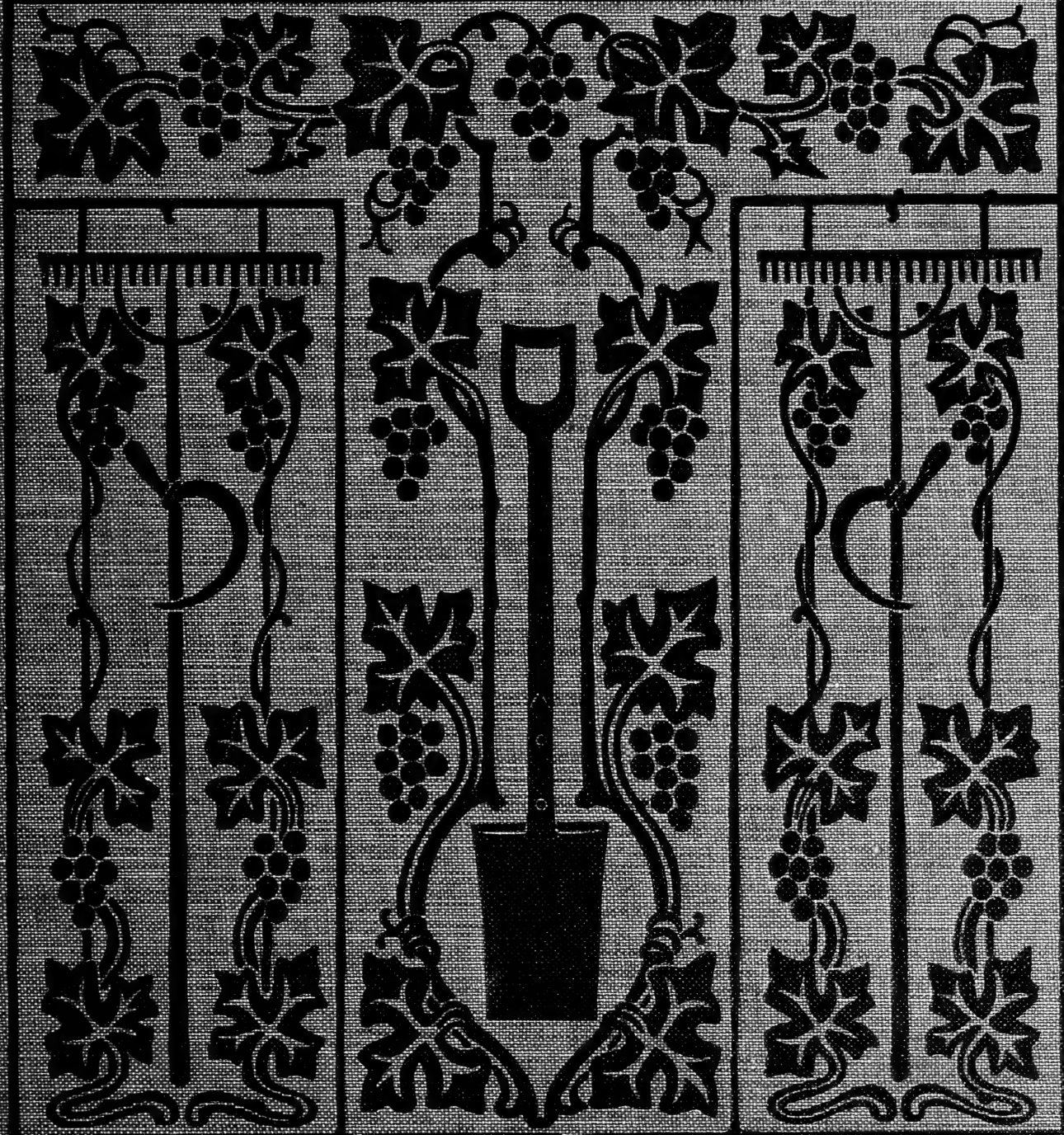
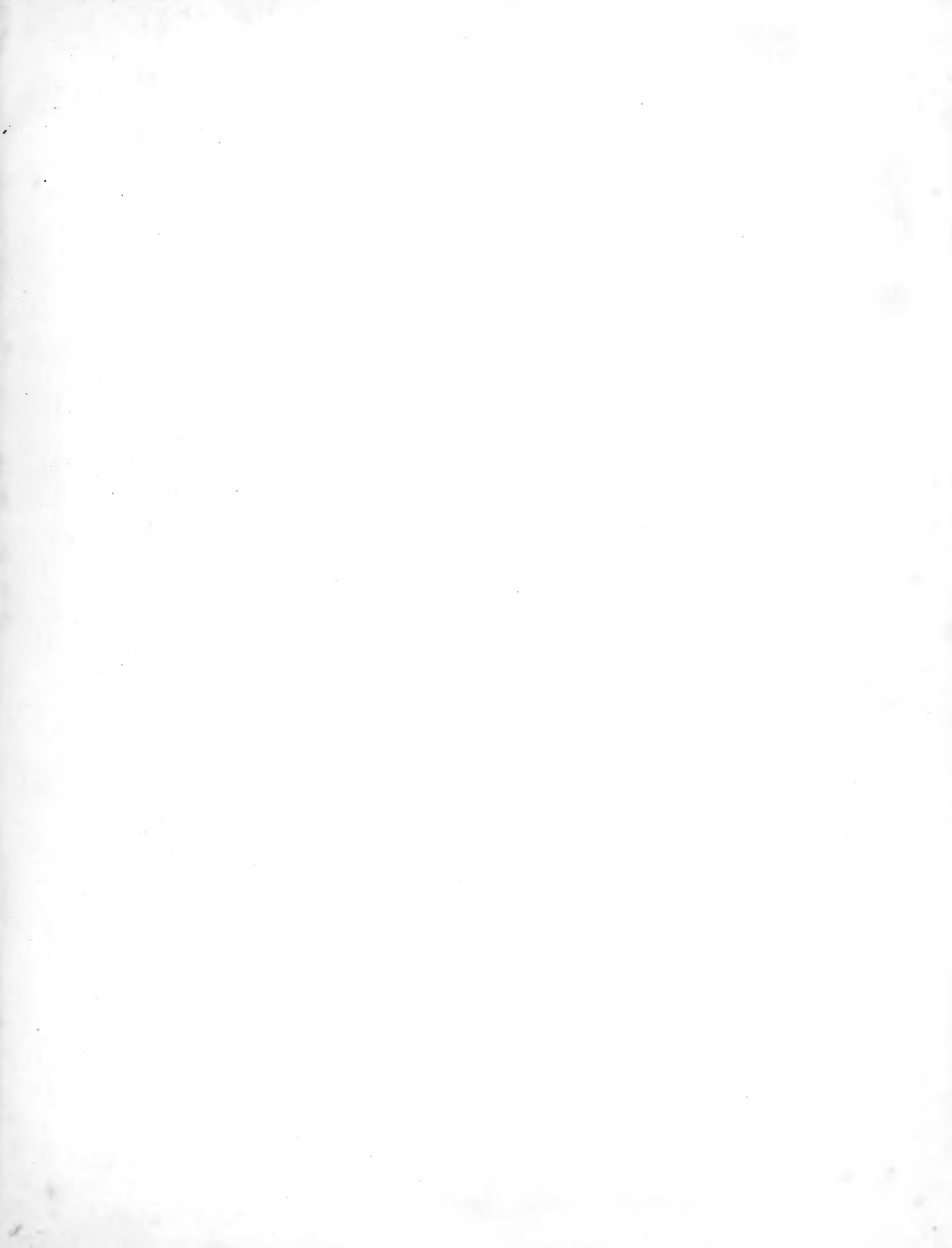


# THE GARDEN MAGAZINE









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# THE GARDEN MAGAZINE

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and to the Cultivation of Fruits, Vegetables and Flowers*

Volume XXXV  
March to August, 1922



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Roses  
Strawberries

# SPRING PLANTING

Shrubs  
Vegetables

# GARDEN

## MAGAZINE

MARCH 1922  
25 CENTS

Vol. XXXV, No. 1

March, 1922

*Doubleday, Page & Company, - Garden City, New York*  
*Boston Los Angeles Chicago*

# The Rose Sensation of 1922

## The Golden Yellow you have waited for

When we first saw this masterpiece, in France, two years ago, we knew instantly and instinctively that here was a Rose destined to make history. Growing, blooming and exhibiting it ourselves the past year has but confirmed our expectations, enhanced our respect for this truly golden garden treasure.

### Souvenir de Claudius Pernet

is the best yellow garden rose so far introduced. In 1920 it was awarded the gold medal in the International Contest, as the best seedling of the year, in world wide competition.

We predict that it will replace entirely such present popular favorites as Sunburst and Mrs. Ward, being entirely devoid of their peculiar orange yellow shade.

The plant is a sturdy grower; the foliage is of attractive, lustrous, glossy green; the flowers are borne freely, are well-shaped and their color is their crowning glory. *Our stock is limited this year, so we advise prompt orders to avoid disappointment. Please do not ask us to include or substitute Souvenir de Claudius Pernet in connection with special offer alongside. We cannot afford, this year, to sell it except as follows:*

**Sturdy plants from 4 in. pots, ready for delivery about May 15th. \$2.50 each, \$25.00 per dozen.**

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**Chas. H. Totty Co.**  
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Five  
Finest  
for \$5.00

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# DAHLIAS *Send for 1922 Catalogue* DAHLIAS

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Babylon, L. I., N. Y.

From Grower  
to Consumer



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We guarantee all our Bulbs, Roots and Plants to grow and to be true to name. We will replace any Bulb, Root or Plant found otherwise.

## RED CROSS—The Dahlia Supreme Hybrid Cactus Introduction from Holland

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COLLECTION A		COLLECTION B		COLLECTION C	
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*Bulb and Plant Specialists Nurseries, Hillegom, Holland, and Babylon, L. I., N. Y.*



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*Outfitters for Home Grounds*

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Tarrytown, N. Y.

MARCH, 1922

# THE GARDEN MAGAZINE

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LEONARD BARRON, Editor

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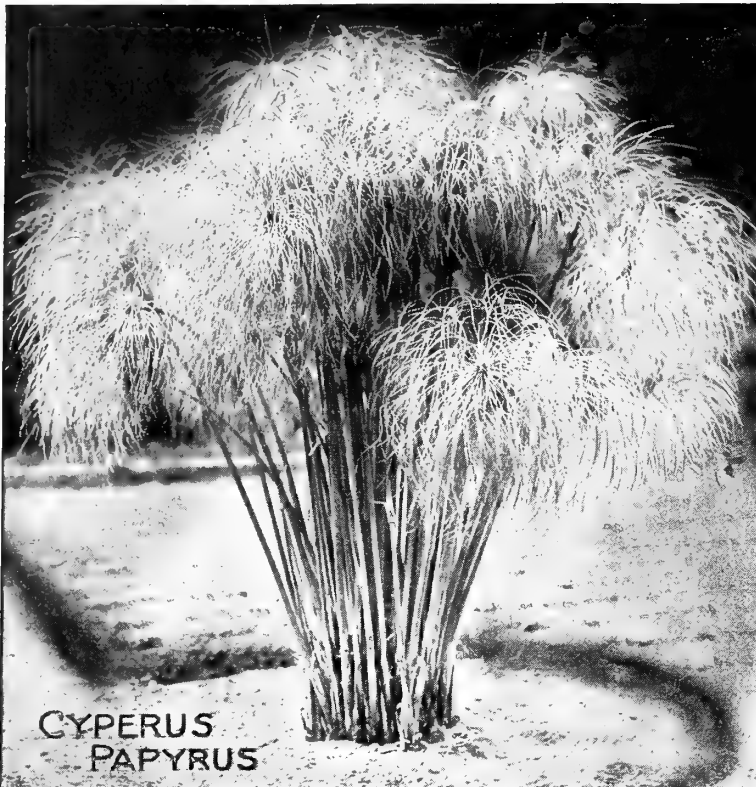
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ESTABLISHED 1866

*Plant a grape vine wherever you can find a space 6 inches square.*



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Established 1846

**W. & T. Smith Company, Geneva, N. Y.**



Partial view of our Kalmia and Rhododendron Nursery

## For Year Round Beauty— Hardy Rhododendrons

Were you to ask us which shrub we would recommend as most desirable for every home garden or estate grounds, our answer would be Rhododendrons! their broad leaves are attractive the year around. Their flowers are superb, in a wide range of colors. They do equally well in sun or shade and any soil can easily be put in condition to cause them to thrive.

### Here Are Four Beautiful Sorts in Representative Range of Colors

From over 30 distinctly beautiful kinds we have selected four that will give you a true idea of the value of these rare new hybrids. The plants we offer come with a liberal setting of flower buds—ready to bloom next May. All four varieties are distinct in both foliage and flowers.

**Album Elegans.** A fine variety for the background of plantings. Very tall grower. Bud a delicate blush opening to a pure white bloom. Price, 4 ft., **\$7.50**

**Charles Dickens.** Glowing scarlet. Considered one of the best reds. An excellent variety for massing where a strong color is desired. Price, 2½ ft., **\$5.00**

**Everestianum.** One of the finest Rhododendrons. Rosy lilac spotted and fringed; of medium height and fine foliage. Price, 1½ ft., **\$5.00**

**Lady Armstrong.** Pale rose beautifully spotted. The very best of the pink Rhododendrons. Price, 3 ft., **\$7.50**

These plants will be lifted with large clumps of roots, to be burlapped securely. They will be packed in a careful manner, guaranteed to arrive in the best of condition.

**SPECIAL OFFER.** To acquaint G. M. Readers with these rare, new forms we will ship one plant of each of above four, handled in fashion as promised, for **\$20.00**

Please ask for Rhododendron Booklet describing these beautiful varieties

**Cottage Gardens Company, Inc. Nurseries**  
Queens, Long Island, New York

### Other Cottage Garden Grown Broad-Leaved Evergreens Include:

Andromeda Floribundi, A. Catesbaei and A. Japonica. You will like both, Azalea Amoena and Hinodigiri, in conjunction with your Rhododendrons. Then there are various new Japanese Evergreen Azaleas, besides Kalmias in unusual variety. Learn to look to Cottage Gardens as headquarters for the better kinds of Broad-Leaved Evergreens.





In order to insure the best possible selection of stock, we sincerely urge you to

## ORDER NOW For Delivery When Wanted

**A**ZALEAS carefully placed about the home add an artistic touch of indisputable quality. For brilliant coloring and profusion of bloom no other shrub can rival this splendid type. When in bloom the entire bush is a mass of color, varying from the most delicate tones and colors of one variety to the flaming tints of others. They flourish exceptionally well in semi-shady and moist situations.

- ARBORESCENS (Wood Honeysuckle.)** Its pinkish white flowers appear about July 10th.
- CALENDULACEA (Flame-colored Azalea.)** Blooms in latter part of May. Brilliant orange yellow flowers.
- MOLLIS (Japanese Azalea.)** Dwarf shrub bears an abundance of large, bright red and yellow blossoms.
- NUDIFLORA (Pinxter Flower.)** Bears a profusion of pink blossoms about the middle of May.
- VASEYI (Carolina Azalea.)** Bears a wealth of delicate pink flowers in June.
- VISCOSA (Small White Azalea.)** Bears in latter June, pure white, exceedingly fragrant flower.

*The following prices have been made specially low to induce you to order now for delivery when wanted. Besides, your ordering now will reserve our choicest specimens.*

### SPECIAL PRICES

- 12 to 18 inches high - - - - \$1.75 each  
For 6—(1 of each variety) - - 9.00
- 18 to 24 inches high - - - - 2.25 each  
For 6—(1 of each variety) - - 12.00

**F**LOWERING CRAB APPLES, the most gorgeous of all flowering trees, greatly enhance the inviting charm and beauty of the grounds. Being of relatively low growth they are excellently suited for individual as well as group planting. Even when young they blossom early in May, with flowers ranging in color from the deepest rose to the most delicate pinks and pure white. Some varieties bear tiny red and yellow fruits in the Fall.

- PYRUS FLORIBUNDA.** Rose-red single flowers, produced in great abundance and very showy. Fruit small, bright red in Autumn.
- PYRUS IOENSIS (Bechtel's Flowering Crab.)** Medium size tree covered in early Spring with large double, fragrant flowers of a delicate pink. Blooms when quite young.
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- PYRUS SPECTABILIS, Fl. Pl.** Beautiful pink and white flowers, sweet scented—double of good size.
- PYRUS SCHEIDECKERI.** A double-flowered form of the above. Exceedingly attractive.

*And, just as with the Azaleas above, we have arranged the following special prices to offer a more inducing incentive to order now, for delivery when wanted.*

### SPECIAL PRICES

- 3 to 4 feet high - - - - \$ 1.25 each  
For 10—(2 of each variety) - 11.00
- 4 to 5 feet high - - - - 1.50 each  
For 10—(2 of each variety) - 13.50

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**AMERICAN NURSERIES**

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NEW YORK**

# BROMFIELD'S DEPENDABLE SEEDS



**O**UR CATALOGUE—Your Garden Year is dedicated to Garden Lovers with the hope that it will be a stepping-stone to the most charming and delightful Garden you have ever enjoyed.

It will always be our highest aim to supply the very best grade of Vegetable and Flower Seeds obtainable.

Send for Your Garden Year to-day—mailed free.

**Edward T. Bromfield Seed Co.**  
GARDEN CITY ~ NEW YORK



## RUTH VAN FLEET

If any Dahlia is worth-while, it's Ruth Van Fleet. Graceful in form, of pleasing yellow, with long, stiff stems.

Field-grown tubers \$3.00 each 4 bulbs \$10.00 12 bulbs \$25.00

Any of my customers will gladly testify to the superior merits of Stillman creations. Please ask for my complete catalogue—gladly mailed free!

**GEORGE L. STILLMAN** **DAHRIA SPECIALIST**  
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# Are You a Real "Dirt Gardener?"

Some gardeners grow flowers—for pleasure; others grow vegetables—for profit. But there is one group of home gardeners that make gardens for the sheer joy of coming in contact with the soil—these we think of as honest-to-goodness "dirt gardeners." If you enjoy a fine, level garden, in perfect state of cultivation, with the paths as neat as the beds and weeds noticeable by their absence—

## Then You'll Appreciate **GILSON** GARDEN TOOLS

First, *The Gilson Weeder*, the original two-edged Rocker or Scuffle Hoe that is as safe and effective in the hands of boys and girls as those of grown-ups. As shown alongside, the reverse side of it becomes an efficient rake with which to do *extra* smoothing of the soil. Made in three sizes for different types of gardens.

*The Liberty Cultivator*, as shown below as a Wheelhoe, embodies the most scientifically shaped cultivator teeth to date. They sink into the soil without downward pressure, cut off weeds besides up-rooting them. Adjustable to different widths, in three sizes, with five, seven and nine teeth respectively.

The complete Gilson Line also offers Scratch Weeders, and Dandelion Diggers, in short, a practical tool for practically every purpose of cultivation.

### Will you try them on our "Say-So?"

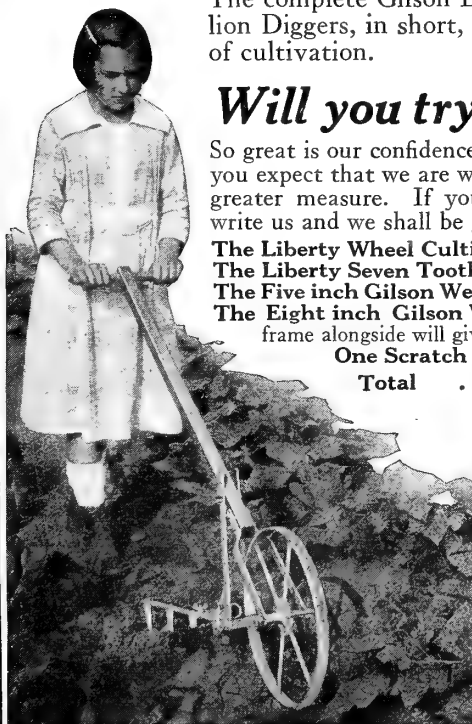
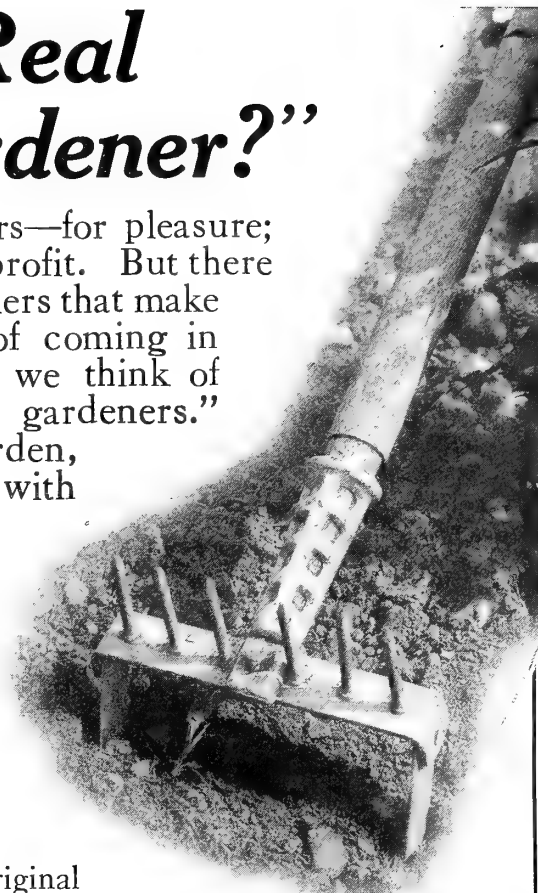
So great is our confidence in the ability of Gilson Tools to do *even better* than you expect that we are willing to do our part to popularize them in even greater measure. If your dealer does not carry the Gilson Line, please write us and we shall be glad to supply.

<b>The Liberty Wheel Cultivator, No 1</b> , as shown alongside, . . . . .	\$3.70
<b>The Liberty Seven Tooth Hand Cultivator</b> . . . . .	1.40
<b>The Five inch Gilson Weeder Blade</b> , as shown to left above . . . . .	.95
<b>The Eight inch Gilson Weeder Blade</b> , which, combined with wheel frame alongside will give you the Gilson Weeder Wheel Outfit. . . . .	1.10
<b>One Scratch Weeder and One Dandelion Digger</b> . . . . .	1.25
<b>Total</b> . . . . .	<b>\$8.40</b>

**SPECIAL OFFER:**—We will send prepaid, any of the tools (items two, three and four, minus handles costing little at any hardware store) at prices quoted. The Wheel Cultivator to be sent by Express at your expense. The entire assortment, a most valuable addition to any garden, for \$8.00, to be delivered prepaid anywhere East of the Rockies.

**Helpful Booklet FREE**—To make Gilson Garden Tools most valuable we have issued "Bigger Crops Through Cultivation," a modest booklet giving useful facts about correct tillage for different crops and the best tools with which to score best results. Ask for it.

**J. E. GILSON COMPANY**  
100 VALLEY ST., PORT WASHINGTON, WIS.



*For the  
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Dahlias from the famous Private Collection of Supreme Court Justice Josiah Mearan.

Gladioli selected from the finest varieties produced by the best American and European Hybridizers.

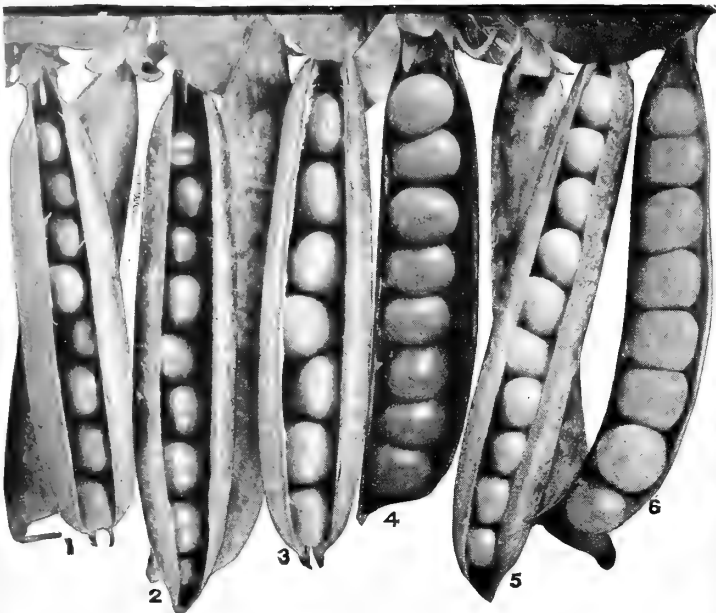
Lilies in varieties that are easiest of cultivation and are the most beautiful.

Miscellaneous bulbs of Merit All for Spring Planting.

Described in our new catalogue, which will be sent gratis upon request of those who want the finer things.

"Judge Mearan"

**JOHN SCHEEPERS, Inc.**  
522 Fifth Ave. New York City



### Do You Know This Secret?

DO you know how to avoid the usual disappointment of a poor Pea crop after mid-July? It's easy to get big crops of luscious juicy peas "falling right over one another," in steady succession even up to late August—if you learn this secret:

Instead of planting at 2-or-3 week intervals, get the following picked varieties and plant *all at once* in early Spring, the moment the ground can be worked. This will allow a good root system to develop before hot weather comes. The varieties will bear in the order shown below (and pictured above), beginning about June 20th and keeping up a steady succession of big mouth-watering crops until late August.

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| <p>1. <b>Schling's Pedigree Extra-Early</b><br/>2½ feet. The earliest Pea grown; large, well-filled pods.</p> <p>2. <b>Gradus, or Prosperity</b><br/>3 feet. An early fine wrinkled Pea of delicious flavor.</p> <p>3. <b>Sutton's Excelsior</b><br/>1½ feet. The most productive of dwarf medium-early wrinkled Peas. Very sweet.</p> | <p>4. <b>Dwarf Champion</b><br/>2½ feet. An enormous cropper. Broad pods, very sweet Peas.</p> <p>5. <b>Improved Telephone</b><br/>5 feet. Enormous pods, filled with Peas of the finest quality.</p> <p>6. <b>Heroine</b><br/>4 feet. Pods are large, deep green, somewhat curved; tender Peas of finest quality.</p> |
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**Special Offer!**

}	½ lb. each of all 6 varieties, 3 lbs. in all.....	\$1.75	}	Delivered FREE within 300 miles of N.Y.; beyond, add 5 cents per lb. for postage.
	1 lb. each of all six varieties, 6 lbs. in all.....	\$2.75		
	2 lbs. each of all six varieties, 12 lbs. in all.....	\$5.00		

Give yourself a real treat!—Never mind how small your garden is—you have plenty of room for peas.  
*Send in your order to-day!*

### The Flower Novelties of 1922!

*You must have them in your garden!*

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| <p>1. <b>Schling's Wonderful New Snapdragon "Indian Summer."</b>—A lovely rich, velvety copper color, indescribably beautiful. Pkt. \$1.00.</p> <p>2. <b>The Wonderful Blue Lace Flower.</b>—Finely laced flowers of an exquisite light blue shade. Pkt. 50c.</p> <p>3. <b>New Bedding Petunia Violet Queen.</b>—A real deep violet blue. Blooms as freely as Rosy Morn. Pkt. 50c.</p> <p>4. <b>New Bedding Petunia Purple Queen.</b>—Exquisite rich clear purple overlaid with a velvety sheen. Pkt. 50c.</p> <p>5. <b>Adonis Aleppica.</b>—16 to 18 in. high. From 16 to 20 main stems with fine dark blood-red flowers. Pkt. 50c.</p> <p>6. <b>New Giant Dahlia-Zinnia.</b>—A true giant in size. Pkt. 50c.</p> | <p>7. <b>New Lilliput Poppy.</b>—Only 12 in. high, constantly in bloom. A lovely daybreak pink. Pkt. 50c.</p> <p>8. <b>New Miniature Dahlia Peter Pan.</b>—Flowers Anemone-shaped with tubular center. All the pastel shades. Pkt. 75c.</p> <p>9. <b>New Sunflower Dazzler.</b>—Flowers 4 in. across, of a rich chestnut, tipped orange with dark center. Pkt. 35c.</p> <p>10. <b>Dianthus Laciniatus Purpureus Fl. Pl.</b>—A purple garnet, inclined to a claret. Beautifully fringed. Pkt. 50c.</p> <p>11. <b>Cynoglossum Heavenly Blue.</b>—Brilliant blue forget-me-not flowers from May until frost. Pkt. 50c.</p> <p>12. <b>New Giant Zinnia, Apricot.</b>—Charming new color in Giant Double Zinnias. Pkt. 25c.</p> |
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*Above novelties sold separately at the prices named, or the entire collection of twelve at \$5.00*

# Schling's Seeds

24 West 59th Street, New York

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Largest Growers of

## PERENNIALS

in America

We grow not only the largest number of Hardy Plants, but likewise the greatest assortment of both the popular favorites and newer kinds of exceptional merit.

Among our particularly noteworthy specialties we class new Delphiniums, Buddleias, and Dwarf Bleeding Heart. Lilies, too, are available in extraordinary quantities. Ours is, perhaps, the finest stock of Liliium Regale in the country.

Please afford our freely illustrated, descriptive catalogue a chance to tell you more about what we offer.

**MENTOR**

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# Cherry Hill Quality

When you buy Peonies of the famous **Cherry Hill Strain** you get the achievements of over half a century in perfecting this **Queen of Flowers**.

We grow, also, a full line of **Ornamental Evergreens, Rhododendrons, Azaleas, Shade Trees and Deciduous Shrubs.**

**Hardy Phlox, Japanese and German Iris, Hardy Garden Perennials**

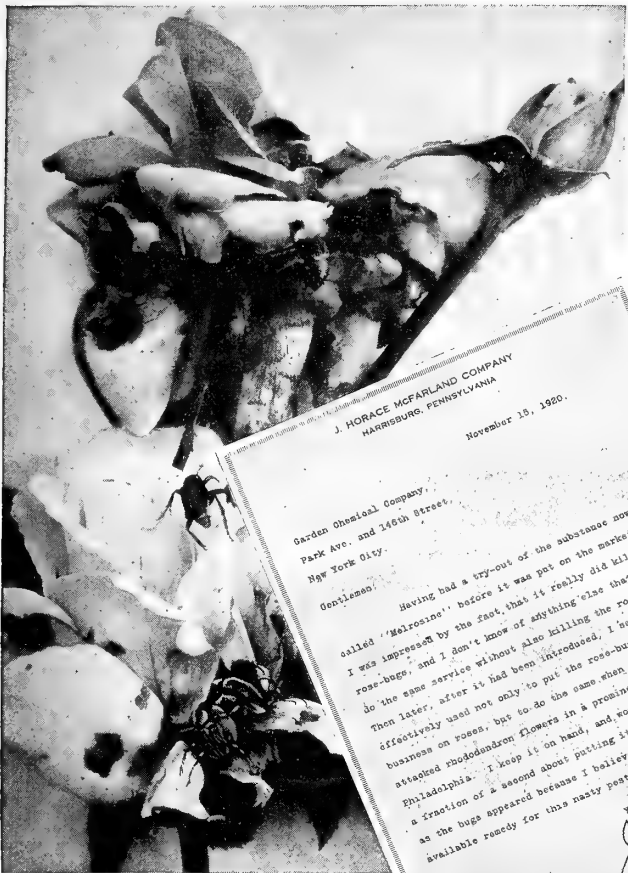
Quality is our watchword.

**T. C. THURLOW'S SONS, INC.**

*(Cherry Hill Nurseries)*

WEST NEWBURY, MASS.

Catalogue



J. HORACE MCFARLAND COMPANY  
HARRISBURG, PENNSYLVANIA  
November 15, 1920.

Garden Chemical Company,  
Park Ave. and 146th Street,  
New York City.

Gentlemen:

Having had a try-out of the substance now called "Melrosine" before it was put on the market, I was impressed by the fact that it really did kill rose-bugs, and I don't know of anything else that will do the same service without also killing the roses. Then later, after it had been introduced, I saw it being effectively used not only to put the rose-bugs out of business on roses, but to do the same when they had attacked rhododendron flowers in a prominent garden near Philadelphia. I keep it on hand, and would not hesitate a fraction of a second about putting it in use as soon as the bugs appeared because I believe it to be the best available remedy for this nasty pest.

Yours truly,  
J. Horace McFarland

JHMC/DA

# Roses—Rhododendrons—

Peonies, Phlox, or Poppies, it matters little just what kinds of flowers your garden holds or will bring forth during the next three months—there is one ferocious insect that is lying in wait for your garden treasures—the ROSE BUG. For centuries this insect has thrived on the garden's best, until the discovery of MELROSINE came to save the flower crops.

## Rose Bugs

Aphis, striped or spotted beetles, spiders, thrips, sawbugs, and all kinds of plantlice succumb to the destructive force of MELROSINE. Even the most difficult of the plantlouse species, the black aphis, feasting especially on Spirea, Chrysanthemums, and other shrubs and perennials, is destroyed by MELROSINE.

### MELROSINE— The All-round Contact Insecticide FATAL TO EVERY BUG IT TOUCHES

One of the country's foremost Rosarians, Editor of *The Rose Manual* and a frequent contributor to G. M. columns, Mr. J. Horace McFarland, tested Melrosine upon our request and was kind enough to put his conviction into words, as shown above.

### Go To Your Dealer For Your Supply

Most leading Seed and Nursery Establishments carry MELROSINE. Some offer it in their catalogues, while others sell it over the store counters. Please ask for it or if your dealer cannot supply you, afford us the opportunity to do so.

MELROSINE is obtainable in the following packages, at prices quoted:

**Gallon, \$6.00; Half-Gallon, \$3.25; Quart, \$1.75; Pint, \$1.00.**

These prices for East of Rockies, with transportation at customer's expense.

Coupon alongside is provided for your convenience. We shall be delighted to meet G.M. readers at the Melrosine Booth, International Flower Show, Grand Central Palace, March 13 to 19.

**Please Mail This Coupon**   
**Should No Dealer Live Near You!**

**THE GARDEN CHEMICAL COMPANY**  
NEW YORK CITY, N.Y.



G. M.  
March-22

**Garden Chemical Company**

**Park Avenue & 146th Street,  
New York, N. Y.**

Check what you desire

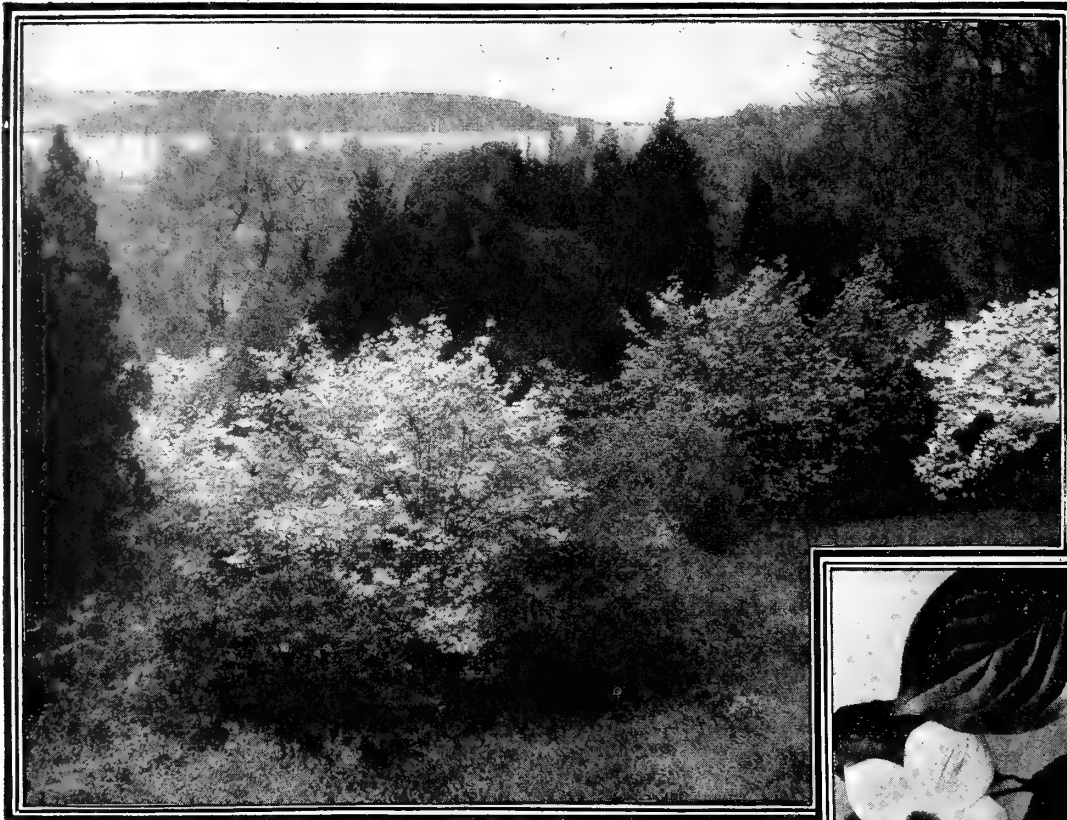
- Please mail special leaflet, describing What Melrosine will do.
- I enclose 60 cents for which please mail sample of Melrosine, sufficient to make one gallon. My favorite garden supply store is

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## Flowering Dogwood

*White (Cornus Florida) and Red (Cornus Florida Rubra). Generally considered by expert gardeners and other flower lovers to be among the best shrubs for landscape planting. Useful as single specimens, in massing, or in combination with other shrubs. Will grow in full sun or in partial shade. Hardy over practically all the United States. Trees 3 to 4 feet high. Leaves bright green, turning to brilliant scarlet in fall. Flowers white and pink. Indispensable for lawn or landscape. The bright red berries which appear in September and last until late in the winter enhance the beauty of these picturesque trees and attract various species of birds.*



## From Gardens Behind The Sun

Floating above green rolling lawns or edging the hem of the woodlands, clouds of Dogwood, pink and white, seem to have drifted down to earth from gardens behind the sun. No flowering tree so charms the eye or appeals more to the imagination. Dogwood and Spring are refreshing memories that dwell deep in the eyes of all who have ever beheld the large white petals, often diffused with pink, when glowing life and color return once more to the world.

## For Your Own Lawn

It is a simple matter for you to have Flowering Dogwood, red (*Cornus Florida Rubra*) or white (*Cornus Florida*), floating and blooming across your lawn. By landscape planters they are considered the most picturesque and practical of flowering shrubs.

