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 structure—rigid and safe. This is the only car of its kind.

The Lincoln-Zephyr V-type 12-cylinder engine 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 rubber-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, quiet power. 3—14 to 18 miles to the gallon. 4—High power-to-weight ratio—low center of gravity. 5—Passengers “amidships”—modern comfort for six in chair-height seats—the gliding ride—direct entrance to floor of car—high visibility. 6—Hydraulic brakes.
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 valuable 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.

Published by
F. W. DODGE CORPORATION
119 West 40th Street, New York, N. Y.

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.

F. W. DODGE CORPORATION, 119 W. 40th Street, New York, N. Y.

I hereby apply for a copy of Home Owners' Catalogs — which is to be sent prepaid, without cost or obligation — in accordance with above restrictions. My letter is attached.

Name: ____________________________ Street: ____________________________
City: ____________________________ State: ____________________________ Phone: ____________________________
DOGMART

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 tread on the floor below, or a feeling of inevitable danger as the children leave for play. We forget, for a moment, how to

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

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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 watchdog 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.
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)
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 Ben­shein, 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."
BOOKLETS

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

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 you plan your cruise. United Paint Co., Dept. G-1, Pier 2, No. River, N. Y. C.

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 Child Lake, Puno Salt Lake, Titicaca, La Paz and Ignera Falls. American Express Co., Dept. G-1, 67 Broadway, N. Y. C.

CUBA, the Land of Romance and Baliuna, beckons you in this colorful booklet. Here is a guide to the best in restaurants, night clubs, casino life, tours for touring, fishing, racing, and the finest of Cuba's beautiful beaches. Cuban National Tourism Commission, Dept. G-1, Paseo De Marti 255, Havana, Cuba.

WINTER Mediterranean Cruises. Three folders describe three exciting cruises, starting on January 24, February 4 and 15, aboard the modern Conte di Savoia, Rotterdam. Cunard Line, Amsterdam, with itineraries that include shore excursions in the lands along the Mediterranean. Italian Line, 57th St., N. Y. C.

VISIT JAPAN pictures the sports and theatres of Japan—in its sights and scenery. It posts you on coming attractions—the proper clothes to wear—the currency of the country—to travel facilities. It includes specimen tours, with costs. Japan Tourist Bureau, Dept. G-1, 636 Fifth Ave., N. Y. C.


Building and Home Equipment

WESTERN PINE CAMERA VIEWS for Home Builders or Remodeler. How quickly you form an attachment for walls like these of Western Pines! Yet lovely as they are at first, a new loveliness appears in the years. And this is only one of many ways in which the Western Pines contribute to your greater living comfort. Petes, Inc., 855 Broadway, N. Y. C.

WHAT PERMUTIT Water Conditioning Will Do for You is a lovely illustrated booklet on hard water—on the gummy film it leaves on your skin and hair, and what it does to your laundry, water pipes and heater coils. It offers an answer to the problem in an electric automatic water softener for your home. The Permutit Co., Dept. G-1, 339 W. 42nd St., N. Y. C.

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 model to a handsome duplex cabinet. Walton Laboratories, Dept. G-1, Irvington, N. J.

Furniture and Home-furnishings

MODERN FURNITURE is a charming house-test portfolio showing room settings and individual pieces designed in the modern manner, for the graces of an individual American home. It offers an individual decoration service for those who may be re-decorating or furnishing a new home. Send 15c. Modernline, Dept. G-1, 162 E. 33rd St., N. Y. C.

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 manufacture of the vitreous, strong type of tableware known as "American China," Onondaga Pottery Co., Dept. 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 for your own home. Booklet G, Hammage, Schreiber & Co., 145 E. 57th St., N. Y. C.

TOAST-O-LATOR. An important little folder tells of the new and revolutionary automatic electric toaster that keeps the toast constantly in motion, and makes toast as you like it—thick or thin, dark or light. It's fast, economical and clean too. Crocker-Wheeler Electric Mfg. Co., Dept. G-1, Amperst, 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, recommending the exact right luggage for every purpose. Oshkosh, Dept. G-1, 10 E. 34th 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 the gourmet. Known for years in America's finest homes and most exclusive clubs, it is now available in somewhat larger quantities. Pinesbridge Farm, Dept. G-1, Ossining, N. Y.

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(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.)
INTERIOR DECORATION

FOUR MONTHS PRACTICAL TRAINING COURSE

Spring Term Commences February 1st

Intensive training in the selection and harmonious arrangement of period and modern furniture, carpeting, draperies, wall treatments, etc. Faculty composed of leading New York decorators. Cultural or Vocational Courses. Also two-year course in Design. Day or Evening Sessions.

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Those who cannot come to New York may take the same subjects by the Home Study method. Students obtain personal assistance from our regular Faculty. No previous training necessary. Practical, simple, authoritative and intensely interesting course. Requires a few hours weekly in your spare time. Start at once.

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NEW YORK SCHOOL OF INTERIOR DECORATION

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Established 1916
New York City

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A looseleaf GARDEN NOTEBOOK

Arranged to assist you in making a personal record of your gardening, and your garden. 1 Subject Index and 300 pages for notes, clippings, record of microscopes, blooms, and the growing habits of your plants. Available to amateur or professional. A charming and thoughtful gift . . . or a beautiful and satisfactory record book for your own garden notes.

In dark green leatherette . . . $3.50
In beautiful hand-tooled leather . . . $10

JULIA A. LATIMER
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Harold Street, Mamaroneck, N.Y.

YOUR GARDEN

Enhance its natural beauty with shapely, colorful Terra Cotta, Sun Dial, Jars, Vases, Benches, Garden Globes, Bird Baths, etc. Send 10 cents in stamps for illustrated brochure.

3218 Walnut Street, Philadelphia
On display, 123 East 24th St., New York City

GALWAY POTTERY

Your youngest's driveway 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, saving your privet corners from destruction. 15" x 30", two stakes included, it costs $15 from the Garret Thew Studios, Westport, Connecticut.

SHOPPING

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" x 13" x 14" 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, crépes suzettes, pilé, Stilton in port, wild strawberry jam, candies, nuts and cookies, the huge wicker basket, gaily beribboned, costs $25.50 from Vendome, 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 colors touched off with gold or silver. Snap fastenings of jade or carnelian, linings of plain silk. Case and two five-suit decks cost $5 from Yamanaka, 690 Fifth Avenue, New York City.
AROUND

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 4 1/2" long, the larger about 5" 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.

Nextest 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; while leather, $3.50. From Tulsa Lee Barker, 382 Park Avenue, N. Y. C.

For champagne tastes and a champagne pocketbook, for your gilded friend who "has everything", give squab knives and forks. (Also most convenient for toying with a young broiler!) These delicate little instruments are only 8" 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", wing spread 8½". In antique green bronze, they cost $30 each; in lead, $20. They are imported models and come from Erkins Studios, 121 East 28th St., New York City.

Illustrated booklet available. Send 15c to cover mailing expenses.

FOR THAT IMPORTANT PARTY—

SMOKED TURKEY

Pique your guests' epicuriosity . . . enhance your reputation as a clever hostess . . . serve Pinesbridge Farm Smoked Turkey at your next important function. Turkeys, ready-to-serve, weigh 7 to 16 lbs., smoked, $1.35 a pound, direct from the smokehouse, express prepaid. Money back if not satisfied. Footprint brings booklet, "TURKEY SMOKER".

Pinesbridge Farm
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AVOID SUDDEN HEART STRAIN


SEDGWICK MACHINE WORKS
146 West 15th St. New York

STAIR-TRAVELORS

Sedgwick

Also Truck Lifts
Foot Lifts
and Dumb Waiters
MORE FUN IN BED*

Moonbeams, we call it... this little clamp-on lamp that throws a spotlight smack on your book and leaves the rest of the room in outer darkness. Nice when you share quarters with a person who would sleep when you would read. Nice, too, when you want a lamp that focuses on your book and not on you.

In ivory or bronze... $3.50

Ooh! see what's coming your way! Dainty dishes sprinkled with dots, and covered to keep breakfast hot. Served on a tray with big pockets for morning paper and mail. The dishes, 13 pieces, $4.95. The tray, finished in ivory, blue, pink, green or white, with glass top surface... $6.95

*Inspired by Frank Scully's popular series of Fun in Bed books published by Simon & Schuster

SHOPPING

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" high, in gray Pomegranate stone. Piped for fountain use, $35. It may be ordered from Pomegranate 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" x 10". Priced at $25, you can order it from Julius Goodman, 43 South Main Street, in Memphis, Tennessee.

Over a white New England barn swings this weather-vane, "Smoky" and his mate, manes and tails flying to the four winds. About 30" 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 30¢ 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 $7.95; in maple $7.50. 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, teardrop, 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.
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, cumin, 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 assurance that your hors-d'oeuvre are things of joy and beyond reproach. Joha ham, for instance, delicate and aromatic of flavor, cured for two to six weeks with traditional Teuton skill. Or Strasbourg pâté, made by the famed Edouard Arzner—blended with Perigord truffles and packed in convenient tins. For the ham, 79c 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.
**Plummer's Annual Sale**

This establishment conducts but one sale a year.

**RESULTS ARE CERTAIN IF YOU CONSULT A DECORATOR**

Showed above is a living room in our Heritage House, a group of charming traditional interiors created by Paul J. Richart of our staff. A complete service. Inquiries invited.

**Adams Inc.**

**FINE INTERIORS**

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The only merchandise in the sale is our regular stock.

Everything in the store is reduced 10% to 50%.

(Except Lenox China)

**A REFLECTION OF GOOD TASTE**

A distinctive mirror, hand-carved wood frame, finished in antique gold—size 29" x 40".

The brackets are pine touched with white. Also entirely hand-carved wood.

Mirror $90

Brackets $42 a pair

**Lathrop Haynes**

392 Park Ave., N. Y. C. Plate 3-1953

**NOW!**

**ELECTRIFY OIL LAMPS**

Without Drilling or Structural Changes

Amazingly Realistic.

Duplicating The Oil Lamp Wick Burner

DO IT YOURSELF No Tools Required

Yes ... now you can electrify oil lamps merely by replacing the present wick burner with a Nalco Electrified Wick Burner which comes to you complete with switch and cord. Nalco Adapters are available in Standard No. 1 and No. 2 sizes as well as Acorn and Hornet. Also for special or Standard Lamps with Candelabra or Medium base.

Every home will be enriched by the atmosphere of quaint simplicity which an electrified oil lamp with a Nalco Adapter provides.

Write at once for free literature and prices.

**NALCO SPECIALITY SHOP**

1008 Tyler Street

St. Louis, Mo.

**SHOPPING AROUND**

The "Rose of Sharon" is one of the loveliest of the traditional Southern rug patterns. This exquisite copy is hooked with an old-fashioned hand hook, making very tight, fine loops, with raised wool flowers and border on a mercerized jersey background. In soft pastels, 27" x 55", it costs $20 from Laura Coppenhaver, "Rosemont", Marion, Virginia

**AMERICAN HISTORY comes to life on these cocktail plates.**

Border in bright and pastel colors, the subjects, in brown-line etching, include the Mayflower, Drafting the Declaration of Independence, Betsy Ross' House, and so on. In Syracuse China, they are 4½" square, cost $2 for six in assorted colors from Onondaga Pottery, Syracuse, New York.

