $1^{\prime \prime}$ high, bring to light and water. (E) As buds appear give the plants sunlight and $72^{\circ}-80^{\circ}$.
freesias require the same soil as amaryllis. Plant 5 corms (C) in a $5^{\prime \prime}$ pot 1 to $11 / 2^{\prime \prime}$ deep. Keep temperature at $45^{\circ}-55^{\circ}$ and only slightly moist with tepid water. Temperature at night about $55^{\circ}$ for colored varieties. When buds form, give $60^{\circ}-65^{\circ}$ and keep it through the flowering season. Both amaryllis and freesias can be given weak manure water after buds appear.

## Trees How their varied forms add to garden beauty

Nature and habits of deciduous trees make one of the most fascinating studies that falls to the gardener. Unless he knows trees, he can't begin to appreciate how much they contribute to garden beauty or how he can use them to his advantage.
form, follace, flower. First, their form. It ranges from the columnar or fastigiate types found in Lombardy poplars and tulip trees and cypress oak down to the weeping or pendant kinds such as certain willows, beeches and mulberries. Between these two extremes are all the varied forms-the wine-glass shape of elms, the rounded heads of oaks and maples, the triangular growth of pin oaks and ginkgoes, the flat planes of red oak and sycamore.

Second comes their leafage. How different the massed foliage of the red oak from the delicate tracery of the willow! What a contrast between the copper of beeches and the green of the Ailanthus! What amazing tints they contribute to the Autumn landscape: the purple of the red maple, the yellow contributed by poplar, tulip, honey locust, mulberry, ginkgo and beech, the mauve and red of apple, peach, plum, pear, quince, cherry, and mountain ash. Finally how little the alders, black locust and willows change before they drop their leaves.

A third point in the understanding of trees is their flowering. The reddish haze of the American elm each Spring, the lovely blossoms of magnolias, the waves of color pouring from crabapples and cherries, the exotic spires of the horse chestnuts and the strange inflorescence of tulip trees are worthy examples.
tree requirements. A fourth point the gardener should understand is the cultural requirements of certain trees. The willows and magnolias need constant dampness at the root and should be planted in low-lying places or where the roots don't have to range far for a drink. The Ailanthus, pin oak and sycamore withstand the dirt and smoke of the cities under which others would succumb. The poplars, the columnar Lombardy especially and the Chinese elm, are swift growers and consequently can be planted among such slow growers as oaks. They are cut out when the latter begin to mature. Horse chestnuts and beeches give dense shade.

Another most important requirement of trees is that they have room to grow. If one is willing to sacrifice trees, then crowd them, but a few trees well-grown are better than a disorderly mob of scrubs.

On another page of this Yearbook, we have shown how trees should be planted, staked or guyed and watered. Any tree, whether a sapling moved by the gardener himself or a large specimen planted by a tree expert, must be nursed carefully until it is well-established.

To some the idea of feeding trees seems strange. It does not occur to them that trees must either find their food in the soil naturally or the food be put there artificially. The average gardener, too, may not appreciate the necessity for shaping and thinning branches of trees. Study their structure in Winter and this will become apparent.

Caring for trees. Those who traveled through the devastated sections of New England after the hurricane of last September were immediately struck by the condition of the broken trees. Almost invariably they revealed an interior rot or a structural weakness.

Now that these trees are gone, those who formerly owned them appreciate their value. They also appreciate the fact that trees are worth caring for. They are worth spraying and pruning and feeding and protecting against the stress and strain of unusually heavy winds.

A good tree is a precious gift entrusted to the gardener. It can come to us as a heritage from the past or be our contribution to the heritage of tomorrow. Its increasing height and lengthening shadow should be one of the most noble legacies any man can leave.


Horse chestnuts give shade and flower. Good on lawns.



Norway maples give clear yellow to the Autumnal tints.

Pin oak, a hardy tree suitable for street and garden. sum


White oaks have rounded form and deep red Fall foliage.