## Send Your Order Now

to the Elliott Nursery, one of the oldest, most responsible, and respected houses of its kind in the country, and you will be sure of receiving the finest Dogwood specimens to be obtained. Full instructions regarding the planting and tending of the shrubs accompany every shipment. Thirty years of experience stand as a pledge of satisfaction. Price, White Dogwood, \$1.50 each. Pink Dogwood, \$2.50 each.

## Our Catalogue

Our free catalogue is really a fascinating textbook on the cultivation of hardy plants, flowers, evergreens, and other shrubs. If you will mail us the coupon we will send you the book at once.

## ELLIOTT NURSERY CO.

505 Magee Bldg. Pittsburgh, Pa.

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Kindly send me your free catalogue of popular favorites, trees, shrubs, and hardy plants.

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# The Garden

Vol. XXXV, No. 1

MAGAZINE

March, 1922

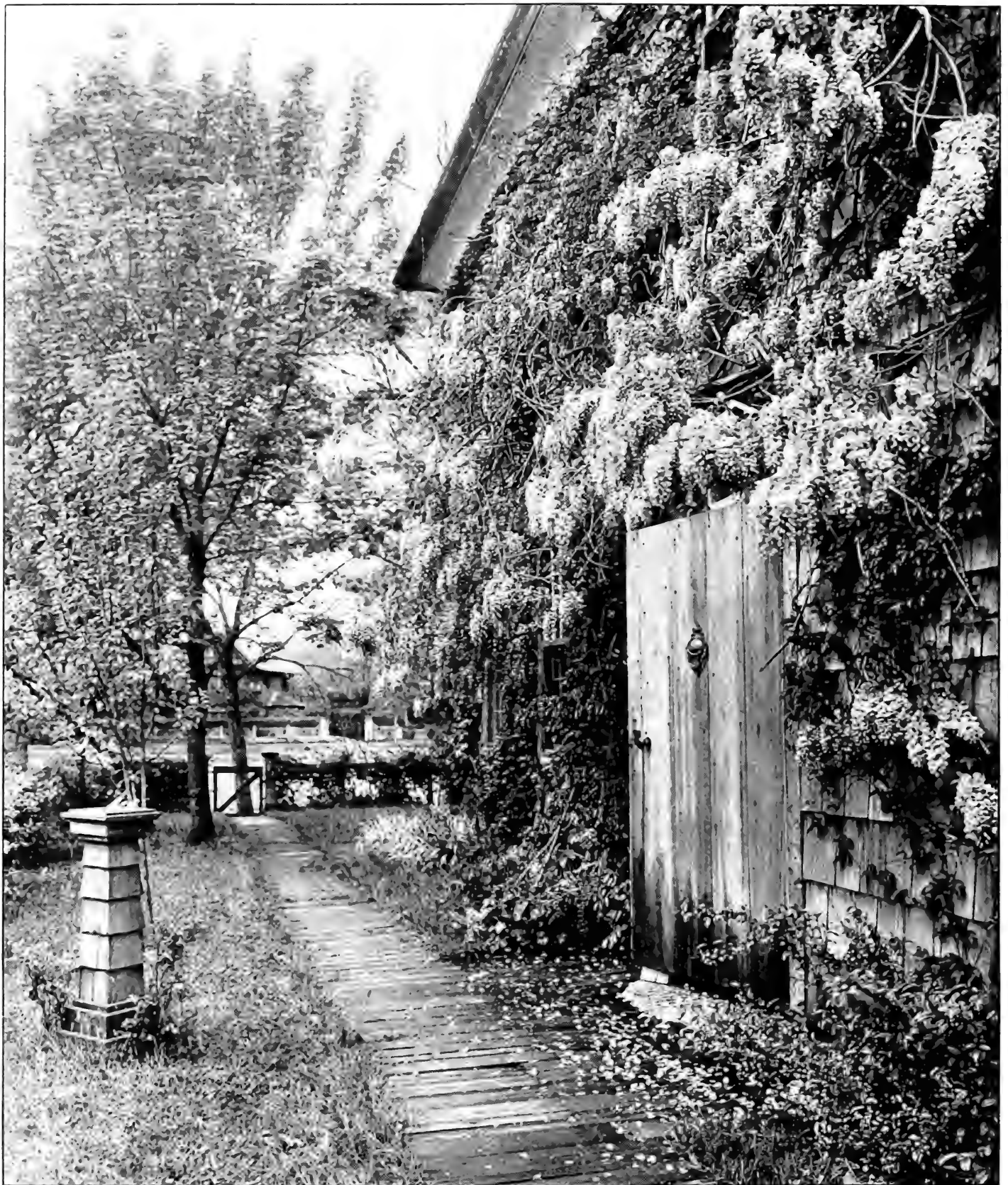


*E. H. Lincoln, Photo.*

"NOR HOLD NONE OTHER FLOWER IN SIC DAINTY  
AS THE FRESH ROSE OF COLOUR RED AND WHITE;  
\* \* \* \* \*  
SO FULL OF VIRTUE, PLEASANCE, AND DELIGHT,"

*William Dunbar, A. D. 1503*

No flower has been so sung or has gathered about it such a wealth of tradition and sentiment as the Rose, a favorite of Shakespeare, of lesser bards, and of gardeners everywhere, it continues to delight, appearing ever in new and lovelier guise. (See pages 18-21 of this issue, "New Roses for the Garden.")



A. G. Eldredge., Photo.

"O GIVE ME MY LOWLY THATCHED COTTAGE AGAIN;  
 \* \* \* \* \*  
 BE IT EVER SO HUMBLE, THERE'S NO PLACE LIKE HOME;"  
 John Howard Payne

This unostentatious little dwelling with Wisteria its chief glory, sheltered the writer of "Home, Sweet Home" and has been in a manner immortalized, for the simple ballad has become part of our national memory though few of us remember its author who while serving as American Consul at Tunis, died there in 1852, far from this cottage of his which still stands at Easthampton, Long Island



"AND DOWN THE VALLEY, WITH LITTLE CLUCKS AND TRILLS,  
THE DANCING WATERS DANCED BY DANCING DAFFODILS."

*John Masefield*

Such friendly informality immediately captivates the visitor to "Gravetye," the Sussex home of that dean of gardeners and warm advocate of planting in nature's manner, William Robinson, whose precept and practice have led us to freer and finer forms of landscaping



# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

MARCH—BEGINNING IN EARNEST OUTDOORS



Herein are listed the seasonal activities for the complete garden. Details of *how to do* each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for out-door work of any sort New York City (latitude 40) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow *four days* for each degree of *latitude*, for each five degrees of *longitude*, and for each four hundred feet of *altitude*.

(Copyright, 1922, Doubleday, Page & Co.)

**N**OW we begin to put into practice plans made during the winter's lull and to resume actual out-of-door activities. Best complete any neglected details of your schedule at once so as to throw yourself wholeheartedly into its successful execution. In June the gardener reaps the rich rewards of forethought in all sorts of delectables for his table and secretly, or, indeed, sometimes very openly, congratulates himself on his wisdom in keeping well ahead of the game!

### General

This is positively the last call for dormant spraying and for pruning. It is of little use to spray and spray again the fruit trees, if near-by ornamental shrubs infested with scale are left untreated. Be thorough. Prune the late flowering shrubs but leave alone the early flowering ones until just *after they have bloomed*; which in a single sentence gives the governing principle for all ornamental flowering shrubs. Early bloomers flower on the wood made last year, late bloomers bear the flowers on new wood of this season. At this time of the year bulb stock requires 20-25 days from the time of being brought indoors until flowers open. Double Tulips take a little longer. Figure your supply accordingly.

### Seeds to Sow in Heat

Sow Primulas for flowering next fall and winter (*P. malacoides* and its varieties are best sown in June.)  
Sow Heliotrope and *Centaurea gymnocarpa* in a temperature of 50° for bedding out in May.  
Sow *Schizanthus retusus*. Transplant to flats, later pot and grow on in a cool temperature, rich soil, and good drainage. Pinch off the flower buds until required to bloom.  
Sow Clarkias and grow on to flower in six-inch pots. No pinching is necessary. Pick off dead blossoms and they will continue to bloom well through the summer.  
Sow *Hunnemannia fumariæfolia* in paper pots for summer flowering. Annual *Gypsophila* can be used in conjunction with almost any other flower for table decorations during the summer months. Make a sowing now in the hotbed for June flowering, again three weeks hence, and so on through the summer to keep up a succession.  
Procure *Lilium speciosum* for summer blooming now, pot into five- or six-inch pots, and grow cool; useful for brightening the show house or conservatory.

### Plants from Cuttings

Pot up early rooted Chrysanthemums. Don't leave them in the sand after the roots are an inch long.  
Continue propagation of Chrysanthemums and bedding stock, as cuttings are available.  
Complete propagation of Carnations as soon as possible, now that the days are getting brighter, which makes rooting more difficult—make the most of every opportunity to get a "crack of fresh air" on the ventilators. Warm weather brings swarms of thrips. Look out for them, spray and fumigate.  
Pot on bedding stock propagated from cuttings last fall and space out on the benches as they show signs of crowding.  
Alternantheras may still be rooted in sand. Divide up plants wintered over in flats; put out in a gentle hotbed, where they will make fine plants for setting out at the end of May.

Root cuttings of *Alyssum saxatile*. Divide up old plants of *Erfordii*, *Luminosa*, and *Chatelaine* Begonias; replot the pieces, or cut back, and take cuttings from the new basal growths. Make cuttings from stock plants of *Hydrangeas* saved for this purpose; or from the basal growths of those being forced into flower at this time. Take cuttings of *Marguerites* and *Heliotrope*.

### Vegetables on Hand and to Come

As weather conditions permit uncover the Asparagus and Rhubarb. Sprinkle salt on the Asparagus bed, also nitrate of soda, using about 1½ lbs. per square rod. Encourage Rhubarb into growth by placing barrels over the crowns, and banking round the barrels with hot manure. Dig all Parsnips, and Oyster plants that have been in the ground all winter, and store in a cold cellar. Whenever possible dig the vegetable patch, and endeavor to get a little deeper than ever before, to break up the hard pan which cuts off the water supply during the growing season. As soon as the soil is dry enough to plant without sticking to the tools, plant all of the most hardy vegetables, without regard to the fluctuations of the thermometer. Plant thick and shallow at this time. Lettuce and Cauliflower pricked-off into frames to mature will be ready for the table some time ahead of outdoor plants. Sow Beans (String) in a frame where they will mature.

### Berry Bushes

Last year's wood of Gooseberries will yield the best fruit; therefore cut out all superfluous shoots, and trim the points only of those that remain. Keep the main shoots six inches apart, and the middle of the bush open. This will let light and air into the plants, and greatly facilitate picking the fruit. Red Currants may be "spurred-back" to a couple of buds; with a few shoots left longer for extension, if needed. Merely cut away exhausted branches of Black Currants and encourage basal growths to take their place. Spur back side shoots that are too numerous. Get at Raspberries and Blackberries that were not thinned out and headed back after fruiting last fall.

### Frames

The big job is to make up the main batch of hotbeds. Details of procedure appeared in last Month's Reminder. Air on all favorable occasions frames that have been in use during the winter carrying over plants; protection is still necessary on very cold nights. Transplant such plants as were started last month. Make sowings of Peppers, Eggplants, Tomatoes, Cucumbers, and Melons. Sow Annuals as required, such as: Annual Larkspurs, Snapdragon, Drummond Phlox, Pentstemon, Sweet-peas, and Verbenas. These require cool treatment when once they have started; avoid extremes. Continue to repair the coldframes, glaze the sash and have ready for pricking-off the young plants as needed. Deep frames with a northern exposure with 2-3 ft. of head room are useful for keeping bulbs in after the flowers have opened. Lay newspapers over the sash above Tulips on bright days.

Set out in the hotbed small plants of Pansies, Myosotis, Phlox, Hardy Poppies, Shasta Daisies, etc., from seeds sown in January.

**Under Glass**

[Full advantage of these directions is only possible with a greenhouse, but so far as opportunity allows they also apply to hotbeds.]

The important job is to "prick-off" the seedlings that are large enough to handle. Use plenty of leaf mold and sand. Cover the surface of the soil in the flats with a layer of sand; then prick-off the little plants. This carries away the water from around the stems, and to a great extent prevents "damping-off." Give shade until re-established, then exposure to full light, and sunshine to ensure sturdy, stocky plants.

Sow Sweet-peas in small pots for planting outdoors next month. Pansies and Forget-me-nots brought in from frames will flower by the holidays in a temperature of 50°.

Keep the Rambler Roses growing in a temperature of 60°. Avoid direct draughts of cold air, or mildew will result.

Give Lilies subject to high temperature plenty of water, and feed occasionally with liquid manure. Stake the plants.

Stake up the Snapdragons, and remove side shoots. The side growths make good cuttings. Put them into the propagating bench.

Start fancy-leaved Caladiums for decorative purposes in sandy soil with gentle bottom heat.

Look over vines, such as Ivies, Vincas, etc., saved from the window boxes and baskets last fall; replot if needed.

Thunbergia is a useful climbing plant. Sow the seeds now. Also seeds of the Castor-bean.

Repot Dracena indivisa that are pot bound; or top-dress.

Early flowering indoor Sweet-peas should have a rich top-dressing of well decayed manure. Acid phosphate and sulphate of ammonia, an ounce to a gallon of water, is a good stimulant, but should be used with care.

A heavy mulching of old cow manure will greatly benefit the Roses planted out in the benches at this time. Don't use fresh horse manure; it will burn. Place a covering of loam over the bare roots before using the manure. Look after the young Roses, use care in watering; and keep them free from black spot. Bank the fire early on sunny days.

Spireas will be showing color in the flower spikes at this time. Space them well apart so that the foliage may develop evenly, and to prevent it damping off as it very readily does when crowded.

Water copiously, but have the foliage dry before night. Place saucers under the pots, and keep these filled with water.

Start at intervals small batches of Godfrey Calla, Gloxinias, and the little blue Achimenes, for summer flowering.

Gardenias may still be rooted provided one has plenty of bottom heat. They require a closed propagating case to root well. Pot when rooted, and carry along in pots until they are transferred to the benches where they are to flower. Use light porous soil, with plenty of leaf mold in it.

Poinsettias through flowering may be laid on their sides under a bench free from drip, and dried off.

Start tuberous Begonias in gentle heat, potted or in flats.

Peaches and Nectarines will be in bloom this month. Encourage fertilization by the admission of fresh air and sunshine on every favorable occasion. Tie in the young shoots of early started vines as required.

Maintain a free buoyant atmosphere. Accommodate Primulas, Cinerarias, Cyclamen, and similar flowering plants now in bloom, with a light position on the north side of a cool house.

Give more air as the days become warmer to Bay-trees, Oleanders, specimen Hydrangeas, and similar plants now in storage. As soon as occasion offers place outdoors, give a thorough hosing; retub, or top-dress as required.

**Lawn Shrubbery and Border**

Clean up the shrubberies, stacking the leaves in a large pile to rot.

They will be useful next August for mulching. Burn all other rubbish in a smother fire, and use the ashes for fertilizer.

Loosen the ground among the shrubs with a spading fork. Attend to the climbers round the dwelling, tying up any growths that have fallen out of place during the winter.

Order any other plants of this class that may be needed. Late in the month remove the wind screen, and other temporary protection afforded choice shrubs and evergreens; likewise from Roses, bulbs, and flower beds. Prune and tie in all Rambler Roses, but leave Tea Roses until all danger of hard frosts is past—better to wait until the eyes begin to swell.

Air freely Pansies, English Daisies, and Myosotis wintered in frames; plant out into flowering quarters as soon as conditions warrant.

As the crowns of the plants show through the ground, do any needed alterations and replanting in the herbaceous border.

Plant deciduous shrubs, and trees.

Trim grass edges as soon as conditions permit.

Apply fertilizer to the lawns, top-dress bad spots, and reseed.

Cut a few sprays of Forsythia, and Pussy Willow; place in a greenhouse, or warm dwelling for very early blossoming.



**WORKING THE HOTBED TO CAPACITY**

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1. Planting plan for one sash only. 2. Where two sash are available the space can be used as shown here. 3. With four sash (or more) the home gardener is well equipped to raise early crops; start tender stuff for transplanting and flower seeds as well.



# NEW ROSES FOR THE GARDEN

CHARLES E. F. GERSDORFF



Varieties that Have Made Good—Seventy-odd New Comers which Measure Up to the Highest Standards of Plant Vigor, Floriferousness, and Quality of Bloom

EDITOR'S NOTE:—The accompanying notes are offered as a selective guide to the gardeners who want only the best all-round varieties; others omitted may excel in some one quality but are not evenly balanced—such varieties are for the connoisseur and the collector. What Mr. Gersdorff says is in no way mere haphazard conclusions. A close student of Roses, in his own garden and in the Rose Test Garden of the Dept. of Agriculture at Washington, he has made careful, systematic, and constant notes on the performance of varieties from the garden viewpoint. To such work he brings a mind trained in scientific analysis, and the "survivals" as given in this article survive because they outpoint others (not named for lack of space) on all three essentials of plant vigor, with quality, and quantity of bloom.

IS IT worth while to plant new Roses considering the number of older favorites still available, and that during the last ten years more than five hundred new varieties have been introduced? Of these newcomers about two hundred have been tried out in this country, and most of them were found wanting in something and failed to survive more than two or three seasons. Would not this tend to prove that growing new Roses is pretty much of a gamble? But were it not for the gambling instinct inherent in most of us, few, if any, of the new Roses would ever have a trial, yet some of them are in every way worthy to grace our gardens. Each succeeding year a few stand out as preëminently suited to our peculiar growing conditions, for it is really a lack of vigor with a consequent tendency to bloom poorly that accounts for so many novelties dropping out of existence. It was in this way—through the elimination of undesirables—that the list of old, tried and true varieties accumulated, and progress is always being made.

Why do the new Roses often fail to come up to standard for us as they do for their originators? Is it because the breeders of to-day are less scientific and less careful in the work of breeding than their predecessors? No, the fault lies elsewhere, and failures may be definitely attributed to two causes:

First: most of the novelties come from Europe, and Roses bred for the conditions over there and which are winners where the climate is peculiarly suited to their successful culture are likely to respond differently here.

Second: most of the varieties originated in America have been developed by growers who are striving toward the definite goal of ideal Roses for greenhouse culture.

Now, when greenhouse beauties are tried in the garden the chances of success are much greater than when good garden varieties are taken into the greenhouse; and though the number of American Roses tried out for the garden have been few, the percentage proving successful is high. Our hybridizers are awakening to the fact that the future of the Rose in America is not alone in the greenhouse, but quite as much in the garden; for witness, look at the increasing number of true garden Roses introduced during the last few seasons and making good.

A Rose of proven merit is not necessarily successful in all regions. Growing conditions vary and, naturally, plants are influenced favorably or otherwise. However, I herewith set down my views on such of the newer Roses as have come under my observation and which appeal to me as significantly marking progress. The garden Rose which has attained the greatest prominence of late years is the Hybrid-tea, and with few exceptions the kinds now described are of that class.

**Yellow Roses.** These are my favorites; perhaps because good yellows are scarce. *Grange Colombe* (H. T.), from France, by Guillot in 1912, is a Rose of much promise for the garden. It is a creamy white with a salmon yellow and fawn centre, clear colors, lasting well; loosely built blooms very freely produced. The plant is of vigorous erect growth. Among other beauties from France I like *Mrs. Chas. Lutaud* (H. T.), one of Pernet-Ducher's creations of 1913. It is a large flower, tinted with carmine in the bud, but opening to a medium shade of clear, dull yellow; a vigorous grower. Another Pernet-Ducher beauty of

1913 which has proven its worth as a bedding Rose, producing large, full, cup-shaped clear yellow blooms, is *Mrs. T. Hillas* (H. T.). In 1915, also, Parnet-Ducher gave us a gorgeous addition to the yellow group in *Mme. Collette Martinet* (H. T.), beautiful both in bud and open bloom, a rich golden yellow changing to old gold shaded with orange yellow, attractively set off by its bronzy green foliage.

*Elli Hartmann* (H. T.), from Welter, Germany, 1913, is a rich old gold in shade. It is distinct and fine, of medium to large size, giving an average amount of bloom which is very durable; in growth is vigorous and bushy. *Tipperary*, an Irish Hybrid-tea from McGredy & Son, 1916, introduced here by Chas. H. Totty, gives clear, light yellow blooms of medium size. It is a fine bloomer and strong grower.

In *Golden Emblem*, (H. T.) from the same source in 1918, through H. A. Dreer, Inc., we have a yellow of much promise for garden and bedding purposes. It is a very fine, constant-blooming Rose, having beautifully formed, large double flowers, fragrant and of a deep, rich golden yellow. Its foliage is a glossy green. One of the latest, an English Hybrid-tea of B. R. Cant & Sons, 1921 (C. H. Totty, American introducer), which shows promise for our gardens is *Golden Ophelia*. In color it is a deep rich yellow, like *Lady Hillingdon* (1911, also introduced by Totty) at its best and its growth is similar. Blooms are freely and generously produced. It is not, however, an *Ophelia* type.

**Good Whites** are scarce; there are, indeed, but few of outstanding quality. *British Queen* (H. T.) McGredy & Son, 1912, is pure white, except in the bud stage when it is tinted pale flesh, with large and finely formed blooms of fine fragrance; quite floriferous and of very vigorous growth. A real American is *Mrs. John Cook* (1920), from the original Hybrid-tea Rose "factory" of this country, the Baltimore, Md., establishment of John Cook. It is a real giant amongst garden Roses; flowers of great substance, glistening clear white, sometimes slightly tinted pink on the outer petals; has many outstanding qualities.

**Pale to Light Pinks.** Selections of merit in this group include *Mme. Jules Bouche* by Croibier & Sons, 1911; *Panama* by John Cook, 1913; *Lucien Chauré* by Soupert & Notting, Luxembourg, 1914; *Amalie de Greiff* by Peter Lambert, Germany, 1914; *Mme. Marcel Delannéy* by Leenders, 1916; and *Rosalind* by F. R. Pierson, 1918.

*Mme. Jules Bouche* has lived up to its early promises. It is a white-shaded light pink, the shadings being variable; colors are clear, form is good, blooms medium sized and freely produced; growth is tall. *Panama* is a good steady bloomer; growth bushy; blooms are not very full, a light pink with distinct silky finish. *Lucien Chauré* showed distinct promise when introduced and has made a record as one of the best; large finely formed blossoms, in color a blend of creamy pink and flesh, are very freely given. *Amalie de Greiff* is a fine grower and free bloomer giving delicately colored flowers of satiny finish, rose tinted white, long and shapely and borne on strong stems. *Mme. Marcel Delannéy* is of distinct coloring, a soft pale rose-pink shaded hydrangea pink, the flowers being large, full, and fragrant, fine of form on good stems. The vigorous plants are very free blooming. *Rosalind* is a sport of *Ophelia*, carrying with it all the good qualities of its parent, differing only in color which is a light, clear shade of pink. Incidentally, *Madame Butterfly* (1920) likewise a sport of *Ophelia*, promises to outclass *Rosalind*.

**Deeper Pinks, ranging from Salmon to Deep Rose**, are well represented. *Killarney Queen* (Budlong, 1912) is an American sport of the well known *Killarney* and has shown itself to be the most reliable sport as to constancy of color. It is a free, vigorous grower and bloomer, giving blooms of sparkling cerise pink. Another sport of *Killarney* (Alex. Dickson & Sons in 1914 and Dreer in America) called *Killarney Brilliant*, has shown





H. T. ROSE OPHELIA

An English production of 1913 whose inherent qualities make it almost the ideal type for under-glass cultivation in America. Clear salmon pink toned with yellow. Ophelia has already given us a considerable family of high grade varieties of proven merit indoors and out, leading to the climax of "America" (to be seen at the shows; for distribution in 1923) which is a rich rose-red, wide-expanding bloom of great promise

itself to be a reliable garden Rose; it is more free in bloom, and a better grower than its parent, with deeper clear pink blooms.

A distinct advance was made in garden Roses when *Radiance* was sent out in 1912 by John Cook. In color a light silvery pink on the inside of the petals and outside a rosy pink; the blooms are large, cup-shaped, slightly weak in the neck, long stemmed and very freely produced on a plant which is hardy and very vigorous in growth. Its fragrance is strong. It is the standard for "best" garden Roses.

*Frau Margrethe Moller* (by Poulson of Germany, 1912) gives dark rose colored blooms which are edged lighter, the color tending to blue on aging. The form is good and growth is fair. It is particularly

noted for its blooming qualities. Another from Germany, of distinct merit, is *Leonie Lambert* (Peter Lambert, 1914) with blooms of a silvery rose and salmon shaded, not very large, but making up in floriferousness; it is a fine bedding Rose. *General Superior Arnold Janssen*, an extra fine Holland Rose of bedding quality, commonly known as *General Janssen* (Leenders, 1912) has large, full, deep, finely formed buds and flowers of great substance, very fragrant, carried erect on strong stems, freely produced throughout the season on sturdy bushes; in color, a deep rich carmine.

*Rose Marie* (F. Dorner & Sons Co., 1918) has made its mark as a bedding Rose of merit. Its well formed flowers and buds, clear rose

pink in color, are developed freely by strong growing bushes. From E. G. Hill Co., and Chas. H. Totty, in 1918, came *Columbia*, truly American, sturdy in all its qualities. Actually it was developed for the greenhouse, but quickly it also made its mark in the garden. Visualize a large and finely formed double bloom, in color silvery and rose, freely produced on long canes by a strong, vigorous bush and you have *Columbia*.

A seedling from Mrs. Chas. Russell with all its good qualities, but superior from a garden standpoint, is the Canadian *Frank W. Dunlop* and sent out in 1920 by Chas. H. Totty. Strong and vigorous in growth, it develops long stemmed beauties of a clear, rich rose pink, the keeping qualities of the blooms and color being unsurpassed. *Ophelia* has given many fine sports, of which another good one is *Evelyn* (A. N. Pierson Inc., 1918), more double than the parent, and in color more pink, a deep salmon pink shade. Montgomery of Massachusetts has given us a promising pink Rose in *Pilgrim* (1920), having finely formed blooms on long stems.

**Red Roses** are plentiful; reds which do not "blue" are scarce. Some new shades have been added to this group. *Robin Hood*, a soft, bright, rosy scarlet, deepening in cool weather, is a fine bedding Rose sent out in 1912 by John Cook; a very free bloomer and makes a fine bush. *Comte G. de Rochemur* (Schwartz, 1912) from France, is an extra fine bloomer, medium large in size, in color a fiery scarlet, tinted with vermilion, but "bluing" as it ages; fragrant and an average grower.

**Intense Dazzling Crimson Reds** are all too rare. Yet we find this color in *Hoosier Beauty* (F. Dorner & Sons Co., 1915) combined with a delightful fragrance and blooms of fine form. Another dark beauty, very double and finely formed, *Francis Scott Key* (John Cook, 1913) has shown up as a markedly fine Rose, dark maroon-scarlet of an even shade. Among all the fine Roses sent from Ireland none is of more promise than *National Emblem* (McGredy & Sons, 1915) dark crimson overlaid with a velvety sheen, and blending lighter toward edges of vermilion. It has fine form and is a fine new color combination. *Crimson Champion* (John Cook, 1916) is noted for its immunity from disease. Its blooms are well formed and of a glowing crimson color overlaid a darker shade.

Two sports of *Radiance*, both red, but of different tones, and both named *Red Radiance*, came out in 1916, one by A. N. Pierson Inc., and the other by Gude Bros. Co., Washington, D. C., have qualified as splendid bedding Roses. They have the size, form, and productiveness of their parent with an improvement in strength of stem. The Pierson sport, a light carmine-crimson, has been withdrawn by its originators in favor of the Gude form which they consider "a little better in color than ours"—a dark carmine-crimson.

*Mrs. Henry Winnett* (John H. Dunlop, 1918) shows much promise, with growth strong and fine. The beautifully formed, freely produced flowers on vigorous stems are bright crimson, a shade darker than in Richmond. Another Montgomery Co. production of 1920, which stands out as of promise for garden decoration, is *Crusader* (introduced by A. N. Pierson Inc.) a velvety crimson, which with *Pilgrim* was primarily developed for greenhouse forcing.

**Blends** is the term which for convenience I give to new color combinations that have appeared in our Hybrid-teas in recent years. Some beautiful and fascinating colorings have been obtained and such blooms are truly the aristocrats of the garden.

From France have come the following Pernetiana varieties, all by



H. T. ROSE CRUSADER

A 1920 American production fitted for both greenhouse and garden. It is a deep velvety crimson

Pernet-Ducher: *Mme. Edouard Herriot*, or *Daily Mail Rose* (1913), is a coral red shaded yellow, opening to a rosy coral red with light shadings of salmon, a unique and startling combination, fading with age. It is average in bloom and growth. In *Mme. Theodore Delacourt* (1913) we have a garden Rose of merit, markedly distinctive for its unusual color; its long buds are rosy scarlet and these develop into large fairly double blooms, globular in form and in color a reddish salmon shaded with yellow. *Mme. Edmond Rostand* (1913) has beautifully and variably blended blossoms of delicate flesh, salmon, and deep yellow, the variability being due to temperature changes. The blooms are quite double and globular in form. A gorgeously beautiful rose is *Willowmere* (1914), particularly in the bud stage. It is free blooming, in color a blending of shrimp pink, yellow, and carmine pink, combined with fine glossy foliage.

England, Ireland, and America have not been backward in competition with France, in the production of these beautiful Blends. Wm. Paul & Son, England, in 1913 gave us the Rose which is to-day the paragon of excellence, *Ophelia*. Credit is due to E. G. Hill for the keen perception of the inherent qualities of this Rose and because of which he brought it over. It is a clear light salmon pink toned with yellow on the base of the petals, the yellow developing a deeper tone in cool weather, combined with fine form and free blooming tendencies. *Ophelia* has had an immense influence on the development of American Roses. Among other varieties of merit, having *Ophelia* as a parent, are *Angelus*, *Columbia*, *Premier*, *Madam Butterfly*, and the phenomenal new Rose *America*, which, however, will not be ready for broad distribution until 1923. *Titania* (a China Rose, from Paul & Son, 1915) is a wonderful variety for bedding purposes. In color on the order of

*Mme. Herriot*, a little lighter, being coppery crimson, opening to deep salmon with clear yellow base; it is more double and a fine bloomer. *Edith Part* (McGredy, 1914) is very distinct in its blending of colors; a rich red suffused and shaded deep salmon and apricot yellow, darker in the bud state, sweetly scented and a good bloomer. Large flowers, of good form, fragrant, and freely borne on strong vigorous plants characterize *Mrs. Ambrose Riccardo* (McGredy, 1914) a blending of flesh pink and deep yellow. *Los Angeles* (Howard & Smith, 1917) came to us from the city of that name and is an achievement worthy of the highest praise and honor. Beautiful blooms of fine form, and a delightful blending of pink, coral, and gold, combined with a rich fragrance, grace a plant that is strong in growth. The E. G. Hill Co. in 1918 gave us a sport of *Ophelia* named *Mme. Butterfly*, a true glorified *Ophelia* with the coloring intensified, blooms increased in size, and with even the growth bettered.

**Distinctive Bedding Roses** are well represented by several of the single Hybrid-teas. I have in mind three of Irish origin in 1914. *Old Gold* (McGredy & Son) has several rows of petals and is a vivid coppery yellow, gold, and orange in the bud, opening to a coppery yellow. *Irish Fireflame* (Alex. Dickson & Sons) with its autumn tints of orange, crimson, and yellow, fading to various shades of yellow when fully expanded, is a beauty; while *Red-letter Day*, another Dickson introduction, is also large, nearly a true scarlet. All are vigorous bushy growers, and very free bloomers.

**Baby Rambler or Dwarf Polyantha.** Of this type I know but two varieties of recent introduction, both are of much merit, however, and are low in growth and suitable for edging beds of taller kinds.

*George Elger* (E. Turbat & Co. France, 1912) is a clear yellow fading lighter, and a continuous bloomer, as, indeed, is *Tip Top* (Peter Lambert, 1915) generally known as *Baby Doll*, in bud a blend of orange yellow to a rosy carmine edge, changing to white edged deep rose.

Climbing Roses of outstanding merit known to me are all of American origin, except *Paul's Scarlet Climber* (Hybrid Wichuraiana, W. Paul & Son, England, 1917, H. A. Dreer, Inc. here) semi-double, a true vivid scarlet, a color which does not burn blue nor fade; a moderately vigorous grower, suitable for covering pillars. In *Mary Lovett* (Hybrid Wichuraiana, Van Fleet, 1915) we have a variety of vigorous growth, freely producing double cupped blooms of large size, with fine fragrance, pure waxy white. *Bess Lovett* (Van Fleet, 1917) is a counterpart of *Mary Lovett* except in its color which is a clear, bright rosy red. *Purity* (Hybrid Wichuraiana, Hoopes Bros. & Thomas Co., 1917) gives large semi-double, pure white blooms, the old flowers readily shedding their petals; the plant has the best of foliage and freedom of growth and bloom and is very close to *Silver Moon*. To all who admired *Tausendschön* but wished its color more constant *Roserie* (R. Witterstaetter, 1917) a sport, should prove a winner, for it is a clear, even shade of carmine-pink. Dr. Van Fleet is also responsible for the *Rose Aunt Harriet* (Hybrid Wichuraiana)—but not for the name—it was distributed in 1918. In

full bloom it is magnificent, covered with masses of dazzling scarlet-crimson, semi-double blooms having white centres and golden stamens.

A New Line of Roses developed and described by Captain George C. Thomas, Jr. in the "American Rose Annual" for 1920 must be mentioned although I have not had opportunity for any personal observation of these varieties. However, the fact that they have been admired by others and have passed successfully the rigid tests conducted at the Rose Test Garden, Portland, Oregon, and have been produced by an amateur whose standard of excellence is very high and whose ability in judging the merits of Roses is well known, leads me to believe that one would not go far wrong in acquiring these varieties. I have in mind the following: *Dr. Huey* (Hybrid Wichuraiana) dark crimson-maroon, semi-double, of great brilliancy and distinctiveness. It has one period of bloom. *Bloomfield Progress* is a Hybrid-tea, deep velvety scarlet, extremely double, with strong fragrance; *Bloomfield Abundance*, an everblooming semi-climber, salmon pink and double, flowers constantly from June to heavy frost; *Bloomfield Perpetual*, a perpetual blooming semi-climber suitable for hedges, carries bloom from spring to frost, having the perfume of the Cherokee Rose and its color. All four were sent out in 1920 by Bobbink & Atkins. The first two were obtained in the development of the others, and better may be expected for Captain Thomas has not reached his ideal.



## LEARNING WHAT ROSES LIKE

J. HORACE McFARLAND

Editor "Rose Annual" of the American Rose Society



### Challenging the Conventions and Simplifying Practice

**M**OST of us garden-hoping folks have despaired at the elaborate soil preparation which is recommended, or even demanded, for rose prosperity, especially for the Hybrid-teas. The orthodox rose bed "must" be prepared two or three feet deep, and I have read of one preparation of four feet, the bottom twelve inches being of broken bricks for drainage. Then there are the "special" beds devised by the late Frederick Efficiency Taylor, in which diagonal slices of soil and manure and what-not manage to make a three-foot-wide bed cost about two dollars the running foot. The orthodoxers also propose three-foot square-and-deep excavations for Climbing Roses, and an elaborate soil prescription to fill them.

When I began to try to have a few Roses at Breeze Hill, I did my best to follow the fashion in soil fixing. True, the workman who was to trench two or three feet deep usually skimmed the job, but nevertheless I did take extra trouble to see that the rose beds were extra deep, extra rich, and extra good.

After I had to transplant some Hybrid-teas that had had a year in the elaborately prepared ground, I began to suspect the need for such extensive and expensive elaboration of preparations. The roots hadn't gone down into the submerged richness, and I couldn't see how they could get the good of it. Indeed, after having transplanted Hybrid-teas on multiflora, on *Manetti*, on *Cherokee*, on *rugosa*, on their own roots, I can say that I never found one, whether it has been doing business for one year or for five, that had gotten below eighteen inches, and most of them had prospered reasonably in a foot of good ground.

In the spring of 1921 I had to transplant considerably again to condense and fill after the Easter Monday freeze of evil memory. By this time I had gotten to confidence in a foot of good soil preparation, giving my heavy shale a full third of rotted stable manure. The Roses planted in this half-orthodox soil have done well for a hot, dry year, and flowered remarkably well in the fall. What have I lost by saving time, money, and manure?

But there's more to the story. When I went over the beds last spring, I found some ten of the Hybrid-teas so nearly dead that I couldn't think of replanting them. There was a little

sign of life in the roots, and as I am soft-hearted about life of any sort, I didn't dump them, but had my helper plant them in my little "nursery" in the vegetable garden, where the soil was just ordinary.

In June these "dead ones," planted thus in ordinary garden soil, without coddling, and without extra water in a dry time, had all recovered and made good tops, on which flowers of quality came and continued to come abundantly. Without spraying or dusting, these plants are free from bugs and mildew and black-spot. Even the difficult *Los Angeles*, one of these derelicts, has done beautifully.

What is the answer? I don't know; but my common-sense is getting busy with my memory, and telling me how Roses flourish in the rough field culture where they have been budded. No "special" beds, no three feet of preparation, no coddling at all, does the nurserymen give them, yet he gets great growth and many blooms.

Isn't it just possible that the elaborate soil preparation recommended is mostly "bunk?" Each writer has written what he read, rather than as a result of his own actual knowledge, possibly, and has passed on all this trouble and expense. I am surmising, not asserting; but, as to the necessity for elaborate and extra deep soil fixing for Roses I have moved to Missouri, and must be shown!

As to Climbing Roses, I do assert that there is no need of any cubic-yard excavation. A fairly large hole with some good soil in it will "start something" with any worth-while modern climber.

Is it not possible that many people have been scared away from rose-growing by these bogies of soil preparation, inherited from the old days when garden literature was loaded with similar and more forbidding prescriptions of soil dopes, differing for every plant? Who knows?

#### The Beauty of Climbing Roses

**A**T A meeting of the Executive Committee of the American Rose Society last spring, in a discussion concerning the introduction of one of Dr. Van Fleet's new creations in Roses,





*Mattie Edwards Hewitt, Photo.*

ROSE GARDEN OF MRS. EDGERTON WINTHROP AT SYOSSET, LONG ISLAND

The symmetric, somewhat formally patterned bed is, of course, the traditional home of the Rose and this modern adaptation has both character and charm

several rose nurserymen were passing the word on the relatively slow sale of good Climbing Roses as compared with the Hybrid-teas. One said he had 140 varieties of Climbers, most of them good, and he insisted that others of us knew little of them.