The mixings, the trimmings and all, to go anywhere at a moment's notice, are in this traveling cocktail kit! Fitted in the striped linen case (15" x 9¼" x 5") are four silver-plate, gold-lined cups, two silver-plate 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.

**NOW in America! SWEDISH smörgåsbord**

Thrilling appetizers—Ready to serve

Now in America you can buy genuine Swedish Smörgåsbord. Assortment includes 11 foreign delicacies for luncheon, the cocktail hour, buffet, supper and holiday parties. Also instructions on how to serve. Other helpful suggestions, too. Why not be the first among your friends to entertain In this unusual Swedish style? Send check or money order today?

$3.25

Now in America you can buy genuine Swedish Smörgåsbord. Assortment includes 11 foreign delicacies for luncheon, the cocktail hour, buffet, supper and holiday parties. Also instructions on how to serve. Other helpful suggestions, too. Why not be the first among your friends to entertain In this unusual Swedish style? Send check or money order today?

**NATIONAL IMPORTING CO.**

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.
Consider the St. Regis

Consider the spacious guest rooms that so closely approximate those in your own house. Consider, too, the exceptional St. Regis restaurants that reflect your varying moods—the brilliant gaiety of the Irudium Room with its music and Ice Show...the cheerful informality of the colorful Maisonette Russe...the robust Oak Room for quiet meals. A stay at the St. Regis interrupts your established mode of living as little as possible. In the instant response of its many carefully trained servants to your every wish, it establishes itself as a fitting background to reflect your own good position and good judgment.

Rooms and Suites by Month or Year

THE St. Regis
FIFTH AVENUE AT 55TH STREET

A National Directory of Real Estate Brokers

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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 weederes, some of them looking like medieval 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.

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 world-wandering 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 busily 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 Kinickinic Avenue, evidently a product of hiccupsing burgers. New Canaan, Connecticut, has a Frogtown Road and the nearby Vista, a Philox Lane. There is a Roast Meat Hill Road in Killingworth, Connecticut, and a Ten 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?” 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?

FURNITURE FASHIONS. 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.
TWELVE 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 outstanding 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, 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 Henitz, 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. During 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 prize-winning 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.
Editors liked this house because:

The plan is well-organized and compact without being cramped. On the first floor the only areas completely closed off by doors are the kitchen and pantry, the studio being isolated for real privacy.

The cinder concrete block used on the exterior is used in an original fashion. Terrace walls carry the motif through into the garden.

Ample closets are all fitted with carefully arranged drawers and clothes-hanging equipment.

Provision has been made for future enlargement. The studio could be converted into a bedroom and bath (water is already piped to the sink), the porch could be expanded to form an extra room.

Decorative art (see pictures opposite) and new materials (see data below) are both intelligently used.

The jury said:

Dr. Teegen: "The scale of the moldings on the concrete blocks used as a surface material may seem fine, but they achieve a character which is interesting and novel. The glass block at the base of the living room windows is disturbing and unnecessary, since more than enough light could be admitted into the room through the windows. This type of house should be the answer for those who like to build a really modern house yet cannot bear to say good-bye to tradition."

Mr. Stone: "An almost perfect plan for the job it has to do. I like the skillful way in which the architect has handled new materials, and his original treatment of the exterior walls."

Mr. Wills: "A quite perfect plan, well adapted to the job it has to do. To me, the design exhibits a certain confusion of thought. It seems to be modern with a traditional flavor. The interiors are good, but the corrugations used on the exterior seem entirely contrary to the lines of the house."

Construction data:

IN THE MASTER BEDROOM THE WALLS ARE SURFACED WITH PRIMAVERA WOOD. DRESSING TABLE AND CHESTS OF DRAWERS ARE COMBINED IN A SINGLE UNIT.
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. Teezen: "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."

CONSTRUCTION DATA

Class I

Architects, Kentz, Adler & Shutze
Owner, Mrs. E. D. Napier, Milledgeville, Ga.
CONSTRUCTION DATA

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!"

RIGHT: 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. WILLS: "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."
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
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.

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.
Women in landscaping

Professional standing is developed by thorough training at Lowthorpe School

"Lady-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 horticult...

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.

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.

Articulate 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 free-hand 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 well-known 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.
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.
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.

Dress 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.
Ultra violet

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

FASHION and decoration run side by side in the race for new trends. Fashion sometimes forgest 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, perchings 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 courtesy 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.

In "The Room with a Diamond Necklace": a bleached oak floor bordered with mirrored baguettes; a sculptured plaster dressing table, lighted from beneath. Shaggy silk curtains hang at the windows, a brilliant chartreuse goatskin rug is on the floor.

"The Leopard in the Drawing Room" this room is titled. 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.

Focus for the end of the music room is an old Viennese piano of rosewood, over which hangs a gold mirror topped by a girl with a tambourine. Two exquisite Louis XVI chairs of striped satin in three soft muted colors stand at either side.

In "The Room with a Diamond Necklace": a bleached oak floor bordered with mirrored baguettes; a sculptured plaster dressing table, lighted from beneath. Shaggy silk curtains hang at the windows, a brilliant chartreuse goatskin rug is on the floor.

Surrealism à la baroque in the "necklace" room: that mirrored fireplace appears to hang from the ceiling by great velvet ribbons! Two quaint Victorian side chairs are covered in tufted glazed chintz boasting a mammoth cabbage rose pattern.

Back in the "necklace" room, this exuberant Venetian commode, painted pink and white like a frosted birthday cake. Above it are two intricate, many-branched sconces, once brass, now for fancy painted chalk-white. Constance Spry arranged the bouquet.
At either side of the music room entrance, a magnificent Buhl cabinet—of tortoise shell inlaid in brass. The matching Buhl table stands before a tall window formally draped in white damask, which also covers the deeply tufted and skirted banquets.

Over this dining room table, a blue sky, dotted with fat plaster clouds and lighted by an alabaster and crystal chandelier. The centerpiece of exotic blooms is by Constance Spry; and those plaster trees sprout brightly colored electric light shades.

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.

Opposite that herringbone wall—this mirrored niche with long beetle green curtains at either side. Dark zebra wood makes the modern table. In brilliant contrast are the candelabra and tall plant stand in chalk-white metal, quite modern in style.

"The Nürnberg Stove that is a Mural" is the title of this Baroque music room. Facing the trompe l'œil 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.
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.
Down the Mosel River Toward Coiibnzig. 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 hangs for a drink. Preferably a drink of Muenchner 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 dock 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.

Motorboating in Scotland

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.

Yachting in Holland

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 paddle. This noon she wants to slip into the vieux port of Dinan. She can leave her canoe, walk up the crooked street of Jersual and dine royally on lobster à l'armoricaine in a simple restaurant on the Promenade. Between courses she can enjoy a view of the towers surrounding medieval Dinan 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 Rhône 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 white-washed 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.
Cubic feet limited

The Arthur John Hockings' New York apartment
fits maximum convenience into minimum space

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.
To increase that spacious look the entire window-wall is curtained as one unit. Right: Mrs. Hocking draws aside the end draperies, to reveal good-sized bookshelves. Mr. Hocking designed most of the furniture. The two chairs above are in gold leaf over coral, all other pieces in pickled oak. The table you see on the opposite page, before the window, masquerades above as a dining table, the square top fitting snugly over the round one.

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.
ENAMEL

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 pot-watching. 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.

STAINLESS STEEL

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.
These new pots and pans are described below, shelf by shelf.

Top: Large Vollrath double boiler; covered saucepan, tea-kettle, Queensware; double boiler and basket inset, Vollrath; Queensware saucepan and pot. Second: Imported asparagus cooker, copper bottom tea-kettle, Revere; French fryer, West Bend Aluminum; triple cooker, pie pan, Mirro; heavy covered frying pan, Wagner-Ware. Third: Baking and roasting pans, Pyrex Ovenware; tea-kettle, double boiler, coffee pot, Pyrex Flameware; covered casseroles, Pyrex Ovenware. Bottom: Large covered pot, Crusader ware from Lalance and Grosjean; ladle, tea-kettle, double boiler, pot and pans are Vollrath Stainless Steel. All from R. H. Macy.
UP 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 becomes 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. Brillat-Savarin was a philosopher, not a technic, and any recipe that begins by "weighing the eggs" is discouraging even at the very beginning.

When M. de la Reyniere 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)
"Useful Articles Under Five Dollars", traveling exhibit of the Museum of Modern Art

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 Gardener's Calendar

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

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1. The greatest dream-books ever written are seed catalogs. Dream, but don't write final orders without planning garden work for first six months.
2. 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?
3. Repot cactus, using 2 parts sand, 2 loam, 1 crushed pot crock, 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. 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.
8. Any day, when the weather is not too cold to make working 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.
10. 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.
11. 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.
12. 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.
13. 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.
14. When geraniums show buds, give them each half a cup of weak manure water. The same potion may be administered to Aspidistrae with success.
15. 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.
16. In the greenhouse make cuttings of fuchsias, heliotropes and Stevias from young wood and give hydrangeas gentle heat to bring on bloom by Easter.

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17. 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.
18. 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.
19. About 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.
20. 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.
21. In stirring the surface soil in potted plants, do it gently. Many feeding roots lie near the surface and shouldn't be gouged out.
22. 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.
23. 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.
25. 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.
26. 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.
27. Willows, poplars and lilacs are desirable locations for borer's. Inspect these trees and shrubs and cut off infested branches of willows and poplars.
28. Set children the task of keeping the bird stations well-stocked with food. Even rabbits may be lured from gnawing hedges by fruit scraps.
29. Lily-of-the-valley pips can be forced into flower within two weeks. Plant 20 in a 6" pot and keep warm and dark until shoots are 3" high.
30. Inspect dahlia tubers and gladiolus corms. Remove rotted parts and dust cut surfaces with sulphur. Try testing seed on blotting paper for germination.
31. 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!
"VERSATILE" 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!"

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 tender, 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?
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 5th to 10th — 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 40th Street, New York.

General Merchandise Fairs — March 5th to 10th
Great Engineering and Building Fairs — March 5th to 13th

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FOR 700 YEARS THE WORLD'S MARKET PLACE

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 converted 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 that individual charm which is always the mark of a real home.
How to Cure

A Cold North Bedroom
by Crawford Heath

Has it ever occurred to you what protection the walls of your home provide—how little there is between you and the biting winds from the north? Perhaps, you've never given that thought. Yet, I'll wager that your house has one failing in common with most houses—cold rooms that simply won't heat up as they should—draughty 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!

* The Snow Test
Start nothing on a roof at a time you're washing hear.

* J-M Rock Wool Home Insulation saves up to 30% of fuel bills.