Red oak's Fall foliage varies from yellow to deep red.

The ginkgo or maidenhair tree is the oldest known to man.


The elm, the most stately of our American tree heritage.


The weeping beech is a graceful, long-lived tree for lawns.

## BUYING SEEDS

The amount of seed you buy depends on the size of ground you can give to vegetables. If limited, avoid the sprawlers-cucumbers, pumpkins and watermelons, and the staple market typescabbages, celery and potatoes. Make a plan, allowing $18^{\prime \prime}$ between rows for low crops and $3^{\prime}$ for tall. Buy all your small seed by the ounce and beans, corn and peas by the pint or quart.

## FOR BUGS AND PESTS

The tool house shelf should be supplied with arsenate of lead for the chewing insects such as the cabbage worm and the bean beetle and for making poison bait to kill cutworms; nicotine or a contact mixture to spray against aphis, and Bordeaux mixture for fungus diseases of mildew, blight and rust. Large bugs can be picked off by hand. Keep sprayers clean.


## PREPARING SOIL

In vegetable gardens this should really never stop. Late Fall sees empty rows sown to cover crops that are dug under in Spring. Or the ground is dug rough in Autumn and raked in Spring. Cultivation continues all through the seasons. Have adequate tools to speed work-spade, rake, line, hoe, hand cultivator, trowel, digging fork and wheelhoe are essentials.


## COMPANION CROPS

Never let the soil be idle in the growing season. Plan for companion and succession crops. Use the space between rows of late vegetables for quickly maturing crops and plan which crops should follow each other. A companion crop would be lettuce between cabbages, the lettuce maturing in $5-7$ weeks, the cabbage $10-12$. Follow early peas with corn and late pole beans.

## FERTILIZERS

A wheelbarrow load of barnyard manure to every square yard is not too much. Lacking this, you spread commercial dried manure at the rate of a pound to 40 square feet. Compost, too, should be dug in, or it can be run into the drills as you sow seed. Use a complete, high grade fertilizer, a 2-4-5 mixture respectively of nitrogen, phosphoric acid and potash.

## ONIONS

Onions can be raised from seed (and seedlings thinned rigorously) or from onion sets. Good white varieties are Southport White Globe, Burpee's Silver King, White Portugal and AdriacBarleta. Good yellows are Southport Yellow Globe, Ebenezer, Yellow Globe Danvers and Yellow Bermuda. A good red is Southport Red Globe. Also try Espanola and Prizetake.

## HOTBEDS AND COLD FRAMES

In hotbeds can be raised early crops of beans, beets, carrots, lettuce, radish and spinach. Cold frames, using only sun heat, extend the fresh vegetable season four weeks in Fall and provide Spring radish, lettuce, onions, etc., two to four weeks before they can be gathered from the open ground. Cold frames can be used to start celery and other tender kinds.
 IIn药


## TOMATOES

Maturing from 85 to 120 days, tomato seed should be planted early indoors or in hotbed or else buy plants. We recommend for early use Break O'Day and Earliana; for the midseason crop, Burpee's Globe, Marglobe, Beefheart, Ponderosa and Winsall; for the late crop, Richmeat, Oxheart and Burpee's Matchless. Try yellows for salads-Golden Ponderosa, Tangerine.

## WATERING

Since every green vegetable contains more than 90 per cent water, moisture must be supplied especially in dry times. Spinach, cabbage and lettuce require more moisture than others. Eggplants, peppers and tomatoes need less. Get the water to the roots either by long sprinkler soaking or by irrigation ditches run beween the rows and closed with earth at each end.

## UNUSUAL VEGETABLES

Where space is available try some unusual vege-tables-the small fruiting-tomatoes, Italian red plum, yellow pear, red cherry and red pear, Chinese cabbage in its various forms, okra, corn salad, sorrel or globe artichokes. The last are treated as biennials, plants being started from seed or root divisions in manured beds. They bear their edible globes from June on.