Believing as I do in the desirability of these modern successors to the old Baltimore Belle and Prairie Queen, it occurred to me to count up the Climbers that make Breeze Hill beautiful in June. I found I had sixty-nine sorts, and as I go over them, I find myself very reluctant to give up many of them. To be sure, there are about a dozen that have not yet shown me their flowers, but that is a joy to come.

I have reached a certain state of hard-heartedness about these Climbers. If any variety fails to "make good," out it comes, to give room for another candidate. Thus have passed away Goldfinch, because it was not distinct enough, and Trier, for the same reason. Climbing American Beauty is reduced to one plant, because, though very lovely when it opens, it "holds its dead," as one friend expresses it, in retaining its faded petals. Mary Lovett froze away, and I did not renew because Silver

Moon and Purity are as good, or better. I have no Crimson Rambler, and want none; Excelsa is far more satisfactory.

Several are on the suspense list: Elizabeth Ziegler may stay, or she may go. Aunt Harriet will have to prove herself a real aunt to stay in my Rose family.

**The Critical Date in Planting Out**

FOR several years I have observed that a surprising difference in eventual growth and prosperity was evident in field-grown Roses planted at varying dates in the spring. The March or early April planting has, in my experience, preceded prompt starting, satisfactory blooming, and permanent strength, while planting in late April and at any time in May at Breeze Hill has actually meant weakness of growth and bloom and sometimes a large proportion of loss.

As I write I have just been looking at certain rose beds, one of which was planted April 1st, 1920, and the other April 21st. Both were of Hybrid-teas on multiflora stock, and from the

same nursery. The April 1st planting did superbly that year, and the plants were established most happily; the later planting looked sick where the Roses were alive, as too many of them were not!

Possibly I have found a reason for the difference. Transplanting a home-grown Van Fleet seedling on March 12th, last year's abnormal spring following a nearly minus winter, I hit upon a condition of soil moisture which permitted the lifting of the plant with every root intact, and with earth clinging to every root fibre. I observed that the little white root-hairs, which we are told are the active agents for food assimilation, were more than a half-inch long, and in vigorous growth.

Now, under ordinary conditions of digging, these tender root-hairs would have been stripped off, leaving the roots bare. Is it not probable that such stripping may so weaken the root action as to check the growth of the plant? That is, the plant set after the suggested critical date is not dormant, though it may show little or no swelling of the buds—if my theory is correct. I shall at least assume its accuracy in my Rose plantings until proof that I am in error is provided.

### Blooms We Enjoy in the Fall

THE June bloom of Roses is a great event in any good garden. Breeze Hill has in addition to the sixty-odd varieties of hardy Climbing Roses about as many Hybrid-teas and Hybrid-perpetuals. When the full show is in process, any one flower is relatively unimportant, and one does not expect it to be lasting.

But the far fewer blooms that come in September and October are different. The superb Druschkis are regal in size, and they are good in their warm whiteness for days. The Hybrid-

teas open slowly but endure long, and each one seems a real rose event.

I find that if cut as they are expanding, they will open very perfectly in the house, and there give great pleasure. For example, one late September morning I cut a great stem of Duchess of Wellington bearing three good buds, one of them showing strongly the red reflex to the outside petals characteristic of this good Rose. All opened slowly and beautifully, giving us two days of decoration in the centre of the dining table. On the third day, they were wide and flat, and suggested gigantic flowers of a semi-double écreu Japanese Anemone rather than Roses.

Miss Cynthia Forde is another of these fall bloomers that develops slowly and beautifully, and Lady Ursula and Mme. Abel Chatenay are even better. Columbia does well, but not as well as those mentioned, nor as Ophelia. That Rose with the outrageous name, General-Superior Arnold Janssen, is as fine in the fall as is Red Radiance (the Gude sort, not the Pierson sort, remember!) That aggravating, lovely, awkward, and captivating deep scarlet beauty with another outrageous name—Château de Clos Vougeot—glows in the house as its buds expand, and has the advantage of exquisite perfume.

My Hybrid-teas were rather good last fall, despite the black-spot ravages. I had every diseased leaf picked off and burned, and the plants were thoroughly dusted while wet with dew with Doctor Massey's black-spot and mildew prescription of sulphur nine parts and lead arsenate one part. This was in finely powdered form, and applied with the Corona duster. Mildew is entirely controlled, and black-spot almost so. Aphis was controlled all summer by a two-inch mulch of tobacco stems, which also keep the ground cooler than it would otherwise have been. I cherish every one of these lovely fall Roses.

## NEW ROSES OF 1920-1921

THE following names have been registered with the American Rose Society during the two years named, and the descriptions are taken from the Society's "Annual," 1921, with additions to the end of the year from the Secretary's office.

*Eugenia*, Per. Sport of Mme. Edouard Herriot. Like Mme. Edouard Herriot except that blooms are flecked or striped with yellow. (H. L. Collier.)

*America*, H. T. Rose Premier X Hoosier Beauty. Bud long-pointed; flower immense, very lasting, rose-pink; fragrant. Foliage large, dark green. Vigorous; very free bloomer. Thornless. Resembles Columbia, but superior in color and form of bud. (E. G. Hill.)

*Miss Amelia Gude*, H. T. (Forcing). Columbia X Sunburst. Bud long-pointed; flower medium size (35 to 40 petals), lasting, outer petals reflexing; deep yellow centre, shading to cream; fragrant. Foliage very handsome dark green. Very vigorous; upright; very free bloomer; hardiness not tested. Similar to Sunburst, but smaller bud. (Fred H. Lemon & Co.)

*Angelus*, H. T. (Forcing). Columbia X Ophelia. Flower large, full (40 to 45 petals), form similar to Premier but higher centre, lasting; white, cream tint at centre; fragrant. Foliage dark green, disease-resistant. Vigorous; upright; free bloomer. Hardiness not tested. Similar to Kaiserin Augusta Victoria, but more double; blooms in winter, and keeps longer. (Fred H. Lemon & Co.)

*Rotarian*, H. T. (Forcing). Ophelia X unknown pollen parent. Bud long-pointed; flower large, full (35 to 40 petals), lasting, high centre, reflexed outer petals; bright cherry crimson; fragrant. Foliage dark green with red tips. Vigorous; upright; free bloomer. Similar to Frank W. Dunlop, but free from mildew, has stronger stems, with color brighter, and does not blue. (Fred H. Lemon & Co.)

*Red Columbia*, H. T. Sport of Columbia. Similar to Columbia, but not so full and of a brilliant scarlet color, like Hoosier Beauty; very lasting. Free bloomer. (Jos. H. Hill Co.)

*Betty Alden*, H. Poly. (?). Origin confused. Flower single, apple-blossom pink, changing to white; borne in clusters. Foliage glossy, dark green. Vigorous. Hardy. (R. & J. Farquhar Co.)

*Beacon Belle*, H. Poly. (?). Origin confused. Similar to Betty Alden, but flowers very double and close; flesh color, becoming pure white when mature; slight fragrance. (R. & J. Farquhar Co.)

*Boston Beauty*, H. Poly. (?). Origin confused. Flower full, double, clear pink, borne in clusters; very fragrant. Foliage leathery, dark green. Vigorous. Hardy. (R. & J. Farquhar Co.)

*Oregon Ophelia*, H. T. Sport of Ophelia. Flower and bud similar in shape to Ophelia, semi-globular, full (56 petals), light pink shading to yellow at base; fragrance same as Ophelia. Foliage dark green, practically disease-proof. Vigorous; upright; very profuse and continuous bloomer. Hardy. (Clarke Bros.)

*Legion*, H. T. Milady seedling X Hadley seedling. Bud well-shaped, globular; flower large, full (42 to 48 petals), lasting, cerise red throughout; fragrant. Foliage large, glossy, reddish green, not subject to mildew. Vigorous; very profuse bloomer; hardy. Originally named American Legion, but changed because objected to by association of that name. (Edward Towill.)

*William Wright Walcott*, H. T. (Forcing.) Sport of Richmond X Ophelia. Outer petals deep pink, inner light; fragrant; 45 to 56 petals, Good winter rose. (Robert T. McGorum.)

*Silver Wedding*, H. T., Ophelia Sport, same as Ophelia with cream colored foliage, red tinge on young growth. (Albert F. Amling Co.)



# THE HOUSE THAT WAS BUILT FOR A GARDEN

ARTHUR W. COLTON



EDITORS' NOTE: Because garden and house are so inevitably linked, so essentially interdependent, we believe that gardeners everywhere will find much to interest and inspire in this series of articles, especially prepared for us by Mr. Colton, which presents some happy solutions achieved by Americans of skill and imagination. Preceding articles may be found in THE GARDEN MAGAZINE for December, 1921, and January, 1922.

## III. MAKING THE HOME FACE GARDENWARD

**T**HE problem of the relatively small house and not extensive garden may be artistically less inspiring than the problems of large country houses and estates, but it is socially a more important matter. It concerns the lives of multitudes of people instead of the relatively few. It concerns all those of moderate means who wish to bring beauty and peace into their lives—lives that are passed in villages, towns, the residence sections of lesser cities and the suburbs of great ones.

The trouble is not that the majority of us live in "Spoon River," for we do not, though there are more of its grim ironies around us than we realize. The trouble is that so many of us live in "Main St.," with its vulgarities of soul, trivialities of mind, ugliness of look, and narrowness of outlook. "Main St." is not unhappy; but it is low grade civilization, and knows no better.

But if any dwelling house there had a fair garden behind it,

and a love of flowers in comely array within it, the street in part would no longer be "Main St." If you could graft the love of flowers and ordered gardens upon it, you might change its knarled and stunted social fruitage into something nearer the apples of the Hesperides. Any kind of beauty, or poetry, or any touch of finer issues, will make the difference, but there probably is, for most "Main St." people, more culture in flower gardens than in university extension courses; first because in raising flowers you are doing it yourself and are learning by contact with things, with the concrete realities of a subject; and second (which follows from the first) because the interest is likely to be more vital and continuing. It is an ancient tale. "We receive but what we give," is not quite true; but somehow or other the thing that is worked for is worth more.

An arid and unlovely society is not a matter especially of slums and factory towns, unlovely as they may be. It flourishes where the people sit on their front porches, of lathy pillars



WHERE GARAGE AND GARDEN ARE A HARMONIOUS UNIT

The house itself necessarily fronting northward, its designer, Mr. Charles Barton Keen, adroitly converted defect into distinction by developing the rear area in a manner to focus attention. Home of Mr. Graham-Clapp, Sewickley, Pa.



and jigsaw ornament, behind their patches of patchy lawn, and watch the trolley car go by and do not hear the wood thrush in the dusty Maples, and all their inner life has the thinness of weak tea, the flavor of remainder tea leaves with a slight taste of sugar. It flourishes in shady suburbs where one may follow mile after mile of asphalt sidewalk and see no house or surroundings with any charm of personality whatsoever—expense, vain-glory, considerable comfort, but nowhere any magic or sensitive-

THE problem of the Olcott house—a problem skilfully solved by Mr. Charles Barton Keen—was to design a simple, inexpensive dwelling on a prominent corner lot overlooking a large park, adjoining which were a number of rather expensive and showy residences; to avoid competition in any sense of display; and to develop the property according to its opportunities, with an individual, distinctive home, suitable to its site.

In both the Olcott and the Graham-Clapp house (also of Mr.

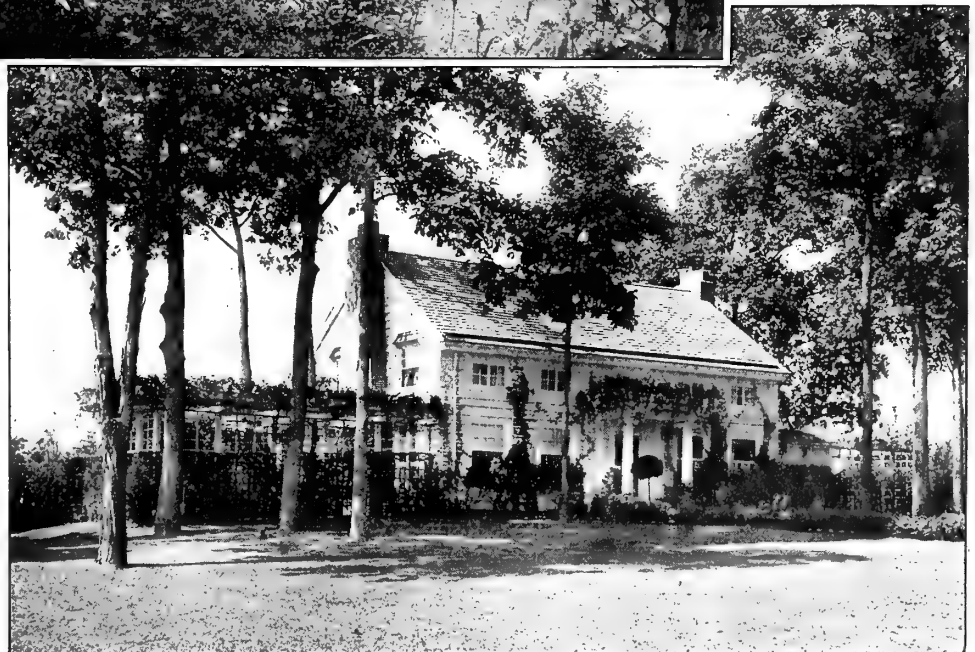


CHAUNCEY  
OLCOTT'S  
SARATOGA HOME

A rather widely known example of the best type of small house which faces inward on its garden; the architect here again being Mr. Charles Barton Keen of Philadelphia

ness, any brooding secret, or any of those slow growths that find their way upward into blossom wherever one's heart is planted. The suburban place generally looks like what it is, something whose architect was Haste and its owner Indifference.

Now, an owner who likes to sit on his back porch and look at his flower garden, rather than on his front porch and look at the street, is one whom any architect with any fineness about him would prefer to build for. The social reformer may complain that it argues inferior "social mindedness," and "unsocial mindedness" is coming to be as appalling a charge as it once was to be called heretic or an infidel. There is an answer to this charge, and a fairly complete one, the whole argument of it would take us a long way round, but it may be summed up in this axiom, namely that the finest social results come from seeds which are first planted and secretly spring up in persons. From which it seems to follow more or less logically that, when we have put our porches behind our houses instead of in front, and turned our backyards into gardens, and have taken to the intensive contemplation of the results of our own doings there, in place of the superficial inspection of other people's doings in the street, we shall have set our faces toward a better civilization.



Keen's design) the front necessarily faced north or northeast; the best exposure then was to the rear, thus making it necessary, or advisable, to develop that side, to put there the living porch, flower garden and other decorative features. In the Olcott place the garage, stable and pergola are treated to frame the picture and form a background to it. In the Graham-Clapp place this rear outlook was developed to have an interesting foreground, with a background to form a screen and shut away

the uninteresting out-buildings of adjoining houses facing on the next street. Both seem to have been cases where a necessity was put to good service. If the antecedent circumstance was not selected, the chance was indeed judicious. It often is, for

“There is a divinity that shapes our ends,  
Rough hew them as we will.”

The pergolas of the Olcott and Graham-Clapp houses have more than an ornamental purpose, they serve as screens to finish the background of the former, and for the latter to shut out undesirable features beyond. Pergolas are, as a species, of Italian origin. To one’s Sicilian memories they recall Grape vines, purple clusters overhead, shadowed by thick leafage from a

too-burning sun, and rows of heavy pillars. Nothing seems more characteristically Mediterranean than those stalwart pillars. If one finds them at first sight incongruous with shingled roofs, it is a casual association that soon passes; they are cool, strong, and peaceful. From the cool of those pillars in the Olcott house a brick walk runs through the flower garden, past the Apple orchard, and the vista ends in a colonnade, hiding the tennis court. The Graham-Clapp house stands on a rugged stone terrace. Both houses are sheltered from outer view by trees and hedges, and both plans imply lives looking inward to the quiet of their gardens and not outward to the casual interest of the street.

This modern English house at Epsom offers attractive suggestion for an owner who would at all times enjoy his garden. The music room (right), the living and dining rooms (centre), and even the service quarters (left), face gardenward: and there is, too, the low, sheltered terrace for “tea”



## TELLING THE TIME IN FLOWERS

JANE LESLIE KIFT

EDITORS' NOTE: Because of an apparent recrudescence of interest (as evidenced by recent letters of inquiry) in a floral fashion in vogue a century ago in English gardens, we are publishing this alleged guide to the planting of the floral dial

**I**N THE effort to recreate the atmosphere of romance commonly attributed to bygone days, people persistently dig up old fashions quite forgetful of the fact that they no longer fit. A mode very charming a century back may to-day be very hideous, what was then a natural form of expression often becomes for us mere superimposed artificiality. Happily, the energies of gardeners in general are being increasingly diverted away from patterned beds and similar floral “stunts” and are being expended on less intricate but far more telling effects.

However, for the benefit of those still be-cobwebbed by the belief that anything “old-fashioned” is inevitably “good taste,” these recipes for the planting of a floral dial are offered.

In the gardens at the World’s Fair, Chicago, 1892, a dial which told off only a few of the hours was planted as follows:

- 6 A. M. Morning Glory
- 7 A. M. Portulaca
- 8 A. M. Single Roses
- 4 P. M. Four-o’clocks
- 7 P. M. Evening Primroses
- 8 P. M. Moon Flower

Flower timepieces of a century ago were more elaborate in arrangement, frequently containing varieties that by their opening and closing told off every hour of the day and night. Many of the older dials of the English estates were planted with wild flowers and had a quaint charm that is lacking in more recent examples.

Such a clock would be a part of the general landscape rather than of the formal garden. The nature of its plant materials makes this imperative: they are all flowers that wander at will over meadow lands and are never quite at home in the modern garden. The list given below for just what it is worth is taken from Brewer’s “Readers’ Hand Book.”

### DIAL OF OPENING FLOWERS

<i>First Twelve Hours</i>		<i>Second Twelve Hours</i>	
1. A. M.	Scandinavian Sowthistle (closes)	1. P. M.	Common Purslane (opens)
2. A. M.	Yellow Goat’s-beard (opens)	2. P. M.	Purple Sandwort (closes)
3. A. M.	Common Ox-tongue (opens)	3. P. M.	Dandelion (closes)
4. A. M.	Hawkweed, late-flowering Dandelion, Wild Succory (open)	4. P. M.	White Spiderwort (closes)
5. A. M.	White Water-lily, Naked-stalked Poppy (open)	5. P. M.	Julap (opens)
6. A. M.	Spotted Cat’s-ears (opens)	6. P. M.	Dark Crane’s-bill (opens)
7. A. M.	White Water-lily, Garden Lettuce, African Marigold (open)	7. P. M.	Naked-stalked Poppy (closes)
8. A. M.	Scarlet Pimpernel, Proliferous Pink (open)	8. P. M.	Orange Day-lily (closes)
9. A. M.	Field Marigold (opens)	9. P. M.	Cactus, Opuntia (opens)
10. A. M.	Red Sandwort (opens)	10. P. M.	Purple Bindweed (opens)
11. A. M.	Star-of-Bethlehem (opens)	11. P. M.	Night-blooming Catch-fly (opens)
Noon	Ice Plant (opens)	12. P. M.	Late-flowering Dandelion (closes)

# STRAWBERRIES FOR THE HOME GARDEN

JOHN L. DOAN

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**EDITORS' NOTE:** The average home garden is notoriously deficient in fruit, perhaps because of a sub-conscious thought that fruits for current needs can always be bought. They can, of a kind, but not the kind that a gardener can grow for himself. Apart from the matter of intrinsic quality and state of maturity it must be recognized that good fruit is becoming less and less easy to obtain at reasonable prices, and that this deficiency of an acknowledged essential in the dietary must be supplied at home. The general outline of the fruit garden and its latent possibilities were presented last month, and subsequent articles by Mr. Doan will discuss individual fruits, the Bramble family coming next.

**T**HE Strawberry is the favorite of both the home garden and of commerce; which is no wonder for it leads in quality and, excepting the Currant and Gooseberry, is the most productive of small fruits. Everbearing varieties that produce fruit on well developed plants of the current season's growth may be set out in April to bear from August until frost, and give a light crop the following June. The common varieties yield their first crop in June of the year *after* they are planted in the North; and earlier, of course, in the South.

The usual rules as to sites for fruit plantations (i. e. avoiding low ground and giving preference to a northerly slope etc.) apply to the Strawberry. Some varieties, as the Chesapeake, require a sandy type of soil; others, as Gandy, prefer a heavy soil. Fortunately, however, many kinds, including the majority of leading varieties, thrive equally on different soils. A moist, well drained loam, abundantly supplied with humus, is desirable; it may range from a sandy to a clay loam. The care that the crop receives is much more important than the type of soil it is planted in, which is fortunate, for the home gardener can use the site and soil he has, making the most of them.

## Feeding for Futures

**F**OR spring planting it is better that the ground be plowed or spaded the autumn before, but at any rate as early in the spring as it works well, and be made as mellow as possible before planting. If the soil be already liberally supplied with well decayed organic matter, manure may be omitted and a mixture of equal parts of bone meal, acid phosphate, and muriate or high grade sulphate of potash, may be broadcasted at the rate of 8 to 10 lbs. per square rod, after the ground has been thoroughly prepared. If it needs enrichment, about 100 to 150 lbs. of well rotted stable manure may be applied to each square rod and worked into the surface soil to a depth of only four inches so that the roots may reach it easily. About 3 lbs. of the fertilizer mixture above mentioned may be used with it.

Get plants that are healthy, vigorous, well rooted, and of *only one season's growth*. If the plant be stemless and the roots whitish or yellowish, it is young; a plant having a stem and dark roots is old and should be rejected. Order twenty per cent. more plants than actually needed, to allow for discards. Large size is of no advantage; small plants that are healthy and well rooted will produce equally good and productive beds. Medium sized plants are probably best.

## Systems of Training

**T**HERE are several systems of training strawberry beds—the Hill, Hedge-row, Spaced Row, and Matted Row, each one having good points.

In the *Hill System* the plants are set from 12 x 12 in. to 18 x 18 in. apart each way, usually in beds four plants wide with narrow walks between. No runner plants are allowed to grow and the original plants become very large. Good yields of very large choice fruits may be obtained by this method. Careful tests at different experiment stations, however, indicate that for a large majority of varieties this is less productive than some other methods, while it involves much more labor and three or four times as many parent plants. Only the varieties that are

not free plant makers, such as Chesapeake and Marshall, are suitable for this system. From 110 to 230 plants per square rod are required.

In the *Single Hedge-Row System* the plants are set about 2 feet apart in equally distant rows, and each plant is allowed to produce two new ones, one on each side of it, in the row. About 68 plants are required per square rod.

In the *Triple Hedge-Row System* the plants are set 2 to 3 feet apart in rows  $2\frac{1}{2}$  to 3 feet apart. Each plant is allowed to produce two new ones in the original row, and two or three in each of the rows that are trained on either side of it from 9 to 12 inches away. There are different methods of bedding the rows.

In the *Spaced Row System* the plants are set from 18 to 36 inches in rows 3 to 5 feet apart, the distances being determined largely by the length and number of the runners the variety produces. However, when an everbearing variety is planted that bears fruit on the new plants, it is preferable to set the plants 18 to 24 inches apart in rows not over 3 or  $3\frac{1}{2}$  feet apart, so that the rows may be filled comparatively early in the summer, leaving a long bearing period for the same season. The runner plants being so placed as to avoid crowding and prevent waste of space are arranged with less exactness than in the Triple Hedge-Row. After the ground becomes well occupied, all surplus runners are destroyed. From 19 to 60 plants are needed for each square rod.

In the *Matted Row* the runners are allowed to grow at will. Usually they are thinned out later; but, as a rule, not sufficiently. The planting distances are the same as for the spaced row. The yield may be very large; but the fruit is not so choice as that produced by the other systems.

The most satisfactory distance apart to bed the forming Strawberry plants may vary from 6 to nearly 12 inches, according to the variety and local conditions. As a general rule they should be a little farther apart than the span of the hand.

## Preparing the Rows and Setting Plants

**H**AVE the soil slightly elevated where the rows are to be planted, stretching a garden line where the row is to go. Its position may be marked upon the ground by walking upon the line, which is then moved out of the way; and the plants are set out the desired distances apart along the print of the line. If one should plant along the stretched line it might be pressed to one side, causing a crooked row. Unless the plants are obtained near by and moved with balls of earth, all but one or two leaves had better be removed from each plant, and the roots shortened back about one fourth. The reduction of the foliage lessens the loss of moisture, and the removal of the injured tips enables the roots to heal and throw out feeding branches more quickly.

Set the plant with its crown (i. e. that part where the root system meets the bases of the leaf stalks) exactly even with the surface of the soil. If too high, the roots may dry out; if too deep, the whole plant is likely to rot. The roots should be spread well apart and the soil pressed firmly against them. The plants may be carried in a pail of water and dropped, a few at a time, as needed. The garden trowel is a convenient and satisfactory planting tool. Thrust it diagonally into the soil





"THE VERY HONEY OF ALL EARTHLY JOY"—Cowley

*E. H. Lincoln, Photo.*

with the concave side away from the planter and the point slanted toward him, it is then brought to a nearly upright position and the plant is swung into the opening by the free hand, with a quick movement that spreads the roots out like the ribs of a fan. The trowel is withdrawn as the plant is placed in the hole, and, as the planter moves forward to set the next plant, he presses quickly and firmly upon the soil close to the plant toward it and downward with one hand or his knee. If the crown of the plant be slightly above the soil when it is placed in the hole, this pressure should leave it just even with the surface. If the gardener finds difficulty about setting the plants at the right depth, they may be held in the desired position while the soil is pressed against the roots.

North of Washington, D. C., the best time to plant Strawberries is before they start growth in spring; also in August or September, preferably with potted plants; though that is not generally so satisfactory a planting season in the North. Below Washington, however, early autumn is the safer time, as the newly set plants thus escape the long hot summer and still have a considerable growing season.

#### Cultivation: Tools for the Purpose

SOON after planting, the soil (which has been packed in planting) should be cultivated deeply and cultivation continued at intervals of about ten days until early autumn. After that

date give about three cultivations, the last coming a little before freezing weather.

Until the runners start, the wheel cultivator can do most of the work, a half-moon hoe being used in the rows. After the new plants start and before their leaves are large, there is no handier tool to preserve the soil mulch and keep weeds from appearing, with little danger of injury to runners, than the potato hook. Later, the half-moon hoe and very narrow bladed hoes are best for working in the rows.

Until the plants are strong, all flower stalks should be removed frequently from the new bed and all runners destroyed. Usually the runners set in spring may be allowed to grow late in June. It is a good plan to place them about every two weeks, until the rows are well supplied with plants, and to destroy all runners that come later. When a plant dies, train the runners from the neighboring plants to fill the vacancy, and, if need be, also move extra plants with balls of earth from places where they are abundant. To keep a runner in place, put a little soil or a pebble on the cord just back of the forming plant.

The beginner will be surprised to find that, with a favorable season and good care, varieties that are only moderate plant producers will form well filled beds before September, when the parent plants are set from 30 to 36 inches apart in rows 4 or 5 feet apart. Wide spacing makes early cultivation easier, greatly reduces the amount of thinning necessary, and permits the growing of some early companion crop, as Lettuce, or Peas.

Where growing seasons are short, or varieties are very poor plant producers, like Chesapeake, closer planting is advisable.

If the rows are not enough higher than the spaces between them to afford easy surface drainage when winter sets in, there is danger of snow water being held upon the plants sufficiently long to drown them. Where the winters are mild, as south of Washington, D. C., this danger is much less.

Soon after the ground freezes protect the bed by a covering of straw, marsh hay, strawy manure, or some other harmless loose material, preferably free from the seeds of weeds. Leaves, except pine needles, are likely to smother the plants. In the latitude of Philadelphia 40 lbs of loose, clean straw or marsh hay or 150 to 200 lbs of strawy manure, evenly distributed, supplies protection for a square rod and the plants are able to push through this covering unaided in spring. Further north the protective covering should be made heavier, according to the climate, which may necessitate removing some of the mulch in spring.

### The Choice of Varieties

VARIETIES that fruit well when planted alone are called staminate. Those that do not fruit properly unless some potent staminate variety that blooms at the same time be planted near are called pistillate; if such be grown, at least every third or fourth row should be staminate. (In the catalogues B or S indicates a variety that is staminate, and P the pistillate.) Senator Dunlap is a good pollinator for midseason bloomers and William Belt for later bloomers. Other pollinators would be better for some varieties.

An experienced neighbor or a near-by nurseryman with similar soil can best advise the beginner. In the absence of local information, choose adaptable varieties of good quality, covering the season.

As an early berry, Progressive (B), one of the best ever-bearing kinds, is far superior to and only two or three days later than Michel's Early, the standard early variety. Senator Dunlap (B) and Haverland (P) are good for early midseason. Marshall (B) and William Belt (B) are good late midseason kinds. These are all adaptable and range from good to excellent. Gandy is the standard very late kind, but requires heavy soil.

### Insects and Diseases that Threaten

TO avoid the white grub, plant Strawberries only on land which has been cultivated at least the year before. If healthy plants wilt in the summer, remove them and dig carefully—usually a grub worm will be found.

The leaf roller attacks the leaves, and the leaf spot causes reddish brown spots. Both may be controlled by spraying (I have used Pyrox) according to directions just before and after blooming, and by removing and burning the old foliage immediately after the crop is gathered. In case a spray is needed for the leaf roller when many of the berries are half grown, use 1 oz. of fresh hellebore in a gallon of water.

If any aphids (plant lice) are found on the roots of plants to be set out, steep some tobacco an hour or so in water and immerse the plants in a moderately strong solution for fifteen minutes.



## THE NEW TRAILING ROSE MAX GRAF

W. C. EGAN

A NEW hardy trailing Rose which, I think, will be used by landscape gardeners as a ground cover and over embankments has been flourishing in my garden and is worth a record. It made its debut as a chance seedling in a Connecticut nursery, and was named Max Graf after the foreman who discovered it. Only the insect that pollinized its parent and the bird that distributed the seed know its origin, but a study of the flower and foliage seem to point to a union of the blood of the rugosa and Wichuraiana, both of which were growing in the nursery. The comparatively small and shining foliage bespeaks its relation to the latter, and its rugged aspect indicates a relationship to the rugosa, while the flower—two, to two and a half inches in diameter—resembles the best pink form of that sturdy shrub.

Max Graf is a June and July bloomer, at which time it is completely covered with bloom, but even when not in flower it makes a handsome show on account of its clean, deep green,

shiny foliage which remains in good condition until frost—its beauty unmarred by attack of mildew, black spot, or insect. The rugosa blood gives a constitution hardier than Wichuraiana which often freezes back here at Highland Park on the shore of Lake Michigan.

The new shoots of the hybrid start upward and at a height of some two feet, arch over, finally reaching the ground on which they trail ten or more feet, rooting at the joints, but not quite so freely as Wichuraiana. Where the latter is perfectly hardy, a combination planting of the two should make a handsome mass.

Trained up and used as a "pillar" Rose, Max Graf should be a boon to Rose lovers living in a climate where the more tender climbers cannot be grown without winter protection. Fortunately the Dreer Co., and some of the commercial growers have seen and appreciated the capabilities of this Rose and offer it, so that it is procurable through the regular dealers.



### CONVERTING BARE SPOTS TO BEAUTY

In habit like Wichuraiana, but hardier, the new trailing Rose Max Graf is suggested for a ground cover and for decorative use in general. Mr. James H. Bowditch, Conn., with whom it originated, thinks it is probably a cross between rugosa and setigera. Flowers pink

# WHEN HOW AND WHERE TO PLANT FOR QUALITY VEGETABLES

ADOLPH KRUEH

Author of "Home Vegetable Gardening from A to Z," and kindred books

Time to Think of Details so Little at the Start but Likely to Develop into Mountains of Annoyance if Neglected Now



THE properly conducted vegetable garden is really a series or succession of gardens. The degree of success you achieve depends entirely on sowing the right seeds at the proper time, on correctly gauging the crops' requirements while growing, and on knowing when they have passed the zenith of their usefulness. There should be no room for sentiment in the home's food factory. It's a case of making the most out of six or seven months of growing season, and frequently a few days delay in sowing seeds spells the difference between a crop before frost or a crop for Jack Frost.

So, let us consider the season's possibilities for an average home garden of, say, 40 x 50 ft. Such a garden between June and October can be made to yield all the vegetables a family of four can eat, besides providing some surplus for canning or storage. But to do this, crop rotation must be practised with time-table precision and only varieties of known performance used. It should be understood, too, that the results here considered are matured under high cultivation and exact management—the goal of possibility!

## When it Is Really Time to Start

IT IS fundamental that the soil be in proper condition to receive the seeds. Whenever you can dig so that the soil crumbles readily, be it March or May, DIG! But when a handful of the soil, squeezed, forms a mud ball, wait! There are enough hardy crops that may advantageously be sown in March, even though April brings frost galore. Among these are Peas, Lettuce, Carrots, Cabbage, Endive, and Parsley; also Chinese Cabbage, in the light of recent discoveries. The entire question of *when* to sow the different vegetables depends largely on two factors:—the relative hardiness of the seeds themselves and the ability of the new-born plants to resist cold.

For illustration, Parsnip plants are every bit as hardy as Carrots or Parsley or Peas. Yet, Parsnip seed will readily rot (as high as 50 per cent. have rotted for me) in cold, wet soil, hence the early start constitutes a loss rather than gain. Again, the character of the soil is a determining factor. In light, sandy loam with good drainage, Onion seed may be sown as early as Peas. On heavy clay, such early sowing would prove disastrous.

Summarizing, here are the most popular home vegetables, arranged in order of their relative resistance to cold as seedlings, and immunity from rotting as seeds.

I. HARDIEST PLANT AND SEED	II. DELICATE SEED	III. DELICATE PLANT
( <i>First Sowing</i> )	( <i>Second Sowing</i> )	( <i>Last Sowing</i> )
Cress	Beets	Beans
Peas	Onions	Corn
Lettuce	Parsnips	Cucumbers
Carrots	Salsify	Melons
Cabbage	Okra	Pumpkins
Endive	New Zealand Spinach	Squash
Parsley	Leek	
Kale	Chard	
Spinach		
Kohlrabi	( <i>To be started Indoors</i> )	
Radishes, and all other members of "Brassica" or Cabbage family	Tomatoes	
	Egg-plant	
	Peppers	
	Celery	

In the small garden conducted for measured results there is not room for quite a number of these. You may have a sentimental longing for a big pumpkin; but any pumpkin you raise

will cost more by way of space wasted than a dozen pumpkins purchased in the market at Halloween! Of all the "vining" plants mentioned in the third column above, only Cucumbers merit consideration in the home garden, because they are easily confined to small space.

A dozen Pepper plants will yield 75 fruits, while twelve Egg-plants will carry 36 perfect "eggs." Okra, Leeks, and Salsify are long-season crops, of little value as food factors, hence of little use for small gardens. We find about a score of vegetables really worthy of cultivation and the accompanying programme is worked out accordingly.

Such suggestions are, of course, subject to wide divergences through personal preferences. In the matter of varieties, however, there is not much room for choice as it is generally necessary to stick to early and extra early kinds. With crops that occupy a row throughout the season there is opportunity for early, midseason, and late kinds. In Tomatoes, for example, grow Globe, or Bonny Best for early; Beauty for midseason; and Stone for main crop. Here follows a selected list of varieties reached by the process of elimination in my own experiences.

## STANDARD VARIETIES THAT HAVE STOOD THE TEST

[NOTE: The time required to come into bearing is shown in the first] figure following the name; the second figure is the duration of the yield]

<b>Beans (Bush)</b> , Bountiful—60 days—2 weeks	<b>Endive</b> , Green Curled—60 days—30 days
Stringless Green Pod—65 days—3 weeks	<b>Kohlrabi</b> , White Vienna—60 days—2 months
Sure Crop Wax—60 days—3 weeks	<b>Lettuce</b> , Wayahead—50 days—2 weeks
Brittle Wax—60 days—2 weeks	Black Seed Simpson—50 days—2 weeks
Fordhook Bush Lima—85 days—8 weeks	California Cream Butter—65 days—2 weeks
<b>Beet</b> , Eclipse—55 days—3 weeks	All Seasons—75 days—3 weeks
Crosby's Egyptian—55 days—2 weeks	Iceberg—85 days—2 weeks
Detroit Dark Red—60 days—3 weeks	Wonderful—90 days—2 weeks
<b>Cabbage</b> , Jersey Wakefield—85 days—4 weeks	Kingsholm Cos—80 days—4 weeks
Copenhagen Market—100 days—4 weeks	<b>Onion</b> , White Portugal—90 days—2 months
<b>Carrot</b> , Paris Forcing—45 days—2 weeks	Yellow Globe Danvers—100 days—4 months
Oxheart—50 days—3 weeks	Southport Red Globe—120 days—6 months
Chantenay—60 days—3 weeks	<b>Peas (Smooth)</b> Market Surprise—50 days—1 week
Danvers—75 days—2 months	(Wrinkled) Little Marvel—55 days—2 weeks
<b>Celery</b> , Golden Self-Blanching—100 days—8 weeks	Thomas Laxton—60 days—2 weeks
Giant Pascal—120 days—4 months	Potlach—80 days—2 weeks
<b>Corn</b> , Peep O'Day—60 days—1 week	<b>Radishes</b> , Rapid Red—25 days—1 week
Golden Bantam—80 days—2 weeks	Scarlet Globe—30 days—10 days
Howling Mob—90 days—2 weeks	Icicle—40 days—2 weeks
<b>Cucumber</b> , Davis Perfect—60 days—2 months	Cincinnati Market—45 days—3 weeks
	White Stuttgart—60 days—2 months
	Black Spanish—80 to 100 days—all winter

After the variety has stood for the time indicated it had best be pulled up to make room for its successor—the extra yield from retaining it any longer is not a profitable return.

The planter can gain further time (which means crops) by manipulating parts of rows to produce plants for successive crops. For instance, a small seed flat of Cos Lettuce started June 1st, will give plants 3 inches tall by June 15th, when Carrots are harvested. The Bush Beans that follow the wrinkled Peas between June 15th and July 1st may bear so well by September 1st that just a plant here and there might be removed to make room for Chinese Cabbage or Kohlrabi. The working out of such details calls for reflection and foresight, which, after all, mark the difference between garden monotony and gardening as a fascinating art.