Far-fetched? Not at all. If your house is a conventional building, that stands between you and the great outdoors is a 1/2" layer of plaster, held in place by a form of lath . . . a four-inch hollow drafty air space . . . a thin layer of sheathing . . . and, nailed to that, an even thinner 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 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, draughty rooms.

Now let's look in your attic. All that space... your attic is... and, again, vanishes into the cold air above.

In summer, the process is reversed. The sun heats up your walls and roof, they heat up quickly—often to 150°. 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—J-M 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 producers and experienced service, to bring you the comfort that pays for itself. J-M Insulation saves up to 30% of the usual fuel costs, reduces summer heat up to 15°.

Why not let J-M Rock Wool Home Insulation stand between you and the weather?

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"Comfort that Pays for Itself" is the most authoritative book on home insulation ever published. Fully illustrated with simple explanations of scientific facts. Explains the J-M method of insulating almost any kind of existing home. Shows importance of a complete job. Before you insulate your home, you need this interesting book.

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Notes on a wine cellar and what to eat and drink...a department written by the Editor—who is also President of the New York Wine and Food Society

DEFINITION: In England the frequent halting for refreshment is given the unholy name of "pub-crawling". In Northern Italy, so Walter Starkie explains in his "Waves of Plain", the phrase to describe the action of a wanderer with a plate 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 Old Southern Gentleman's Egg Nog, why not kick off the traces on New Year's Day and offer your guest something different? Say Brandy Punch. The following recipe for Brandy Punch, which makes a libation both cold 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 pints of Brandy, 1 quart of Jamaica Rum, 1 gallon of water, the juice of 6 lemons, 3 oranges sliced, 1 pineapple pared and cut up, 1 gill of Caracas, 2 gills of raspberries, Falernum to taste, and ice. Mix the Brandy, Rum and Caracas. 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 punch. 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 fruit, etc.—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: 1 cup of whole wheat flour, 1 cup of white flour, 2 cups of bran, 2 tablespoons of baking powder, 1 of soda and 1 of salt, 1% cups of sour milk, 1 egg well-beaten, 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.

CARIBBEAN COCKTAIL. 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 1/4 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 gentleman 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 toast of an English horn in a monody of muted symphonic strings. Broil it slightly, of course, and serve as the perfect accompaniment to scrambled eggs and toast. And if 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. 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 Habilsham 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 Malmsy became fashionable—the names of grapes grown in Madeira. When 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° to 160°, after which it is called Vinho Estufado. After being racked and rested, it is called Trasfigurado Fino, 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 aperitif; with soup, a Sercial; at the end of the meal, a rich type. Between the dry Sercials and the rich Malmsyes can be found a varied range of wines to please an equally varied range of tastes. In the kitchen, Madeira serve a great diversity of purposes: the making of sauces, the flavoring of soups and New­burg, and the enlivening of desserts.

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

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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 tablespoonsfuls 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 BAREKET

The rabbit 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-noggs and fruit cakes in the number of traditional recipes.

Melt one pound of freshly grated cheese — mild or sharp according to taste — with two tablespoonsfuls 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 cheese — then 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 the cheese is put sufficient butter in the chafing dish (or skillet) to fry the sandwiches. Dip them in the egg mixture, coating both sides, and fry in the butter — first as the cheese must melt last. Cook these as they are wanted and serve immediately on a hot plate.

ANCIENT CHEESE CANAPÉS

Provide two six-ounce packages of cream cheese, Mash with a silver fork.
and add two egg yolks. Mix well and add one small white onion, grated. Do not chop the onion as there must be no small pieces in the mixture. Stir in two tablespoons 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 to one's taste, add two tablespoonsfuls of a sharp cheese to the creamy mixture—grated, of course—and 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 anyway 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 ham—then roll each slice. Place them very close together in a shallow baking dish. Sprinkle with buttered bread crumbs and a cup of freshly minced ham. Bake in the oven about 45 minutes or until the rolls are thoroughly done. Serve immediately.

CHEESE SAUCE À LA SUISSE

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 juicy ripe tomatoes—the center slices—rolled in Virginia white wine 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 À LA TRUFFLE

For sheer luxury, if you are giving a buffet supper and would like to go the reputed gourmet 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. Place 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 Romaney wafers with this. A dry chilled sherry or a chilled Moselle as an aperitif goes beautifully with this cream cheese and adds to a very unusual dish.
Los Angeles Sports Fiesta:

Not content with the usual round of sporting events in Southern California, sports promoters have banded together to produce a "Sports Fiesta", packed to the brim with events in every field of competitive endeavor.

Inaugurated by the gala opening of the Santa Anita horse racing season on December 30th, the "Fiesta" will continue for 17 days, each bringing forth a different "big league" event.

Here are a few of the "Fiesta's" highlights:

January 2—Tournament of Roses Football Classic, Rose Bowl, Los Angeles

January 5—East-West Ice Hockey Matches

January 6—Fourth Annual Los Angeles Open Golf Tournament

January 10—Henry Armstrong will defend his World's Championship lightweight boxing title.

You will find it of advantage to identify yourself as a reader of House & Garden, in writing to these advertisers.
January 15—World’s Professional Football Championship game, Los Angeles.

FOR YOUR JANUARY SPORTS CALENDAR

January 6—Annual All-American Air Maneuvers, Miami, Florida.
January 11—Winter Horse Racing Meet at Hialeah Park, Miami, Florida.
January 20-29—Third Annual Palm Springs Rodeo, Palm Springs Field Club, Palm Springs, Calif.
January 31-February 3—Mid-Winter Amateur Golf Championship, Miami, Florida.

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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 Spandoeck—flower painter at the Jardin du Roi—Redouté, Turpin, Poinleau and Madame Vincent. They used the stipple engraving process which Redouté brought to France from England. Redouté's work reached its zenith in "Choix des plus belles fleurs", 1827 which contained six famous camellia plates, Prevost's plates, some of which together with other famous English and French plates, appeared in Hovey & Grooms 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 Martin, 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 1769 with 60 plates accompanied by instructions for coloring them, was the first of these drawing books. We wish he had considered Crispin de Pass'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 Golden's "Flora", the earliest American botanical manuscript, was illustrated by nature printing, which her father, Cadwalader Golden, described in his letter to Gronovius in 1755. Another description of it was written by that curious and picturesque physician-botanist, John Cocksley Lecson. And did not William Curtis, founder of the Botanical Magazine, and his daughters of great help in making water color flower studies, or 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.

Ertzen'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 Bendoro 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 Personalty Decorating Co. P. 34. The poker chips are from Mark Cross.

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SECTION I of the February Double Number presents a Portfolio of 1939 Furniture News—a preview, in color, of The Golden Gate International Exposition—new color schemes for bathrooms—and a full bill of other House & Garden features for your home.

HOUSE & GARDEN'S FEBRUARY DOUBLE NUMBER—

on sale January 20th
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Since more than 1100 kinds of flowers, trees, shrubs, fruits and vegetables are mentioned in this Yearbook, we index below many of the gardening processes.

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Earth

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 soil-testing 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-leaved evergreens—azaleas, laurels, leucothoe, rhododendrons—the heathers and a large number of our native woodland flowers, including arbutus and lady-slipper.

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 bone meal, 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 soil 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 matter—except 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 above-mentioned 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 parceled 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 at 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 forking.

Beds for flowers, especially if they are to be undisturbed perennials, should be prepared so thoroughly that for several years they will need only surface cultivation and surface 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 the 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 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 bone-meal, 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.

**LIVE SOIL.** 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.

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 supply deep anchorage for plants.
**Water**

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

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 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 water-loving 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 architecture 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 deep—at 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 distachys*, 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 nummifolium*, 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; *Typha 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 sylvestris*, goatsbeard; *Arundo donax*, giant reed; *Equisetum purpureum*, Joe-pye weed; *Filipendula palustris*, Siberian meadowsweet; *Habenaria fimbriata*, Siberian meadowsweet; *H. psycodes*, the small purple fringed-orchid; *Iris pseudacorus*, yellowflag; *I. versicolor*, our common blueflag; *Lollipe cardinalis*, cardinal-flower; *L. sphytillica*, large blue lobelia; *Lythrum salicaria*, purple loosestrife; *Mimulus ringens*, Alleghany monkey flower; *Miscanthus sinensis*, eulalia; *Myosotis scorpioides* or *palustris*, true forget-me-not; *Osmunda*
regalis, royal fern; *Rhema Virginica*, common meadowbeauty; *Sarracenia Drummondii*, 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*, *longiflora* 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 hood 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.
Sun

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

S O 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 scattered 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, winter creeper; Taxus Canadensis, ground hemlock. The solitary all-shade ground cover is Packysandra terminalis, Japanese pachysandra. Among the perennials—Cimicifuga racemosa, Caloehis hughes; Eupatorium purpureafolium, 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 shadbloom; Hamamelis Virginica, common witch-hazel; Hydranges arborescent, smooth hydrangea; Zanthorhia apifolia, yellow root. The lone tree suitable for the shade of city back yards and city air is Ailanthus

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

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

The dust mulch is a blanket to temper the sun's heat and prevent attack of insect pests.

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

The dust mulch is made by culti-vating top soil or laying down a coat of peatmoss or leaves.
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 imperialis, crown imperial, and F. meleagris, checkered frilltailia; Galanthus nivalis, snowdrop; Muscar 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, longiforum, 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 Halitana, Hall Japanese honeysuckle; Lycopodium obscurum, groundpbine; 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, Dutchmans-pipe; Humulus Japonica, Japanese hop; Lonicera Japonica, Japanese honeysuckle; Polygonum auberti, China fleecievine; Pueraria thunbergiana, kudzu bean; 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 fruticosa, 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, well-furnished 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 Kerria; E. H. Wilson's famous beauty-bush, Kolkwutia amabilis; Ligustrum amurense, Amur privet; Henry honeysuckle, Lonicera Henryi; the flowering raspberry, Rubus odoratus; Japanese spirea, Spiresa Japonica; and Vanhoutte spires, S. vanhookii; 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"-9" 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" 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 over 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 cold. As illustrated here, broadleaf evergreens are protected from sun scald by slatted shelters or wrapped in layers of soft, light glass wool.

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

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

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. Without that 25% of air the roots cannot thrive. Indeed, a new process of soil preparation is being tried whereby compressed air is driven deep into the soil not only to break it up, as in digging, but also to aerate it.

While the tremendous, tireless activity 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 beneficial and destructive; they can kill or prosper a plant.

Those who garden in cities know how necessary 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 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 Winter 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 usefulness in marking divisions of the garden and property lines, hedges serve the common sense purpose of protecting plants against wind. Even low hedges afford 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, Iboa privet; L. O. Regelianum, Regel privet; L. vulgare, common privet; Chaeomeles lagenaria, Oriental quince; Syringa vulgaris, common lilac; Berberis thunbergii, Thunberg barberry; B. Mentorensis, Mentor barberry; Crapeagus oxyacantha or C. monogyna, English hawthorn; C. crus-galli, Cockspur thorn; Actinidia arguta, bower actinidia; Rhamnus cathartica, buckthorn; Gleditsia triacanthos, honeylocust; Fagus sylvatica, common beech; Carpinus betulus, hornbeam; Taxus cuspidata, Japanese yew; T. media Hick's, Hick's yew; T. media, hybrid yew; Thuja occidentalis, American arborvitae; Pinus strobus, white pine; Tsuga canadensis, 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 essential. Use the following: Caragana arborescens, Siberian pea-tree; C. frutescens, Russian pea-tree; Ulmus pumila, dwarf Asiatic elm; Cotoneaster lucidus, glossy cotoneaster; Rhamnus cathartica, buckthorn; Crataegus crus-galli, 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; Lonicer a tartarica, Tartarian honeysuckle; Berberis thunbergii, Thunberg barberry.