## PEAS

Pods for three meals for a family of five will require six $15^{\prime}$ rows. Calculate on this basis for your family's continuous supply. Sow the smooth kinds first, followed at 10 -day intervals by both early and late wrinkled sorts. Provide wire or brush for tall sorts. Space rows $2^{\prime}-3^{\prime}$ apart. Plant seed $2^{\prime \prime}$ deep in heavy soil, $3^{\prime \prime}$ in light. Consult catalogs for varieties.

## ASPARAGUS

Once an asparagus bed is well made, it needs nothing but surface feeding for ten or more years. Dig trench $21 / 2^{\prime}$ deep and give it the best soil and manure. Plant roots $6^{\prime \prime}$ deep and $18^{\prime \prime}$ apart in the row. Cover with $2^{\prime \prime}$ of soil. Fill trench gradually. Cover bed with $4^{\prime \prime}$ of manure in Fall. Plant 2-year-old roots of Mary Washington or Palmetto. Begin cutting after second year.

## RADISHES

The beginner's delight. He can grow them well over a long season. Plant seeds of early kinds as soon as the ground can be worked, using Scarlet Button, Scarlet Globe or Sparkler. Later sow French Breakfast, Icicle or White Rocket. After June 1st try Long White Vienna and Giant White Globe. After the middle of July sow Celestial and Long Black Spanish. Harvest when tender.


## CELERY

Water and deep rich loam are required. Buy plants or start seed indoors by mid-February for early sorts and mid-March for late. Transplant repeatedly to develop roots. Early June dig trench, enrich, and set in plants $6^{\prime \prime}-8^{\prime \prime}$ apart in single or double rows. Hoe and gradually hill up. Use Bordeaux for Summer blight. Blanch by heaping soil or by using prepared paper collars.


## CARROTS

Sandy soil gives carrots better shape; clay soil better color and firmer texture. Seeds germinate in 2 weeks. Some sow spinach with carrot seed, harvesting spinach first. When $3^{\prime \prime}$ high thin out to stand $3^{\prime \prime}$ apart in row. Good early kinds are Chantenay, Coreless and Early Golden Ball. For late sorts: Danvers Half-Long, Long Orange and the prettily-named Tendersweet.


## EGGPLANT

The eggplant, being of tropical origin, is tender and seeds must be sown by mid-February in heat and plants set out not earlier than June 1st. Give each seedling a shovelful of manure or humus and sand, and water weekly in drought. Try Garden Prolific, Black Beauty, Early Long Purple, and for a novelty, White Beauty with an ivory skin and white flesh.

## Lettuce

A quick crop. It wants cool weather, moisture and room. Thin seedlings to $4^{\prime \prime}$ apart. There are four types-Loose-leaf, Butterhead, Crisphead and Cos or Romaine. Late Butterhead resists heat. Start with Early Butternut, White Big Boston and Grand Rapids. Next, Iceberg, New York and Salamander. Then Crispycos or Dwarf White Heart Cos for a Fall crop.

## RHUBARB

Prepare.a liberal soil. Dig hole $6^{\prime \prime}-8^{\prime \prime}$ deep and $1^{\prime}$ across. Place root upright. Cover crown with $4^{\prime \prime}$ good soil, working it around roots. Fill holes gradually. Don't pull stalks the first year. Ten plants are enough for a family. Two kinds to try: Myatt's Victoria, and St. Martin's which is pink all the way through. Keep Rhubarb wet in dry weather. It can be forced in Spring.

## CABBAGE AND OTHERS

Here we are, at the end, and with only space left for the naming of those delectable home-grown crops-sweet corn, bush beans, butter beans, limas, cauliflower, leeks, broccoli, Summer-squash, cabbage, peppers, turnips, spinach, chard and the multitude of old-fashioned pot herbs now fashionable to grow. May gardening bring good meals and good health as your reward.