## Some General Cultural Principles

SPACE all rows uniformly 2 feet apart at the start; this will permit planting other crops *between* before the original rows are exhausted.



Beans, Corn, and Peas to be sown in drills, 3 to 4 inches deep; all other seeds to be sown about twice their own depth.

A beet "seed" (really a fruit) averaging  $\frac{1}{8}$  inch in diameter is covered  $\frac{1}{4}$  inch and only sufficiently trod over after sowing to assure a uniform stand of seedlings.

A broad rule for all fine-grained vegetable seeds is to cover them just enough to prevent birds or winds from carrying them away.

Brush or other support for Peas and stakes for Tomatoes are essential. Peas seem to thrive best in broad, matted rows. I place the brush first, in straight rows, then open a 4-inch furrow on both sides within 2 inches of the brush and scatter the Peas in these furrows, averaging 1 pint to every 15 foot row. This method has given the biggest yield although the pods are apt to be smaller than in single row culture. Much depends on the fertility of the soil.

For Tomato culture I have firmly settled down to the individual stake method after twenty years' experiments.

	April 15 <sup>th</sup>	June 15 <sup>th</sup>	Aug 15 <sup>th</sup>
Peas		Transformed into Tomato Patch.	
		Rows 3' apart	
Lettuce from plants		6 plants to a row	
		48 plants in all	
Carrots			
Beets	First sowing out June 15 <sup>th</sup>	Beans for May 15 <sup>th</sup>	Lettuce for fall use.
		Out Aug 1 <sup>st</sup>	
Spinach	out June 1 <sup>st</sup>	Alternative - 2 rows for Peppers or Eggplants	
Kohlrabi	out June 15 <sup>th</sup>	First sowing 5 corn	Beans for fall use.
		May 15 <sup>th</sup>	
Radishes	out June 1 <sup>st</sup>	Out Aug 1 <sup>st</sup>	
Parsley		all season	

	April 15 <sup>th</sup>	June 15 <sup>th</sup>	August 1 <sup>st</sup>
Onions	from sets or seeds.		
	(From seeds)		
	an all season crop		
	(Parsnips - an all season crop)		
	alternatives - Celery Plants		
	following a crop of early Radishes or		
	Salsify an all season crop.		
Early Cabbage		Beets for succession	Chinese Cabbage
	plants.	Out Aug 1 <sup>st</sup>	and Endive for fall salads.
	Out July 1 <sup>st</sup>		
Lettuce	second sowing	Crop 5 Corn	Turnips
	April 15 <sup>th</sup>	June 1 <sup>st</sup>	and Kohlrabi for winter storage
Lettuce	Cucumbers	Beets	
	Crisphead or in hills	for winter storage	
	cos from seed, 3' apart.		
	Swiss Chard	All	
	Lucullus	season crop	
	New Zealand Spinach		

CHART FOR THE VEGETABLE GARDEN

This shows the success on plantings for each row of the garden, dividing the season into three periods

Each plant is provided with a 5-foot stake and, about July 1st, is reduced to its three strongest branches which are then tied to the stake. Thereafter all side-shoots or branches and suckers at leaf joints are scrupulously removed once a week so that by the middle of August the plant has reached the top of the stake and it is time to cut off the tip of each branch. Flowers set after August 1st seldom ripen fruit before frost. Handled thus Tomatoes will bear as much as 25 lbs. of fruit per plant.

Give all your plants a chance to breathe, even as seedlings. As soon as big enough to be taken hold of, thin to stand from 2 to 4 inches apart, according to their growth. Rapid Red Radishes making very small tops are satisfied with one inch of space. Most Lettuces, before making heads, require 12 inches or more.

Beans and Corn should be dropped four inches apart in the row. Corn is generally thinned out to stand a foot apart, but Beans will thrive when closer, say at four to five inches. Both do better if hilled.



## PLANTING FACTS FOR READY REFERENCE

—Soil that will grow good potatoes will raise good strawberries.

—Plant Strawberries, for field culture, 1 to 1½ by 3 to 3½ feet apart; for garden culture, 1 to 2 feet apart.

—Plant Raspberries and Blackberries 3 to 5 by 4 to 7 feet apart.

—The bearing life of the Blackberry is estimated at from 6 to 14 years; Currant, 20 years; Gooseberry, 8 to 12 years; Raspberry, 6 to 14 years.

—Mulching the small fruits with hay, straw or leaves, saves a large amount of hard hoeing, holds the moisture and keeps the weeds from growing.

—Plant Currants and Gooseberries 3 to 4 feet apart.

—Plant Grapes 7 to 16 feet in the row, the rows to be 10 to 15 feet apart.

—Grape rows should run north and south. High, stony, well-drained land is best.

—Grape vines must not be pruned during April or May, as the bleeding will cause wasteful and injurious expenditure of sap.

—A liquid fertilizer for potted plants can be made by using one-fifth as much poultry droppings as cow manure. The liquid should be rather thick and the color of strong coffee.

# The Gardens at Glenallen

Home of  
Mr. and Mrs.  
F. F. Prentiss  
Cleveland, Ohio

Photographs by  
Clifford Norton

FEW gardens are so saturated with the spirit of the American landscape or fit more completely into it with, of course, the exception of the Japanese feature which is distinctly oriental in character and for that reason has been placed in a secluded spot to avoid incongruity. Glenallen combines in unusually happy fashion the freedom of a country estate with the convenience of a suburb. The plan for this fifty acres was originally designed ten years ago by Mr. Warren H. Manning of Boston, subsequent developments being made by Mr. M. H. Horvath of Cleveland. All the construction work from the landscape architects' studies have been carried out by Mr. Robert P. Brydon, superintendent for Mr. and Mrs. Prentiss, who continues in charge



## IN THE WOODLAND WILD GARDEN

Prairie Roses (*Rosa setigera*) beautifully fringe the margin with color, and hardy Water-lilies light up the surface of the still pool. Birds love this quiet spot and fill it with their singing



## HERE ARE ALL SORTS OF THINGS TO FILL THE HOUSE WITH BLOOM

Its very simplicity gives this formal garden a quite distinctive charm—Annuals flowing in bands of color down the center beds bordered about by Perennials and backed by a hedge of Arborvitae



EARLY SPRING WILD GARDEN

Where ecstatic little Trilliums run fleet-footedly through the fresh greenery, followed later by the bright bloom of collected Azaleas and Rhododendrons



STEPPING FROM THE  
JAPANESE GARDEN

Scotch Pinks and Stonecrop enliven the rockwork which links lawn and Japanese garden



# CUT FLOWERS FOR EVERY DAY

CARL STANTON

Sprays and Bouquets as Accents in the Indoor Decorative Color Scheme—Planning the Garden to Supply Variety the Season Through



**S**O TO arrange flowers that they really emphasize or increase the beauty of a room calls for considerable artistic skill. A great many people make an other-

wise livable room positively jarring by the misuse of flowers; some, having an idea of color and a little common-sense, do no actual harm to a room, but at the same time add nothing much; still others, exercising their knowledge of color and decorative values, make the most uninteresting interior charming by their arrangement of bouquets. Different interiors call for different kinds of cut flowers; dark, formal rooms usually requiring upright, stately blooms of a not too insistent hue, while delicate tints of pink or blue need a bright, sunny room to show to advantage. Curiously enough, too, red flowers tend to

diminish size whereas blue ones set at the further side of a small room seem literally to increase its area.

## Maxims to Remember

**C**HOOSE flowers for a room with reference to its color scheme; for example, do not use blue flowers in a "red room," or on a red table cover.

Select your receptacle to conform with the flower; tall vases for tall flowers; shallow vases and bowls for the short-stemmers. Have them large enough to hold plenty of water, and also of a shape that will not appear top-heavy when filled.

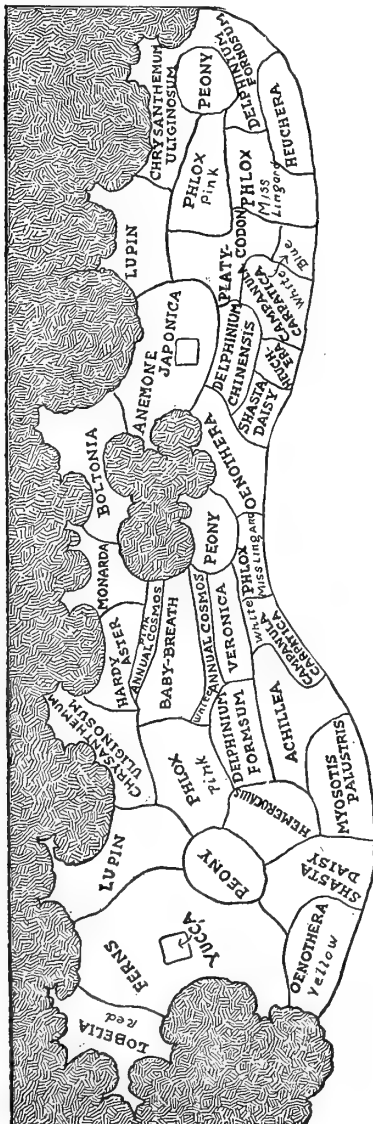
Arrange the flowers at different heights and not as a flat-topped bunch.

A single flower often looks far more beautiful than a jammed-up cluster.

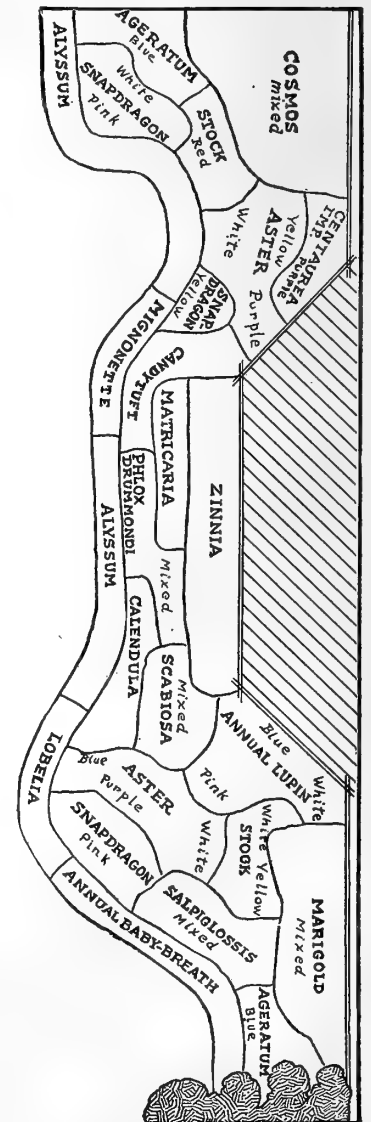
## PROVEN PLANTS FOR CUT FLOWERS AND DECORATION

NAME	COLORS	SEASON OF BLOOM	COLOR HARMONIES, USES AND ODD HINTS
<i>Annuals</i>			
Ageratum	Blue, white	All summer	With pink, blue, yellow; in bowls.
Arctotis grandis	White	July; August	With Poppies; effective used alone.
Aster	Various	All summer	With blue, pink; loose sprays.
Calendula	Yellow	" "	With a touch of blue or purple.
Candytuft	White, blue, purple	" "	Generally decorative (succession sowings).
Carnations	Pink, white	" "	With Ferns; loosely.
Celosia (in variety)	Various	" "	Best alone; vivid effect.
Centaurea	"	" "	With light, slender flowers.
Clarkia	"	" "	Alone; very brilliant.
Cosmos	Pink, white	" "	Loosely; with light, graceful flowers.
Gypsophila	White	" "	For airy effect.
Lobelia	Various	" "	Fine for "filling"; in bowls.
Lupin	Rose, blue, white	" "	Lasting quality; loosely.
Marigold (Tagetes)	Yellow, orange	" "	With touch of blue; keeps well.
Mignonette	Reddish	" "	Many uses, fragrant; succession sowings.
Nasturtium	Red to yellow	" "	Best alone; bright.
Nicotiana	Various	" "	Good for fragrance.
Petunia	Various	" "	Pinks and whites especially desirable.
Phlox	"	" "	Pretty shades for special effects.
Poppy	"	" "	In small, loose clusters.
Salpiglossis	"	" "	Best used alone.
Scabiosa	"	" "	Fragrant; variety maxima plena best.
Schizanthus	"	" "	Showy; fine for corners.
Snapdragon	"	" "	With blue, pink; loose sprays.
Stock	"	" "	Pleasant odor; good for bedrooms.
Sweet Alyssum	White, purple	Early	With low flowers; mass in bowls.
Sweet-pea	Various	Early	Among the best for centrepieces.
Zinnia	"	All	Gay coloring; for centrepieces.
Zinnia	"	"	Best used alone.
<i>Perennials</i>			
Achillea	White	All summer	Poor foliage, but fine flowers.
Aconitum	Blue	"	Good blue when blues are scarce.
Alyssum saxatile	Yellow	May	Best early yellow.
Anchusa italica	Blue	July-Aug.	With yellows, russet etc.; delightful in combination with Iris.
Anemone laponica	White, pink	Sept.-Oct.	Charming little flowers.
Arabis albida	White	May	With other early flowers of any color; in low bowls.
Asparagus Fern	Blue, purple	All summer	With the finer flowers.
Aster (shrubby)	White	July on	For taller arrangements.
Baby-breath	White	Early	Fine for mixing, but short seasoned.
Beebalm	Red	Summer	Pleasant odor; odd shaped blooms.
Boltonia	Pink-lavender	Aug.-Sept.	With Asters.
Campanula (in variety)	Various	All summer	Best used alone; large vases.
Canna	Red, yellow	"	Coarse; for strong featering.
Columbine	Various	May-Aug.	Use in loose clusters; delicate.
Coreopsis	Yellow	All summer	With pink and blue; a clear yellow.
Dahlia	Various	"	Best used alone.
Evening Primrose	Yellow	"	Good for strong effect.
Forget-me-not	Blue	"	Ideal small blue flower for bowls.
Foxglove	Various	Early	White is best, but others are good.
Funkia	White, blue	Late	Lily-like flowers for bud-vases.
Gaillardia	Red, yellow	All	Extremely bright.
Gladiolus	Various	Early	Attractive shades; many uses.
Helenium autumnale	Yellow	" Fall	Pleasing yellow for tall effects.
Hemerocallis	"	June-July	Very fine, lasting for days.
Heuchera	Pink	"	With blues and yellows.
Hollyhock	Various	July-Aug.	For tall effects, corners, etc.
Hydrangea	Pink, white, blue	All summer	Best of the larger flowers.
Iris	Various	Early	Exceedingly decorative; best alone.
Larkspur	Blues	All	"
Lily-of-the-valley	White	Early spring	With Forget-me-nots and similar small flowers; for bedrooms.
Lupin	Various	All summer	Large spikes very charming for large bouquets.
Maidenhair Fern	"	"	With medium sized flowers.
Pansy	"	"	Great diversity of hues; blooms all season.
Peony	Various	All summer	Mammoth flowers of delicate coloring.
Phlox	Blue, white	July-Sept.	Miss Lingard best; avoid crimson.
Platycodon	Various	"	Delightful, bell-shaped flowers.
Sempervivum	White	"	Dry for use all winter.
Shasta Daisy	Blue, white	All summer	Clear white, daisy-shaped flower.
Stokesia	Yellow	July-Sept.	Pleasing if well grown.
Sunflower	Yellow	Early fall	Pleasing yellow for tall effects.
Sweet William	Various	" summer	Effective when used alone; good shades.
Tritoma	Red, yellow	All summer	To brighten dark corners.
Tuberose	White	Late	Pleasant odor; very dainty.
Water-lily	Various	All	For sunny windows.

20 FT. BORDER OF PERENNIALS FOR CUT FLOWERS



20 FT. BORDER OF ANNUALS FOR CUT FLOWERS





*Arrangement by Cadieux & Co.  
Mattie Edwards Hewitt, Photo.*

#### SNAPDRAGON AND FORSYTHIA

The iridescent bronze-pink of Snapdragons and the clear gold of Forsythia blend exquisitely, suggesting the lightsome joy of earliest summer. Growing flowers for indoor use is one of many fascinating aspects of gardening and furnishes the housewife appreciative of color with a flexible and responsive medium in which to execute her fancies

Keep the taller flowers nearer the floor or at least below the level of the eye; few flowers look well when above eye-level.

Blooms of distinctive form should be used by themselves in small numbers so that the beauty of structure may be seen.

Flowers of delicate coloring may be used either singly or in mass. There is less danger of light shades clashing than of strong colors.

Delphiniums combined with a few Coreopsis make a delightful bouquet; they are also very effective in combination with Phlox Miss Lingard, with any light pink Phlox in fact.

For the ivory-finished dressing table, try a few yellow Stocks in a small vase.

A single Peony or a Cactus Dahlia cut off close to the flower may be attractively used as a centre-piece for the dining table by floating in a bowl, Pond-lily fashion.

If one has a place to grow Ferns, they are well adapted for many decorative purposes and are particularly good when used with the smaller flowers.

Put plenty of green in your bouquets, preferably the natural foliage; but if this is unattainable, secure something that resembles it and as nearly as possible of the same shade: heavy leaves for large flowers; fine leaves for small flowers; and straight, spear leaves for the bulb and Lily family.

Mignonette judiciously mixed in a scentless bouquet adds greenery and imparts a delightful odor.

To keep your flowers fresh give them clean, slightly salted water, and cut off their stems a little each day.

**What to Avoid**

**D**O NOT mix the finer flowers with the coarser, except in a few cases. For instance, Baby-breath goes well with almost anything, whereas it would never do to use Sweet-peas with Sunflowers.

This applies also to colors. It is not advisable to attempt to mingle the delicately tinted flowers with those strongly colored, because the latter kill the effect of the former.

Use red very sparingly; it is sometimes handsome if displayed by itself in surroundings of a neutral tone to offset its emphatic brilliance.

Avoid using flowers with strong fragrance in the dining- and bedrooms. For the bedrooms light colors are best. Incidentally, the current conviction that harmful gas (carbon-dioxide) is thrown off by flowers at night frequently prevents people from enhancing the attractiveness of their guest chambers. To me it seems absurd to believe that a handful of flowers can throw out sufficient poisonous gas to hurt anybody, especially as most people keep the windows open all day and all night during the summer.

**A Safe Guide to Follow**

**H**ERE is a simple device which enables one to avoid at least any glaring discordancies and to achieve some fairly happy results. Of the six primary colors as arranged on the accompanying chart, any adjoining two (for example red and orange or orange and yellow); or any exactly opposite each other (as blue and orange or purple and yellow, etc.) may be combined with good effect. However, when using opposites it is better to let one predominate than to use both colors in equal quantity. In these matters there is no more reliable guide than nature and a thoughtful study of her methods is one of the first essentials. Her palette has infinite variety—we find a golden-eyed purple Violet, a flame-petalled Nasturtium with a throat of cool, lemon yellow—try these combinations or any others more to your fancy; following her, you cannot go wrong; as a mixer and blender of color she remains unsurpassed.

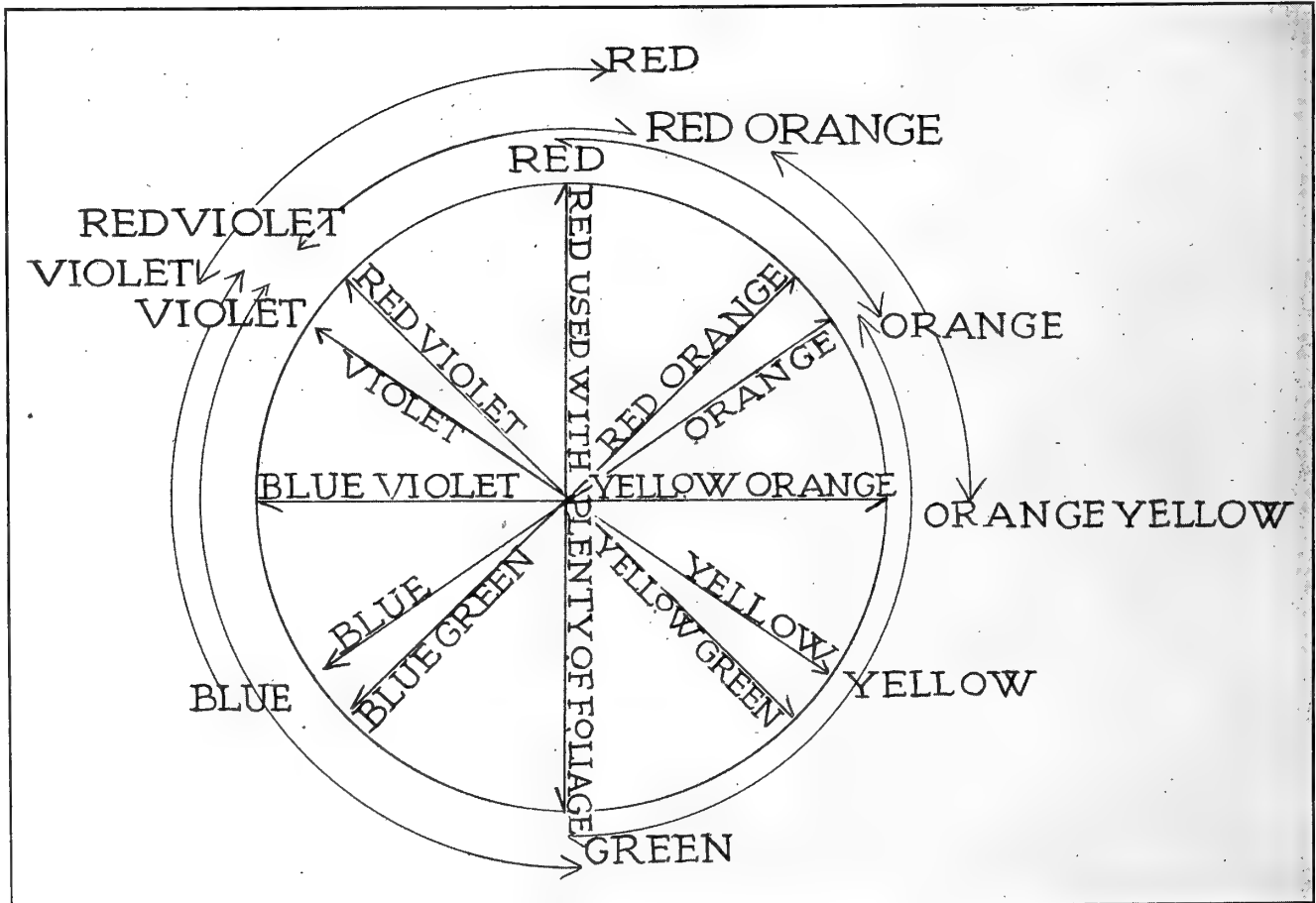


DIAGRAM SHOWING STANDARD COLORS, AND METHODS OF COMBINING THEM TO OBTAIN BEST RESULTS WITH CUT FLOWERS

Adjacent colors may be used (red and orange, or orange and yellow, etc.) or opposite colors, such as blue and orange, or purple and yellow. This rule applies mostly to the stronger colors, as it is possible to use much more latitude in mixing flowers of more delicate tints



# WALKS AND TALKS AT BREEZE HILL—VI

Wherein is Reflective, Critical, Philosophical, and Friendly Comment About Plants and Their Behavior, Inspired by Personal Experiences in a Garden Made for Pleasure

J. HORACE McFARLAND

## SPRING PLANTING FOR COLOR IN WINTER

**T**S THE garden dead in winter? Not mine; it is full of life, and full of color—color that compares with summer somewhat as a Mozart string quartette compares with a Strauss waltz. Both are enjoyable, but this winter color-music is more intellectual than it is emotional.

Two rheumatic knees and a hard-hearted doctor have been interfering with my daily garden journey, but this bright mid-January Sunday I just had to take a chance on both, because the first clean snow-blanket is reflecting all the lovely color in a way not possible so long as the browning grass and the soil absorb the light. To-day the garden glows again in warmth and winter brightness. There is no chill in the color, whatever the thermometer may say.

### Thunberg's Scarlet-Jeweled Barberry

**I**T IS rather a tradition to depend on berries for winter color, but where birds own the place, and a garden-loving human is a mere incidental owner, the berries soon perform their food function and are not a color factor! The Thunberg Barberry, of course, still holds its scarlet sprinkle, because the birds won't touch it while other food can be had, and the Breeze Hill hedge consequently yet carries a Christmas brilliance.

That same Barberry, by the way, has and does disappoint me by its unorthodox vigor. It was planted ten years ago on a three-foot "maturity" basis, but much of it now touches six feet in height, and more than two yards in depth. I have been too kind to it, and it is only by annual trenching and root-pruning inside that I can keep it from wholly possessing the good borders it backs. I suspect my neighbor, who planted smaller stock a year later, did better than he intended, though he now seems to envy the year-round attractiveness of my hedge. I have found it possible to get the height down about a foot, without the hateful formality resulting from shearing, by cutting out the high places well down into the plant, and so not interfering with the graceful informality which is a special merit of this fine thing.

### Evergreens That Endure

**B**UT that winter color which started me to gossip begins, naturally, with the evergreens. The Norway Spruces I wish I didn't have at Breeze Hill—they are poor things at their forty-five years, just when they should be taking on an appearance of stability—are dull brown-green, and the least alive-looking of all the conifers. The Hemlocks are much brighter and the few cherished White Pines are cheerful.



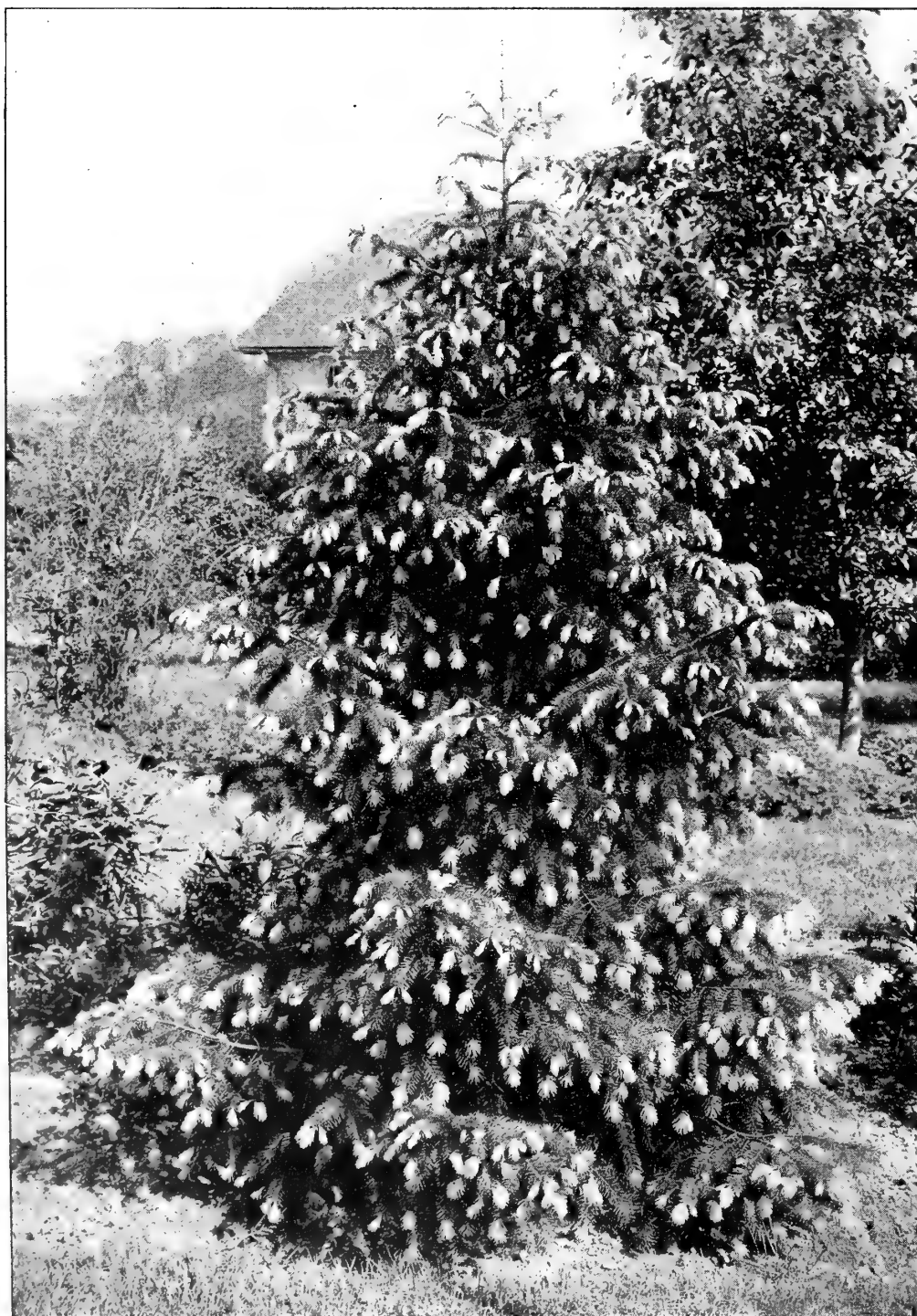
NO CHILL IN THIS WINTER-COLOR PICTURE

The hanging snow reveals new charms and interests in the varied patterns of the bare branches foiled by the heavier masses supported by the Evergreens

The American Arborvitae of the place, really its main ever-green feature because they were so liberally planted as inner hedges by my predecessor, and so cruelly beheaded after they had grown up six or eight feet—as was told during an earlier walk—are a warm brown-green now. Each heavy snow bows them nearly to the ground, and I enjoy going about to gently relieve them of their fleecy load.

The dark and rich green of the Japanese Yew, unaffected by any winter, now shows at its best. This *Taxus* is a prize, and I'm exceedingly glad my specimens came to me before the Federal Horticultural Board took charge of all American garden introductions from abroad, and announced its disdain for the "mere adornment of a private estate," as one of their recent publications phrases it. I wonder how long Uncle Sam will stand for this bug-on-the-brain garden check!

The Japanese Fir (hitherto familiar as *Abies brachyphylla*) is another lovely thing in the snow. Its lustrous green leaves, silvery below, are glistening in the winter sun, just as if they belonged here, instead of in Japan, where the F. H. B. would have kept them. We are now to call it *Abies homolepis*, I believe.



Our White Fir (*Abies concolor*), of Colorado is nearly as beautiful, though the green of it is just a little bleached in winter. Near it is another native, *Abies Fraseri*, said to be quite temporary, but assuredly now quite beautiful. It looks like a super-balsam.

My favorites among the conifers of Breeze Hill are two lusty young specimens of the Douglas Spruce (*Pseudotsuga taxifolia*) of western North America. One is the conventional color of dark green, and the other has the bluish cast which makes it far finer than any form of the Colorado Blue Spruce and, of course, with its own noble and stately aspect. Just why anyone would plant a Colorado Blue or a Norway Spruce when he could get this fast-growing and always beautiful Douglas Spruce, I don't know. Does anybody?

I find to-day that the Carolina Hemlock is a little brighter in its green than our northern native, and the Cedars, which belong hereabouts in Pennsylvania, are good in color. *Juniperus Pfitzeri* disappoints me a little by its winter dullness—I like it well in summer, however.

These winter days the Rhododendrons are particularly enjoyable, not only because of the splendid deep green their leaves hold, but because those same leaves are veritable natural thermometers. I hardly need look at Mr. Fahrenheit's arrangement of mercury and glass in the morning after I have cast my eye toward the big Rhododendrons of Lovers' Lane. When the leaves are curled down around their stems, I know the frost is fierce; but whatever message the wind whistles does not deceive me when I see these leaves at an angle of forty-five degrees or higher. On the coldest morning yet—6° above zero—I found the smaller leaves of the beautiful Carolina Rhododendron curled into little tubes, and looking as if they had shuddered themselves to a protective position, but by noon, when the sun had warmed the air, they were up and flat, just as per as ever.

My cherished little plants of the rare Box-huckleberry (*Gaylussacia brachycera*) are nearly covered with snow, but the twigs above the whiteness show the fine bronzy green that will make this shade-loving evergreen a favorite where it has been successfully propagated and made available. It is a sour-soil plant and must have leaf-mold to live in; but I have a suspicion that some one is coming along shortly with a tannic acid soil prescription that will make the growing of all these woods-mold plants easier. [Dr. E. T. Wherry, in his studies of soil acidity, discovered that watering with water in which spruce-bark chips have been soaked will bring about a sufficiently acid condition in any ordinary soil. — Ed.]

#### Cheerful Colors in Shrub Shoots

THE bare stems of the shrubs furnish most of the refined winter color. The Forsythia twigs are a warm yellowish tone that is bright and cheerful, and

#### NATIVE EVERGREEN FOR THE GARDEN

Is there anything better than the Douglas Spruce? Varying from gray to blue-green, hardy and adaptable, it assumes added picturesqueness when the young growth pushes out in May



THE GLORY OF THE EVERGREENS

Arthur G. Eldredge, Photo.

Not alone for their winter persistent foliage which is the charm of the conifers, but also for the summer bloom of the many broad-leaved kinds are they welcome in our plantings. Spruce and Cypress to the rear, Native Laurel (Kalmia) in bloom in front



a fair forecast of what they will do to the spring garden in a dozen weeks. Bright in another way are the shaggy stems of the Oak-leaved Hydrangea (*Hydrangea quercifolia*), one of the finest natives, for they are a lively brown. Not far away *H. radiata*—not the *H. cinerea* which some folks confuse with it—shows its reddish brown twigs in sharp contrast with the beautiful silver gray tones of the heavy clumps of *H. arborescens grandiflora* that are close by. These last two Hydrangeas have foliage—in foliage time—apparently identical until a breeze turns up the white under-surface of the *radiata* sort, which I grow for just that same breeze effect. *H. paniculata*—not the *grandiflora* variety which I won't harbor here but the single type—shows dull gray twigs of no winter value, and the newer Asiatic sorts are no more notable.

Another silver gray arrangement is that of the Dwarf Horsechestnut (*Aesculus parviflora*), which is in association with dark gray Dogwoods and the red-brown stems of the Japanese Cherries, all showing to color advantage against great Arborvitae.

One of my pet Wilson introductions, *Lonicera Korolkowii floribunda*, fairly glistens in the winter sun, showing also a warm light gray. It is a chameleon shrub, and of a charming habit in its down-drooping slender branchlets, for when its buds swell and break in spring, the young growth will be dull red and

the beautiful leaves a distinct blue-green, to say nothing of a veritable cloud of pink and white blossoms in due course.

Most of the newer Mock-oranges show a warm brown twig color that varies agreeably. A plant of the rare *Viburnum theiferum*, from which the birds have long since removed its brilliant scarlet fruits, shows attractive deep pink buds, all ready for the warm days of March.

But I must not run into a catalogue of winter colors, or rather tones. I only suggest that any garden lover see them and appreciate their beauty, and their predominant warmth—for even the shadows of the trees on the snow in January days are warm in hue, with more purple than one would believe whose attention had not yet been drawn to the way in which nature meets the chill of winter. All the tones are hinting of summer ahead, whether it be the red browns of the Grape vines, the Persimmons yet hanging for the early robins, or the varying tones of the tree trunks. Even the great Sycamore that dominates Breeze Hill suggests the hues that cheer rather than those that chill.

When the snow covers the ground, I must raise my eyes to the shrubs and trees, and so these winter garden walks are full of color pleasure, as well as full of opportunity for planning betterments in the garden framework. The only bad day in a garden is the day you can't get into it!

## PLANTING THE SHRUBBERY BORDER FOR FOUR-SEASON EFFECT

LESLIE HUDSON



IN MAKING a shrubbery border or even in planting a few shrubs in the spring, it would be well to look at our gardens with all four seasons in mind.

Look at the general nurseryman's catalogue—pages upon pages usually arranged alphabetically with only a few lists classified as to possible uses. The merits and attractive flowering qualities of a handful of popular shrubs, the Spiraeas, Deutzias, Forsythias, Weigelas planted primarily for their gift of bloom in early spring are easy enough to handle; everybody knows them. In consequence, the attitude of the average planter towards shrubs is far too often limited by consideration merely of their flowering season and the color of their bloom.

But there are other equally important considerations to be borne in mind, and especially is this worth while where the plot to be planted is of not very large dimensions. There are so many shrubs that have some especial seasonal interest, such as fruit in fall, or colored foliage at a particular period, even the bark in winter is sometimes an effective attribute, and the suitable blending of all these qualities obviously can do much to enhance the interest of the entire garden and to make its appeal continuous.

Naturally, the mind runs to evergreens for main dependence for winter cheer. That is the stereotyped expression, but all evergreens are not necessarily cheerful in winter, particularly the *Rhododendron* which in extremely cold weather seems to shiver exceedingly. Frequently a brighter and more persistent green may be had from the barks of a few deciduous shrubs, as the *Kerria*, for instance, with its vivid green shoots that give brilliancy even when quite bare of leaves. Against this for color contrast may be put the *Red Osier Dogwood* which becomes ever brighter as the winter approaches to spring. Some of the *Willows* lend a pleasant green and yellow and if gray and silvery tones are wanted, *Goumi*, *Hippophae*, and the *Smoke Tree* serve.

If space permits, considerable emphasis and sparkle can be lent by introducing a solitary tree or two, such as the *White Birch* with its bark of silver. The *Oriental Plane* makes an

attractive pattern in gray, as also the *White Poplar*. For contrast with these the *Chinese Cork Tree* (*Phellodendron amurense*) with its glistening black will serve as an accent; and *P. villosa* glows in fall with hues that vie with the *Sugar Maple* at its very best.

Much stress has been placed at one time or another upon the values of the berried shrubs for fall color. As a matter of fact, the fall berried color is largely outclassed by the fall foliage and by the fruits that persist into winter. These merit more attention than commonly given them. Not in any way to be despised from this point of view is *Regel's Privet*, graceful in habit, with tasseled white flowers in spring, it carries through the winter a wonderful profusion of ashen black berries. Not strikingly conspicuous, it is true, but effective in varying moods of weather when water globules drip from each and catch the light of the sun. The brilliant scarlet of the *Japan* and other *Barberries* scarcely needs mention; it has been so much appreciated that there is perhaps a little danger of the *Barberries* being over-planted though their color is welcome and, used in conjunction with some others of duller character, achieves some worth while effects. And in such combinations, the *Snowberry* and *Coralberry*, although not persisting through to spring, are not without charm with their white and red fruits.