California furnishes a different and more extensive list: Berberis xerophyta, rosemary barberry; B. Darwinii, Darwin barberry; Pernettya mucronata, broadleaf pernettya; Escallonia floribunda, white escallonia; Quercus ilex, holly oak; Lonicera nitida, box honeysuckle; Ilex aquifolium, English holly; I. cornuta, Chinese holly; Euonymous japonicus, evergreen bittersweet; Cotoneaster Simonsii, Simon's cotoneaster; Pittosporum tobira, tobira; Cinnamomum camphora, camphor-tree; Raphiolepis umbellata, yedo hawthorn; Photinia glabra, Japanese photinia; P. arbutilifolia, Christmasberry; Chamaecyparis Lawsoniana, Lawson cypress; Cupressus macrocarpa, Monterey cypress.

OTHER HEDGE MATERIAL. For the area from Washington southward, much of the material recommended for California can be used, together with the following: Buxus sempervirens, boxwood; Taxus baccata, English yew; Quercus virginiana, live oak; Ligustrum quihouii, Quihouii privet; L. lucidum, glossy privet; L. Japonicum, Japanese privet; Maclura pomifera, Osage orange; Cupressus sempervirens, 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.

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.
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 plants, furnish support for 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 after-care 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 investment 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, light-weight 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 meadow rue, the loose branching of Speciosum lilies, the tangle of Gyrophiila, the husky branches of high zinnias, the spires of hollyhocks and Verbasums, the white fountains of Shasta daisies, the starred stems of Anchusa, the arching stems of Baptisia, the tall stalks of Rudbeckia, Michaelmas daisies and Helieinum—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 THICKS. 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.
Seeds

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

A seed 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 1/4 garden loam, 1/4 finely ground peat and 1/4 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.

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

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

Peas are broadcast in a wide drill, thinned later.

All corn, pumpkins, cucumber, melons, etc., should be sown ringwise in well-enriched hills.

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.

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.

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.

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.
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 instance—some 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.
By grafting, layering and also by root-cutting we increase our plants

Layering canes of climbing roses by pinning them down and covering with soil. The roots soon sprout.

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

Left: 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.

Left: A double pot to root soft cuttings. Sandy soil in the big pot; water is poured into the little one.

Below: The use of stems in espalier fruit. Here horizontal cordons are beneath a six-branch palmette.

Stems and branches

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.

Grafting 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.
Leaves

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

ALTHOUGH, 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 arcing 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 spiresas, of lilacs, viburnums, rhododendrons and various bush honeysuckles.

1. When the tips of delphinium leaves curl and the flowers look sickly, this is mite injury. Spray with a rotenone compound.

2. The black patches on delphinium foliage indicate a bacterial infection that is caused by the broad mite. Use sulphur dust.

3. When the tips of Austrian and other pines bend over and fade, you find the larvae of a pine shoot moth. . . . Break off tip.

4. The elm leaf beetle which chews the leaves can be defeated by spraying. Keep elms healthy to resist all kinds of diseases.

5. Hollyhock rust appears as orange-red pustules on the stems and back of leaves. Dust with sulphur and burn infected parts.

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.
Fruits and flowers

The varieties of flowers—Disbudding and saving seeds

—The results gained by pruning—Pretty Autumnal fruits

So far 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; SPIKES, as you find in the lilac, 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 DISBUDING. 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 Rutiodendron, R. tartarica and Asiatic crabapples. The blacks are found on Canadian elderberries, privets, chokeberries, inkberries, Viburnum acerifolium, lacteoides, pubescens and Sieboldii, various cotoneasters, some of the barberries and the common buckthorn of our own countryside.

1. After flowers of lilacs, rhododendrons and azaleas are spent, clip them off to save strength of the plant and to induce growth.
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.
3. In addition to pinching back chrysanthemums to make them bushier, the side buds (not terminal buds) should be rubbed off.
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.
5. Collect seed as soon as the pods appear to be bursting. Plant immediately or put away in tin boxes until Spring planting time.
6. When cutting iris, gladioli and narcissi do not shear off all the leaves. These are needed for continuing bulb and root growth.
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-glory—Scarlett 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 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 list—Hollywood 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 Drummondii 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" to 10" 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" to 5" blooms are borne on 3' 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" to 18" tall, 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 1½' 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" to 12" 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)
Among the Novelties and Revivals

BUDDLEIA CHARMING

ORANGE NASSAU

TRITOMAS MT. ETNA AND TOWER OF GOLD

CHrysanthemum Glomero

ENGLISH DWARF BEDDING DAHLIAS

CHrysanthemum Lavender Lady

SCARLETT O'HARA MOONFLOWER

LILY-SHAPED DWARF DAHLIAS
Five Seasons in
Five Gardens

1. Early Summer at Durham, N.C., in the garden of R. P. McClamrock of which George Watts Carr was architect. A large Vanhouette 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 "Paradoa", 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. Orloff & 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.

Bottom: 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.

In a New Jersey garden where selected plants give formal and informal effects both in Summer and Winter.
A New England house brought out-of-doors by its garden

Situated 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 Euphonyous 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.
A garden designed to extend the house beyond its actual walls

The garden of Mrs. William Hanly at New Canaan, Conn., illustrates the 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 clothra, 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 Middelee was landscape architect of the property.
A rock garden set between a placid lake and noble trees

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 saxifrage 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, Meriania and gromwell—with the yellow of Alyssum saxatile, Hypericums and Doronicums.
1. The colorful modern massed arrangement in a blue porcelain rectangular vase on a black base was made by Mrs. William Hutchinson of the New York State Federation of Garden Clubs at the Judges’ course last year.

2. A modern group of white calla lilies and horizontal leaves in a white glass vase, with glass birds as accessories, drew a prize for Mrs. Edward C. Blum of the Garden Club of America at the International Flower Show.

3. First prize for a composition using tropical or semi-tropical plant material was awarded to Mrs. Robert H. Wyld of the New York State Federation, who used orange clivias and spotted calla leaves in her selection.

4. A coleus leaf, the high spot of this arrangement in shades of lavender, purple and maroon in a maroon metal Jensen container, made by Mrs. Ralph Magoffin of the New York State Federation of Garden Clubs.

5. A composition in which the shadow completes the design: a grouping of red amaryllis and leaves in an iron pot with a metal figure, by Mrs. Alfred B. Frenning of the Garden Club of America. It took second prize.

Flower arrangements that show the contemporary taste.
A new annual and five perennials that will add distinction to our gardens this year
The newer perennials

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

NOVELTY 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, Gaucherii. 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 dudonnet, close on the heels of last year's pink-flowered 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" in circumference.

Gunnera manicata, from South America, makes an exotic looking specimen with handsome leaves 4' in diameter on stems 5' 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" or 7" flowers on 40' 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.

AFTER 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' to 4') 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 1'/2"—Little Boy Blue, Little Pink Lady and Olga Keith, you will also want if you haven't yet given them a trial.

COLOR, 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!
The first crop—Catalogs

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 if seed house or nursery catalog. By all means, read gardening books. 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.

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.

These 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 irises 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 pruning 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, bulbs, annuals, perennials, trees, shrubs and rock garden plants

Vines

<table>
<thead>
<tr>
<th>NAME</th>
<th>HEIGHT</th>
<th>SEASON</th>
<th>COLOR</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achimenes</td>
<td>12&quot;-24&quot;</td>
<td>July-Sept.</td>
<td>Blue, white</td>
<td>Good for sheltered porch boxes or brackets in semishade.</td>
</tr>
<tr>
<td>Akebia, Fivesleaf</td>
<td>To 15&quot;</td>
<td>May-June</td>
<td>White</td>
<td>Aristocratic climber.</td>
</tr>
<tr>
<td>Clematis</td>
<td>10'-12&quot;</td>
<td>Apr.-Sept.</td>
<td>Blue</td>
<td>Good for arches.</td>
</tr>
<tr>
<td>Cobaan</td>
<td>To 40&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for pergolas.</td>
</tr>
<tr>
<td>Dutchman's Pipe</td>
<td>To 30&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for arbors.</td>
</tr>
<tr>
<td>Hydrangea, Climbing</td>
<td>To 40&quot;</td>
<td>July-Oct.</td>
<td>Blue</td>
<td>Good for climbing rose.</td>
</tr>
<tr>
<td>Ivy, English</td>
<td>To 50&quot;</td>
<td>Apr.-Aug.</td>
<td>White</td>
<td>Good for pergolas.</td>
</tr>
<tr>
<td>Morning-glory</td>
<td>To 60&quot;</td>
<td>Apr.-Aug.</td>
<td>White</td>
<td>Good for arbors.</td>
</tr>
<tr>
<td>Wintercreeper</td>
<td>To 40&quot;</td>
<td>Apr.-Aug.</td>
<td>White</td>
<td>Good for climbing rose.</td>
</tr>
<tr>
<td>Wistaria</td>
<td>To 40&quot;</td>
<td>Apr.-Aug.</td>
<td>White</td>
<td>Good for climbing rose.</td>
</tr>
</tbody>
</table>

Ground Covers

<table>
<thead>
<tr>
<th>NAME</th>
<th>HEIGHT</th>
<th>SEASON</th>
<th>COLOR</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
</table>

Bulbs and Tubers

<table>
<thead>
<tr>
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<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buttecup, Tall</td>
<td>18&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Canna</td>
<td>36&quot;-60&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Hacinth, Cape</td>
<td>36&quot;-60&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Liliy auratum</td>
<td>36&quot;-60&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>L. henryii</td>
<td>60&quot;-80&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>L. speciosum</td>
<td>48&quot;-60&quot;</td>
<td>Apr.-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>L. superbum</td>
<td>60&quot;</td>
<td>May-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>L. testaceum</td>
<td>60&quot;-72&quot;</td>
<td>May-Aug.</td>
<td>Blue</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Narcissus</td>
<td>4&quot;-18&quot;</td>
<td>Apr.-May</td>
<td>Yellow</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Oenothera</td>
<td>4&quot;-6&quot;</td>
<td>Apr.-May</td>
<td>Yellow</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Scilla</td>
<td>6&quot;-10&quot;</td>
<td>Apr.-May</td>
<td>Yellow</td>
<td>Good for mixed borders.</td>
</tr>
<tr>
<td>Snowdrop</td>
<td>4&quot;-6&quot;</td>
<td>Mar.-Apr.</td>
<td>Yellow</td>
<td>Good for mixed borders.</td>
</tr>
</tbody>
</table>
### Perennials