## Truits suggested varieties for the home garden

Jox and Mersereau are midseason fruiters. The latter needs training. Eldorado is early, of vigorous growth and resistant to rust. Blower's, an everlasting, produces lusty canes. Mt. Pocono carries large fruits. Consider also Boysenberries, Loganberries and Dewberries.



PEACHES
$\mathbf{F}_{\mathrm{OR}}$ white freestones grow Belle of Georgia, Brackett, Hiley and Carmen. In the early yellows are Crawford, Early Alberta and Jubilee. The lates include Crawford Late, and Late Alberta with J. H. Hale for midseason yellow. Also grow peaches in various espalier forms.


NOVELTIES IN ANNUALS


SCABIOSA BLUE MOON

(CONTINUED from page 16)

In the general list of new annuals, two new morning glories are of special interest because of the prominence awarded Scarlett O'Hara. These are Cornell, which is somewhat similar but with a band of white around the edges of the petals and, as I saw it, a better climber; and Crimson Rambler, with brighter coloring, and freer flowering.

Still leading the field in the number of new types and varieties to be intro-duced-and hence, presumably at least, in popular interest-come the marigolds. A single firm is bringing out ten new sorts. One wonders how long this can keep up!

Early Sunshine I have already described. Dixie Sunrise is another early flowering close relative of Dixie Sunshine, but flowers considerably later than Early Sunshine.

The most important, as well as the most attractive of the new marigolds that I have seen is Red and Gold hybrids: a "mule" or sterile cross between an African and a French variety. It gives a wonderful color combination in fair-sized flowers that are produced in almost unbelievable profusion. Beginning to flower within 8 or 9 weeks from seed, it continues until killed by frost.

Those who have grown the immense and delightfully fragrant Sunset Giant type of marigold, but have been somewhat annoyed by its diversity, will welcome the new selection, Orange Sun-set-a splendid loose, informal flower for cutting. Another orange one, of the chrysanthemum type, is Orange Delight. It has astonishing depth of color and brilliance, very dark and vigorous foliage. Shaggy is even more loose and informal than the chrysanthemum-flowered varieties; a bright golden yellow with good cutting stem.

Marigold lovers in northern climates will be interested in the new extra early and hardy Viking strain with carnationlike flowers of good size. It flowers as early as the popular small-flowered Harmony. The new "Hedge" marigold Spanish Gold is distinct in its neat, compact upright habit of growth, giving it the appearance of having been sheared or clipped all over.

In Golden Glow we have still another new type of marigold: an African that looks almost startlingly like the perennial of that name-but without the accompanying black aphids. Its vigorous growth and heavy foliage suggest (Continued on page 42)


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## BOBBINK \& ATKINS

Rutherford 23, New Jersey

NOVELTIES IN ANNUALS

(CONTINUED FROM Page 41)

its use as a Summer hedge. Royal Crown is an earlier and larger flowered type. Dwarf scabiosa-flowered Orange is described by its name.

Still another new type of this endlessly variable flower is represented by American Beauty. This one I have not seen, but the introducers describe it as having an incurved chrysanthemum form. They modestly consider it "one of the great horticultural achievements of the century".

While we have to admit that this is another marigold year, the petunias, with more than a dozen new sorts, run a close second.

Most distinctive is Hollywood Star, already described. Of the others I have grown or seen, the two most striking are Strawberry Festival, of a peculiar crushed strawberry color and especially good for cutting; and Velvet Ball, a very dwarf compact plant excellent for (Continucd on page 43)


ZINNIA-WHITE LIGHT


SNAPDRAGON-GUINEA GOLD


Petunia apple blossom

NOVELTIES IN ANNUALS


PHLOX DRUMMONDI SALMON GLORY


HOLLYHOCKS AND INDIAN SPRING

(CONTINUED FROM PAGE 42)
a narrow edge or border with deep blood red flowers like those of the popular Flaming Velvet.