Where it will grow, the *Evergreen Thorn* cannot be ignored with its myriads of orange-red miniature apples which persist up to Thanksgiving. They might adhere longer if they were not so palatable to the birds! The *Laland's* variety is the better one for the gardener, seemingly more hardy and the brighter color. A planting of this in combination with the *Snowberry* made a delightful picture until the *Thorn* succumbed to scale; not that it is more scale infested than other members of the *Rose* or *Pome* family and the winter spraying of shrubbery, which the cultivation of some of these may compel, is, perhaps, after all not a bad necessity. Winter spraying may prove preventive of more troubles than we wot!



Mary H. Northend, Photo.

## DIVERSIFIED SHRUBBERY PLANTING, HOME OF MRS. J. A. DOWNS, WINCHESTER, MASS.

Strongly colored foliage as that of the Purple Filbert and the Purple Beech, the Golden Mockorange, and the Golden Privet offer delightful possibilities to the planter, but such strikingly divergent tones need be used with great caution. One specimen to emphasize, to lighten, or to accent a given point may serve well, whereas a repetition is another matter.

For the intimate quarters around the house as giving a welcome to the guest, the use of evergreen plants of low habit has an apt suggestion, the Mountain Spurge (*Pachysandra*) for carpet is brighter and more all-dependable than the time-honored Myrtle (*Vinca*). Dwarf forms of the *Retinispora*, especially forms of *obtusata*, offer an abundant choice. Against the *Retinisporas* it is often claimed that they have a tendency to go brown in spots; and it is true that they show the browning in the open, taller-growing forms, but the little dwarfs are so compact and such dense masses of greenery that the eye cannot penetrate to the browning of departing foliage in the interior, so it matters not, and they may be planted with perfect confidence. They take years to attain any real size and even then are never big. *Retinispora obtusata pygmaea nana* will barely attain a foot after several years of growth and, amusingly enough, the plant is dwarf in proportion to the length of its name and working backward the several varieties become taller as you cut off the terms.

Where their growth can be admitted, the Mugho Pine and the Pfitzer Juniper hold unequal sway, and these are among the few evergreens that can be planted reasonably close to a house in confidence that the house will not disappear behind a barrier of forest before many years roll by.

A list of plants with special seasonal attractions follows (all have been proven reliable at St. Louis Botanical Garden):

TREES: English Cork Maple (*Acer campestre*); *fol.* yellow. Amur

Maple (*Acer Ginnala*); *fol.* scarlet. Norway Maple (*Acer platanoides*); *fol.* pale yellow. Schwedler's Maple (*Acer platanoides Schwedleri*); *fol.* purplish. Sycamore Maple (*Acer Pseudoplatanus*); *fol.* yellow. Tartar Maple (*Acer tataricum*); *fol.* reddish. Speckled Maple (*Acer incana*); *fol.* green; *fr.* black. White Birch (*Betula populifolia*); *bark* white. *Evonymus Bungeana*; *fr.* orange and scarlet. *Evonymus europaea*; *fr.* orange and scarlet. Purple Beech (*Fagus sylvatica purpurea*); *fol.* purple all season. Ash (European) (*Fraxinus excelsior*); *fol.* bronze. Ginkgo biloba; *fol.* yellow. Japanese Walnut (*Juglans Sieboldiana*); *fol.* yellow. Chinese Cork (*Phellodendron amurense*); *fol.* yellow; *bark* black. Plane (*Platanus orientalis*); *bark* gray. White Poplar (*Populus alba*); *fol.* grayish; *bark* gray. Pussy Willow (*Salix caprea*); *fol.* grayish; *fr.* silvery gray; *bark* gray. Willow (*Salix*); *fol.* bright green.

SHRUBS: Hollyleaf Barberry (*Berberis ilicifolia*); *fol.* bronze; *fr.* bright red. Thunberg's Barberry (*Berberis Thunbergi*); *fol.* scarlet and yellow; *fr.* bright red. Purple Barberry (*Berberis vulgaris purpurea*); *fol.* purple; *fr.* red. Red Osier Dogwood (*Cornus alba*); *bark* red. Red-branched Dogwood (*Cornus sanguinea*); *bark* dull red. Purple Hazel (*Corylus Avellana atropurpurea*); *fol.* purple all season. *Cotoneaster acuminata*; *fr.* red-purple. *Cotoneaster multiflora*; *fr.* scarlet. English Hawthorn (*Crataegus oxycantha*); *fol.* reddish; *fr.* red. *Elaeagnus longipes*; *fol.* silvery all season; *fr.* red; *bark* silvery. Oleaster (*Elaeagnus umbellata*); *fol.* scarlet all season; *fr.* red. Strawberry Bush (*Evonymus alata*); *fol.* pinkish-red; *fr.* red and orange. Forsythia suspensa; *fol.* purple; *bark* bright green. Sea Buckthorn *fol.* silvery; *fr.* red; *bark* silvery. *Kerria japonica*; *bark* bright green. Privet (*Ligustrum* sp.); *fol.* glossy green; *fr.* black. Buckthorn (*Rhamnus cathartica*); *bark* black. Smoke Tree (*Rhus cotinus*); *bark* grayish. European Elder (*Sambucus niger*); *fol.* yellow. *Securinega ramifolia*; *fol.* yellow; *fr.* green; *bark* green. Bladder Nut (*Staphylea colchica*); *bark* white. *Viburnum* (Carle's) (*Viburnum Carlesii*); *fol.* reddish. *Viburnum Lantana*; *fol.* reddish; *fr.* green red. *Viburnum Sieboldi*; *fol.* reddish; *fr.* bright red.



BLOOM EVERYWHERE IN MISS KEELER'S WALL GARDEN ON JUNE FIRST

Five-foot Dalmatian Iris crowns the apex; just below are Gypsophila, Cerasium, and *Statice latifolia*; white Columbine (left) is also already in flower

## FLOWERS IN A CRANNIED WALL

LUCY ELLIOT KEELER

Where Five Score Plants and Plantlets Cosily Rub Elbows, Clothing Bare Rock with Scented Glory

**A**FIFTY-FOOT grass terrace, connecting two levels of the lawn, a steep terrace, hard to mow, easily burnt by summer suns and easily injured in winter by exploring little boys with sleds! Some fifteen years ago an old family house was moved off and, being a bit sentimental about the foundation stones, I began building them into a loose wall, urged thereto by pictures in my English periodical, William Robinson's *The Garden*. A length of about twelve feet was laid up experimentally at first, this being extended annually as I got stones and plants and experience. The seams of the additions prove some of the prettiest bits of the wall. One forms a little fern gully, another an herb patch, and in still a third, where granite boulders took the place of limestone chunks, grow some plants which merely die on the hotter stone. Furthermore, since the highest parts of the terrace are shaded by trees, the middle section partially so, and the lower is sun baked, any plant can be lodged to its private taste.

No "landscape architect" did the job, but my own hands, aided by stronger ones of a day laborer. Some six inches of soil were dug out along the base of the terrace, and the largest, flattest stones placed there, tipping slightly inward so that rain falling on them would run back into the bank. Good soil from the compost pile was thrown over and behind the stones and rammed into the cracks. Plants I thought suitable were then brought from other parts of the garden, arranged at the very face of the rock, roots carefully spread out and back, several more inches of earth thrown over, and a second strata of rocks superadded, their noses retreating an inch or two behind the first row. This process was repeated till the desired height was reached, by which time a strip of four feet was added to the upper yard. Some large rough stones were embedded here, placed to afford shade and pockets, several bushels of rough gravel were strewed on the top soil, and the planting finished. This work was done in late September, when the ground was still warm, and the plants went



NEAR THE TOP OF THE WALL

A fine bush of *Santolina* backed by *Sedum spectabile* (right) with *Sedum acre* spreading its lusty growth over the joints below





# MAKING A LAWN THAT WILL LAST

JOHN COLLINS CAMPBELL  
Landscape Architect

## STAGE II. SEEDING, AND UPKEEP IN USE

**A**NY time when there is sufficient moisture in the soil to support the young plant on germination is the time to sow grass seed. Generally this condition exists in spring and in fall, but often August offers opportunity for sowing and, if subsequent weather conditions are good, summer is as practical a time as any other. But most people will prefer spring seeding anyhow.

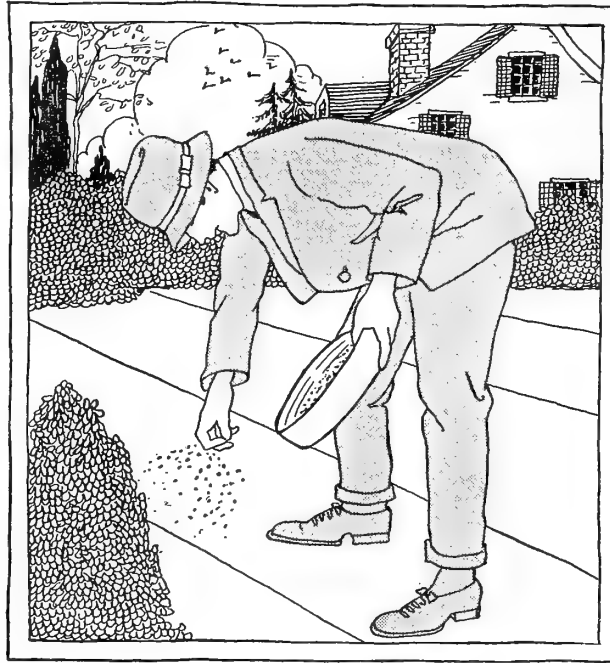
**W**HEN buying grass seed specify *fancy re-cleaned* seed and weed troubles will be greatly lessened. Fancy re-cleaned seed costs slightly more than the ordinary grade, but the results secured will more than repay the extra initial cost and you are getting seed, not dirt or chaff. A good practical method for sowing is as follows: divide the ground into strips of a convenient width, say about five feet, with pegs and string; divide the quantity of seed into halves and divide each half into as many equal portions as there are strips, to insure an even distribution. Sow by hand with the back bent and the hand close to the ground; spread as evenly as possible over the surface. Now take up the strings and pegs and divide the ground in like manner at right angles to the former divisions and repeat the seeding process with the remaining half of the seed.

Cover to a depth of about  $\frac{1}{4}$  in. by raking the surface lightly in two directions, care being taken not to bury the seed too deeply. Then roll and cross-roll with a roller of not less than three hundred pounds weight. Choose a very quiet, dry day for this; if possible a day before wet weather is expected.

The amount of seed required for small places is about 9 lbs. to  $\frac{1}{8}$  acre or about  $\frac{1}{2}$  lb. to the square rod of an approved mixture, such as the following (20 lbs. is called a bushel):

20 lbs. Kentucky Blue Grass	} <i>Spring Sowing</i>
20 lbs. Rhode Island Bent	
20 lbs. Red Top	} <i>Autumn Sowing</i>
10 lbs. White Clover	

70 lbs. (nominally  $3\frac{1}{2}$  bushels) to the acre.



SOWING THE LAWN

Sow the seed by hand with the back bent and the hand containing seed close to the ground; spread seed as evenly as possible over the surface. Large areas may be divided into sections as shown by the transverse lines

**O**NCE a lawn has been built, poor drainage or inadequate soil cannot be successfully remedied without tearing up the whole area and rebuilding it; therefore it is sound economy to make a proper foundation (as described in the January GARDEN MAGAZINE). Many lawns built at a cost of a few hundred dollars have cost many times that amount in up-keep in a few years. Stinginess in construction is not economy. If the proper amount of plant food is incorporated in the topsoil before the turf is established, the up-keep is made more simple and much cheaper.

### After the Grass Is Up

**I**N THE absence of rain immediately after seeding and rolling, a light gentle sprinkling is very beneficial. When established, the lawn should receive a very thorough wetting and it will not then be necessary to water again for a week or ten days. Too frequent

waterings have a tendency to weaken the drouth-resisting qualities of the lawn so that if subjected to a period of dry weather disastrous results are apt to follow.

Do not cut young grass too early. If sown in the fall it is better not to cut until the following spring, and then not until it has attained a height of 3 to 4 inches. By preference make the first cutting with a scythe as it does not pull the roots. Successive cuttings should not be too frequent—about once every ten days on a new lawn; and leave the clippings on the lawn unless the growth is excessive.

Rolling the lawn is very beneficial. In the early spring when the moisture is still in the ground this treatment presses the crowns of the grass plants firmly into the soil where they can grow to the best advantage and at the same time levels the bumps and hollows caused by the frost of the past winter.

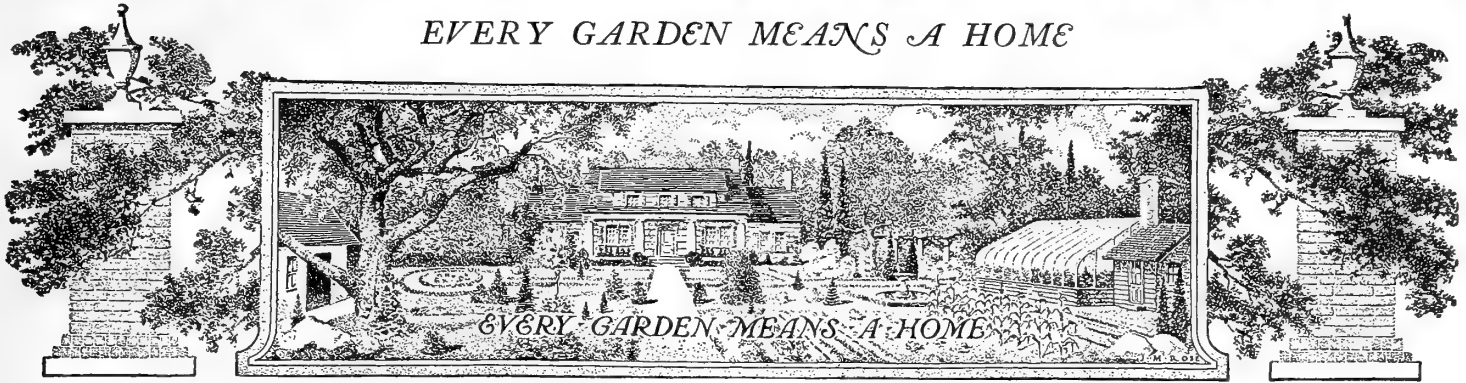
If the lawn is made with fancy re-cleaned seed and sufficiently well rotted manure, serious weed trouble is not likely to ensue. Should any weeds appear, however, dig these up by hand and rake over the bare places, fertilize, and reseed.

EDITORS' NOTE: The preceding article, Stage I., dealing with soil preparation, grading, and fertilizing appeared in the January number



# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



## AN ISSUE IN ETHICS

**I**T IS a pity that issues should elbow their way into the garden, rending its presumptive peace; we say presumptive because every true gardener knows it actually as a place of creative struggle crowned with the tingling joy of achievement, though popular fancy persistently pictures it as steeped in a sort of radiant, slumberous, and permanent quiescence.

A perturbed query, recently arrived, has set us wondering how gardeners in general solve the problem in question and how visitors to gardens really feel about carrying away with them part of the beauty, possibly at the expense of the portion left behind. Our questioner writes:

Though a flower garden is the most delightful place in the world, still there will come little perplexing things to mar its pleasure. My garden is small, one of perennials arranged for continuous blooming, and little picture effects from spring until the autumn. It has also been my pleasure to welcome many visitors and, between my desire to keep my floral pictures perfect and that stern sense of duty toward the visiting ones, I have found a problem. Shall I cut and give to those who come to me and deplete my blossom effect, or shall I be selfish?

At the risk of being relegated to the ranks of the hopelessly unregenerate we venture the opinion that one gardener visiting another gardener derives the greatest amount of satisfaction in the inspection of the actual growing plant, in that particular environment, where most of us prefer it should be left to render its full service for its full life as a vital part of the garden in which it has been set.

Student visitors coming for purposes of comparison or other specific reasons are manifestly an exception, and the interchange of material in such cases is rather a different matter from the ordinary ruthless culling of blossoms for a few moments' enjoyment.

On the other hand, there are people who do greatly appreciate the gift of flowers though, in fact, they are usually not gardeners themselves or at any rate do not own gardens.

We admire a painting and the artist comfortably listens without any disquieting twinges of conscience, knowing full well that we do not harbor the slightest expectation of profiting by our praise. However generously disposed, he never for a moment dreams of snipping off the bit of color that pleases and presenting it to the appreciative visitor to carry away.

Gardens, too, are sometimes little masterpieces wrought through long months of careful planning, and doubly precious for their transiency; like masterpieces, too, in that they are never twice the same. It is conceivable that on occasion the higher form of unselfishness, and certainly the more difficult to practise, may be to let one's friends go empty handed and the garden stand untouched to be enjoyed in its beauty and completeness by other friends and every passerby.

Of course, the obvious practical solution, wherever space permits, is a roomy cutting bed full of all the blossoms people

usually love, but for those of us who count in inches rather than acres there is no such easy answer. Perhaps our readers, both gardening and garden-less, may throw sufficient light on this nagging little issue in garden ethics, which continually embarrasses so many of us, to reduce it to a final negligibility.

How would *you* answer this appeal?

## INTO THE OPEN

**A**LTHOUGH it may be of small comfort, there is, perhaps, some satisfaction in learning, over the signature of the Chairman of the Federal Horticultural Board himself, that the "general principle underlying Quarantine 37 is as rapidly as possible to make this country independent of foreign supplies, with the object of ultimately reaching a condition where entry of foreign plants will be limited to new plants and such plants as are not capable of production in the United States."

This is what many of us have suspected all along and that invoking a Quarantine order was simply camouflage. It has taken the Board a long time to come out into the open with an honest statement of the real purport of its rulings. In a recent statement elsewhere Doctor Marlatt has also declared that "mere adornment of private estates is not a sufficient use of plants to warrant permission to import them by mail or any other way." What in the name of horticulture does Doctor Marlatt think is a "sufficient use" of plants? Is the Board determinedly starting out to oppose the adornment of grounds and hamper the development of the æsthetic sense and insist that all planting and cultivation of trees, shrubs, and plants in general shall be solely utilitarian and for economic necessity?

The rules imposed by the Board and the restrictions, even when they are making what they are pleased to call "liberal interpretations," are hampering to the action of individuals trying to import new plants, and indeed the method is so complicated that it is practically impossible for a private individual to import plant material of any sort. Even the dealer, the commercial horticulturist, cannot import for re-sale, only for propagation, and to guarantee his good faith has to file a bond to the effect that the material is for propagation and will not be distributed for a term of years. Such slight modification is obviously of no benefit to the ordinary individual and, it may be suggested, it is not the intention of the Board that it should be. Indeed the definite attitude of the Board as at present constituted is that *it alone*, directly or through the Bureau of Plant Industry is to be the sole judge as to what new or scarce things may be imported. Thus the beginning of a dangerous centralization of bureaucratic power in the Bureau of Plant Industry of the Department of Agriculture that is un-American in principle. Individual or commercial initiative is prohibited without relation to any possible danger of admission of new insects or diseases. No word in the Act of August 20, 1912, creating the Federal Horticultural Board warrants such action.



The committee at large on Quarantine, appointed some time ago, has not been idle, although no public notice has been made of its work, and those of our readers who are interested may take this assurance that the committee is definitely at work and that some progress has been made which it is hoped will lead ultimately to a sane and intelligent understanding and interpretation of what a quarantine is really for.

The GARDEN MAGAZINE asks its readers to write at once directly to the Hon. Henry Wallace, Secretary of Agriculture, in protest, *not* at a reasonable quarantine, but at the attitude of horticultural censorship assumed by the Federal Horticultural Board.

IMPORTANT SPRING FLOWER SHOWS to which attention is turned this month are to be held in Indianapolis, New York, and Boston. Indianapolis has welcomed the Fifth National Flower Show, after Cleveland was abandoned on account of the non-completion of the building. The original dates March 25 to April 1 are adhered to. The annual New York feature—the so-called “International”—is fixed for March 13 to 19. The Massachusetts Horticultural Society announces a feature display of Spring Flowering Bulbous Plants at its annual spring exhibition March 23 to 26.

THE AMERICAN IRIS SOCIETY announces its annual exhibition to take place in New York June 3-5.

DR. WALTER VAN FLEET, universally regarded as the most famous plant breeder of America, whose productions in Roses and Gladiolus particularly are widely appreciated, died in Florida on January 29. Recently engaged with the Department of Agriculture, he was bringing to fruition the results of many crossings and hybridizations with Roses at Bell Station, Md. An account of this work appeared in THE GARDEN MAGAZINE for August, 1920.

The first fruits of his recent work are just being introduced, the others yet to come will add to the account of our indebtedness to his painstaking achievements. A pioneer always, his efforts in plant-raising looked ever to future possibilities, and he worked not in ringing the changes of already known things but by introducing new elements and new species into combinations. Most familiarly known to our readers through his Roses, particularly Dr. Van Fleet, Silver Moon, and American Pillar there are to his credit in addition several Gladiolus, Strawberries, Raspberries, and other fruits; also his work on hybridization of disease-resisting Chestnuts just coming into effect. Some of his very latest productions are now being distributed through the American Rose Society.

Due to his intense affection for plant material Doctor Van Fleet was drawn from his original profession as a practicing physician and became the devoted pioneer and servant of the gardener.

THIRTY YEARS AGO the name of James R. Pitcher was a household word on the lips of every gardener and plant lover in America, yet his passing away in New York recently was hardly noticed outside of a small circle of old-time horticulturists.

Always an enthusiastic plant lover and collector, he formed one of the richest collections of plants, especially Orchids, Palms, and Ferns at his home at Short Hills, N. J. Later, with a vision of expansive popular gardening in all suburbs he established the United States Nurseries, projected on a large scale and, as events perhaps proved, a little in advance of the times. Yet to-day we are reaping many results of Mr. Pitcher's optimism and the modern gardening spirit gathered much momentum from his enthusiasm. One tangible evidence is the fact that a dozen names of dominant firms and individuals in the industry at this moment got their feet on the ladder while with Pitcher & Manda at Short Hills. “He builded better than he knew.”

## THE OPEN COLUMN

Readers' Interchange of Experience and Comment

### The Iron Fetters of Quarantine 37

[EDITORS' NOTE: Since the “mere adornment of private estates” is not regarded by the Federal Horticultural Board as sufficient use of plants to warrant permission to import them, gardeners apparently must in many instances depend upon the generosity and good will of their similarly oppressed fellows to supply the desired material. THE GARDEN MAGAZINE will gladly publish requests for such plants as are seemingly unattainable through the ordinary channels.]

To the Editor of THE GARDEN MAGAZINE:

QUARANTINE 37 links us all in the bond of fellowship. Your correspondent Mr. A. N. Smith, of Brooklyn, can get *Helleborus niger* and *Pulmonaria* from Bobbink & Atkins, and *Muscari* from Henry A. Dreer. [Both these dealers inform us they have no stock left.—ED.] For the rest he must look to “the snow of yesteryear,” and if he finds what he seeks should pass the word along. This much is true, however; one of the oldest and largest seedsmen in the world is Vilmorin Andrieux & Co., of France, and they undoubtedly grow *Chionodoxa*, *Galanthus*, *Scilla siberica*, and *Eranthis hyemalis*. I have grown some rare plants from seed supplied by them. According to their comprehensive work, “*Les Fleurs de Pleine Terre*,” several of the bulbs desired can be reproduced from seed. This is true of *Chionodoxa*; it is the best means of propagating *Eranthis hyemalis*—though it is two years from seed to blossom. None of these are listed, commercially, but perhaps the famous old firm would heed a Macedonian cry; and Obstruction 37 does not apply to seed!—CHARLES J. BAYNE, *Macon, Ga.* [The regular seed trade here would handle orders for import, as the firm named does only a wholesale business in this country maintaining an agency here.—ED.]

To the Editor of THE GARDEN MAGAZINE:

CAN any one tell where in this country I can obtain Christmas and Lenten Roses and their varieties? I am very anxious to build up a collection but am finding great difficulty in doing this in view of the fact that the F. H. B. does not allow them to be imported.

A number of possible sources suggested have been tried with negative results.—V. E. HARRISON, *Cleveland, Ohio.*

### Pleas Peonies that Please

To the Editor of THE GARDEN MAGAZINE:

IN 1909 I had the pleasure of visiting Mrs. Sarah A. Pleas's Peony garden near Spiceland, Indiana, and saw her famous varieties of Elwood Pleas, Opal, Mad. Pleas, Queen of Pleasance, Lady Emily, Joseph Griffin, Multiflora, Mrs. Barrett, and others, which I procured later. The Peony Mrs. Barrett is, I believe, owned by few—the blooms hang longest of any for me; tall and stately; 5 to 7 on a stem, unevenly clouded pink and lighter; stamens beautifully intermingled. Who has her large sized, single Wild Rose? She sent me two.—(MRS.) CORA JEWELL, *Darlington, Ind.*

### Why We Grow Balsam

To the Editor of THE GARDEN MAGAZINE:

DID you ever grow a long row of Touch-me-nots in your garden? Wasn't it a joy? Yes, of course, I mean Balsam, but Touch-me-not was its name when I first knew it, years and years ago, in my grandmother's garden.

The old plants were small—about twelve inches at their very best, a single stalk, straight up, and with little white, pink or purple flowers, set close to the stem, almost covered by foliage, fading nearly as quickly as Morning-glories, and going to seed immediately. They probably took their name of Touch-me-not from the way the little yellow seed pods curl up in one's hand at a touch.

How different are the new and improved varieties! A ten-cent package of Balsam seed, from a good seed house, was planted at the usual time, along with the other annuals in the seed bed, for in this garden all annuals are transplanted. When the seedling Balsams appeared in due course they were not, however, removed to the flower garden as there was already an over abundance of other more favored flowers. But, after a severe drouth, many of the favored things were found dead, so the Touch-me-nots were brought to the garden to fill the

vacancies. We filled a large triangular bed also, but soon discovered that they were not for bedding, but looked well in borders and as single plants, or in small groups.

When they bloomed the colors, in many instances, were inharmonious as the plants had been set out in a hit-and-miss fashion. Then it was that we found out their wonderfully accommodating nature, for we literally pulled them up like weeds and put them to rights, plants full grown and in full bloom. We rearranged them to please our sense of color, choosing a rainy afternoon for the somewhat ruthless performance. They never even wilted, but went right on growing and blooming!

Now we are enthusiastic about Balsam, and for so many reasons. It is a trim and tidy plant, foliage graceful and of good quality, it displays a long range of colors, from daintiest shell pink to the brilliant "pink" of an English hunting coat; from palest lilac to deepest royal purple; white and also mottled. The flowers are two inches across, often larger in specially grown and cultivated plants, and fragrant; the period of bloom is longer than with most annuals, lasting from four to five weeks.

We put a row across the foot of our Ever-bearing Strawberry patch—fifty feet—using only seventeen plants, most of which grew from two to two and a half feet tall.

When potted, a single plant of double Balsam in full bloom is as lovely as any Azalea from the florist, and all who see it exclaim at its beauty.—EMMA L. MORRIS, *Madison, Tenn.*

### A Topsy-Turvy Calendar

To the Editor of THE GARDEN MAGAZINE:

WITH interest I have noted different articles you have had on occasion in the magazine relative to unusual flowering times of plants.

We have a camp in Colorado at an altitude of 9500 feet. Darwin Tulips bloom there approximately August first, German Iris from the first to the middle of August, and common meadow Daisies the last of August and the first of September. The colors of the Iris and Tulip blossoms are deeper than in this part of the country (i. e., Kansas City, Mo.) The Daisies grow over three feet tall and are fully as large as Shasta Daisies that grow here, though, as I said above, they are only the ordinary field variety.

In Colorado we have also Pansy plants—some of them seven years old—that produce a profusion of blooms of immense size. One gets tired of gathering blossoms from even a half dozen plants. Last summer my wife and I picked three hundred and twenty-five fully opened flowers from six plants at one time and the next day there were apparently almost that many more—C. H. BENTON, *Kansas City, Mo.*

### A Tool that I Find Useful

To the Editor of THE GARDEN MAGAZINE:

OTHER readers may be interested in a new tool that was first brought to my attention last fall. The New Porcupine Cultivator produces a fine dust mulch with the least effort; generally two strokes forward and two pulls back are sufficient to put the roughest soil in the



THE NEW PORCUPINE CULTIVATOR IN ACTION

best of shape. Every push puts a score of teeth into the soil, and the tool itself is heavy enough to assure the sinking into the soil of the teeth or spikes, so that all the muscular power can be devoted to the back and forward movement.—A. VINTON, *New York.*

### "A Barrel of Rhubarb"

To the Editor of THE GARDEN MAGAZINE:

OFTEN I have noted my neighbors using half barrels to force their Rhubarb, so having an empty flour barrel last spring, I knocked the bottom out and placed it over a clump of Rhubarb with the result here



A SIMPLE AND EFFICACIOUS FORCING  
These stalks of Rhubarb measure two feet and over

shown. The longest stalks measured twenty-six inches and the majority were twenty-four inches long. The barrel was placed over the plant April 1st and removed May 8th, and at the time of placing I dug in a small quantity of poultry manure.—GEORGE OAKES STODDARD, *Newtonville, Mass.*

### Sweet-peas Can be Transplanted!

To the Editor of THE GARDEN MAGAZINE:

HAVE you ever transplanted Sweet-peas? Perhaps you have wished you could but, on mentioning the undertaking, have been discouraged by over-wise friends!

On a certain April 1st, a sudden upheaval landed me in a different section of the city, and my Peas with their running start of a month and a half—in Seattle, Sweet-peas are planted either in the fall or in February—must they, indeed, be left behind? Turning a deaf ear to the chorus of "Oh, no, you can't transplant them, they won't grow"—"Once the roots are disturbed, the plants die"—"Never heard of anybody's doing it, and there's not a chance," I carefully inserted a spade under a small portion of the row at a time, taking particular pains to go deep enough and not break the roots, which burrow to a most amazing depth—lifted earth and plants together into a large shallow box, then repeated the performance until I had all on board. The box was carried to the new home and here the plants were at once set in prepared ground, care being taken that the roots were not at any time left exposed. From the very start these Sweet-peas were as happy in the change as their owner; they soon raced for the top of the wire netting, and I saw no others all season more flourishing than mine.—INEZ FRASER, *Seattle, Wash.*

### Fuchsias in California

To the Editor of THE GARDEN MAGAZINE:

IN THE article of the series of "Talks and Walks at Breeze Hill," which appeared in your September issue reference is made to the Fuchsia and I am pleased to learn of Mr. McFarland's interest in this wonderful flower, and have taken the liberty of sending some specimens of both single and double flowers produced here at Berkeley. In all, I have about twenty-five varieties which are quite representative of the various forms and colors of leaves and flowers, and special markings and venations of the leaves.

The Fuchsia is especially adapted to the Bay Region (San Francisco) because of the fairly equable climate and absence of excessive extremes of temperature. It does not do so well in the very hot or cold interior regions. You may be surprised to learn that I am growing twenty-two varieties in a space seventy feet long by less than three feet wide on the north of the residence, and with a Pittosporum hedge on one side. It

is my intention to train these plants to form pyramidal trees, 5-6 feet high, by pruning and training leaders.

The Fuchsia does not receive the recognition that is due it, perhaps because it is so common and grows so luxuriantly where conditions are favorable. It lends itself very readily to hybridization, new varieties exhibiting every possible gradation in color of flowers and variations in color, texture, venation, and forms of leaves. I have seen Fuchsias climbing into trees for a distance of twenty feet and more. I hope that my innovation will tend to foster a greater interest in the Fuchsia, and serve to raise it again to the pedestal it once occupied.

The plant favors almost a fully shaded location, rich, well-drained soil, with plenty of leaf-mold, plenty of moisture, and a cool atmosphere. It can be grown to advantage in the greenhouse under conditions approximating as closely as possible those I have described. It will not stand wind. The superintendent of the Monterey Tree Company, at Monterey, California, is doing considerable hybridizing with Fuchsias, and claims to have the largest collection of new varieties in the country. I have been threatening to do a little hybridizing myself, but my place is hardly large enough, and I never seem to find the time, because of other duties.—A. M. WOODMAN, *Berkeley, Cal.*

### What Plants Really Grow Well Indoors?

To the Editor of THE GARDEN MAGAZINE:

THE purpose of this letter is to commend the article, "When the Gardener Builds His Home," by Estelle H. Ries, as an extremely practical and inspiring group of suggestions. Now, can someone follow up with names and results of plants suitable for the modern home? We all know that the home to-day, with dry heated air, is not fitted for the growth of window plants which grew well for our grandmothers in the days of open wood fires. I object to the Lilies in the picture on page 243 (January issue) as they were flowered in a greenhouse and brought in to be photographed. I want plants that grow well, flower well, and look well in the living-room windows near the radiators, the winter through. This is a subject for real investigation.—STEPHEN F. HAMBLIN, *Lexington, Mass.*

### Growing Exhibition Chrysanthemums Outdoors

To the Editor of THE GARDEN MAGAZINE:

PERHAPS some of your readers would like to know how exhibition Chrysanthemums can be grown outdoors with very little trouble and without the aid of a greenhouse.

Like everyone else, I once believed that the small Hardy and Pompon varieties were the only really satisfactory outdoor kind, but I longed for the big fellows. None of the garden books told how to do it, so I started to experiment about five years ago to see just how large they would grow. Two years later, I grew one seven inches across with a five-foot stem. This took the prize at New Rochelle and all my trouble was paid for when the judge, a well-known commercial grower, at first refused to give the award for it because he believed it could not have been grown outdoors. Last year in one day I picked four dozen six-inch flowers with stems over four feet long.

Why not order a few plants for your garden this year? If planted during the first three weeks of May, they will bloom during October and on until November 15th or thereabouts. When they arrive, place them eighteen inches apart each way in a well-manured bed. If you have it, sprinkle about a tablespoonful of bonemeal inside the hole before planting. Firm the soil around the plant with foot, then water to fill up all air spaces. Place one-inch sticks six feet long at side of plant immediately, as setting later injures the roots. The fall winds exert heavy pressure against full-grown plants, so tie the string tightly to stick and loosely around plant every foot of growth.

Practically no growth will show for four weeks. As soon as plants are nine inches high pinch off tip. This will make about six side shoots grow. Keep pinching off all side growth on these six branches, and do not let any buds develop before September 10th. If a bud develops at the end of these branches before that date, pinch it off and let one side shoot just below grow. After September 10th let the first bud that comes at the end of these branches grow, removing all others.

Once each week until root growth is far advanced, cultivate the surface of the ground to kill weeds and produce a dust mulch that will conserve moisture. After cultivating, pour about a cupful of liquid manure at the base of each plant. Make liquid manure as follows: place one cupful of pulverized sheep manure or fresh chicken manure in a four-gallon watering can from which the sprinkler has been removed, allow water to run in slowly while vigorously stirring. After September 10th, apply this twice each week.

On October 1st erect a light wooden framework so that a cloth can be tacked or thrown on the top. This is called a frost screen. As frost never moves sideways but settles straight down, the cloth above the Chrysanthemums will protect them and they will live until it actually freezes. It is well to brace the framework with guy ropes, so that the fall winds will not blow it over.

Varieties that have given me big blooms are Unaka, Chieftain, Nerissa, Calumet, Ramapo, Jos. Foley, Pres. John Everitt, Elberon, Nakota, Chrysolora, Goldsmith, Dick Witterstaetter.

The above method is really not so difficult to practice as it reads. Many of my friends have tried it with success and are now confirmed Chrysanthemum chasers. I wish everyone could have the pleasure these flowers have given me!—WILLIAM CURRIE, *New York.*

### Anent Delphinium Nudicaule

To the Editor of GARDEN MAGAZINE:

THAT Delphinium nudicaule is not common in England, Julian Hinckley is right in assuming. It is possible to grow it there even in a border, but I never found a plant survive the winter outdoors. It certainly is not dormant in the summer, for seedlings carried over in a frame flower the following summer but, as stated, that is the end of them. How it behaves on a rockery I have no knowledge. It is shown on rockery exhibits at the shows but, in such cases, the plants are pot-grown.

And as to D. Zalil—times out of number I tried to raise this in England without result. Further, I have no recollection of ever seeing it exhibited, and I have attended hundreds of shows. Like Mr. Hinckley, I look upon D. Zalil as a myth. D. nudicaule is more or less a freak; compared with Blue Butterfly it is a poor weed.—T. A. W., *N. Y.*

### A Neighbor Who Wants to Know

To the Editor of THE GARDEN MAGAZINE:

I AM greatly indebted for the two letters on Grapes in THE OPEN COLUMN. I find this column year in and year out to have the greatest amount of human interest, to me, at least. May I ask Mr. Seymour if cow manure makes only leaves on a Grapevine? We have some as big as a pie plate.

Why do Larkspurs—perennial ones with big white bees, in three lovely shades of blue—show distorted petals with a yellowish gum underneath and blackened flowerstalks? I've tried lime and flowers of sulphur but no improvement resulted. [Nobody knows how to handle the "Blacks" disease.—ED.]

Why do Dahlias fertilized with bone-meal show leaves mottled with light green? Can I use Bordeaux mixture to advantage? I've found no insects, and have over a hundred plants. I lost three beauties over winter: Conquest; Homer, a chocolate red, incurved, very deep-quilled; and Gwendolyn Tucker, pale pink with flat golden centre, quilled petals, 7 inches across, and little pink florets curled around the golden heart. Does anyone know where I can purchase these varieties?

I find the mottling of lighter green and tendency to turn yellow more pronounced on my new California Dahlias, of which I received sixteen from a friend; American and Copper have already bloomed for me.

In Roses, I had Wm. R. Smith, Souv. de Gustave Prat, Kaiserin Augusta Victoria and Willowmere in bloom about May 15th last year, and I am trying good old Catherine Mermet and Isabella Sprunt this year to see if, though ungrafted, they can hold their own.

The yellowest Rose I have actually seen (and, Mr. McFarland, I dislike a whopper as much as you do!) is Golden Emblem; I wonder why yellow Roses, and yellow Chrysanthemums are apt to winter-kill? Duchess of Wellington is particularly likely to do so, it seems.—C. A. G., *New York.*

### Midsummer Perennials in Abundance

To the Editor of THE GARDEN MAGAZINE:

IN THE September issue Mrs. Caraway inquires about midsummer bloomers. It is certainly a problem to extend the glorious spring and early summer show of flowers into the later months without using annuals, and I have found July and August more difficult to fill than September and October. You give a long list of late bloomers with most of whom I have a garden acquaintance, and perhaps some notes of my experiences with them may prove helpful.