<table>
<thead>
<tr>
<th>NAME</th>
<th>HEIGHT</th>
<th>SEASON</th>
<th>COLOR</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alyssum, Hardy</td>
<td>12&quot;</td>
<td>April-May</td>
<td>Golden yellow</td>
<td>Broad, solid masses of bloom. Excellent for edging sunny borders.</td>
</tr>
<tr>
<td>Arabis</td>
<td>10&quot;</td>
<td>April-May</td>
<td>White</td>
<td>Low and spreading; combines well with alium, as border edging plant.</td>
</tr>
<tr>
<td>Aster, Hardy</td>
<td>8&quot;-8&quot;</td>
<td>Sept.-Nov.</td>
<td>Deep rose</td>
<td>Many fine types, including new dwarfs. Indispensable in the Autumn garden.</td>
</tr>
<tr>
<td>Bleeding-heart</td>
<td>18&quot;-36&quot;</td>
<td>April-June</td>
<td>Orange-red</td>
<td>Vigorous, brilliant-flowered plants for rear of plantings. Sow under glass in early March.</td>
</tr>
<tr>
<td>Bocconia</td>
<td>48-60&quot;</td>
<td>June-Aug.</td>
<td>Pinkish</td>
<td>Effective and satisfactory in every way. Sow under glass about mid-March.</td>
</tr>
<tr>
<td>Butterfly-weed</td>
<td>24-36&quot;</td>
<td>July-Aug.</td>
<td>Orange</td>
<td>Spreading ground covers that withstand even difficult conditions. Sow under glass in February.</td>
</tr>
<tr>
<td>Campanula</td>
<td>24-36&quot;</td>
<td>June-July</td>
<td>Various</td>
<td>Especially for cutting and edging in dry, sunny places. Also called montbretia. Should be much better known. Culture as for gladiolus.</td>
</tr>
<tr>
<td>Candytuft, Hardy</td>
<td>6-10&quot;</td>
<td>April-May</td>
<td>White</td>
<td>Evergreen, especially good for edging and low, broad masses. Best in full sun.</td>
</tr>
<tr>
<td>Coreopsis</td>
<td>24-36&quot;</td>
<td>June-July</td>
<td>Deep rose</td>
<td>Very easily grown, excellent for garden display and cutting. Keep old flower heads removed.</td>
</tr>
<tr>
<td>Cynoglossum</td>
<td>18&quot;</td>
<td>June-frost</td>
<td>Blue</td>
<td>Forget-me-not type flowers, especially fine during late Summer. Very good.</td>
</tr>
<tr>
<td>Delphinium</td>
<td>36-60&quot;</td>
<td>June-Sept.</td>
<td>Blue, various</td>
<td>Several types, mostly fragrant. Excellent for cutting. Flower freely in sun and lime soil.</td>
</tr>
<tr>
<td>Dianthus (Pinks)</td>
<td>8-18&quot;</td>
<td>May-July</td>
<td>Pink, various</td>
<td>Daisy-like flowers in masses, good for display and cutting. Sun and well-drained soil.</td>
</tr>
<tr>
<td>Duronia</td>
<td>24-30&quot;</td>
<td>April-May</td>
<td>Orange</td>
<td>Continuous flowering in well-drained soil and sunny situation.</td>
</tr>
<tr>
<td>Evening Primrose</td>
<td>18-24&quot;</td>
<td>May-June</td>
<td>Primrose</td>
<td>Continued on the next page</td>
</tr>
</tbody>
</table>
### Perennials

<table>
<thead>
<tr>
<th>NAME</th>
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<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flax</td>
<td>18&quot;</td>
<td>May-June</td>
<td>Light blue</td>
<td>Graceful and airy, delightful clean color. Best in masses, sun or part shade.</td>
</tr>
<tr>
<td>Forget-me-not</td>
<td>8&quot;-12&quot;</td>
<td>May-Oct.</td>
<td>Light blue</td>
<td>As edging or masses, or as ground cover for Spring bulbs. Sun or light shade.</td>
</tr>
<tr>
<td>Gaillardia</td>
<td>15&quot;-24&quot;</td>
<td>June-Nov.</td>
<td>Various</td>
<td>Continuous flowering, especially good for cutting. Modern named varieties much improved.</td>
</tr>
<tr>
<td>Gypsophila</td>
<td>24&quot;-36&quot;</td>
<td>June-Sept.</td>
<td>White, pink</td>
<td>Clouds of wee dainty flowers, indispensable for arranging with other flowers.</td>
</tr>
<tr>
<td>Helichrysum</td>
<td>12&quot;-18&quot;</td>
<td>May-Aug.</td>
<td>Red, pink</td>
<td>Effective in masses and for cutting. Tall, airy stems. Sun or part shade.</td>
</tr>
<tr>
<td>Hollyhock</td>
<td>60&quot;-80&quot;</td>
<td>July-Sept.</td>
<td>Various</td>
<td>Tall and dominating, against walls, buildings or at back of border. Singles and doubles. Full sun.</td>
</tr>
<tr>
<td>Iris</td>
<td>6&quot;-48&quot;</td>
<td>April-Sept.</td>
<td>Various</td>
<td>Many types and varieties. Can be selected for moist or dry, sunny or shady conditions.</td>
</tr>
<tr>
<td>Lirais</td>
<td>30&quot;-48&quot;</td>
<td>July-Sept.</td>
<td>Purplish</td>
<td>Long, slender, picturesque wands of densely packed little blossoms of peculiar rosy purple color.</td>
</tr>
<tr>
<td>Lupine</td>
<td>15&quot;-48&quot;</td>
<td>June-Aug.</td>
<td>Blue, various</td>
<td>Unsurpassed where conditions suit it. Full sun, fair amount of moisture.</td>
</tr>
<tr>
<td>Morningglow</td>
<td>36&quot;-48&quot;</td>
<td>May-June</td>
<td>Blue, white</td>
<td>Feathery and fine for cutting. Moist, well drained soil in sun or part shade.</td>
</tr>
<tr>
<td>Monkshood</td>
<td>36&quot;-48&quot;</td>
<td>Aug-Sept.</td>
<td>Blue, white</td>
<td>For display at back of border, and for cutting. Rich, not dry soil and partial shade.</td>
</tr>
<tr>
<td>Phloxscodon</td>
<td>24&quot;</td>
<td>July-Nov.</td>
<td>Blue, white</td>
<td>For garden display and cutting. Sandy, well drained soil, sun or shade.</td>
</tr>
<tr>
<td>Poppy, Iceland</td>
<td>12&quot;</td>
<td>May-Oct.</td>
<td>Various</td>
<td>For edging, colorful ground cover and cutting. April sown seed blooms first season.</td>
</tr>
<tr>
<td>Poppy, Oriental</td>
<td>24&quot;-36&quot;</td>
<td>May-June</td>
<td>Various</td>
<td>Many new, subtle colors available in this old-time favorite. Sun and good soil.</td>
</tr>
<tr>
<td>Primrose, Hardy</td>
<td>8&quot;-15&quot;</td>
<td>April-May</td>
<td>Various</td>
<td>For edging and general early display in well-drained, not too dry soil.</td>
</tr>
<tr>
<td>Schisandra, Hardy</td>
<td>18&quot;-24&quot;</td>
<td>May-Oct.</td>
<td>Various</td>
<td>Excellent border plants for full sun and average soil. Large, showy flowers.</td>
</tr>
<tr>
<td>Shasta Daisy</td>
<td>18&quot;-24&quot;</td>
<td>June-Nov.</td>
<td>White</td>
<td>Showy, daisy-like flowers, fine for display and cutting. Prefers cool, moist soil.</td>
</tr>
<tr>
<td>Sipho</td>
<td>15&quot;-36&quot;</td>
<td>June-July</td>
<td>Creamy, pink</td>
<td>Dense foliage and spraying heads of small flowers, pink or white. Moist, well-drained soil. Very free-flowering, for border and cutting. Sun and sandy soil preferred.</td>
</tr>
<tr>
<td>Stokesia</td>
<td>18&quot;</td>
<td>June-Oct.</td>
<td>Blue, white</td>
<td>Always desirable for border and cutting, especially the newer varieties. Full sun.</td>
</tr>
<tr>
<td>Sweet William</td>
<td>12&quot;-18&quot;</td>
<td>May-June</td>
<td>Various</td>
<td>Graceful, slender flower spikes, some very long, Sun or part shade.</td>
</tr>
<tr>
<td>Veronica</td>
<td>8&quot;-15&quot;</td>
<td>June-July</td>
<td>Blue, white</td>
<td>For edging and ground cover in either sun or part shade. Numerous varieties.</td>
</tr>
<tr>
<td>Viola</td>
<td>6&quot;-8&quot;</td>
<td>April-Nov.</td>
<td>Blue, various</td>
<td>Especially for broad chump effects at back of border. Full sun and well-drained, dryish soil.</td>
</tr>
<tr>
<td>Yarrow</td>
<td>36&quot;-48&quot;</td>
<td>July-Aug.</td>
<td>Yellow</td>
<td>Especially for broad chump effects at back of border. Full sun and well-drained, dryish soil.</td>
</tr>
</tbody>
</table>