Black Prince, similar to Velvet Ball but a dark maroon in color, is exceptionally uniform in growth habit. Harris Purple Prince is an improved Elk's Pride, a favorite old variety.

Because of the more compact growth, the Miniature or Gem Petunias have quickly been taken up by small gar-
den owners. Pink and White Gem, rose starred white, has been added to the Rose, Pink and White varieties; and Crêpe de Chine is distinctive in texture as well as in color-a rich rose. Lady Bird, an "almost red" deep rose, will be welcomed by many admirers.

The Ruffled Giant type, favored for pot plants, is represented by a glorious new salmon rose, Marilyn, of heavy (Continued on page 44)

You have been hearing intriguing rumors of the New Hovarth Setigera Strain of hardy How cold resisting and rugged they are. How free from black spot, mildew and other rose maladies. All of which is true. They are a remarkably rugged strain, both the flowering


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See page 42 for our Ad. on New Hardy Plants

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## NOVELTIES IN ANNUALS

## (CONTINUED TROM PAGE 43 )

upright growth; and the new Super Fluffy Ruffles, in a wide range of colors. The ruffling is so deep that the blooms appear to be double. The Paramount strain has been bred especially for dwarf compact plants.

Balcony Rosy Morn carries this favorite color into the Balcony type. In the All-double section, popular with many gardeners, Daintiness brings us a charming apple blossom pink, but judging from the trials seen, it is not yet thoroughly fixed.

## ZINNIAS

Running neck and neck with the petunias for popular favor are the zinnias. Of the new introductions I consider Super Crown O' Gold, Pastel Tints the most outstanding. Their twotoned effect, in a wide range of soft colors, is most charming. Those who considered the recent introduction, Stardust (a selection from the Fantasy type), one of the most attractive of all zinnias will surely welcome White Light, Orange Lady and Rosalie to their cutting gardens.

Zinnia Early Wonder Fiesta, like its older sisters in this dwarf group, is
especially important for its quick growth. It prodaces flowers in less than 6 weeks from seed. It is a rich deep red. In the scabiosa-flowered or highcrowned group, Sunburst adds a new color, canary yellow.

Judging from the renewed interest in China Asters, the wilt-resistant strains must be bringing this fine flower back to many sections where its culture had been abandoned. Not all of the new ones however are resistant-a point to be kept in mind in making selections. In addition to Light B'ue, described previously, there is Extra Early Violet Glory, a distinct new type with blooms of American Beauty form, but claimed to flower in 14 weeks from seed.

Mariner, a navy blue, adds a new color to the Giant Peony-flowered group, particularly good for cutting. Peach Blossom is a beautiful and wiltresistant Early Giant.

## A Pew ror cutting

Those who like to be sure of an abundance of flowers for cutting will be interested in the new rust-resistant An -tirrhinums-Mandarin Yellow, Pink, (Continued on page 52)


ASTER GIANTS OF CALIFORNIA

## THE NEWER PERENNIALS

(CONTINUED FROM PAGE 25)
them, and the group is one that needs straightening out in nomenclature. Ronsdorf Beauty is described as the best salmon rose; Sampson, a deep rose pink; Lilakonigin, pure deep blue; Leuchtstern, light pink, and Snowwhite, a pure white.

Aquilegia oxysepala is described as a very early short-spurred variety, with flowers of periwinkle blue, tipped with white and attractive persistant foliage. Crimson Star has already made a permanent place for itself. If you haven't yet tried it, put it down as a sure bet.

Ajuga reptans, Pink Spires, give us a new color in a most serviceable ground cover, bank and rock garden trailer. As you know, they do well in semishade.