Last summer (1921) my best July show was given by perennials not mentioned. In early July nothing, in my opinion, makes a more impressive appearance than the Yucca. I have it bordering a drive where



the great spires of white bells attract every eye. Unfortunately it does not last much more than two weeks unless one has a great many plants. Its foliage, however, is always good, summer and winter. I wish it were a freer bloomer; I never have had even half of my plants in flower at the same time, but perhaps eventually I may succeed better in attaining an unbroken row of flower stems.

A plant giving a longer season of bloom and one excellent for cutting is *Hemerocallis Thunbergii*, a special favorite of mine. This closely resembles the old-fashioned Lemon Lily which blooms in June. It



CLIMBING HELIOTROPE ROYAL HIGHNESS

In southern California sometimes reaching as high as the second story; lovely in combination with either pink or yellow Rambler Roses

has the same color and delightful scent, but is taller in growth and blooms a month later. I have many clumps and had quantities of flowers all through July, cutting the last about the tenth of August.

The Tiger Lily, especially the form *splendens* which grows more than five feet high, is well worth a place in the border; it is so easy to grow and so much more reliable than most Lilies.

Hollyhocks are a stand-by for the July garden, and they will last even into September if old stalks are cut down and some fertilizer supplied. I am glad to see that more attention is now being paid to securing a better color range. White and shades of red are universally grown, but I am sure some wonderful combinations of color could be obtained. I had in my own garden this year a plant bearing double scalloped blooms of deep cream shaded to pink in centre, a unique and beautiful combination. It has Newport pink for a neighbor on one side, and I mean to plant double yellow and double black at the other side and see what my neighbor's bees, who summer in my garden, will present me with in the second generation.

In August nothing in my garden gives me more satisfaction than the *Funkia subcordata*. There are great clumps of it under the north windows of the bungalow and from among the luxuriant, handsome foliage, stem after stem of waxen white Lilies appears and sends its delicious perfume through the dining-room windows with every breeze. The blooming season covers the full month of August.

The new giant Mallows are very fine; a pity each bloom only lasts the one day. The plants are for background, growing tall as shrubs.

Among lower growers suitable for masses, *Platycodon* (Balloon-flower) in blue and white, and Stokes' Aster are near the head of the list. Both can be readily grown from seed, and are as suitable for beds as many of the annuals.

The shrubby Clematis, both *Davidiana* and *recta*, are fine in groups, and I want to speak a good word for *Helenium autumnale rubrum* which, surrounded with late white Phlox and feathered down with white and primrose Snapdragons, makes a bold and attractive feature in early September.

But one is in danger of proving a bore if enthusiasm about the garden is allowed full sway. There really is plenty of material for each month among the perennials.—AMELIA H. BOTSFORD, *Edgemore, Del.*

### Good and Bad Points of Some Yellow Perennials

To the Editor of THE GARDEN MAGAZINE:

TO answer Mr. Hinckley's question in the November magazine: *Helianthus angustifolius* has not shown the slightest tendency to sucker out in my garden. It will multiply by volunteer seedlings, which, of course, are easily hoed up if they are not wanted. To judge by my experience this year, however, I should recommend transplanting these seedlings when they are 3 or 4 inches high until enough are provided to give the desired display in October. Then if the original plants tend to become too large they can be dug up.

Pinching back the seedling when it has grown about 18 inches will make a symmetrical, bushy plant by blooming time, perhaps 3 or 4 feet high. It is not necessary to have 7-foot plants with 500 flower heads to a plant, if that would be too much of a good thing. With a little practice the plants can be grown to fit the space available. I agree that the old-fashioned chicken-fence annual, *Helianthus annuus*, is "oppressive," but certainly *H. angustifolius* has nothing in common with that species beyond the generic name and the fact that the ray flowers are yellow. Although Mr. Hinckley has found that the perennial species give him "only a few days of glory," my plants began to bloom late in September, and some of the seedlings that I had transplanted twice were still carrying perfect flowers November 15th.

I sympathize with Mr. Hinckley's complaint about *Coreopsis*—it requires even more manicuring than a Privet hedge. But wouldn't a continuous performance such as *Coreopsis* will give, with no fading flowers to remove, be an almost impossible combination? My *Helianthus* comes pretty near it; for although, of course, the ray flowers lose their freshness before they drop, the intermediate stage is not so unattractive as to require cutting. I have grown *Helenium* and admire it, but I find the same objection to it as to *Coreopsis*—the flowers soon become dingy and need to be removed. Thunberg's Day-lily (*Hemerocallis Thunbergii*)

was still blooming for me in October, 1921, and is a late yellow perennial that I have grown for several years without finding a defect. It requires a dozen plants or more to make much of a display, but is easily multiplied by division of the roots in spring. A good companion for it is the Wilson Monkshood (*Aconitum Wilsoni*), described in THE GARDEN MAGAZINE a few years ago. This grows taller than the Day-lily but blooms at about the same time and has a season extending over a month or more. Its deep lavender and the deep yellow of the Day-lily make a pleasing contrast, and both thrive in partial shade.—BERNARD H. LANE, *Washington, D. C.*

### How Deep Does a Mole Go?

To the Editor of THE GARDEN MAGAZINE:

WE WANT to build a new picket fence around our garden and will have a concrete wall under it instead of a base board. How deep must we make this wall to keep the moles out of the garden?—W. A. SHAFOR, *Hamilton, Ohio.*



TAKING THE CHILDREN OFF THE STREETS  
New York's Avenue A Gardens with Rockefeller Institute in the background

#### WHAT ARE THE AVENUE A GARDENS?

**F**EW New Yorkers and fewer visitors to New York ever see Avenue A. It is not a bit like Avenue 5, better known as Fifth Avenue. The magnificent shops and residences which line the latter are replaced on Avenue A by coalyards, machine shops, ex-breweries, things of that sort, and tenements, especially tenements. The side streets which cross Avenue A reek with tenements. And wherever there are tenements there are children—lots of children.

Those children, such of them as survive in their surroundings, are going to be American citizens. What kind of American citizens they are going to be depends largely upon what they are doing with themselves now. If their play-time, in New York or in any other city, is spent in the streets or backyards, left to their own devices and bad suggestion, it's a fair wager they won't turn out very well.

Almost all children like to have a try at gardening. Whether they keep on liking to garden depends a good deal on the success of their early experiments. When once they see something of their own planting beginning to grow, the liking is established and that child has acquired an interest in life which is far more promising for its future than stoning cats, robbing fruit-stands, or corner loafing.

The gardens are located on grounds loaned by the Rockefeller Institute at Sixty-fifth Street. When the Plant, Flower and Fruit Guild undertook this venture the three city blocks had been a dumping ground for the builders of the Institute. The boys of the neighborhood were organized to clear the ground of the mass of sticks and stones. A neighboring stableman gave the gardens the needed fertilizer. Six hundred gardens, each 5 x 10 feet, were mapped out for the children. Besides these there were community plots for bigger crops on shares, and plots for families. A woman superintendent and a man gardener attend to the organization, instruction, and supervision. The children who have had a year's experience are enlisted to show the beginners; both mutual help and the spirit of competition do much to produce results. The applicants are more numerous than the plots and there is always a long waiting-list.

Every city in the United States might profitably establish similar gardens. Examples of the gardens with the child gardeners at work will be shown at the National Flower Show at the Grand Central Palace, March 13th to 19th. Members of the Plant, Flower and Fruit Guild will be in charge to give information to those interested.

**N**ATURALLY it takes money to carry on an institution like the Avenue A gardens. Salaries of the supervisors must be paid, tools, seeds, and sets provided and other disbursements met. Ten dollars takes care of the upkeep of a garden and insures that a poor, city child will have wholesome occupation and a new interest in life which is pretty sure to prove enduring. Donors may give what names they select to the garden or gardens they endow.

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- MR. ARTHUR W. PAGE, Garden City, N. Y., for  
The William Robinson Garden
- MR. NELSON DOUBLEDAY, Garden City, N. Y., for  
The Frederick Law Olmsted Garden
- THE BEDFORD (N. Y.) GARDEN CLUB for  
Four gardens not yet named

THE GARDEN MAGAZINE hopes to print in its April issue a much longer list of acknowledgments. Checks for ten dollars or multiples of that amount, may be sent payable to the order of Avenue A Gardens Fund, THE GARDEN MAGAZINE, Garden City, N. Y., and will be acknowledged in the next issue going to press after receipt. Contributions will also be received by the Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City.



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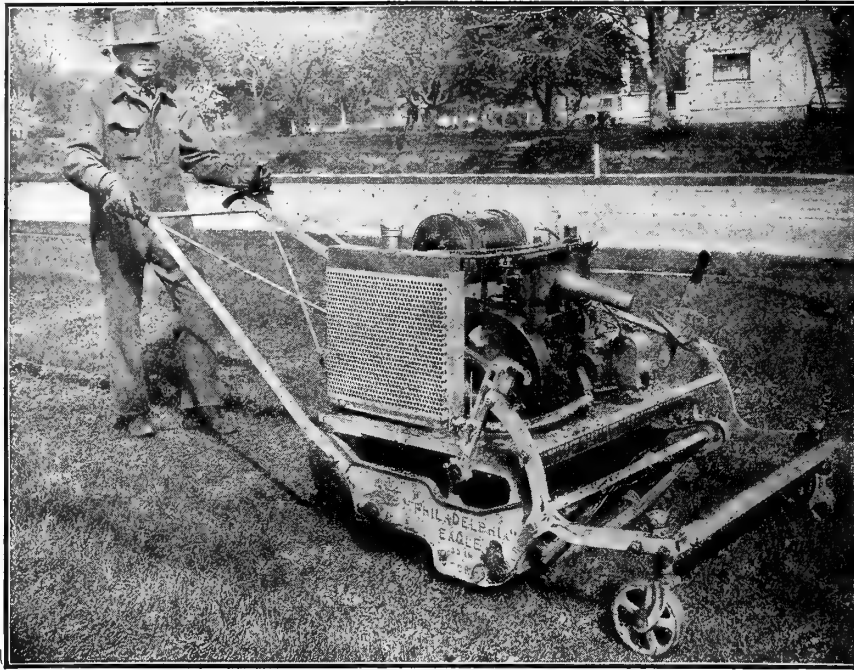


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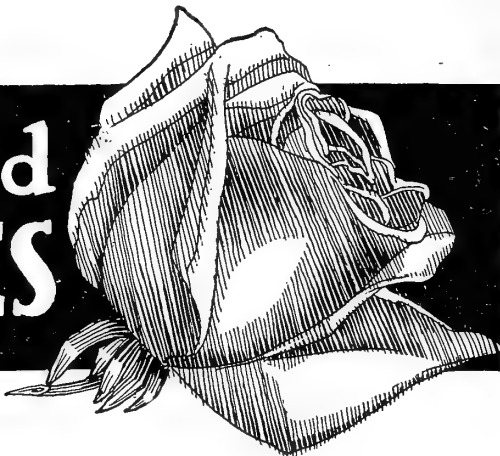
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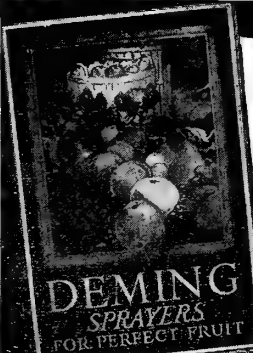
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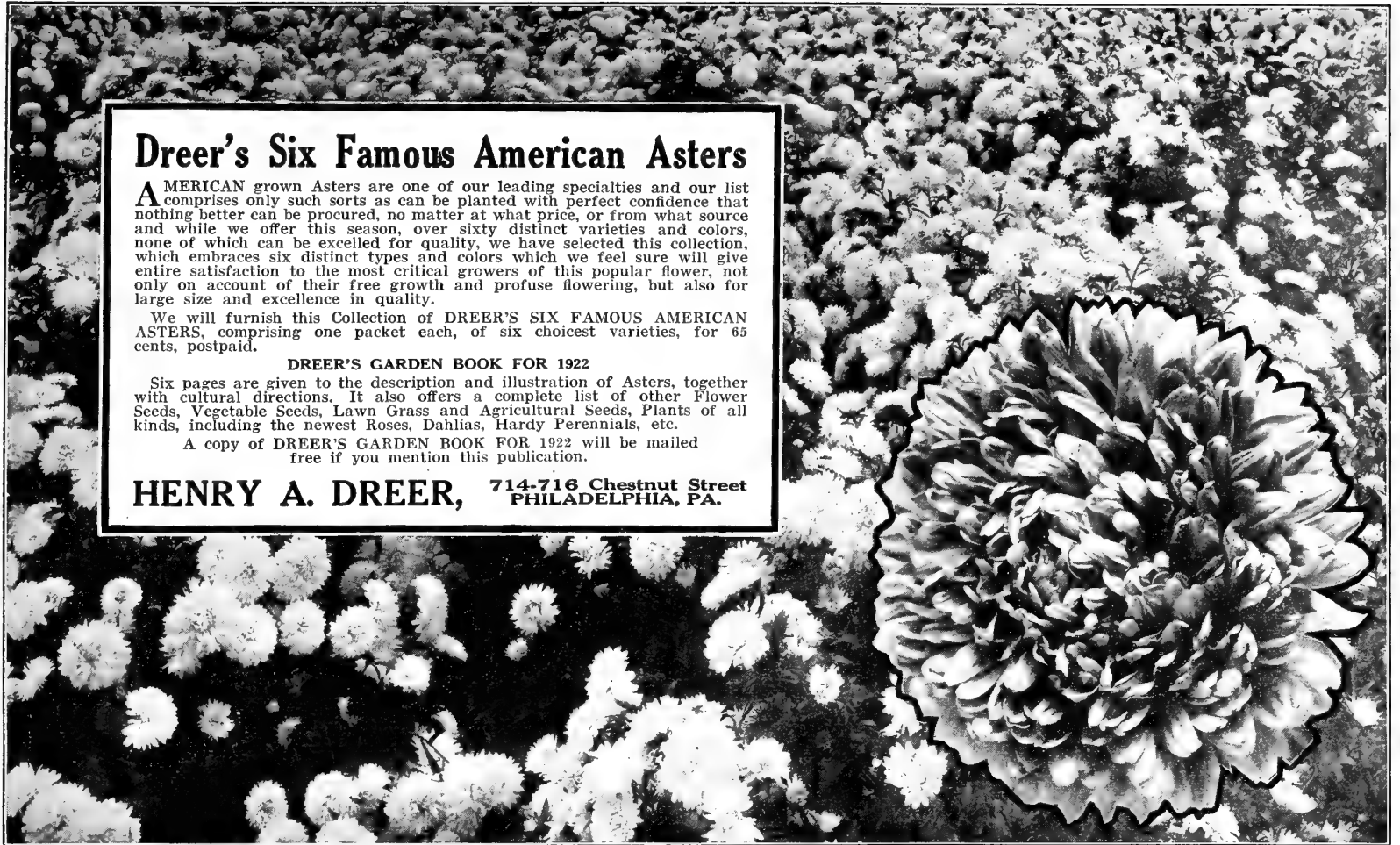
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- Sorrel Tree, (Oxendrum)*, 5 to 6 ft., each, \$3.50



Cherry Blossoms

## Moons' Nurseries

THE WM. H. MOON CO.

MORRISVILLE

PENNSYLVANIA

which is 1 mile from Trenton, N. J.

## Joyous Easter Bells

Easter Sunday Falls April 16th

Nothing sweeter as a remembrance to a friend; a *Real Joy* to an invalid, or "shut-in" than a bowl or jar filled with our fragrant,

### Magic Lily-of-the-Valley

We send you as we have for the past ten years the strong healthy pips, as follows.

10 PIPS.....	\$1.35
20 ".....	2.25
50 ".....	5.00

They flower in full glory in *Our Prepared Moss Fibre* in 16 to 18 days from time of planting. (*Any bowl or jar without drainage can be used*). The price includes *Delivery* with sufficient *Moss Fiber* to plant and *Full Directions*.

To secure them *Order Early*. Demand exceeds supply.

### Plant a Rock Garden—Make It Alpinesque

These seeds are all chosen for their quick germination, easy culture and brilliant results—Rock Gardens are increasing in popularity every year.

- Alyssum Saxatile**—for yellow 6 inches—so bright it is called "*Gold Dust*."
- Arabis Alpina**—(Rock Cress) Very early—when in bloom truly a drift of snow.
- Armeria**—6 in. masses of deep pink flowers with grass-like foliage.
- Aubretia**—4-6 in. Rose and lilac shades.
- Campanula Carpatica**—In June these tiny plants are covered with bells of clear rich blue continuing till frost.
- Cerastium Tomentosum**—Silvery foliage and white flowers.
- Cheddar Pinks**—Rosy fragrant blossoms carpeting the ground.
- Dianthus Deltoides**—10 in. Pink with blue anthers.
- Saxifrage**—In sorts mixed.
- Sedum**—In sorts.
- Viola Cornuta**—Tufted Pansy. Blooms continuously till frost—6 in.

And last but not least the delicate Annual **Erysimum** Fairy Wallflower, per single pkt. 15 cts.; or the *Set* of 12 Lovely Rock plants \$1.50. Send for copy *Our Spring Garden Book*, listing all *Seed* (Flower & Vegetable) *Novelties* for 1922.

## H. H. BERGER & CO.

Estb. 45 yrs.

70 Warren St., New York City



# Kunderd's Marvelous Ruffled Gladioli



are so different and superior that you will miss something big if you do not have a nice collection of them in your garden the coming summer. My 56-page catalogue describes nearly 400 varieties (by far the finest collection in the world). Illustrates 19 varieties in natural colors and many more in halftone. It is the most beautiful, useful and instructive catalogue of Gladioli ever issued. Send for a free copy which I will promptly send you.

## A. E. KUNDERD

The Originator of The Ruffled Gladiolus

Box G, GOSHEN, INDIANA, U. S. A.

### Pools with Water Lilies

These lovely flowers—readily grown by anyone—show many distinct colors, although most people know only the common waxy white variety. There are crimson, purple, blue and yellow Water Lilies that

### Are a Source of Delight

to every gardener who loves the unusual, and who is looking for plants that will lift his garden out of the ordinary

My Water Lily Booklet for 1922 tells how to grow these flowers in pools or tubs; pictures and describes the best sorts for general culture, and lists other plants adapted to a water garden. Send to-day for a free copy.

**WILLIAM TRICKER**

661 Forest Street  
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### B. L. SMITH

FLORA, MARSHAL FOCH,  
ORANGE GLORY, TITANIC and CRIMSON GLOW

One bulb each of the above named varieties of Gladioli (all of excellent flowering size) post-paid, for \$2.00.

You want them, because they have been tested and found worthy. Order now. Our stock has a limit. There are other good things on our Descriptive List. It is free for the asking. Mention GARDEN MAGAZINE.

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### Progress Trees and Plants Grow

Send us 98c along with your inquiry for a Progress catalogue and get 40 fine mixed Gladioli Bulbs that will be the glory of your garden next summer.

**THE PROGRESS NURSERIES**  
1313 Peters Avenue Troy, Ohio

### Kill Bugs—Prevent Blights

You can easily keep your garden, shrubbery and roses healthy and free from diseases. Spray early and often. Use a No. 1.



It operates by compressed air—throws a continuous stream. Finger pressure instantly starts or stops the spray. Special nozzle strainer prevents clogging. Solid brass pump parts are non-corrosive. Write for catalogue and Spray Calendar prepared by Cornell University specialists—both free. Ask your dealer to show you an Auto-Spray.

The E. C. BROWN COMPANY  
850 Maple St., Rochester, N. Y.

### Puget Sound Iris Excel

WE HAVE THE CLIMATE!  
WE HAVE THE SOIL!  
I SPECIALIZE IN IRIS!



My new comprehensive 40 page catalogue describes in detail upwards of 200 distinct species and varieties, including the best of the famous Foster, Bliss, Hort and Yeld Irises, with a valuable treatise on 'Iris for the Garden' by A. J. Bliss, extensive articles dealing with Iris culture, selecting, grouping and color classification, etc. Are these varieties familiar to you? Dominior; Angelo; Ann Page; Ambassadeur; Asia; Lady Foster; Lord of June; Lent A. Williamson; Magnifica; Mlle. Schwartz; Gaudichau; Hoogiana; Korolkow; Susiana. I grow them all; they mean the finest and best in Iris. I also grow a host of the cheaper, old garden favorites. If interested in Iris ask for a copy.

I will sell Iris roots during MARCH and APRIL (not later)  
**O. M. PUDOR** A Lover of Iris **PUYALLUP, WASH.**  
(In the famous Valley of the Mountain)

By WM. M. ODOM

### A History of Italian Furniture

TWO VOLS. NET, \$100

ROSES of QUALITY  
for  
Outdoor Garden Planting

Send for Rose Annual

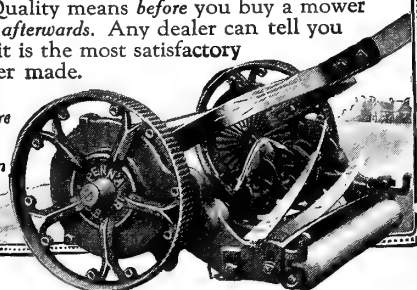
**William C. Duckham**  
Rose Specialist

One Noe Ave. Madison, N.J.

## PENNSYLVANIA QUALITY LAWN MOWERS

It's better to find out what Pennsylvania Quality means before you buy a mower than afterwards. Any dealer can tell you why it is the most satisfactory mower made.

At Hardware Dealers and Seedsmen



# MAKE \$1.00 Do the WORK of \$3.00

Every Rose Lover Will  
Take Advantage of This Offer

Every Rose lover intends to get at least \$2.00 worth of Roses this spring. Buy them through the American Rose Society and your \$3.00 membership in that great organization will cost you only \$1.00, provided your application is received before May 1, 1922.

## This is no Puzzle

It is perfectly clear and easy. You begin by sending \$3.00 to The American Rose Society, John C. Wister, Secretary, 606 Finance Building, Desk G, Philadelphia, Penna. You will get promptly the

### A. R. S. \$2.00 Rose Coupon

This coupon will be accepted as cash by several of America's foremost rose-growers in payment for \$2.00 worth of Rose bushes (or other plants), your own choice, to be selected from their 1922 catalogues.

*For the remaining \$1.00 Mr. Wister, Sec'y, will send to you a \$3.00 membership in A. R. S. with all the privileges below.*

For  
But  
\$1

### Full Membership Privileges

which for new members joining before May 1, 1922, will include

### The American Rose Annual for 1922

A splendidly illustrated book of 200 pages, giving interesting stories of rose progress and the achievements of American amateur rose growers. This book is supplied to members only. The 1922 issue will be ready about March 1st.

You  
Get  
All  
This

### The Members' Handbook

supplements the Annual with much valuable information about Roses, and gives a complete list of members so you can find rose-lovers in your neighborhood. Ready about September 1, 1922.

### A Card of Membership

admitting you free to all rose shows in which the Society formally takes part.

### Advice From Research Committee

Members can secure advice from a committee of Rose experts about varieties, cultivation, insects, diseases, habits, color, and other characteristics of all known Roses.

All of these will be given to new members who join before May 1, 1922. Send your name, address, and check for \$3.00 payable and directed to

## The American Rose Society

JOHN C. WISTER, Secretary

606 Finance Building, Desk G, Philadelphia, Penna.

*The coupon good for \$2.00 worth of Rose bushes (or other plants) and the Membership Card will be sent to you at once. The Rose Annual and the Handbook will be forwarded as soon as published.*

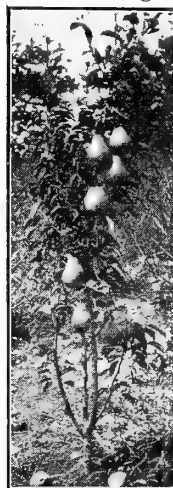
## Have a Little Fruit Garden of Your Own Plant

# Dwarf Trees

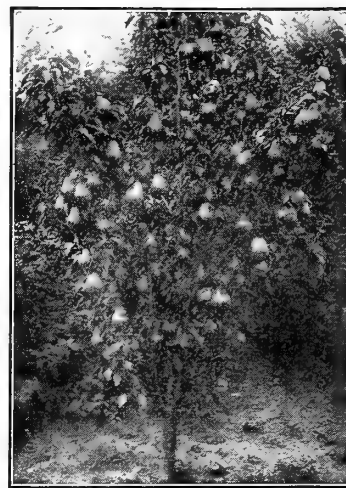


PEAR APPLE PEACH  
PLUM CHERRY  
\$1.00 to \$1.50 each

With warm spring sun, you'll just hanker to plant something; and the first place you'll think of will be that empty space in your garden. Our dwarfed fruit trees, fresh-dug and reset on your place, will make your fruit-garden dreams come true. Three or four summers after planting the dwarf trees will be fruiting.



Planted 3 years

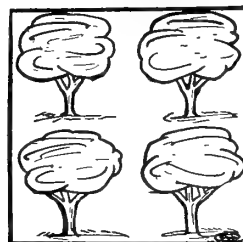


Planted 7 years

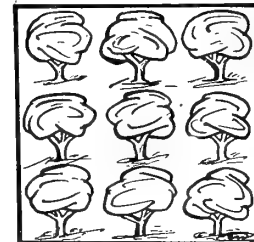
These trees not only fruit very quickly, but may be planted as close as ten or twelve feet apart; and though the trees are dwarfed, the fruit is generally finer and larger!

The following reports show what dwarf trees are doing: 32 peaches from a tree planted two years, 75 peaches the following year; nearly a bushel of Elberta peaches from a four year tree; two and one half bushels of Stayman Winesap apples from a tree planted five years; one barrel of McIntosh apples from a tree planted seven years; one four year quince matured 12 large fruits, the largest 14 ounces, besides 20 thinned out before maturity; 14 Bartlett pears from a three year tree; one and a half bushels of Clapp pears from a tree planted five years.

### WHICH WOULD YOU RATHER HAVE? Four Kinds or Nine Kinds?



Ordinary Trees



Dwarf Trees?

### Two Unsolicited Testimonials

"This season all of my dwarf apple trees were a great success. As people were walking along we overheard them discussing how such apples could grow on bushes and some of them came to us to ask if they were really apples. Truly the little trees were a sight. Winter Banana, Bismark, Twenty Ounce, etc., were so loaded with large and beautiful fruit, that I had to brace nearly every limb."

"The dwarf Japan Dream peach you sold me in 1918 had 32 peaches last year, 75 this year—and the dwarf Champion peach has 44 fruits this year."

Complete Catalogue Free

THE VAN DUSEN NURSERIES  
C. C. McKay, Mgr. Box G. Geneva, N. Y.



# Cedar Acres Gladioli

Known as "Bulbs That Bloom"  
The World Over

A strong claim, to be sure, but one that we can prove! Tracy Gladioli have brought gladness to hearts of garden lovers in far away Japan, Russia, in Africa, and Australia. In America the name Tracy has stood for the utmost in Gadiolus reliability for over a quarter century!

## Some of the New Varieties You'll Value

- WHITE WONDER, Pure White, \$15.00 per dozen.
- PINK WONDER, (Kemp) Pure Pink, \$15.00 per dozen.
- CRIMSON GLOW, (Betscher) Deep Scarlet, \$5.00 per dozen.
- DAYBREAK, (Tracy) Salmon Pink, \$3.00 per dozen.
- DAWN, (Tracy) Coral Pink, \$2.00 per dozen.

## New Orchid-Flowering Primulinus Hybrids

will appeal particularly to those in search of delicate colors and dainty forms. For over thirty years the founder of this business has worked on the development of the Gladiolus race. Tracy Hybrids in this class equal the choicest obtainable anywhere!

We shall send collection of 25 bulbs for \$1.25, postpaid. 100 for \$5.00, express prepaid.

Any one of the collection worthy of a name.

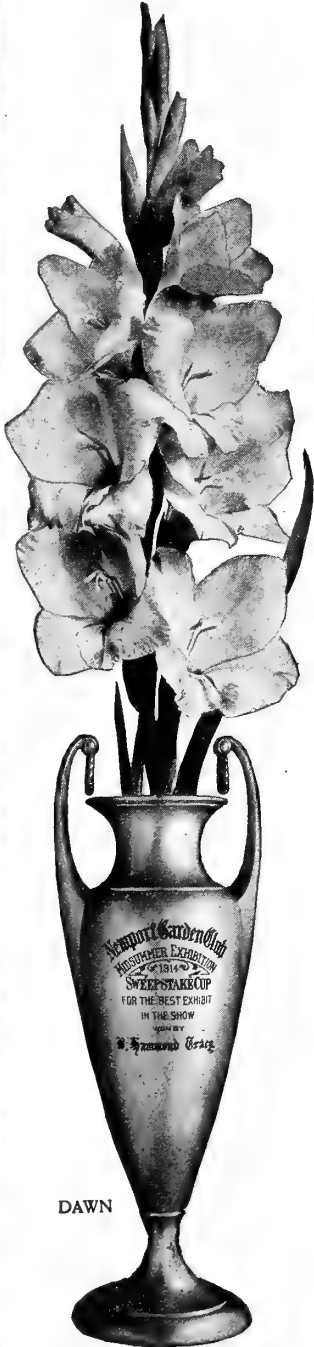
If you love flowers you'll love the Primulinus Hybrids.

## And Tracy Dahlias, Too

We champion the Dahlia as a garden flower, rather than an object for exhibition. The old proven stand-bys with the newer

free-flowering kinds in all classes make up our collection. Please afford our free catalogue an opportunity to acquaint you with all we offer.

B. HAMMOND TRACY, Inc., Box 32, Wenham, Mass.



DAWN



## What's More Enchanting Than a Rustic Summer House,

Like the one pictured here in a secluded nook of your garden; especially if seen through a vista of Rustic Pergola or approach over ravine or brook bridged by a charming Rustic Structure?

Like the one pictured here in a secluded nook of your garden; especially if seen through a vista of Rustic Pergola or approach over ravine or brook bridged by a charming Rustic Structure?

## Jersey Keystone Rustic Work

- PERGOLAS FENCES AND GATES TABLES AND CHAIRS
- SUMMER HOUSES FRELLISES FLOWER BOXES
- BRIDGES SETTEES

Write for handsome illustrated catalogue. Designs and estimates submitted upon request.

**JERSEY KEYSTONE WOOD CO.**  
219 East Hanover St. Trenton, N. J.

## The Little Wonder Hedge Trimmer

Revolutionizes Hedge Trimming. Trims every variety grown. Cuts from five to ten times as fast as by hand and makes a more even cut. Operates so easy that women operate them.

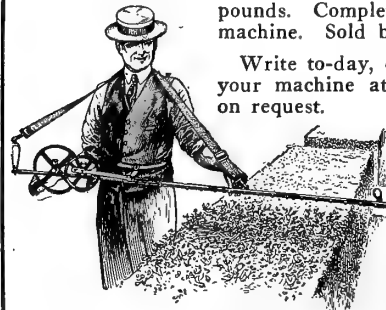
An amateur becomes expert with very little practice. Various adjustments and attachments suit it to very shape of hedge and cut desired. In use on hundreds of the largest estates in the country and highly recommended by all.

Harrison, N. Y.  
Gentlemen:—Your "Little Wonder" Hedge Trimmer does not only as good work as we formerly did by hand shears, but we keep our hedges in much better shape because of being able to trim them often and we succeeded in cutting in about three hours what it formerly took us three days to do by hand. Wishing you the success your machine so well merits, I am,  
HARMON AUGUST

Price, \$27.50, prepaid, East of Mississippi  
Price, 30.00, prepaid, West of Mississippi

Built for practical use, is mechanically perfect and made of the best materials. Nothing to get out of order. With reasonable care will last a lifetime. Guaranteed for one year. Weighs sixteen pounds. Complete instructions accompany each machine. Sold by leading dealers.

Write to-day, enclosing check, and we will ship your machine at once. References and circulars on request.



**John C. Dettra  
Machine Company**

Oaks, Montgomery Co.,  
Penna.

# New Giant Zinnias

EACH year sees an increased number of Zinnias in well planned gardens. They are easily grown, uniformly tall, and are blended with tints and shades that for subdued coloring are unsurpassed.

**Achievement** is noted for its enormous flowers and queer petals—like those of cactus dahlias at the tips.

Packet 25 cts. postpaid.

**Giant Picotee-flowered** is distinguished by the peculiar color markings at the tips of the petals. In a variety of colors.

Packet 15 cts. postpaid

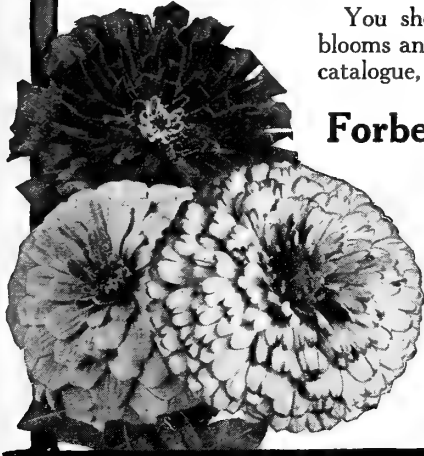
You should learn about these splendid blooms and see them in color on our 1922 catalogue, which we send with each order.

## Forbes 1922 Catalogue

Tells you about our new varieties for the vegetable garden—Coreless Carrot, Des Moines Squash, Many-fold Tomato, and the new things for the flower garden. All of them are well worth knowing; send for the catalogue to-day.

**Alexander Forbes & Co.**

111 Mulberry St.,  
Newark New Jersey



# Schulz's Dahlias



## SIX ALL ROUND FAVORITES

**Attraction.** Hybrid Cactus, large flowers, of soft lavender with long, stiff stems. A great favorite for cutting. One of the best of all Dahlias. 75c each.

**Crystal.** Cactus. The best Dahlia on the market for vase decoration. A clear, soft pink makes a dainty bouquet when combined with Delphiniums, Maidenhair ferns, etc. 75c each.

**Jonker Boreel.** Holland Hybrid Cactus. No Dahlia has more fine qualities than Jonker. Color a brilliant orange, glistening with golden sheen. Arrange this Dahlia with Delphiniums or Helvetias and you have a stunning effect. \$1.50 each.

**Latona.** The ideal peony flowered Dahlia. A Holland introduction of superior merit. An unusual combination of yellow and burnt orange. Flowers of beautiful form on strong stems. \$1.00 each.

**George Walters.** Hybrid Cactus. A rich salmon intermingled with old gold. One of Dahliadom's most popular flowers for exhibition or garden. \$1.00 each.

**Mrs. Warner.** Hybrid Cactus. Perfect flowers of soft white flushed with pink. Unexcelled for cutting or garden. \$1.00 each.

Collection of these six Favorites, \$5.00 postpaid.

## ANOTHER GOOD COLLECTION

**Kalif.** Large red Cactus of perfect form. 75c each.

**Mme. Henri Cayeux.** Large Cactus. Color is rich pink tipped white. 35c each.

**Diemont Von Bystein.** Peony. A unique shade of deep blue-lilac. 50c each.

**F. R. Austin.** Large Peony. One of the finest in this class. A charming combination of rich yellow with salmon and red shadings. 50c each.

**Mina Burgle.** Red Decorative. A Dahlia that is popular everywhere. 25c each.

**Maud Adams.** Show. Pure snowy white with a pink flush. Great for cutting or for garden. 50c each.

Collection of these six Dahlias, \$2.00 postpaid.

## SIX STANDARD CANNAS

**Allemania.** (Orchid flowering). Salmon with gold markings. 15c each, \$1.50 doz. each petal flaked carmine-crimson. 20c each, \$2.00 doz.

**King Humbert.** (Orchid Flowering). The most popular Canna. Great orange scarlet flowers. Foliage dark bronze. 15c each, \$1.50 doz.

**Mrs. Alfred Conard.** Large salmon pink. 24c each, \$2.50 doz.

**Wintzer's Colossal.** (Orchid Flowering). The largest flowering Canna. Bright scarlet. 15c each, \$1.50 doz.

**Yellow King Humbert.** (Orchid Flowering). Flowers yellow with red spots. 15c each, \$1.50 doz.

Collection 1 Doz. of each of these Cannas, \$8.00 postpaid.

## SEND FOR 1922 CATALOGUE

With full descriptions and prices of our Dahlias, Trees, Shrubs, Perennials, Garden Tools, etc. We maintain a skilled Landscape Department. Write for Information. Everything for Your Garden at Reasonable Prices.

**JACOB SCHULZ CO., Inc.**

Nurserymen and Landscape Architects

550 South Fourth Avenue

Louisville, Kentucky

# Hours of Pleasure



EACH pleasant hour you spent in your garden last summer brought you closer to your ideal garden. You are now keener in appreciation of fine strains, better able to choose wisely.

You are ready for the greater pleasure of your next garden, planted with S. & H. high-quality shrubs, trees, plants, vines, flower and vegetable seeds, the product of 68 years of skilled culture.

Be sure to send tonight for our new catalog.