### Ornamental Trees

#### Deciduous

<table>
<thead>
<tr>
<th>NAME</th>
<th>HEIGHT</th>
<th>SEASON</th>
<th>COLOR</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>15&quot;-25&quot;</td>
<td></td>
<td></td>
<td>Usually thought of as an orchard tree, but also first-class ornamental. Good, well-drained soil and sun.</td>
</tr>
<tr>
<td>Beech</td>
<td>25&quot;-40&quot;</td>
<td></td>
<td></td>
<td>Excellent ornamental for lawn use. Purple and European most popular. American difficult to transplant.</td>
</tr>
<tr>
<td>Elm, American</td>
<td>To 99&quot;</td>
<td></td>
<td></td>
<td>Best of all for framing vista, landscape view or house. Fairly rapid grower. For lawn or background.</td>
</tr>
<tr>
<td>Flowering Cherry</td>
<td>To 29&quot;</td>
<td></td>
<td></td>
<td>Fine Spring display of pink to white flowers. Use as specimen, in border or for mixed planting. Sun.</td>
</tr>
<tr>
<td>Gingko</td>
<td>To 60&quot;</td>
<td></td>
<td></td>
<td>Good form, white, pink or red flowers and colorful fruit. Specimen or hedge use.</td>
</tr>
<tr>
<td>Hickory, Shagbark</td>
<td>To 75&quot;</td>
<td></td>
<td></td>
<td>Pyramidal, makes dense shade. Showy panicles of white flowers. Many species, varying heights.</td>
</tr>
<tr>
<td>Horsechestnut</td>
<td>To 50&quot;</td>
<td></td>
<td></td>
<td>Fine, symmetrical form providing dense shade. Specimen or screen use. Am. and European species.</td>
</tr>
<tr>
<td>Linden</td>
<td>To 80&quot;</td>
<td></td>
<td></td>
<td>Rapid grower in any soil. White or pinkish flowers. Best in groves or background.</td>
</tr>
<tr>
<td>Locust, Honey</td>
<td>To 90&quot;</td>
<td></td>
<td></td>
<td>Many species, mostly tall and spreading. Fine for shade, as specimens, or along boundaries.</td>
</tr>
<tr>
<td>Maple</td>
<td>50'-100'</td>
<td></td>
<td></td>
<td>Dense, rugged, symmetrical form. Good for shade and as specimens. Many fine species.</td>
</tr>
<tr>
<td>Oak</td>
<td>60'-100'</td>
<td></td>
<td></td>
<td>Often called Sycamore. Very picturesque, with mottled trunk and branches. Likes moisture.</td>
</tr>
<tr>
<td>Planetree</td>
<td>To 90&quot;</td>
<td></td>
<td></td>
<td>A native with deep pink flowers in early Spring. Use like flowering crab and flowering cherry.</td>
</tr>
<tr>
<td>Redbud</td>
<td>To 25&quot;</td>
<td></td>
<td></td>
<td>Native, not reliably hardy much north of New York. Symmetrical, spreading, superb Autumn color.</td>
</tr>
<tr>
<td>Sweetgum</td>
<td>To 40&quot;</td>
<td></td>
<td></td>
<td>Mast-like trunk, very symmetrical form. Imposing specimen or shade tree. Yellow flowers and Fall coloring.</td>
</tr>
<tr>
<td>Tulip tree</td>
<td>To 100'</td>
<td></td>
<td></td>
<td>High-branched and handsome. Provides light shade. Bears crops of excellent nuts. Hardy.</td>
</tr>
<tr>
<td>Walnut, Black</td>
<td>To 90&quot;</td>
<td></td>
<td></td>
<td>Very fine, symmetrical form providing dense shade. Specimen or screen use. Am. and European species.</td>
</tr>
</tbody>
</table>

#### Evergreen

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Arborvitae, American</td>
<td>To 50&quot;</td>
<td></td>
<td></td>
<td>Slender, columnar tree, with flat, fern-like foliage. Several types. For specimen accent, windbreak or hedge purposes.</td>
</tr>
<tr>
<td>Arborvitae, Oriental</td>
<td>To 50&quot;</td>
<td></td>
<td></td>
<td>Dark, rich, suggests Italian Cypress. Uses same as for the American form.</td>
</tr>
<tr>
<td>Cypress, Hinoki</td>
<td>2&quot;-20&quot;</td>
<td></td>
<td></td>
<td>Excellent for dwarf habit, and average soil. Large, rugged, symmetrical form. Good for shade and as specimens. Many fine species.</td>
</tr>
<tr>
<td>Cypress, Plumosa</td>
<td>20&quot;-25&quot;</td>
<td></td>
<td></td>
<td>Especially desirable for mixed evergreen groups, because of its foliage form. Listed as Chamaecyparis plumosa.</td>
</tr>
<tr>
<td>Fir, Douglas</td>
<td>60&quot;-75&quot;</td>
<td></td>
<td></td>
<td>Handsome pyramidal tree, dark buffalo, green for location. Very hardy.</td>
</tr>
<tr>
<td>Fir, Fraser</td>
<td>40&quot;-50&quot;</td>
<td></td>
<td></td>
<td>Soft, dark green. Excellent as a specimen or in group plantings.</td>
</tr>
<tr>
<td>Fir, White</td>
<td>70&quot;-90&quot;</td>
<td></td>
<td></td>
<td>Pyramidal, silvery green of foliage. Specimen use, or as windbreak or background. Botanically, Abies concolor.</td>
</tr>
<tr>
<td>Hemlock, Canada</td>
<td>To 75&quot;</td>
<td></td>
<td></td>
<td>Symmetrical, broad, very graceful and perfectly hardy. Makes fine group or windbreak.</td>
</tr>
<tr>
<td>Pine, Australian</td>
<td>50&quot;-70&quot;</td>
<td></td>
<td></td>
<td>Dense, rugged, symmetrical form. Good for shade and as specimens. Many fine species.</td>
</tr>
<tr>
<td>Holly, Japanese</td>
<td>15&quot;-20&quot;</td>
<td></td>
<td></td>
<td>Botanically, Ilex crenata. Small leaves, but handsome effect. Black berries in some forms. Especially good hedge.</td>
</tr>
<tr>
<td>Spruce, Engelmann</td>
<td>75&quot;-100&quot;</td>
<td></td>
<td></td>
<td>Broad pyramidal of soft gray green. Particularly recommended for single specimen use.</td>
</tr>
<tr>
<td>Spruce, Koster Blue</td>
<td>40&quot;-50&quot;</td>
<td></td>
<td></td>
<td>Silvery blue green. Distant accent, or in background mass plantings.</td>
</tr>
<tr>
<td>Spruce, Norway</td>
<td>To 60&quot;</td>
<td></td>
<td></td>
<td>Dark green, rapid grower. Best for screens, windbreaks or tall hedges.</td>
</tr>
<tr>
<td>Pine, Scotch</td>
<td>50&quot;-70&quot;</td>
<td></td>
<td></td>
<td>Dark green, rugged habit. Does well near seashore. Not long-lived, but very picturesque. Withstands windy exposure and dryish locations.</td>
</tr>
</tbody>
</table>
### A Selection of Shrubs: Evergreens

<table>
<thead>
<tr>
<th>NAME</th>
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<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abelia</td>
<td>2'-4'</td>
<td>A small, graceful shrub with pinkish white Summer and Fall flowers. Good for foundations. Sun, part shade.</td>
</tr>
<tr>
<td>Azalea</td>
<td>18'-48'</td>
<td>General character similar to other Azaleas, but evergreen. Especially A. semeia, A. floribunda.</td>
</tr>
<tr>
<td>Barberis</td>
<td>12'-24'</td>
<td>Unusual and very choice for low, spreading effects. Especially <em>Vernicosus</em> and <em>Trisantochora</em>.</td>
</tr>
<tr>
<td>Boxwood</td>
<td>To 12'</td>
<td>Great variety of uses, from garden edging to large specimens. Sun or partial shade. Winter protection in North. Several practically evergreen species, ornamental fruits. Shrub borders, rock garden. Sun or part shade.</td>
</tr>
<tr>
<td>Cotoneaster</td>
<td>13'-5'</td>
<td>Dense, spreading heads of very fragrant pink flowers in Spring and Fall. Sun or partial shade. Very decorative with clusters of white flowers followed by orange to red berries.</td>
</tr>
<tr>
<td>Daphne</td>
<td>8'-12'</td>
<td>Botanically, <em>Callosa vulgaris</em>. Dense, dwarf shrub, sprays of tiny rosy blossoms. Sun, drainage, acid soil.</td>
</tr>
<tr>
<td>Firethorn</td>
<td>5'-8'</td>
<td>Glossy, dark foliage, black berries. Botanically, <em>Ilex glabra</em>, a holly. Sun or shade.</td>
</tr>
<tr>
<td>Heather</td>
<td>12'-24'</td>
<td>Wide-spreading, many semi-upright branches. Several forms. Sun, good drainage.</td>
</tr>
<tr>
<td>Juniper, Common</td>
<td>To 4'</td>
<td>Feather, spray-like, dense. Splendid for masses and foundations. Sun or partial shade.</td>
</tr>
<tr>
<td>Juniper, Pagoda</td>
<td>To 5'</td>
<td>Spreading, makes large masses. One of the best low evergreens. Sun or partial shade.</td>
</tr>
<tr>
<td>Juniper, Sargent</td>
<td>2'-3'</td>
<td>Arching, graceful native with small white, bell flowers. Foliage deep reddish in Winter. Sun or shade. Acid soil.</td>
</tr>
<tr>
<td>Kerria</td>
<td>5'-6'</td>
<td>Thick, holly-like leaves, reddening in Autumn. Yellow flowers, grape-like bluish fruits. Part shade.</td>
</tr>
<tr>
<td>Kolkwitzia</td>
<td>To 8'</td>
<td>Superb flowering evergreen, perfectly hardy. Sun or shade, as specimen or massed. Acid soil.</td>
</tr>
<tr>
<td>Lilac</td>
<td>To 15'</td>
<td>Strong-growing, holly-like shrub, dark shiny, spiny-toothed leaves. For shrub borders, rock garden. Sun or partial shade.</td>
</tr>
<tr>
<td>Magnolia</td>
<td>To 25'</td>
<td>Fine hybrids as well as original species, giving broad color range. Specimen, hedge or border use.</td>
</tr>
<tr>
<td>Mahonia</td>
<td>To 10'</td>
<td>Several practically evergreen species, ornamental fruits. Shrub borders, rock garden. Sun or partial shade.</td>
</tr>
<tr>
<td>Murotham</td>
<td>5'-8'</td>
<td>Dense, spreading heads of very fragrant pink flowers in Spring and Fall. Sun or partial shade. Very decorative with clusters of white flowers followed by orange to red berries.</td>
</tr>
<tr>
<td>Osmanthus</td>
<td>To 15'</td>
<td>Botanically, <em>Callosa vulgaris</em>. Dense, dwarf shrub, sprays of tiny rosy blossoms. Sun, drainage, acid soil.</td>
</tr>
<tr>
<td>Pieris</td>
<td>3'-5'</td>
<td>Many fine species and hybrids. Showy red, pink, or white blooms. Acid soil, sun or shade.</td>
</tr>
<tr>
<td>Rhododendron</td>
<td>4'-12'</td>
<td>Many fine species and hybrids. Showy red, pink, or white blooms. Acid soil, sun or shade.</td>
</tr>
</tbody>
</table>