Coming into Summer, we find an embarrassing wealth of new things. First of all is the long talked of delphinium, Pink Sensation. It is shown in color on page 24, but no photographs can do it full justice. When you plant it, don't expect a heavy solid spike of the English type, for this graceful new beauty is of the more open Belladonna form (Continued on page 46)


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## THE NEWER PERENNIALS


(CONTINCED FROM PAGE 45)
with many laterals. It makes a charming tapering pyramid. A valuable characteristic is its "repeating" habit,three or four "crops" during the season. Don't be anxious about the color; it is a clear, soft real pink that you will like -and that doesn't fight.

The Giant Pacific hybrid delphiniums have created a sensation in the delphinium world. Those who like white delphs will be interested in Pacific Giant Pure White, which has a white bee; and in the Galahad Series,
a strain which gives strong, disease-resistant plants with pure white flowers.

Slowly but surely the hardy or "border" carnation, so popular in England, is making headway in this country. The Hardy Cottage class, from Allwood Bros., world famous for carnations, should help increase the use of this fine flower over here. The large, double flowers of vigorous stocky growth make troublesome staking unnecessary.

New Blue is a lavender blue Sweet (Continued on page 47)

of Cleveland, says: "Have learned more from LAWN CARE than have absorbed in the previous 50 years." A New York customer writes: "I didn't realize how fascinating lawn making could be until nating lawn making could be until I read LAWN CARE. - You will find the solution to your problem
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The Garden Mart appears on page 49 of this section.


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## THE NEWER PERENNIALS

William, produced on $15^{\prime \prime}$ stems. Single Midget Mixed is a very dwarf, compact type, good for edging or for pots.

Somewhat similar to the Iceland poppy, one of the most universally satisfactory of all garden flowers, is Papaver schizianum, with very large, soft buff orange blooms produced through the entire season. Unlike the Iceland poppy, it transplants readily. Red Cardinal is a new crimson scarlet Iceland poppy. Snowflame, a "bicolor" Oriental, is a startling combination of pure white and flame red, one of the most striking flower effects I have ever seen. It is one of the very last Orientals to bloom.

To the gypsophilia collection can be added Flamingo, a new double pink, deeper than Rosy Veil, and practically ever-blooming. And those who like new colors in old plants will want to try Veronica spicata rubra, similar to rosea, but very dark, almost red; and Pyrethrum Robertson's Dark Crimson with very large flowers and stiff stems. There is also Lavendula Rose and another White and Blue Mixed.

Harvest Fire, brilliant salmon orange, is considered by some authorities to be the best new phlox in years. Individual florets are extra large, and the foliage seems to be disease-resistant. Columbia, one of the most discussedand often cussed-varieties of recent in troduction, I saw flowering in the Midwest for the first time this Summer. It certainly was excellent there; very different from its performance in my own garden, and a striking example of how local conditions can influence the be havior of a species or even a variety.

Two new hollyhock types are of fered in begonia-flowered Pastel Mixture and Double Souvenir de Madame Perrin, said to include a wide range of colors.

Those who like something a bit out of the ordinary will want to try the English Award of Merit winning Verbascum Cotswold Gem. Blooming from July to late September, its 4' spikes bear amber colored, purple centered flowers. They are valuable because poor soil and hot, dry weather do not affect them And another good thing for a difficult location is Tradescantia James C Weguelin, with porcelain blue flowers from June to September.

## flames of autumn

Kindled by the popularity of such fine tritomas as Tower of Gold and

Mount Etna (in color on page 17), there seems to be a conflagration of new varieties among the flame flowers. The names-Blazing Comet, Orange Flame Sunset, Golden Pride and Goldmin give an idea of the colors. The lastnamed won a first-class certificate in the Holland trial.

Almost synonymous with Autumn are the graceful Japanese anemones September Charm continues to win host of new admirers each season. Mar garete is an unusually tall, dark double.