# THE STORRS AND HARRISON CO.

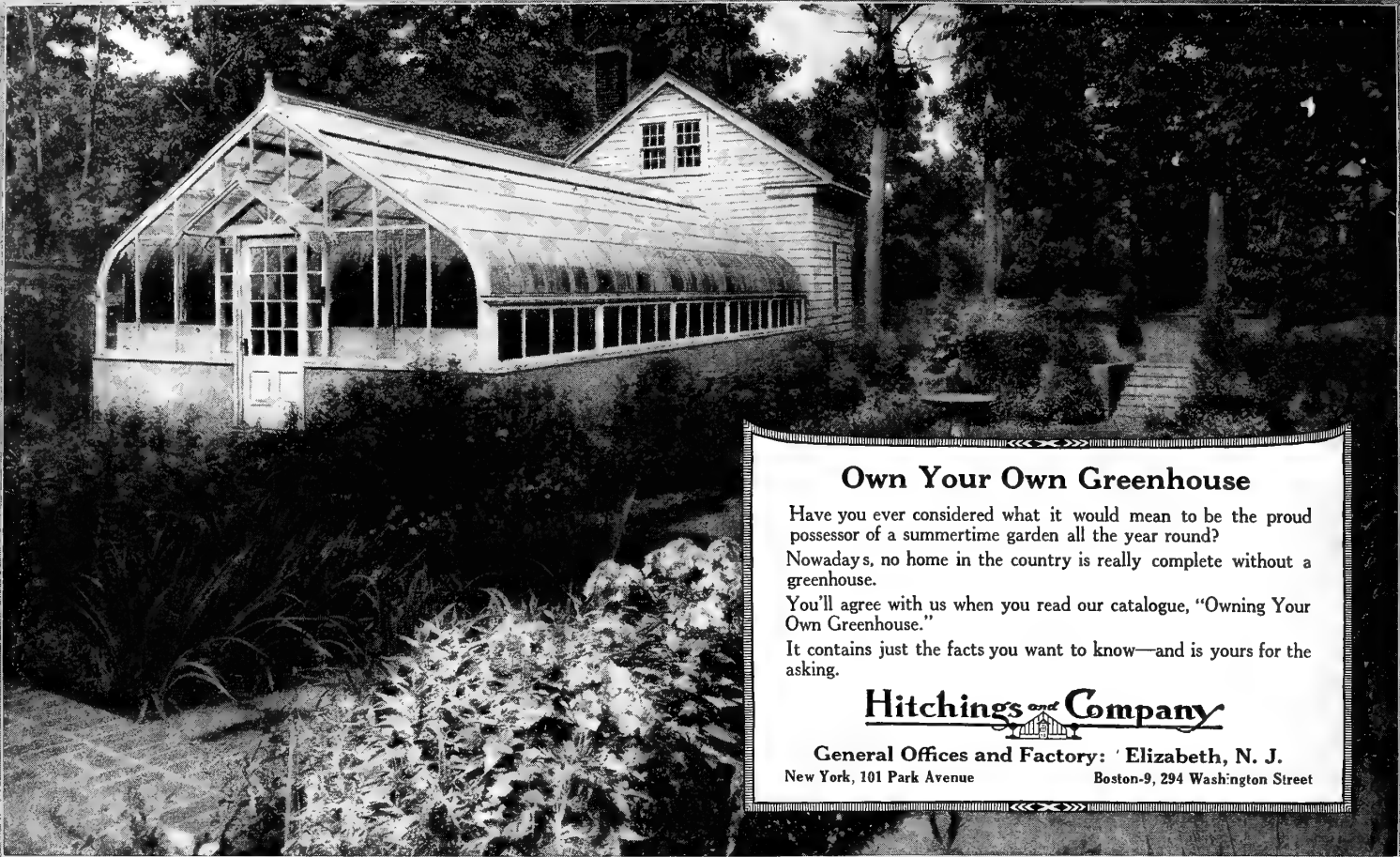
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Nurserymen

Box 163

Painesville, Ohio



### Own Your Own Greenhouse

Have you ever considered what it would mean to be the proud possessor of a summertime garden all the year round?

Nowadays, no home in the country is really complete without a greenhouse.

You'll agree with us when you read our catalogue, "Owning Your Own Greenhouse."

It contains just the facts you want to know—and is yours for the asking.

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## Glorious Gladioli



*Select them from Our Catalogue — It's Free!*

Every variety listed in our catalogue will give you bloom and beauty that will satisfy the most exacting grower.

We offer only bulbs, seeds, and shrubs of select strains. This is your assurance of the excellence of every variety we list.

Our Catalogue offers an unusual assortment of Sweet Peas, Dahlias, Gladioli, Asters, Hardy Perennials, Ornamental Shrubs, and Vegetable Seeds. Send for Catalogue now and order your seeds early.

**Fottler, Fiske, Rawson Co.**  
BOSTON, MASS.

## Gold Medal Gladioli!

*400 of the Finest Varieties in the World!*

The Private Gardens of Elmwood Terrace offers for sale the surplus of this magnificent collection—Prize winners at all the big shows.

The following special offers will be sent postpaid. All are full sized bulbs grown for exhibition purposes.

1. 2 each, 'Crimson Glow, Le Marechal Foch, Louise, Flora-White Giant \$3.00
  2. 1 each, A. B. Kunderd, Peach Rose, K.'s Marshal Foch, E. J. Shaylor, B. L. Smith, Mrs. Dr. Norton... \$3.00
  3. 2 each, Alice Tiplady, Altair, Albion Linton, Topaz, Tupilo, Capella... \$2.75
  4. 3 each, Mrs. Watt, Golden King, America, Anna Wigman, Faust, Candidum, Halley, Niagara, Panama, Peace, Scarsdale, America, Victory, Rouge Torch, Mrs. Frances King..... \$2.25
- 100 Bulbs in fine mixture ..... \$4.00

For other offers, see February Number of Garden Magazine. A handsome descriptive booklet will be mailed upon request.

**Mrs. M. B. Hawks Bennington, Vermont**





### Evergreen Cheer Throughout the Year

**N**OTHING like a cheery spot of Evergreen to soften the harsh, unlovely grasp in which Winter holds your home surroundings!


About your grounds, to-day, are dozen of places that could be made colorfully attractive through otherwise colorless months by the friendly presence of EVERGREENS.

Note such spots NOW and fill them in the early Spring with famously hardy FRAMINGHAM EVERGREENS. Selection superb!

*Send for our handsome Book:  
"Beautiful Home Surroundings"*

(Sent FREE of charge anywhere east of the Mississippi River and north of the Potomac. Elsewhere upon receipt of One Dollar.)

**WYMAN'S**  
**Framingham Nurseries**  
FRAMINGHAM, MASSACHUSETTS



## Pink Abundance

AN ALLING DAHLIA

This has been for the past two seasons the first plant in our garden to bloom. It is particularly adapted for commercial cut flower purposes on account of its extreme freedom of bloom and wiry growth. Color is delicate mallow pink with white suffusions. Incurved Cactus type as photo shows. Tubers \$1.50 each, \$15.00 per dozen. Postpaid. My new catalogue is now ready. If I have not already had the pleasure of sending you a copy, may I do so at once? A post card request will bring it.

**C. LOUIS ALLING, *Dahlia Specialist***  
COURT ST., WEST HAVEN, CONN.

# A Garden Full of Gladioli for \$2.00



**The Gladiolus** is one of the most satisfactory flowers grown and there is no reason why every family cannot enjoy this grand flower—it is as easy to grow as the potato.

Bloom from July to frost if you plant a few bulbs each month from April to July.

For **Two Dollars** we will send **50 Bulbs** of our **Grand Prize Mixture**, which covers every conceivable shade in the Gladiolus kingdom.


Each year we sell thousands of these bulbs and received numerous testimonials as to their merits. **Order Your Bulbs Now**, so as to have them to plant when you begin making your garden.

*Simple cultural directions in package*

Mail this advertisement, or present at our store, with Check, Money Order, Cash or Stamps, and secure this splendid collection, sent prepaid to any point in the U. S. east of the Mississippi. For points West and Canada add 25c—(\$2.25.)

*Our 1922 Spring Seed Annual sent on request*

**Stumpp & Walter Co** 30-32 Barclay St.  
New York City



# CONARD STAR ROSES


## BLOOM or your money back

NATURE'S loveliest gift—ROSES—will be yours in abundance if you order Conard Star Roses. Hardy, field-grown plants, raised with skill and knowledge gained from over 50 years' experience. Thoroughbred roses of so high an innate quality that we can safely guarantee their bloom.

*Our big illustrated catalogue of nearly 200 glorious roses is yours for the asking. Write for it Now.*

**CONARD STAR ROSES**  
 & JONES CO., Box 24, West Grove, Pa.  
 Robert Pyle, Pres. A. Wintzer, Vice-Pres.  
 Rose Specialists—Backed by over 50 years' experience

*Full directions for planting and care come with every Conard Star Rose. Success assured. They'll bloom or your money back.*



**PREMIER ROSE**

*"This celluloid star tag labels your growing rose and is the sign of our guarantee—two exclusive C. & J. features."*

## PRIZE WINNING CROPS

Men who know from experience say that with most crops cultivation is more necessary than fertilization. Plant life needs air as much as water and food. The one big problem has been to get the cultivating done when needed most.



**THE MOTOR MACULTIVATOR IS ENDORSED BY PROMINENT AGRICULTURAL INSTITUTIONS**

Macultivator owners testify that it does the work of four men and does it better. It makes thorough and frequent cultivation easily and economically available. It can also be readily converted into a power lawn mower.

### TRY IT FOR TEN DAYS

We are so certain of its performance that we are perfectly willing to let every Garden Magazine reader be the judge. Whether you or the operator have had experience with power cultivators matters little. It is simplicity itself to operate a Macultivator, which is built heavy enough to do good work in any soil, yet light enough to be handled easily. Write to-day and learn all about our trial offer. Dealers—Write for interesting proposition.

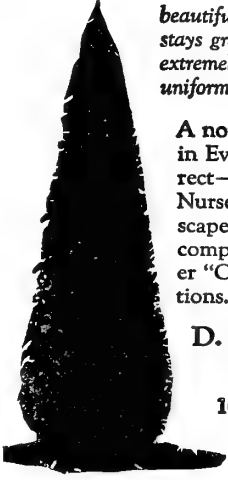


The Macultivator will be exhibited at International Hort. Show, Grand Central Palace, N. Y., March 15-19, by Dietz and Trivett Co., West End of Main Floor.

**THE MOTOR MACULTIVATOR COMPANY**  
 1308-10 Dorr Street  
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## Hill's Pyramidal Arbor Vitae

Long continued effort in type development, under the direction of D. Hill, the Evergreen Specialist, has produced this remarkably improved Pyramidal Arbor Vitae, having the following characteristics:



*beautiful dark green stays green all winter extremely compact and narrow uniform in quality.*

A noteworthy achievement in Evergreens. Supplied direct—or through your local Nurseryman, Florist or Landscape Architect. Send for complete catalog. Also folder "Cozy Bungalow Collections."

**D. Hill Nursery Co.**  
*Evergreen Specialists for Over 60 Years*  
 1061 Cedar Street  
 DUNDEE, ILL.



**WE GROW NURSERY STOCK TO SUIT EVERY REQUIREMENT**

We have a complete stock of Evergreen and Deciduous Trees and Shrubs as well as Roses, Vines, and Perennials. A small section of our Evergreens is shown above. We specialize in Rhododendrons and other hardy, broad-leaf Evergreens.

A copy of our "Hand-book of General Information on Trees and Hardy Plants" will be gladly mailed upon request.

**THE BAY STATE NURSERIES**

**NORTH ABINGTON, MASSACHUSETTS**

W. H. Wyman & Son, Proprietors

**Selling Out**

**The Famous Rose Hill Nurseries**

North Avenue, New Rochelle, N. Y.

**T**HERE are still some great bargains to be had in fine, large specimen trees, both Deciduous and Evergreen:

A great collection of **Box Trees** in all sizes, shapes and forms. They are not the tender varieties. But the hardy and sturdy types, including also the Golden Variety.

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A real handbook for amateur and professional gardeners. Contains 132 pages of text and illustrations; shows in natural colors and photographic reproductions many rare Irises, Peonies, Chrysanthemums, Aquilegias, and Lilacs. Too valuable and costly for promiscuous distribution, but will be mailed to any address for \$1.00, which may be deducted from the first order amounting to \$10.00 for plants, trees or shrubs.

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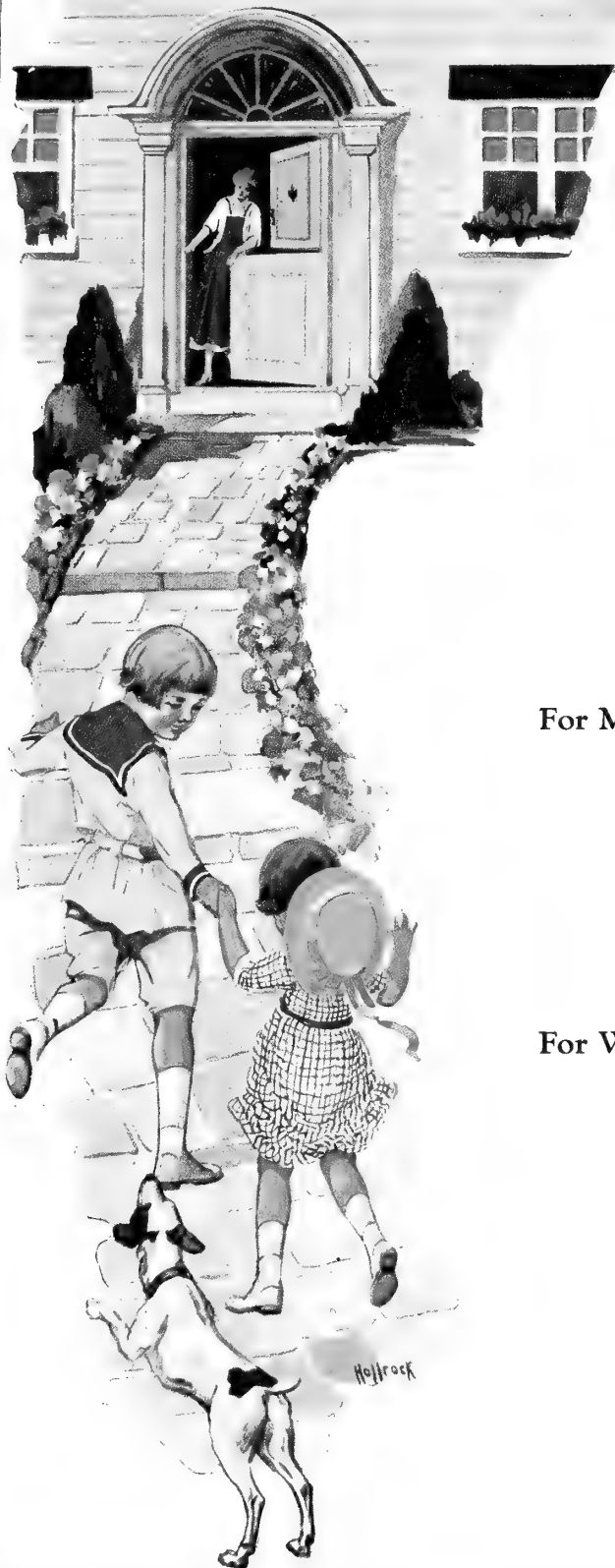
Ask your dealer for ATLAS Portland Cement booklets on the building of Stucco homes; or the remodeling of old homes. ATLAS dealers are always ready to give you the benefit of their advice and to tell you the many ways ATLAS service can aid the home builder.

*If there is not an ATLAS dealer in your immediate vicinity, write the nearest office of this company*

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PORTLAND CEMENT COMPANY  
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**ATLAS-WHITE  
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## For Home Builders Here Are Two Invaluable Help Hints

THEY have to do with everything you want to do in the way of painting, varnishing, staining and finishing your home, both inside and out.

The Help hints are two books that tell you exactly what you want to know, exactly as you would tell it to someone it you knew. It is told in such a human, readable sort of a way, that it makes decidedly interesting reading. All the facts are there. The help hints are many. Their following may save you many a dollar, not to mention the lasting satisfaction their following insures.

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The Happy Happening Book has the strongest appeal to men, because it was written mostly by a man. It is a book that tells of the painting and finishing problems of a man and his wife, covering a period of a score of years in their country house. It is about everything, from how to prevent the outside paint from cracking and peeling, to the sure way of securing a floor finish that combines lastingness with effectiveness. It is a sure enough counselor, friend and guide.

It's name is the Happy Happening Book, because it just plain makes happiness happen. Send 10 cents for a copy, to our Dayton Office.

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From the "Birthplace of Little Trees that Live"—comes a very unusual offer of six choice evergreens for only *ten dollars*. Would not a really choice collection of evergreens add value and beauty to your home grounds? Here, then, is the way to get them planted this spring.

**\$10.00 WILL BRING**

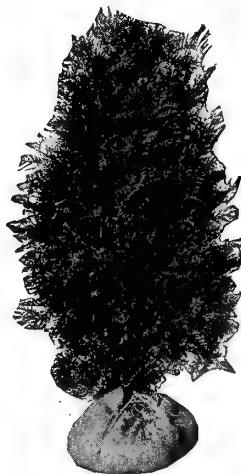
- One Blue Spruce
- One Arbor Vitae
- One Prostrate Juniper
- One Erect Juniper
- One White Spruce
- One Red Pine

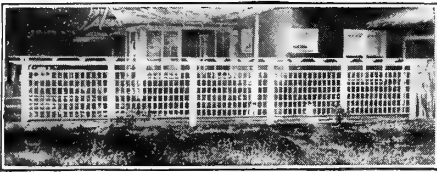
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Our equipment enables us to manufacture at low cost a very large line of original designs—the attractive kind. It will be a pleasure to mail you our booklet, "LANDSCAPE BEAUTY HINTS."

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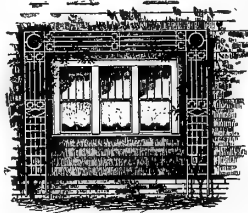
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*With Special Notes on a New Method of Grafting Applicable to all Trees,*

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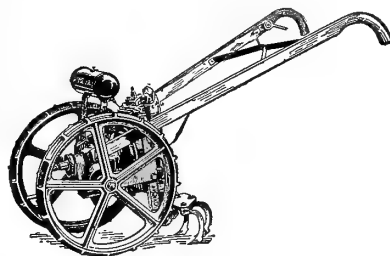
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\$3.50 per dozen—\$21.00 per 100

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**Minataka** (Kunderd) upper petals soft pink, lower petals yellow striped with red.

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\$3.50 per dozen—\$24.00 per 100

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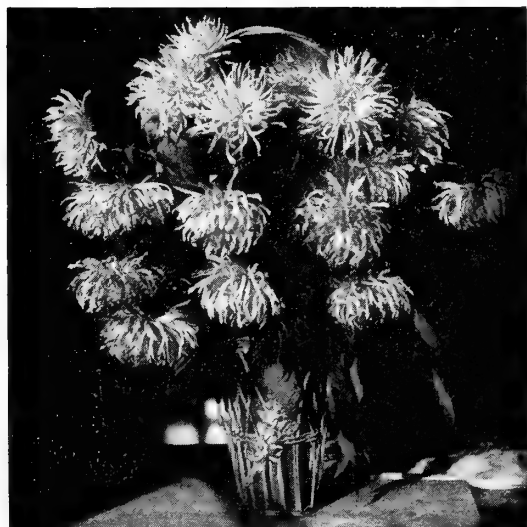


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WHEN making your plans for your summer and fall Gardens, use a liberal assortment of Gladioli. You can easily have a succession of Gladiolus bloom from July until frost. Below we are offering three of the finest Gladioli we know. If you want something extremely rare and beautiful include these in your selection:—

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Exquisite shade of light rose, darker at edges, fading to shell pink at the centre, with brilliant scarlet blotches in the lower petals. Spike tall and erect.

Each 50c., \$5.00 per doz., \$35.00 per 100.

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A grand large primulinus of the most beautiful orange saffron. Strikingly handsome.

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Anywhere among Gladioli this variety stands out pre-eminently. Color beautiful light salmon with orange shade. Very early.

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### SPECIAL OFFER

2 bulbs of each of the above varieties, \$2.00 Postpaid.

6 bulbs of each of the above varieties, \$5.50 Postpaid.

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Choice Mixed Gladioli, including all of the most desirable colors, 75c. per doz. Postpaid. \$5.00 per 100, Postpaid.

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Spring 1922 Garden Annual free on application

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The Publishers cannot undertake to send this book free to children.

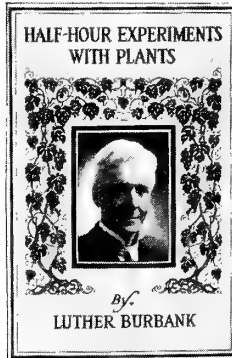
They are invaluable alike to the amateur and the professional plant grower, for they cover the whole field of plant culture from helpful details to the bolder innovations that have given Burbank the name of "miracle worker" and wizard.

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You can find out by getting a copy of our 1922 catalogue. It gives full cultural directions, describes a great many varieties, and illustrates typical blooms (three in natural colors). You can have a charming water garden in a little plot without trouble.

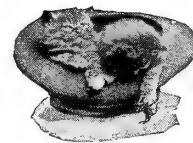
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It describes *William Falconer* (deep red), *William Doogue* (light pink), *Odorata Sulphurea* (bright yellow) and many others of varied colors and sizes. The sorts suitable for tub or barrel culture are indicated. Your name and address on a postcard will bring a copy of this helpful booklet. Send to-day.

**Independence Nurseries**  
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"Grown in Vermont, it's hardy"

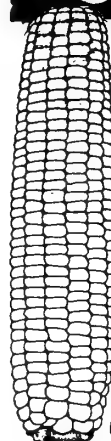
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And another says: "Our Gladioli were very lovely and we appreciate the nice selection and excellent quality."

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**Mrs. F. C. Peters**, a new and delightful shade of rose violet with a crimson blotch. Each \$1.00; dozen \$10.00.

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One extra large bulb of each ..... \$2.75  
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Take the drudgery out of garden work and it becomes a fascinating, healthy outdoor game. There's relaxation and absorbing interest in planting and watching seeds sprout and grow. When you plant and work your garden with Planet Jr., your work is all play—healthful exercise that repays you well. You do the work standing straight, traversing row by row at a steady, even pace. No bending, no continuous kneeling. And Planet Jr. does its work so quickly and cleanly. When cultivating, the sharp hoes slice off weeds short below the surface, leaving a fine, protective soil mulch. Yet you can work right close up to the row without injuring the plants.

# Planet Jr.

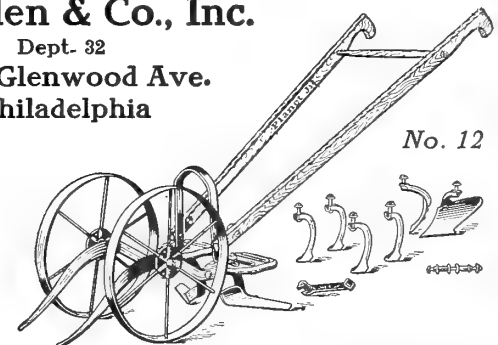
For large home gardens No. 12 Planet Jr. Double and Single wheel hoe combined is a great time and labor saver—one of the most popular garden tools made. Opens and closes furrows; straddles and hoes both sides of a row at once. So light, a woman or boy can use it; so strong, it lasts a lifetime.

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No. 12



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Among the New and Rare Varieties you will find such Gems as Azalea, Edith Wooster, Grizzly and several superb California Creations that have won their place. You will also be pleasantly surprised by our modest prices.

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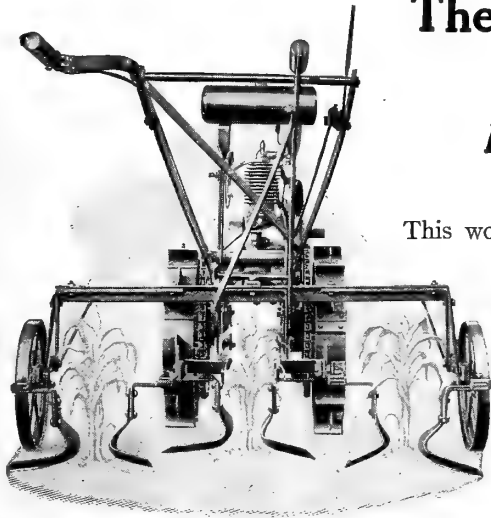
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## Gives you more time for Pleasure Gardening.

Thousands of Garden Lovers begin the year with plans for better lawns and greater gardens only to abandon them later because they are overwhelmed by drudging, time-devouring work. At last comes relief in the form of a cheap, dependable power.



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*It will make your gardening dreams come true.*

This wonderful tractor has an arched axle to work astride narrow rows. It has a new and simple tool control so a boy can do weeding and hoeing better than with a hand or wheel hoe, and from four to six times as fast. It has a differential drive, making it easy to turn,—a wonderful advantage in cultivating and lawn mowing. The attachments for seeding, cultivating and lawn mowing have snap hitches and can be instantly changed without the use of a wrench.

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The "Better-Built" kind constructed not only for attractiveness, but for permanency as well.

This advertisement shows only a few selections of suggestive features taken from our catalogue which contains over one hundred practical illustrations of distinctive Garden decorations for beautifying the surroundings of home.

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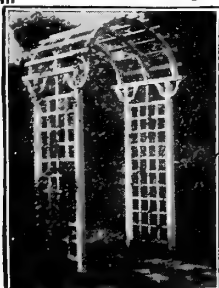
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Mary Steffenson

*Write to-day for free catalogue*

So beautifully distinct from any other dahlia. The soft colors and tints blend so harmoniously. The most exquisitely formed flowers are carried so gracefully, erect to facing, on the long, cane stiff stems. Size, six to eight inches. Color at base of petal, citron yellow, outer half creamy white,

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That you may know our dahlias we make the following

**SPECIAL INTRODUCTORY OFFERS**

- 5 beautiful Cactus Dahlias ..... \$1.00
- 5 grand Decorative Dahlias ..... \$1.00
- 2 Giant Century, 2 unique Collarettes, 2 Ball, 6 in all ..... \$1.00
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Write to-day. A post card will bring you a copy by return mail.

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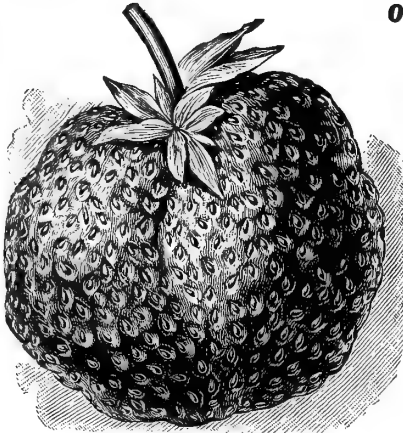
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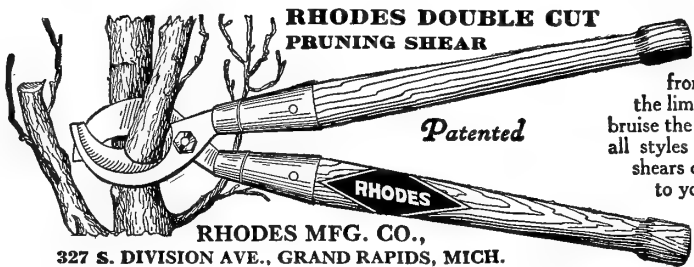
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Why not have a hardy, permanent border which gives you flowers from early April until late November. WE MAKE YOU A SPECIAL TRIAL OFFER. All plants are field grown clumps.

A border 25 feet long and 4 feet wide, including 70 strong plants of the best varieties and blending colors covering the blooming season. Regular price \$15.00.

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I feel sure that you also will find this hardy biennial most pleasing. Easily grown from seed which I can supply at 25c per package, or I can send you strong young plants, prepaid, at 25c each, \$2.50 per doz.

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Makers of Everything in Band and Orchestra Instruments  
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Plan for Beautifying your home grounds. Trained landscape architects prepare it. Use it this spring. Send for it now. FREE.

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MARY McD. BEIRNE  
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American Legion Rose

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**PRICE:** for strong, vigorous, pot-grown plants that will bloom the first season, \$2.50 each. Parcel Post, 25c. extra; 50c. extra for Parcel Post west of Mississippi River. Safe Arrival Guaranteed.

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THE DAHLIA FARM, East Moriches, Long Island, New York

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For years the name of Mott has been identified with the best in Garden Ornaments of every description in bronze and iron.

Our Artists, Designers, and Modelers are at your service to meet special requirements.

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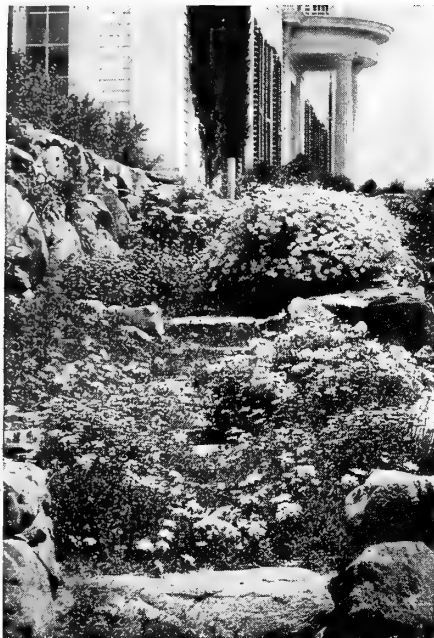
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the new early ruffled pink.

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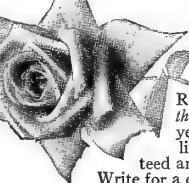
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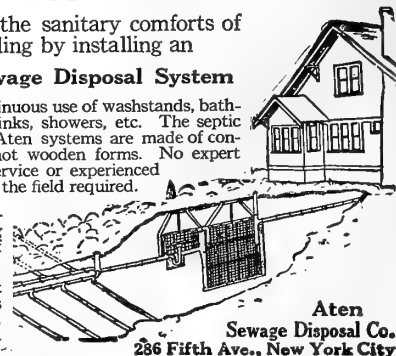
Secure all the sanitary comforts of a city building by installing an

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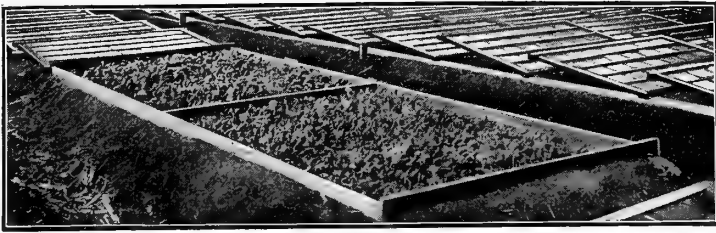
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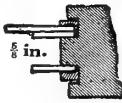
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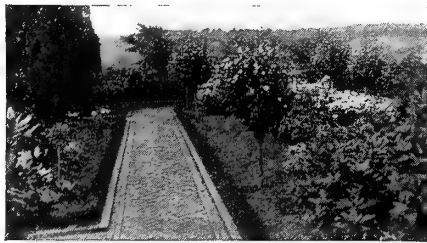
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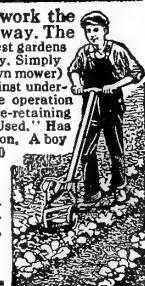
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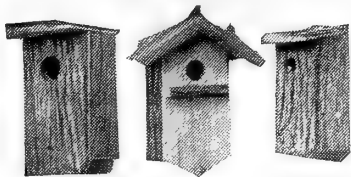
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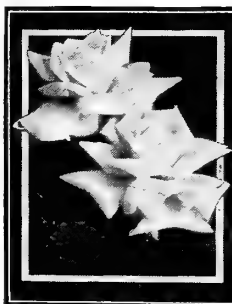
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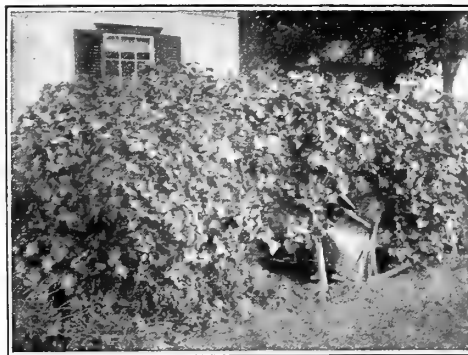
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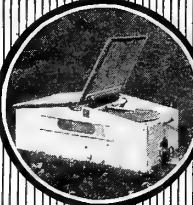
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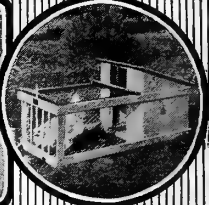




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**I Offer: COLLECTION A** (order by this name). Three (3) bulbs each: America, Annie Wigman, Burrel, Blue Hybrids, Halley, Queenly, Primulnas Hybrids, Meadowvale, War, Mrs. King. These 30 bulbs, all marked and 500 bulblets, postpaid, for \$1.00. (Beyond Fifth Zone add 5c).

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Catalogue for 1922,

listing, Byron L. Smith, Kemp's Wonders, Marshal Foch (K), and several Diener and Kunderd varieties, free.

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## Let This BARTLETT Jointed Tree Trimmer Do the Stretching



YOU don't have to climb a Ladder when you use this Pruner, made in sections 4 feet long. It joins together easily to make an 8, 12 or 16 foot pole.

The Compound Leverhead makes the large limbs cut as easy as the small. Only best of material used in its construction.

8-foot—2 sections	PRICE
12-foot—3 sections	\$4.20
16-foot—4 sections	4.50
	4.80

Deduct 60 cts. per length if long pole is preferred.

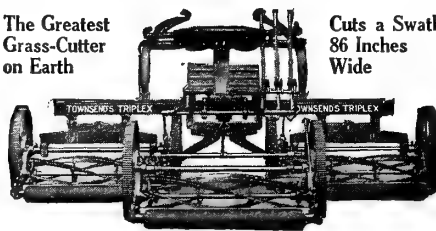
Sent, prepaid, if your dealer doesn't carry them. Ask for circular of Hand Pruners, Saws, Lopping Shears and Long Pole Pruners.

**BARTLETT MANUFACTURING CO.**  
29 East Lafayette Ave., Detroit, Mich.

## TOWNSEND'S TRIPLEX

The Greatest Grass-Cutter on Earth

Cuts a Swath 86 Inches Wide



Floats Over the Uneven Ground as a Ship Rides the Waves

One mower may be climbing a knoll, the second skimming a level, and the third paring a hollow. Drawn by one horse and operated by one man, the TRIPLEX will mow more lawn in a day than the best motor mower ever made; cut it better and at a fraction of the cost.

Drawn by one horse and operated by one man, it will mow more lawn in a day than any three ordinary horse-drawn mowers with three horses and three men.

Does not smash the grass to earth and plaster it in the mud in springtime, neither does it crush the life out of the grass between hot rollers and hard, hot ground in summer, as does the motor mower.

The public is warned not to purchase mowers infringing the Townsend Patent, No. 1,209,519, December 19th, 1916.

Write for catalogue illustrating all types of Lawn Mowers

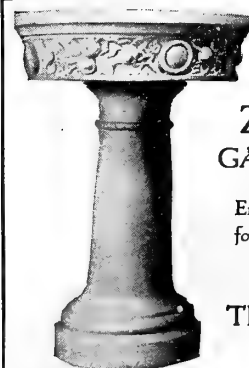
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A quarterly illustrated magazine devoted exclusively to the subjects of COUNTRY, TOWN and ESTATE PLANNING.

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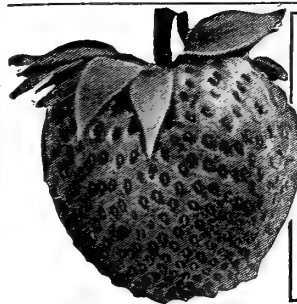
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We have chosen five of our finest roses, reserving strong, sturdy two-year plants of each, costing \$1.10 singly, for this collection. The whole color range of rose beauty is covered by

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*Picea albertiana var. conica.*

**PICEA albertiana var. conica.** A beautiful, pyramidal evergreen tree of slender proportions. Its density of short, silvery green needles gives it the appearance of a Retinospora, rather than a tree; a rare and valuable plant.

6 to 8 inches . . . . .	\$2.00 each	10 to 12 inches . . . . .	\$4.00 each
8 to 10 inches . . . . .	3.00 each	12 to 14 inches . . . . .	5.00 each

## FARQUHAR FAMOUS FLOWER SEEDS

are known from the Atlantic to the Pacific for **QUALITY**—the result of over 30 years' experience in the selection of the best types by us the world over. Complete collections of all the best varieties will be found in our Garden Annual—mailed free on application.

**R. & J. FARQUHAR COMPANY**

**Boston, Mass.**



## Dodson Bird Houses



*I've found March the best month to put out new bird houses. They have a chance to season a little before the birds come. It's the early birds, too, that need protection.*

*Joseph H. Dodson*  
President, American Audubon Association

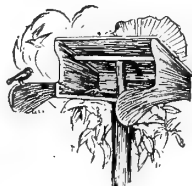
## Here are the houses—that have saved hundreds of trees and shrubs

Last March, 500 Dodson Bird Houses of various designs were installed at the Olympia Fields Country Club, Chicago. During the summer every house was occupied. The club grounds were alive with birds, bird songs filled the air. More than this—the trees, shrubs and greens were protected from insect pests. The troublesome mosquito was materially reduced in number.

A few Dodson Bird Houses scattered thru your garden—one hanging from a tree—will attract the birds. Mr. Dodson has created them after thirty years' loving study of the birds. They are most picturesque and built of staunch materials. We send them to you anywhere. Let them add a touch of refinement to your grounds. Write to Mr. Dodson.

  
Wren House, solid oak, cypress shingles, copper coping, 4 compartments, 28 inches high, 18 inches diameter. Price \$6.00.

  
Purple Martin House, cottage style, 28 compartments, 32x27 inches. Price \$16.00. Other styles up to \$78.00.

  
Automatic Sheltered Feeding Table—operates like a weather vane, always a shelter against the wind, with 8-ft. pole, size 24x22x12. Price \$7.50. With copper roof, \$10.00.

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Dodson Sparrow Trap, guaranteed to rid your premises of this noisy, quarrelsome nest. \$8.00.

**FREE** Mr. Dodson's fascinating booklet, "Your Bird Friends and How to Win Them," with all the styles of Bird Houses and Mr. Dodson's valuable suggestions. A colored bird picture suitable for framing will also be sent free.





Colortype of group of evergreens on the lawn of Mr. J. H. Otley, North Country Colony, Glen Cove, Long Island, designed by Messrs. Hinchman & Pilat, Landscape Architects, New York City. The first two trees on the right are Austrian Pines; the next Colorado Blue Spruce; the next lighter blue, Concolor Fir or White Fir. At the base the low, flat-topped evergreen is Mugho or Mountain Pine. You can have trees larger than this now.

## WALLS OF GREEN—Don't Plant Wait-For-Me Evergreens

These trees have been grown for the most discriminating clientele in the world and hundreds of carloads have been shipped to Boston, Buffalo, Cleveland, Sewickley, Detroit, St. Louis, Baltimore, Washington and barge loads to Newport, Bridgeport, Greenwich and Irvington.

They are guaranteed to grow satisfactorily or replaced free with new stock f.o.b. the nursery. The replace is very, very small. Why? Because the trees are prepared to grow satisfactorily.

Austrian Pines as illustrated . . . . .	7' 8 years old	\$30.00 each	Douglas Spruce . . . . .	16' 20 years old	\$75.00 each
Jack Pine . . . . .	12' 10 " "	25.00 "	Oriental Spruce . . . . .	6' 12 " "	18.00 "
Scotch Pine . . . . .	7' 8 " "	15.00 "	Nikko Fir . . . . .	7' 9 " "	10.00 "
Red Pine . . . . .	6' 8 " "	20.00 "	Nikko Fir . . . . .	12' 15 " "	60.00 "
Colorado Blue Spruce as illustrated . . . . .	10' 16 " "	75.00 "	White Fir as illustrated . . . . .	8' 12 " "	25.00 "
Douglas Spruce . . . . .	7' 14 " "	15.00 "	White Fir . . . . .	12' 16 " "	60.00 "

You can get a good wall of green with evergreens from 4 to 6' high.