### A Selection of Shrubs: Deciduous

<table>
<thead>
<tr>
<th>NAME</th>
<th>HEIGHT</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azalea</td>
<td>2'-10'</td>
<td>Numerous species, foreign and native; not all hardy. Wide variety of blossom colors. Must have acid soil.</td>
</tr>
<tr>
<td>Barberry</td>
<td>To 5'</td>
<td>For borders, hedges, etc. Stands shering well. Red winter berries. Hardy.</td>
</tr>
<tr>
<td>Buddleia</td>
<td>6'-8'</td>
<td>Lilac-like spires of Summer flowers. Best in shrubbery border or at back of perennials.</td>
</tr>
<tr>
<td>Deutzia</td>
<td>To 5'</td>
<td>Graceful smallish shrub, quantities of white flowers in Spring. Specimen or shrub border. Sun or partial shade.</td>
</tr>
<tr>
<td>Honeyuckle</td>
<td>To 8'</td>
<td>Many fine bush forms, flowers and fruits of different colors. Sun or partial shade.</td>
</tr>
<tr>
<td>Kerria</td>
<td>To 8'</td>
<td>Golden or white flowers early Summer to Fall. Makes good specimen or border shrub.</td>
</tr>
<tr>
<td>Kolkwitzia</td>
<td>To 8'</td>
<td>Slender twigs, fountain-like form. Clouds of pale pink blossoms in late Spring. Sun, good soil.</td>
</tr>
<tr>
<td>Lilac</td>
<td>To 8'</td>
<td>Fine hybrids as well as original species, giving broad color range. Specimen, hedge or border use.</td>
</tr>
<tr>
<td>Magnolias</td>
<td>To 25'</td>
<td>Spreading, semi-tree character, showy Spring blossoms of various colors. Sun or partial shade.</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>To 10'</td>
<td>Good form, for many locations and uses. Display of white flowers in May or June.</td>
</tr>
<tr>
<td>Quince, Flowering</td>
<td>6'-8'</td>
<td>Dense bush, pink to red flowers in May. Very hardy and long lived. Sun or shade.</td>
</tr>
<tr>
<td>Shadbush</td>
<td>To 25'</td>
<td>Tall, graceful native shrub; occasionally tree-like. White, very early flowers. For masses, border or woodland.</td>
</tr>
<tr>
<td>Spirea</td>
<td>4'-6'</td>
<td>Spreading, rather neat shrub, flowers white or pink. Many forms for many places.</td>
</tr>
<tr>
<td>Summersweet</td>
<td>To 10'</td>
<td>Creamy, very fragrant flower spires in early Summer. Acid soil, some shade, fair moisture.</td>
</tr>
<tr>
<td>Sweetshrub</td>
<td>6'-8'</td>
<td>Spicy, chocolate brown flowers in early Summer. Any soil, sun or shade. Botanically, <em>Callicoma floribunda</em>.</td>
</tr>
<tr>
<td>Viburnum</td>
<td>5'-15'</td>
<td>Numerous good species, mostly with white or creamy flowers and ornamental fruit. For background or border. Pink or rose flowers in early Summer. Graceful, arching form. Many uses.</td>
</tr>
<tr>
<td>Weigela</td>
<td>5'-7'</td>
<td></td>
</tr>
</tbody>
</table>

### Rock Garden Plants

<table>
<thead>
<tr>
<th>NAME</th>
<th>COLOR</th>
<th>SEASON</th>
<th>COMMENTS AND DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absynium</td>
<td>Yellow</td>
<td>April-May</td>
<td>Compact, spreading to 12th high. <em>A. saxatile compactus</em> especially easy. Sun, any soil.</td>
</tr>
<tr>
<td>Arabis</td>
<td>White</td>
<td>April-May</td>
<td>Free-flowering and effective. 5'-6' high. Easily grown, sun or shade.</td>
</tr>
<tr>
<td>Blue Cup Flower</td>
<td>Blue</td>
<td>April-June</td>
<td>Botanical name is <em>Nemorogyna</em>. Plants form mats 4'-6' high. Profuse flowering. Easily raised.</td>
</tr>
<tr>
<td>Cotoneaster (horizontal)</td>
<td>Red fruits</td>
<td>Fall</td>
<td>Picturesque, profuse shrub, especially good when overlapping large rocks. Sun or partial shade.</td>
</tr>
<tr>
<td>Dianthus delhoides</td>
<td>Pink, white</td>
<td>May-June</td>
<td>Delightful small fellow, true Flax-blue flowers. Sun or partial shade.</td>
</tr>
<tr>
<td>Flax, Alpine</td>
<td>Blue</td>
<td>April-May</td>
<td>Several color forms, some very intense. To 8th high. Plant bulbs in Fall. Sun, partial shade.</td>
</tr>
<tr>
<td>Grape Hycisth</td>
<td>Blue, white</td>
<td>April-May</td>
<td>The dainty so-called Bluebell of Scotland (<em>Campanula rotundifolia</em>). To 12th high. Grows anywhere.</td>
</tr>
<tr>
<td>Harebell</td>
<td>Blue</td>
<td>May-June</td>
<td>Dense evergreen shrublets. Many species and hybrids, many perfectly hardy. Sun, drainage. Known as Coral-bells. Airy flower sprays from cushion of basal leaves. Sun or partial shade.</td>
</tr>
<tr>
<td>Iberis</td>
<td>White</td>
<td>April-May</td>
<td>Cushion-forming, practically evergreen. Many kinds with fine colors. Sun, good drainage.</td>
</tr>
<tr>
<td>Iris</td>
<td>Various</td>
<td>April-June</td>
<td>Very large cushion with many showy members. Sun or partial shade. Refer to growers' catalogs.</td>
</tr>
<tr>
<td>Juniper</td>
<td>Various</td>
<td>April-June</td>
<td>Charming little early bulbs, for massing in shade or partial sun. Plant in Fall.</td>
</tr>
<tr>
<td>Pasqueflower</td>
<td>Lilac</td>
<td>April-May</td>
<td>Compact, evergreen leaf rosettes, various color tones. Odd flower stalks. Sun, good drainage.</td>
</tr>
<tr>
<td>Saxifrage</td>
<td>Various</td>
<td>April-June</td>
<td>Another indispensable little bulb, very early. Newer varieties best. Sun or shade. Plant in Fall.</td>
</tr>
<tr>
<td>Scilla</td>
<td>Blue, white</td>
<td>April-May</td>
<td>Low, flat carpets, very small, practically evergreen leaves. Sun or partial shade.</td>
</tr>
<tr>
<td>Sedum</td>
<td>Various</td>
<td>May-June</td>
<td>Delightful small fellow, true Flax-blue flowers. Sun or partial shade.</td>
</tr>
<tr>
<td>Semprevireum</td>
<td>Various</td>
<td>May-June</td>
<td>Compact, evergreen leaf rosettes, various color tones. Odd flower stalks. Sun, good drainage.</td>
</tr>
<tr>
<td>Snowdrop</td>
<td>White</td>
<td>March</td>
<td>Minute foliage and flowers, makes delicate low mass. Good in crevices. Sun, any soil.</td>
</tr>
<tr>
<td>Thyme</td>
<td>White, yellow</td>
<td>June-July</td>
<td>For dry, sunny spots where there is room to spread. 4'' to 12th high, depending on species.</td>
</tr>
<tr>
<td>Tusscica</td>
<td>Pinkish</td>
<td>July-Sept.</td>
<td>Want shade or semi-shade and, with some exceptions, damp acid soil. Increase by division.</td>
</tr>
<tr>
<td>Veronica, dwarf</td>
<td>Blue</td>
<td>May-July</td>
<td></td>
</tr>
<tr>
<td>Viola in variety</td>
<td>Various</td>
<td>April-May</td>
<td></td>
</tr>
</tbody>
</table>
Evergreens Their various types and how to plant them

**Shapes**

- Austrian pine, *Pinus nigra*, makes a good background.
- Cypress, **LEFT**: Dwarf hinoki. **RIGHT**: Retinospora plumosa.
- Yew, *Taxus cuspidata*.
- Canadian hemlock.
- Koster's fir, *Abies bungensis Kosterm*.
- Chinese column juniper.
- Retinospora plumbosa.
- **American arborvitae.**

**For Hedges**

- Yew sheared and uncut. **Hemlock wind break.** **American arborvitae.**

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**Plant early Spring or early Fall.**

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

**Position before planting.**

- **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.**

Dig hole (A) 10" wide and 2" 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.

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

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

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

Tap with stick to remove snow from branches of loaded evergreens.
Roses — first you plant them carefully

When rose bushes arrive, heel them into the soil. When planting, spread out all incurred roots. The bud eye is set too low, too high, or at proper depth for growth.

(1) Rich soil
(2) Manure
(3) Drainage

Take two at a time in bucket of water. When planting, spread out all incurred roots. Rose bush and its underlying layers.

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Diseases and how to combat them

Brown canker of rose stems
Mildew withers the leaves
Black spot the worst enemy

For these diseases spray or dust from both above and beneath.

Cutting for increase

Cut at mark. Leave two leaves. Two new roses will grow.

Proper pruning

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

In pruning ramblers, remove canes that have previously flowered.

Summer mulch

Left: (a) Peat moss; (b) Dust mulch and bonemeal. Right: Proper watering.

Winter protection for cold sections

(a) Sods or branches
(b) First heap soil
(c) Pile on leaves

Protect standard roses by (c) loosening root, bending down and burying in (b) soil and covering with (a) evergreen boughs; or (d) wrap in corn stalks.

Wrap climbers in burp 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 naphthalene 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.

**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 ½" 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" 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' high 18" in ground 36" apart before digging holes. B. Hole 6" 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" 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' wide 2' deep. For drainage (B), dig 6" 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" below the surface of the soil.

D. To assure proper depth in planting, rub soil flat with a stick and measure from it 2" 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' bamboo stakes. B. Control mites with nicotine spray.

Bait: A. Numbers 1-3 are three stages of tying with raffia or loose cotton twine to 6' bamboo stakes. B. Control mites with nicotine spray.

C. 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", 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". 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° 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


To naturalize crocuses, snowdrops and daffodils: scatter by hand and plant them where they fall.

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.

Two plants for indoor cultivation

AMARYLLIS wants equal parts of fibrous loam, leafmold and sand. To pot, cover the drainage hole with a crock (A), allow 1" space (B) between bulb and side of pot, neck of bulb (C) should protrude above soil. (D) Keep at 60°-70° and only slightly moist. When shoots are 1" high, bring to light and water. (E) As buds appear give the plants sunlight and 72°-80°.

FREESIAS require the same soil as amaryllis. Plant 5 corms (C) in a 5" pot 1 to 1 1/2" deep. Keep temperature at 45°-55° and only slightly moist with tepid water. Temperature at night about 55° for colored varieties. When buds form, give 60°-65° and keep it through the flowering season. Both amaryllis and freesias can be given weak manure water after buds appear.
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, FOLIAGE, FLOWER. First, their form. It ranges from the columnar or fastigate 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.
Vegetables Provide a continuous supply in many varieties

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 types—cabbages, celery and potatoes. Make a plan, allowing 18” between rows for low crops and 3’ for tall. Buy all your small seed by the ounce and beans, corn and peas by the pint or quart.

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.

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.

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.

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 between the rows and closed with earth at each end.

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.

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.

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 Adriatic Barleta. 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.

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 Winaall; for the late crop, Richmeat, Oxheart and Burpee’s Matchless. Try yellows for salads—Golden Ponderosa, Tangerine.

UNUSUAL VEGETABLES
Where space is available try some unusual vegetables—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' 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'-3' apart. Plant seed 2" deep in heavy soil, 3" 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 2'/2 deep and give it the best soil and manure. Plant roots 6" deep and 18" apart in the row. Cover with 2" of soil. Fill trench gradually. Cover bed with 4" of manure in Fall. Plant 2-year-old roots of Mary Washington or Palmsetto. Begin cutting after second year.

RADIANTES
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"-8" 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" high thin out to stand 3" 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 handful 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.

CELLENT
A quick crop. It wants cool weather, moisture and room. Thin seedlings to 4" apart. There are four types—Loose-leaf, Butterhead, Cripshead and Cos or Romaine. Late Butterhead resists heat. Start with Early Buttercup, White Big Boston and Grand Rapids. Next, Iceberg, New York and Salamander. Then Crippsno or Dwarf White Heart Cos for a Fall crop.