In Heleniums, another Autumn flower, I think Peregrina the most at tractive I have seen. It is less weedy than the older sorts and earlier to bloom. The color is an indescribable blending of dark mahogany and old gold. Recommended by an English Award of Merit comes Heliopsis scabra incomparabilis, a $3^{\prime}$ border plant with $3^{\prime \prime}$ golden flowers produced from July to Autumn. Following the success of the White Liatris (L scariosa alba) comes a purple variety reintroduced under the name of September Glory, the showiest of all the late sorts with $6^{\prime}$ spires. Gaillardia grandiflora Chloe is a new self-colored Indian yellow.

## A few new roses

A full review of the newer roses will be covered in a later article, but I cannot close without mentioning just a few that you will want to try.

Orange Nassau strikes me as one of the most glorious varieties I have ever seen-an orange and flame combination hard to describe (see page 17). World's Fair, a crimson red in the new "Floribunda" class, also has my vote as a top notcher. A mass planting of it will be featured at the New York World's Fair this Summer. The official flower of the Golden Gate San Francisco Exposition will be Golden State, the color of which is described as a glowing Mikado orange. This rose has an imposing record of awards: Golden Medal at Bagatelle; Gold Medal, International Rose Garden, Portland; Gold Medal Certificate, American Rose Society, and Grand Gold Medal, Lyons, France.

One of the most interesting roses I have seen this Summer is Hercules, an extremely vigorous climber with huge deep rose pink flowers more than $5^{\prime \prime}$ across on long, strong stems, and with heavy mahonia-like foliage
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When a greenhouse is attached directly to the residence it assumes the rôle of another room. While the usual central bench may be dispensed with to give space for furniture, there is still plenty of bench area for the pursuit of indoor horticultural hobbies. This is demonstrated by the J. H. Van Alystyne residence at Davenport Neck, New Rochelle, N. Y. (shown above) where flowers are grown in quantity and great variety throughout the winter, Photographs by courtesy of Lord \& Burnham.

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of ornamental and shade Trees and a of ornamental and shade Trees and a
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plete Chrysanthemum collection. Also outstanding are its offerings in choice Delphiniums, its Rose specialties and its Perennial plants of exceptional merit. Charles H. Totty, Box 6, Madison, N. J. ham, Mass Peat institute of Americ

WYMAN'S GARDEN BOOK features Rhododendron and other desirable Ever-greens-particularly Taxus in wide va
riety. It offers a fine selection of shade screen and flowering Trees: Azaleas and other Shrubs; Vines, hardy Perennials and Rock Garden Plants. Wyman's

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greens and Shrubs, as well as
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tools. Seymour Smith \& Son, 10 Main

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INTER-STATE Planting Handbook is a pocket edition of year-round garden care. It's packed with paragraphs on
hedging ; proper planting of bulbs, plants, shrubs and trees; and it gives you spray calendar, too. Inter-State Nur series, 3119 E. Street, Hamburg,

THE WAY to a Beautiful Home (through a beautiful garden) gets down to the fundamentals of correct soil condition, with helpful data on the kind and quality of peat moss to use (Swedish is recommended). An all-year chart tells
where, when and how to use it. PREMER Peat Moss Corp., Dept. G-1, 150

GARDENING ILLUSTRATED 1939 is a 124-page book of Flowers and Vegetables, with 52 pages in color. It de-
scribes Annuals and Perennials. Roses scribes Annuals and Perennials; Roses; Dahlias; Gladioli; Water Lilies, and the new Marigold, "Mrs. Lippincott", loveliest of the carnation type. Vaughan's
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As readers of this magazine know, I have long been a booster for the "litthe" dahlia. Space for any discussion of varieties is lacking, but I must mention in passing the new dwarf all-season bloomers of the improved Easter Greeting type. One of these, Gerda, is in the group shown in color on page 17 . Then too, we at last have a real American strain, Waller-Frankling Dwarf Hybrids of the "English Bedding" type. But don't be misled by the name; they are equally good for borders and for cutting.

Those with a yen for the modernistic will take to Celosia Royal Velvet with its carmine crimson cockscombs on two-foot plants bearing bronzy, red-
dish margined foliage. It is really strik-
ingly effective when cut.