RHUBARB
Prepare a liberal soil. Dig hole 6"-8" deep and 1' across. Place root upright. Cover crown with 4" 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.

MELONS
Melons love warmth and need room. Plant a dozen seeds in a circle in rich hills 4" wide. Watch for slugs. Thin to the plants per hill. In cool sections start plants indoors, using seed of small-fruited early sorts. These include Rocky Ford, Early Hackensack, Burpee's Netted Gem, Hale's Best, Hearts of Gold and Delicious. For stem wilt spray with Bordeaux mixture.

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.
**Fruits**

**Suggested varieties for the home garden**

**BLACKBERRIES**

Joy and Mers<Teau are mid-season 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 Reubenberries, Loganberries and Dewberries.

**RASPBERRIES**

Among the reds are Newburgh, Taylor, Chief, Cuthbert, St. Regis, Red Path, Viking and the Autumn-fruitering Indian Summer. The blacks include Shuttleworth, Plum Farmer and Gorgeous. Sodus is a new purple; Golden Queen, a yellow, and Monarch White, its own color.

**APPLES**

Here you choose not only varieties but styles of growth—large, dwarf or espalier according to available space. Golden Delicious and Grime's Golden for yellows. Red Delicious, Jonathan, Winesap and Baldwin for scarlets. Don't miss McIntosh and Rhode Island Greening.

**PLUMS**

For white freestones grow Belle of Georgia, Brackett, Hiley and Carmen. In the early yellows are Crawford, Early Alberta and Jubilee. The latest include Crawford Late, and Late Alberta with J. H. Hale for midseason yellow. Also grow peaches in various espalier forms.

**PEACHES**

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**STRAWBERRIES**

**GRAPES**

Raspberries have their favorite localities. In the deep south are grown Muscadine and bunch types such as Scuppernong and Beascon. In north select for taste: Caco, redamber; Verden and Moore's Early black; Niagara and Portland, white; Catawba and Delaware, red.

**GRAPEFRUITS**

Here fall into four groups—early, midseason, late and everbearing. Dorsett, Success, Early Jersey Giant, and Premier for early, Big Joe, Brandywine, Fairfax and Marshall for midseason, Chesapeake and William Belt for late. Among the everbearings is Mattadon.

**PEARS**

Pears are fruits with individual flavors. There's the taste of Seckel and the taste of Bartlett. Some prefer the long-necked Buerre Bosc, others the golden yellow Kieffer. Duchess is a favorite yellow and Anjou has its following. Also try Lincoln.

**CHERRIES**

For a sour pie cherry grow Montmorency or Montearly. For the blacks, Schmidt's Bigarreau and Black Tartarian. In the yellows are Napoleon, Yellow Spanish, Spanish Gold, Stark's Gold and the curious Rainbow Striped Lambert. Suda is a good late tart cherry.

**QUINCES**

You'll not need many quinces. One tree on a place is sufficient. See that it has deep, rich soil. To canning, preserving and jellies the quince gives a subtle, interesting flavor. Grow Champion or Orange; the latter, a bright yellow, usually produces a magnificent crop.
NOVELTIES IN ANNUALS

SCABIOSA BLUE MOON

ASTER—VIOLET

PETUNIA—STRAWBERRY FESTIVAL

(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 finer flowering.

Still leading the field in the number of new types and varieties to be introduced—and, 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 hybrid—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 Sunset—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 carnation-like flowers of good size. It flowers as early as the popular small-flowered Harmony. The new "Hone" 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 a great future for this novel type.

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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 cut-flower work.

(Reduced from page 43)
NOVELTIES IN ANNUALS

HOLLYHOCKS AND INDIAN SPRING

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 garden owners. Pink and White Gem, rose starred white, has been added to the Rose, Pink and White varieties; and Crepe 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)
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NOVELTIES IN ANNUALS

(continued from 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 Rose 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 two-toned 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 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 produces flowers in less than 6 weeks from seed. It is a rich deep red. In the scabiosa-flowered or high-crowned group, Sunburst adds a new color, canary yellow.

Judging from the renewed interest in China Asters, the will-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 Blue, 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 Penny-flowered group, particularly good for cutting. Peach Blossom is a beautiful and wilt-resistant Early Giant.

A FEW FOR CUTTING

Those who like to be sure of an abundance of flowers for cutting will be interested in the new rust-resistant Antirrhinums—Mandarin Yellow, Pink, (Continued on page 52)
THE NEWER PERENNIALS  
(Continued from page 25)

them, and the group is one that needs straightening out in nomenclature.
Ronsorl Beauty is described as the best salmon rose; Sampson, a deep rose pink; Lilakonig, pure deep blue; Leuchtstern, light pink, and Snow-white, a pure white.

_Aguilegia oxysepala_ is described as a very early short-spurred variety, with flowers of periwinkle blue, tipped with white and attractive persistent 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 Spirys_, 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)
THE NEWER PERENNIALS

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THE NEWER PERENNIALS

(CONTINUED FROM PAGE 46)

William, produced on 15" stems. Single Midget Mixed is a very dwarf, compact type, good for edging or rock garden pots.

Somewhat similar to the Iceland poppy, one of the most universally satisfactory of all garden flowers, is Papaver somniferum 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. Snowflake, 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 gypsophila collection can be added Flamingo, a new double pink, deeper than Rose 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 Pertydium Robertson's Dark Crimson with very large flowers and still 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 discussed—and often cursed—varieties of recent introduction, is making an impression in the West for the first time this Summer. It certainly was excellent here; very different from its performance in my own garden, and a striking example of how local conditions can influence the behavior of a species or even a variety.

Two new hollyhock types are of special note: tall Flori-gold and Double Souvenir de Madame Perin, said to include a wide range of color types. Those who like something a bit out of the ordinary will want to try the English Award of Merit for an outstanding year's introduction, I saw flowering in the Midwest for the first time this Summer. It certainly was excellent here; very different from its performance in my own garden, and a striking example of how local conditions can influence the behavior of a species or even a variety.

One of the most interesting roses I have seen this Summer is Heracleum, an extremely vigorous climber with huge deep rose pink flowers more than 5" across on long, strong stems, and with heavy mahogany-like foliage.

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Catalogue from Mr. G. H. Penson, Dept. G-1, 24th St. and Broadway, New York City.

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NOVELTIES IN ANNUALS

(CONTINUED FROM PAGE 44)

Sensation and Shell Pink. Those named selections now make it possible to have uniform fixed colors instead of the "shade mixtures" heretofore available.

Calendula Lemon Shaggy—contemporary to the famous Chinese Shaggy. The petals are light, a pastel yellow, are new in this excellent cutting flower so indispensable for the tall end of the outdoor season. And among the large-flowered—addition to award-winning Blue Moon, are the Royal (deep blue), Rose and White Cockades, all with the deep cone-centered shape that helped to make Blue Cockade such an immediate favorite.

As readers of this magazine know, I have long been a booster for the "little" 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 them is pictured above and is in the group shown in color on page 17. Then too, we at last have a real American strain, Waller-Frankling is in the group shown in color on two-foot plants bearing bronzy, red, yellow, and lime green blooms. It is a deep flame rose, is said to be an improvement of Luminosa. And "meriwinkle" (or periwinkle) Twinkles is a larger flowered Flower rose 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 nomenclature to report after the deluge of but a few seasons gone! Dwarf Double Indian Chief has the attractive combination of scarlet, white, and for all-season foliage suggestive of the splendid dahlia Bishop of Llandaff.

For a very tall backbone plant—of which there are few among annuals—note may be made of Impatiens Pink Butterfly, with 2" salmon-pink flowers; and of the Golden Cleome, a spider flower with deep golden orange blossoms. Either of these in good soil will produce plants 6' or more in height.

GARDENING BOOKLETS

(CONTINUED FROM PAGE 51)

ESPALIER FRUIT TREES, dwarf-trained, permit you to plant nearer, pears, peaches or apples from your window. This folder, with its accompanying prices, will help you give your garden a special Old World charm. HENRY LEATHERMAN, Dept. G-1, 175 King St., Fostertown, 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 much you can prevent it with an insulating blanket of peat moss. WILLIAM & DICKSON, 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 are suitable for different diets—charts their requirements—and tells of a soil testing kit you can buy for yourself. SUBURBAN SOIL TESTING LABORATORY, P.O. Box 553, South Suburban, Mass.

ROOTONE is a hock about hormone powder, which makes cuttings grow heavier roots in half the time. It is also useful for the prevention of damping off, and fungus diseases. AMERICAN CHEMICAL PAINT CO., Rootone Dept., Amsterdam, Pa.

HOW TO MAKE, out of garden waste, an artificial manure, with the nourishing properties of the real, is interesting news for gardeners who find this indispensible fertilizer difficult to obtain. ANSON WORKS, Dept- G-1, Carlisle, Pa.

SIESTA FURNITURE shows the new and charming metal furniture for terrace and garden—styles that fit the formality of a sophisticated pittance terrace and some more rustic simple country Summer garden. Royal Metal Mfg. Co., Dept- G-1, Chicago, Ill.

GREENHOUSES by Lord & Burnham is a charming book of sun rooms, from a modest lean-to to the most complex of those enclosed in glass. This book, with its carmine crimson cockscombs of "winter kill"—chiefly to temperature changes during cold weather—and fungus diseases. AMERICAN CHEMICAL PAINT CO., Rootone Dept., Amsterdam, Pa.

COLDWELL catalog of power and hand lawn mowers includes everything from a brand new inexpensive model for smaller lawns to power motors for large lawns. It helps you determine the size you need—and shows such added equipment as hedge cutter, gray and sidle lather. COLDWELL-LAW MOWER CO., Dept. G-1, Newburgh, N. Y.

GALLOWAY POTTERY entails charming garden ornaments—bird baths and benches—flower pots and elaborate fountains—jars in Italian red or blue-green glazes—many fine examples of both modern and traditional design. Send 10c GALLOWAY TERRA-COTTA CO., 187 Walnut and 50th St., Phila., Pa.

GARDEN ORNAMENTS is the booklet to write for if your garden calls for a bench or bird bath—ah, a colorful Spanish jar—or anything in marble, lead, bronze or stone from a kiln to a fountain of superb design. It includes handcrafted wrought iron furniture, too. Send 10c THE EARLY HOME, Dept. G-1, 121 E. 24th St., N. Y. C.

SEEDS OF RARE PLANTS lists nearly 3,000 unusual species from every corner of the world—seeds that have become better known—others, fascinating adventures in gardening, from Chile, Mexico, Tasmania, Korea, China, Japan, Australia, the Amazon, the Congo, the West Indies, and the U. S. REX D. PEARCE, Dept. H, MERCHANTVILLE, Pa.
JACKSON & PERKINS presents two superb new Garden Roses certain to cast a refreshing brilliance on the garden scene. Roses selected from the best the world has to offer. One comes from the Ireland of sentiment and legend; while the other brings with it the sparkle and warmth of the Italian Riviera. You will want to make a place for these two beautiful New Roses on your own home grounds.

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