## FOR LOW COLOR MASSES

We don't often get a new portulaca, and Double Scarlet Glow will appeal to many. Lobelia compacta Duplex provides an edging or a carpet of gentian blue, a tone much pleasanter than that of many lobelias. Verbena Brilliant, a deep flame rose, is said to be an improvement of Luminosa. And "meriwinkle" (or periwinkle) Twinkles is a larger flowered Vinca rosea which, like the type, is unexcelled for dry locations and when planted for growing close to salt water.
It seems odd to have but one nasturtium to report after the deluge of but a few seasons gone! Dwarf Double Indian Chief has the attractive combination of scarlet flowers and dark foliage suggestive of the splendid dahlia Bishop of Llangdaff.

For a very tall background plantof which there are few among annuals -note may be made of Impatiens Pink Butterfly, with $2^{\prime \prime}$ salmon-pink flowers and of the Golden Cleome, a spider plant with deep golden orange blooms Either of these in good soil will pro duce plants $6^{\prime}$ or more in height.
F. F. Rockwell

## GARDENING BOOKLETS

ESPALIER FRUIT TREES, dwarftrained, permit you to pluck nectarines, pears, peaches or apples from your walls. This folder, with its pictures and prices, will help you give your garden a special Old World charm. Henry Leuthardt, Dept. G-1, King St., Port Chester, N. Y.

WHY AND HOW to Prepare Your Garden for Winter explains the causes of "winter kill"-due chiefly to temperature changes during cold weather-and how you can prevent it by mulching with an insulating blanket of peat moss, Atkins \& Durbrow, Dept. G, 165 John St., N. Y. C.

DO NOT PLANT good seeds in soil where they cannot grow! This booklet explains why seeds and plants need different diets-charts their requirements -and tells of a soil testing kit you can buy for yourself. Sudbury Soil Test ing Laboratory, P. O. Box 633, South
Sudbury, Mass.

ROOTONE is a book about hormone powder, which makes cuttings grow powder, which half the time. It is also useful for the prevention of damping off, useful for the prevention of damping off,
and fungus diseases. American CHEMIand fungus diseases. American Calnt Co., Rootone Dept., Ambler, Pa. HOW TO MAKE, out of garden waste,
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fertilizer difficult to obtain. ADco fertilizer difficult to obtain.
Works, Dept, G-1, Carlisle, Pa.

SIESTA FURNITURE shows the new and charming metal furniture for terrace and garden-styles that fit the for mality of a sophisticated penthouse terSummer garden. Royal Metal MFg Summer garden. Royal Metal Mfg Co., Dept. G-1, Chicaco, Ill

GREENHOUSES by Lord \& Burnham is a charming book of sun rooms, from a modest lean-to to the most commodious glass enclosed room for all-year living in the sun. Also worth sending for Electric Hotbed?" Lord \& with an Electric Hotbed?" Lord \& Burnham

COLDWELL catalog of power and hand lawn mowers includes everything from a brand new inexpensive model for smaller lawns to power motors for large estates. It helps you decide the kind and size you need-and shows such added equipment as hedge cutter, glider and sickle bar. Coldwell Lawn Mower Co., Dept. G-1, Newburgh, N. Y.

GALLOWAY POTTERY catalogs charming garden ornaments-bird baths and benches-flower pots and elaborate fountains-jars in Italian red or bluegreen glaze-many fine examples of both modern and traditional design. Send 10c. Galloway Terra-Cotta Co. Dept. G-1, Walnut and 32nd Sts. Phila., Pa

GARDEN ORNAMENTS is the booklet to write for if your garden calls for a
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SEEDS OF RARE PLANTS lists nearly 3,000 unusual species from every corner of the world-some that have ing adventures in gardening, from Chile, Mexico, Tasmania, Kenya and the Orient. Rex D. Pearce, Dept. H, Merchantville, N. J.


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