## Cool Shade Trees This Summer—Not Little Sticks You Can Pat On The Head

Perhaps you did not know it was practical to get a carload of big Oaks, Maples, Lindens, Beech, that save you 10 to 25 years. Here are acres and acres growing like an orchard. Transportation is normal, we take the risk; labor is available and it's your duty to employ it.

Norway Maples . . . . .	18-22' 4" dia.	15 years old	\$15.00 each	Sweet Gum . . . . .	18' 4-5" dia.	17 years old	\$25.00 each
Norway Maples . . . . .	18-22' 5" "	17 " "	40.00 "	Tulip Tree . . . . .	18' 4" "	17 " "	25.00 "
Norway Maples . . . . .	24-26' 7" "	20 " "	80.00 "	Pin Oak . . . . .	20' 4" "	17 " "	35.00 "
Sugar Maples . . . . .	16' 3-4" "	15 " "	15.00 "	Pin Oak . . . . .	25' 5" "	20 " "	50.00 "
European Beech . . . . .	7" wide	16 " "	50.00 "	Silver Leaf Linden . . . . .	20' 5" "		40.00 "

You have been waiting for prices to come down. There has been 25 to 50% reduction in several of the above items. Less than carloads? Certainly, that is the way we like to ship, crate them up or pack them in a bale of straw. Motor truck loads to 100 miles.

## Hardy Garden Flowers

Send for the Home Landscapes with chart of color, season and height. Satisfactory color guaranteed. A valuable aid in planting your garden but more valuable is the fact that you can come here in the spring and plant your garden, come again in June, July, August and September. Visit the Rock Garden, Hicks Nurseries, see things in bloom, pick up the plants from pots and make a better garden.

Henry Hicks

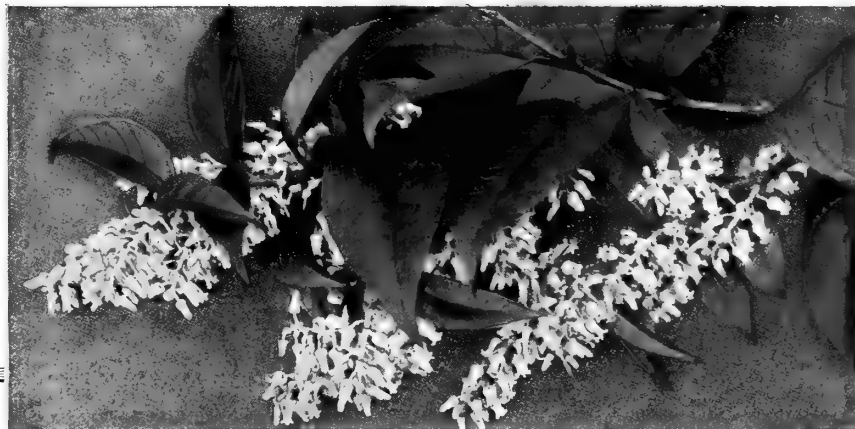
## HICKS NURSERIES

Department M

Westbury, Long Island

### New and Rare Plants

Come to the Nurseries any-time. prowl around, feel, taste, smell. Many of the plants are in pots, pick them up, put them in your car, report how many you have taken. If you want to have a run in the evening, telephone in your order and it may be ready for you on the office steps.



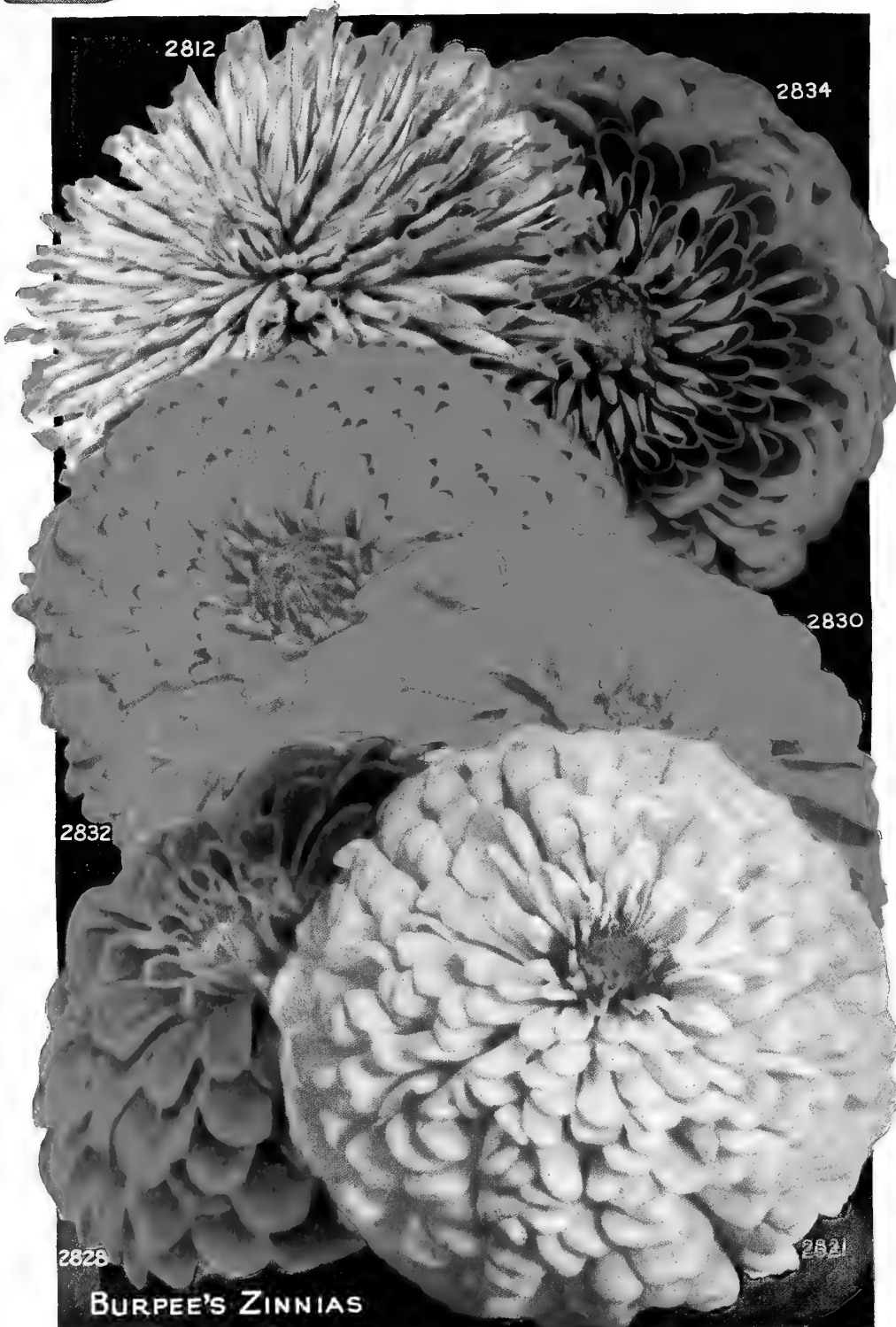
LEUCOTHOE CATESBAEI. A horrible name, but one of the prettiest plants of the Alleghany Mountains. The foliage is great, arching sprays of bronze-evergreen. Just the thing for extensive planting in the woodland, on acid soils where Laurel is at home. Put them under your shrubbery to fill out and feather down and to give winter beauty. Use them at the house foundation with Japanese Spurge to tie together the Yew, Laurel, Azaleas and Rhododendrons. The flowers are showy clusters of white bells in May. Plants 12-18" high are \$1.00 each; \$9.00 per 10.

See Garden Magazine, February, page 355, illustrates Elscholtzia which we are going to name Heather Mint, spikes of lavender in September. Plants, \$1.00 each.

### How to Order

Send sketches, snapshot plans of what you or your landscape architect want to do. Tell whether your soil is limestone, loam or sand. We will help you carry out your plans.

# Burpee's Zinnias



Zinnias are a great Burpee specialty and our strains are unsurpassed for their large flowers. Burpee's Zinnia seed is grown on Burpee's Fordhook Farms which are world-famous as "The Largest Trial Grounds in America." Zinnias are easily grown and bloom freely with but little attention. They may be counted upon for a continuous show of flowers from early July until frost.

**2812 Burpee's Cactus-Flowered Zinnias.** An altogether unique new Zinnia in which the petals are so curled that they become almost tubular. In their artistic arrangement they greatly resemble a fine-petaled Cactus Dahlia. The colors range through various shades and combinations of yellow, orange, pink, and rose to scarlet and crimson. Pkt. 20 cts.

**2834 New Dahlia-Flowered Zinnias.** This is another outstanding new type of Zinnia, greatly resembling a Dahlia in general appearance. The flower petals stand well apart, and this characteristic lends a graceful and airy appearance to the flowers. They come in many fine colors. Pkt. 15 cts.;  $\frac{1}{4}$  oz. 75 cts.

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**2830 Giant Canary Yellow.** The flowers measure 4 to 5 inches across and are borne profusely all during summer and fall. They are a rich shade of canary or lemon-yellow. Pkt. 10 cts.;  $\frac{1}{4}$  oz. 45 cts.; oz. \$1.25.

**2828 Giant Crimson.** This is a rich crimson with a soft velvety finish. It blends particularly well with the lighter shades, and is one of the largest Zinnias known. Pkt. 10 cts.;  $\frac{1}{4}$  oz. 45 cts.; oz. \$1.25.

**2821 Giant Rose.** This is a beautiful new rose shade. The flowers are of immense size and perfect shape. Pkt. 15 cts.;  $\frac{1}{4}$  oz. 60 cts.; oz. \$1.75.

**Zinnia Collection** for 50 cts. This remarkable collection contains one packet each of the six beautiful Zinnias illustrated in colors. These wonderful varieties should be in every garden. The complete collection will be mailed to your door, postpaid, for 50 cts.

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# GARDEN MAGAZINE

APRIL 1922

*Foundation Plantings for Houses Big and Small*

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Announce the first complete offering of

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Awarded Gold Medal by  
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**Dorothy Wheeler**—A beautiful pink. Awarded a Silver Medal M. H. S. 1921.

Each 30c., dozen \$3.00

**Antares**—Salmon-orange blooms on long, slender stems. One of the choicest of the season's offerings.

Each 20c., dozen \$2.00

**Minataka**—Extra large flowers of yellow, shading at tips of petals to salmon-pink.

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**Marechal Foch**—A most delightful warm salmon-pink, growing nearly 4 feet tall, it shows 6 gigantic blooms open at one time. The most consistent prize-winner of them all.

Each 35c., dozen \$3.50.

### EXCLUSIVE MAURICE FULD, Inc. OFFER:

6 bulbs of each of the above varieties (value \$6.25)..... \$5.00  
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**PRIMULINUS HYBRIDS, Assorted**—Cary Farm Mixture, consisting of only those varieties exhibited by Mr. Fairbanks this past season. Twenty-two varieties of the twenty-four shown received awards.

Per dozen \$1.00, per hundred \$7.00

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His productions were the most consistent prize winners of all the Gladioli shown in exhibitions for the past twenty years.

Mr. Fairbanks enjoys the unique distinction of being the only Gladiolus grower ever to receive a GOLD MEDAL from the Massachusetts Horticultural Society as a mark of recognition of preeminent success in this important branch of Floriculture.

Let MY GARDEN FAVORITES, our "just delightfully different" catalogue suggest the best types of vegetable and flower seeds, Gladioli, Dahlias and plants for your 1922 garden,—a copy is yours for the asking.

*Maurice Fuld, Inc.*  
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7 West 45<sup>th</sup> St. New York

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## The Finest American and European Introductions

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White Giant

#### TEN OF THE FINEST GLADIOLI

	EACH	DOZ.	100		EACH	DOZ.	100
<b>Conspicuous</b> , light blue, dark blue spot with very attractive yellow blotch on lower petals	\$.20	\$2.00	\$15.00	<b>Prince of India</b> , a very unusual color, hard to describe. Color varies from light to deep smoky gray, with many petals freely penciled with dark slaty blue. A remarkable mixture of colors which blend well	\$.50	\$5.00	\$35.00
<b>Evelyn Kirtland</b> , rosy pink, darker on edges, shading to shell pink in the centre; very large spikes, unusually attractive	.20	2.00	15.00	<b>Red Canna</b> , a greatly admired novelty. The large scarlet flowers and exceptionally tall, erect stems make this one of the best scarlet cut flowers	.25	2.50	16.00
<b>Flora</b> , beautiful golden yellow. This large Gladiolus is a pure color, and a beauty in this shade	.50	5.00	35.00	<b>White Giant</b> , the finest and largest pure white Gladiolus known. This variety excels any other white for the reason that it is pure color and colossal size. The spike is very erect and many flowers are out at the same time, making it wonderful for cut flower purposes	.25	2.50	18.00
<b>Gretchen Zang</b> , deep pink with rich markings on lower petals	.20	2.00	15.00				
<b>Majestic</b> , fine pink with orange tint. A large flower of great brilliancy and very distinct in this color	.50	5.00	35.00				
<b>Mr. Mark</b> , light blue with darker spot. One of the best blue Gladioli	.20	2.00	15.00				
<b>Pride of Hillegom</b> , large scarlet, long spikes, very erect	.20	2.00	15.00				

#### SPECIAL COLLECTION

1 bulb each of the above 10 named varieties ( 10 bulbs)	\$ 3.00
5 bulbs each of the above 10 named varieties ( 50 bulbs)	13.00
10 bulbs each of the above 10 named varieties ( 100 bulbs)	24.00
25 bulbs each of the above 10 named varieties ( 250 bulbs)	50.00
100 bulbs each of the above 10 named varieties (1000 bulbs)	195.00

#### PRIMULINUS HYBRIDS

We offer the following varieties at \$1.25 per doz.; \$10 per 100

**Anny**, bronze, flower of great beauty.  
**Fire Queen**, very tall spikes of a pleasing scarlet shade, with yellow blotch on lower tips.  
**Jane**, soft salmon yellow, a very pleasing and attractive color that will insure popularity for this variety.  
**Jaune D'Oeuf**, extra salmon, slightly bronze tinted, with yellow tip, a lovely variety that is much admired wherever grown.  
**Lemon Pillar**, a very tall and erect spike of soft citron yellow.

**Lutea Pallida**, bright deep yellow; tall and strong spike.  
**Nelly**, light yellow, very pretty.  
**Orange Brilliant**, a very brilliant orange flower of medium size but extremely beautiful.  
**Parisian Yellow**, very early; light yellow; very fine cutflower.  
**Reine Victoria**, silvery rose, very early.  
**Traub**, very soft shade of pink; very beautiful.  
**Vesuvius**, deep pink; shading to rose pink and canary yellow eye.

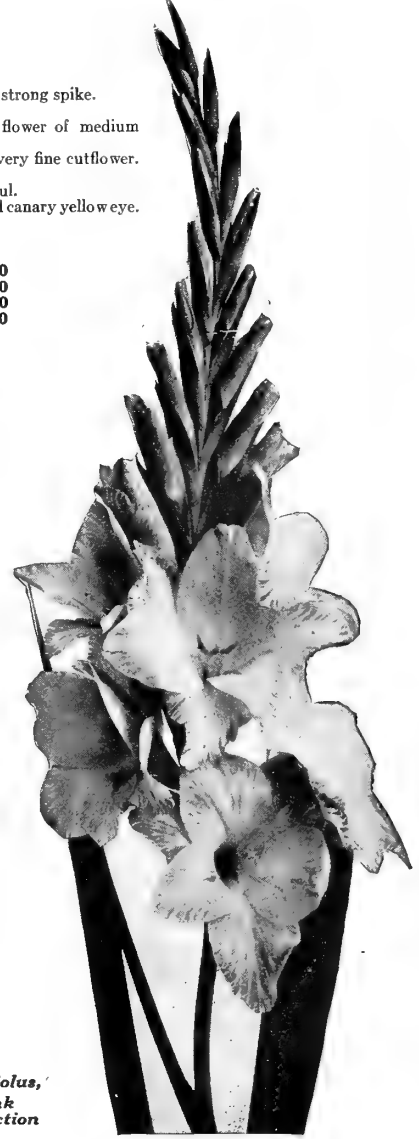
#### SPECIAL COLLECTION

5 bulbs each of the above 12 named varieties ( 60 bulbs)	\$ 6.00
10 bulbs each of the above 12 named varieties ( 120 bulbs)	12.00
25 bulbs each of the above 12 named varieties ( 300 bulbs)	29.00
100 bulbs each of the above 12 named varieties (1200 bulbs)	115.00

#### TWO COLLECTIONS OF LARGE FLOWERING GLADIOLI

	DOZ.	100
<b>America</b> , lavender pink	\$.75	\$5.50
<b>Anne Wigman</b> , cream yellow	.75	5.50
<b>Electra</b> , light red, white throat	.75	5.50
<b>Empress of India</b> , mahogany red	.75	5.50
<b>Faust</b> , wine red	.75	5.50
<b>Glory of Holland</b> , vigorous white	.75	5.50
<b>Halley</b> , salmon	.75	5.50
<b>Hilda</b> , carmine	.75	5.50
<b>Mrs. Francis King</b> , coppery red	.75	5.50
<b>Niagara</b> , large yellow	.80	6.00
<b>Pink Beauty</b> , deep pink with carmine blotch on lower petal	1.00	7.50
<b>Willy Wigman</b> , creamy white, carmine blotch	.75	5.50
5 bulbs each of the above 12 named varieties ( 60 bulbs)	\$ 4.00	
10 bulbs each of the above 12 named varieties ( 120 bulbs)	7.00	
25 bulbs each of the above 12 named varieties ( 300 bulbs)	17.00	
100 bulbs each of the above 12 named varieties (1200 bulbs)	65.00	

	DOZ.	100
<b>Baron Joseph Hulot</b> , the most distinct purple	\$1.25	\$ 9.00
<b>Etna</b> , brilliant red	.75	5.50
<b>Lily Lehman</b> , very fine white	.80	6.00
<b>Loveliness</b> , cream white, very fine	1.00	7.50
<b>Miss Gladys Harkness</b> , extra white	.90	6.50
<b>Golden West</b> , bright orange red, with darker stripes	1.00	7.50
<b>Panama</b> , rose pink	1.00	7.50
<b>Peace</b> , large white, crimson eye	1.50	11.00
<b>Pink Perfection</b> , exquisite perfect pink; very large	1.40	10.00
<b>Prince of Wales</b> , extra pink, orange shading	1.25	9.00
<b>Schwaben</b> , yellow, crimson blotch; immense spike	1.40	10.00
<b>Wilbrink</b> , this is a pink Halley, with all of Halley's good qualities	1.00	7.50
5 bulbs each of the above 12 named varieties ( 60 bulbs)	\$ 5.00	
10 bulbs each of the above 12 named varieties ( 120 bulbs)	9.70	
25 bulbs each of the above 12 named varieties ( 300 bulbs)	24.05	
100 bulbs each of the above 12 named varieties (1200 bulbs)	95.00	



Gladiolus,  
Pink  
Perfection

We prepay all charges to your home if order is accompanied by cash, providing your address is in the following states: New York, New Jersey, Pennsylvania, Delaware, Maryland, Connecticut, Vermont, New Hampshire, Maine, Rhode Island, Massachusetts, and District of Columbia.

Terms: Our business is based on cash with order, however, if credit is desired it is necessary to furnish Bank References. No credit below \$10.00.

Did you see our Dahlia Ad. in the March Garden Magazine?

## Van Bourgondien Bros. Box B, Babylon, L. I., N. Y.

Bulb and Plant Specialists

Nurseries: Hillegom, Holland and Babylon, L. I., N. Y.





# CALIFORNIA DAHLIAS

## The Big Prize Winners

At all the shows from the Atlantic to the Pacific are from creations originated at the world renowned Bessie Boston Dahlia Farm, San Mateo, California. Many of the leaders featured in the Dahlia catalogues East and West are Bessie Boston creations too.

### PALACE HOTEL SHOW SAN FRANCISCO

Took 23 prizes, including Gold Medal, for most meritorious display and twelve first prizes.

### SHUDOW'S LAVENDER (A Bessie Boston Creation)

Took first prize at Los Angeles for best Dahlia in the show.

### TWENTY NEW VARIETIES FOR 1922

Including four new Pinks. Every Dahlia enthusiast who wants to be fully informed and who desires the best should write for our new catalogue.

**BESSIE BOSTON DAHLIA FARM**  
(on the Highway)  
SAN MATEO, CALIFORNIA

# Tackle the Season's Big Job Right!

It is one thing to make a garden and another to keep that garden going! There is no question but that gardening enthusiasm is easily squashed when the work of cultivating the growing crops becomes a hardship. Old fashioned tools stand for backaches and meager rewards for hard work. Lucky indeed is the gardener who has at his disposal:

## Gilson Garden Tools

*The Equipment for Greater Crops*

In most soils, cultivation is more necessary than fertilization. Given a good average garden soil, the matter of crops will be determined entirely by the amount of cultivation given the plants. Of the vast number of garden cultivators available, none serve in better fashion than

### Gilson Weeders—

### The Safe Tool for Gardeners of All Ages



No other tool ever invented has made good on as big a scale as Gilson Weeders. It is the tool with which every stroke counts. Back and forth the double edge rocker blade travels through the soil, cutting off weeds, pulverizing the soil. Absolutely the safest garden tool for children, who can use it as effectively as grown-ups.

Made in four sizes, as follows:  
3 1/2 in. Blade for narrow rows ..... \$1.05  
5 in. Blade for heavy soil ..... 1.15

6 in. Blade for lighter soil ..... 1.25  
8 in. Blade for wide rows ..... 1.35

If your dealer does not handle Gilson Tools, we will supply the Weeders at above prices, postpaid with handle.

### Liberty Cultivators—

### The Adjustable Cultivator for All Round Gardening



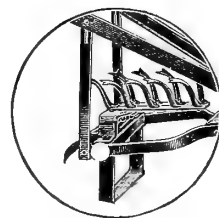
The Liberty stands foremost as the greatest advance made in the scientific shape of cultivator teeth. These teeth sink into the soil naturally, no downward pressure needed. They cut the weeds, besides uprooting them. By removing center tooth, both sides of seedling row may be cultivated at once.

Liberty Cultivators are made in 3 sizes, with 5, 7 and 9 V shaped cutting teeth. Made either as a hand cultivator, or, attached to a light yet exceedingly strong wheel frame, becoming a most powerful Wheelhoe.

Prices, 5 Tooth Liberty Hand Cultivator, \$1.15; 7 Tooth, \$1.45; 9 Tooth, \$1.70.  
Wheel Outfit, 14 inch Wheel with 7 Tooth Cultivator, \$3.70.  
Hand Cultivators, delivery postpaid, with handle; Wheel Outfit by express.

### The Gilson Triplex—

### The All-Round Combination for Every Man's Garden



Distinctly a man's cultivator, because of its weight. It combines all the advantages of the Gilson Weeder, the 9 Tooth Liberty Cultivator, and a Plowshare. All these are arranged in unique fashion on a pivot axle, easily locked and unlocked without tools, by a hand lock nut as shown in illustration to right.

Price of Gilson Triplex Wheel Outfit, Express prepaid East of Rocky Mountains.....\$8.75

### Instructive Booklet Free

"Bigger Crops Through Cultivation" will give you some valuable hints about the relative importance of cultivation as a sure way to greater crops from every square foot of soil. Besides, it will bring to you facts about the best type of tools for different soils, crops and seasons. Incidentally, it is an index to the entire Gilson line of garden tools including a dandelion digger, scratch weeder, tools for the lawn, etc. Please afford us the chance to send you this booklet by asking for it to-day.



**J. E. GILSON COMPANY**

102 Valley Street

Port Washington, Wis.



## Armsful of them—

August-October.

Here is a perennial which stands head and shoulders above others—for cut flower purposes. Helonium or Sneezewort not only makes a spectacular show in the autumn garden, but the cut flowers are of exceptionally lasting qualities.

### Helonium Autumnale Rubrum The Hardest of The Family

The color is old gold suffused with bright terra-cotta, changing to wall flower red. \$5.00 per doz.; \$35.00 per 100.

Complete Catalogue to America's Largest Stocks of Hardy Plants free on request.

**WAYSIDE GARDENS** Largest Growers of Perennials in America **Mentor, Ohio**

# Exclusive!—

Rare and Glorious Flowers That Will Give Individuality to Your Garden— And Joy to Your Heart!—

1. **A Beautiful Double Salmon-Pink Clarkia.**—Like a spray of apple blossoms, 18 inch stems, studded with beautiful double rosette-shaped flowers. Blooms quickly from seed. Pkt. 15c.
2. **The Lovely Arctotis.**—A white daisy with blue center surrounded by a ring of yellow stamens tinged lavender on the back of the petals, 18 inch stems. Excellent flowers for cutting. Pkt. 15c.
3. **New Single Black Dahlia "Titania."**—Rich velvety black flowers 4 inches across on long, slender stems. From seeds sown outdoors in May, plants will bloom from August until frost. Pkt. 50c.
4. **Globe Amaranth Orange.**—Flowers resemble huge clover heads of a beautiful orange-buff color, tinged with bronze. A lovely autumn shade. You will give yourself a real treat if you grow them in your garden. The flowers can also be grown for winter bouquets. Pkt. 25c.
5. **Glorious Sunkissed Golden-Yellow Tulip-Poppy.**—Held upright from 14 inch stems. Wonderful for cutting. Just like a tulip. Lasts a long time in water. Pkt. 15c.
6. **Lovely Salmon-Pink Gaillardia.**—On stems 18 inches long with flowers 3 inches in diameter. An exquisite shade. Pkt. 15c.
7. **American Beauty Aster.**—Immense double flowers of perfect rose form. Often from 6 to 7 inches in diameter, 3 ft. stems are not unusual. Excellent for tall vases. Same color as American Beauty rose. Pkt. 25c.
8. **An Annual Pink Statice.**—Large flower heads of a cloud-like mass of beautiful soft rose color. On 2½ ft. stems. Can be dried for winter decoration, the same as straw-flowers. Pkt. 25c.
9. **Schling's New Giant Garden Orchids.**—Like Orchids in shape and color. Flowers fully 2 inches across, with exquisite shades and markings. Pkt. 35c.
10. **Chinese Lantern Plant.**—Sturdy plants, with foliage of a rich, refreshing emerald green. The small white flowers develop into balloon-shaped fruit capsules which are a revelation; a wonderful orange-red—decorating the garden all during Sept. and Oct.—and when you cut it, will decorate your room all winter. Pkt. 25c.

The above Collection of Ten Exclusive Flowers \$2.00 or separately at prices given.

## Once Again—We Repeat Our Sensational Offer of

### The Flower Novelties of 1922!

You must have them in your garden!

1. **Schling's Wonderful New Snapdragon "Indian Summer."**—The greatest achievement in Snapdragons to date, introducing a new and bewitching color never before seen in Snapdragons—a lovely rich, velvety copper color indescribably beautiful. Pkt. \$1.00.
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3. **New Bedding Petunia Violet Queen.**—A real deep violet blue. Blooms as freely as Rosy Morn. Pkt. 50c.
4. **New Bedding Petunia Purple Queen.**—Exquisite rich clear purple overlaid with a velvety sheen. Pkt. 50c.
5. **Adonis Aleppica.**—16 to 18 in. high. From 16 to 20 main stems with fine dark blood-red flowers. Pkt. 50c.
6. **New Giant Dahlia-Zinnia.**—A true giant in size. Pkt. 50c.
7. **New Lilliput Poppy.**—Only 12 in. high, constantly in bloom. A lovely daybreak pink. Pkt. 50c.
8. **New Miniature Dahlia Peter Pan.**—Flowers Anemone-shaped with tubular center. All the pastel shades. Pkt. 75c.
9. **New Sunflower Dazzler.**—Flowers 4 in. across, of a rich chestnut, tipped orange with dark center. Pkt. 35c.
10. **Dianthus Laciniatus Purpureus Fl. Pl.**—A purple garnet, inclined to a claret. Beautifully fringed. Pkt. 50c.
11. **Cynoglossum Heavenly Blue.**—Brilliant blue forget-me-not flowers from May until frost. Pkt. 50c.
12. **New Giant Zinnia, Apricot.**—Charming new color in Giant Double Zinnias. Pkt. 25c.

Above novelties sold separately at the prices named, or the entire collection of twelve worth \$6.35, at \$5.00

Use this Coupon For Either or Both Offers

Our "Book for Garden Lovers" (25c a copy) FREE with every order.

MAX SCHLING SEEDSMEN, Inc.,  
24 West 59th Street, New York

I enclose \$..... Please send me your

- Collection of Ten Exclusive Flowers \$2.45 value for \$2.00
- 12-Novelties Collection, \$6.35 value, for ..... \$5.00
- BOTH Collections, \$8.80 value, for ..... \$6.50
- ADD \$1.00 for 2-oz. pkg. *Perpetual Spinach*

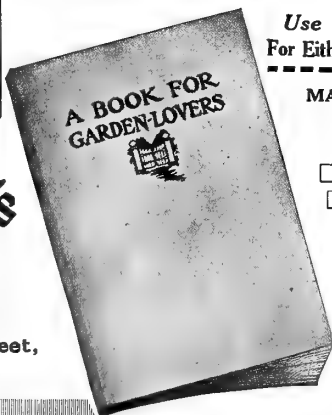
ALSO, FREE, your "Book for Garden Lovers," (Sent gratis with any of above offers)

Name .....  
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### Exclusive!

#### A PERPETUAL SPINACH

Developed exclusively by ourselves, and not obtainable elsewhere. A real Spinach that you can cut and recut, and it will come and come again—not a Swiss Chard, but a big-leaved, quick growing summer and fall Spinach which takes the place of all other varieties. A 2-ounce package which will cost you only \$1.00, if you remit at once, is enough to supply the table with this delicious Spinach for a whole summer.



Schling's  
Seeds

24 West 59th Street,  
New York

## DAHLIAS

None over a dollar and ranging to ten cents per tuber. A sifted, selected choice collection, twelve years in the making. Worth your attention, will save you money.

### Bolles Dahlia Brochures (Illus.)

Written by an American Grower for American amateurs and professionals, for American conditions of climate, soils, and markets. Beautifully illustrated.

#### These Booklets

are really de luxe editions. They are not cheap little pamphlets. They measure 5 x 7½ inches, are beautifully printed upon a most attractively surfaced paper, of artistic appearance and value. They are well illustrated. They are bound in a heavy, colored cover with the title not merely printed, but placed in a die-sunk panel with a specially tinted surface.

#### Returnable copies

sent upon receipt of price. Try one or more of the booklets. Money back next mail, if returned.

#### Don't Plant

valuable Dahlias this year without the latest, complete, most exhaustive information obtainable. Bolles Booklets have exactly what you want, and all you need to know.

Harvesting and Storage, may save your crop of tubers. Fertilizer and Large Blooms, tells how to grow garden and exhibition blooms. Price, 35 cents each.

#### Dahlias From Seed

Propagation and Breeding New Varieties, explains growing from tubers, from seeds, and how, by cuttings, fifty plants may be obtained from a single clump. Also explains cross-breeding (Hybridizing), and sets forth the conditions under which new dahlia creations may be produced by the amateur as well as by the professional grower; (Double Number), 50 cents.

Cultivation (Double Number), price fifty cents a copy. These four are off the press, and ready for your order to-day.

There are three other booklets. Prospectus sent with my catalogue.



My 1922 Dahlia Catalogue now ready awaits your request



Charlton Burgess Bolles  
R.F.D. 3, Box 81 Media, Penna.

## Selling Out

### The Famous Rose Hill Nurseries

North Avenue, New Rochelle, N. Y.

THERE are still some great bargains to be had in fine, large specimen trees, both Deciduous and Evergreen:

A great collection of Box Trees in all sizes, shapes and forms. They are not the tender varieties. But the hardy and sturdy types, including also the Golden Variety.

Koster Blue Spruce, Retinosporas, Colorado Spruce, Douglas Fir, Weeping and Copper Beech, Rhododendrons, both hybrids and native varieties. Also large collection of double and single Lilacs.

It should be noted that the real big Bargains are in the larger size specimen trees, several thousands of which have been reduced from 40 to 50%. These trees should be seen to be fully appreciated.

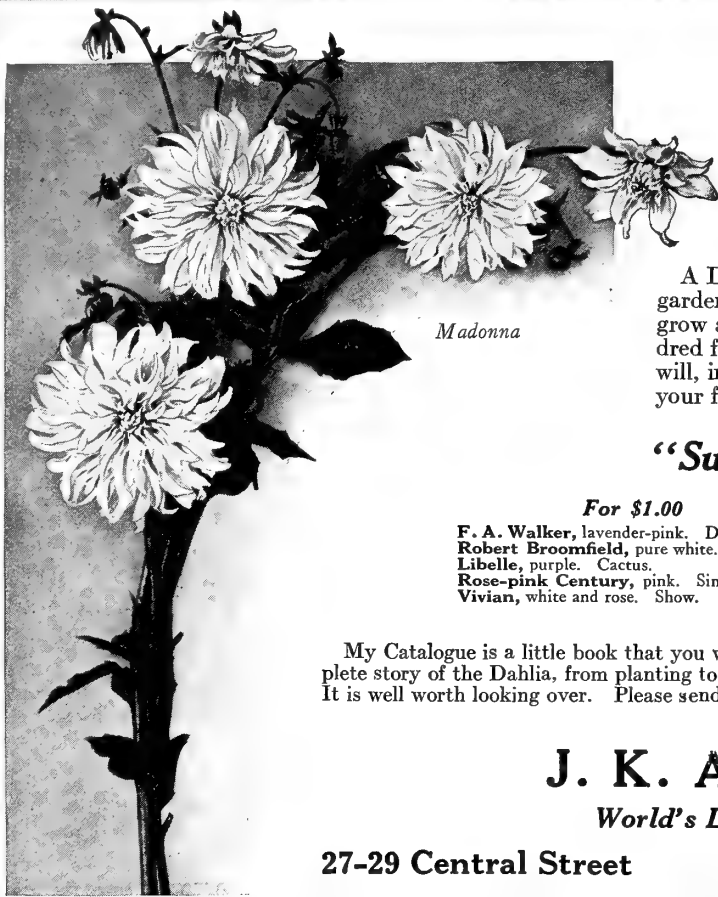
Flowering Shrubs, Roses, and a complete list of hardy Perennials. All of which are in prime condition, and must be sold to settle Estate.

#### ROSE HILL NURSERIES

North Avenue New Rochelle, N. Y.  
Near Wykagyl Station on N. Y., Westchester & Boston R. R.







# Alexander's Dahlias

"A Hundred Forms and a Thousand Colors"

A Dahlia Garden is the most satisfactory, the most complete of all flower gardens. The Dahlia, to me, is the most fascinating of all flowers. It will grow and bloom for you, for everybody. It will bring you literally, "a hundred forms and a thousand colors" in bewildering and charming variety. It will, in fact, prove a source of the most exquisite pleasure to both you and your friends.

## "Sure to Bloom" Collections

(TUBERS-PREPAID)

For \$1.00

F. A. Walker, lavender-pink. Decorative.  
 Robert Broomfield, pure white. Show.  
 Libelle, purple. Cactus.  
 Rose-pink Century, pink. Single.  
 Vivian, white and rose. Show.

For \$2.00

Madonna, white. Peony flowered.  
 Mina Burgle, scarlet. Decorative.  
 Maud Adams, pink and white. Show.  
 W. B. Childs, purple-maroon. Cactus.  
 Zeppelin, lavender. Peony-flowered.

My Catalogue is a little book that you will be glad to get and glad to keep. It contains the complete story of the Dahlia, from planting to harvesting and care of the tubers, and is fully illustrated. It is well worth looking over. Please send for your copy.

## J. K. ALEXANDER

World's Largest Dahlia Grower

27-29 Central Street

East Bridgewater, Mass.



"The Dahlia King"



## There is Only One Real Rose Bug Remedy— MELROSINE—

The All-round Contact Insecticide

Fatal to every bug it touches. Aphis, striped or spotted beetles, spiders, thrips, sawbugs, and all kinds of plant lice, even the most difficult of the plant louse species, the black aphid, is destroyed by MELROSINE.

Gal'on Can.....	\$6.00	Quart Can.....	\$1.75
Half-Gallon Can....	3.25	Pint Can.....	1.00
Trial Size.....	.50c		

By Mail or Express at purchaser's expense, or the Trial Size sent Postpaid for 60c.

Most leading Seed and Nursery establishments carry MELROSINE. If your dealer cannot supply you, afford us the opportunity to do so.

**THE GARDEN CHEMICAL COMPANY**  
 NEW YORK CITY, N.Y.

# Bassi Frères INC.

Seedsman,  
 Main Street

de Paris

New Rochelle,  
 New York

## Plant in April 1922 Novelties

"*Helvetia*"—Single late flowering Aster. Brilliant crimson. A much desired addition in "Helvetias." Invaluable for cutting.  
 Pkt. 50c., 5 pkts. \$2.00

"*Eschscholtzia*"—(California Poppy). Mauve beauty. A positive new creation in California poppies. The mauve color is wonderfully effective in buds or for cut flowers.  
 Pkt. 50c., 5 pkts. \$2.00

*Cosmos*—New Extra Early Flowering Double. Ever since the Double Cosmos was introduced, growers have been striving to obtain an early flowering double. We are pleased to offer this novelty in a pleasing shade of pink. The petals grow to 3 feet high, forming a perfect bush bearing beautifully petalled flowers on long stems. Seed sown in April will bloom in July.  
 Pkt. 50c., 5 Pkts. \$2.00

### Special Catalogue Offer

For \$1.25 we will mail you, postpaid, one packet of each of these wonderful novelties, together with copy of 1922 Catalogue. This collection will give you something new for garden or border—novelties your neighbors haven't seen. Our Spring Catalogue gives many helpful garden facts.

### Choice Mixed Gladioli

This collection contains all the most desirable colors in Gladioli and an order of these bulbs will give you a real treat in Gladioli. Plant them from April to July for bloom from July to October.

75c. per doz., \$5.00 per 100, Postpaid.

Be sure to ask for 1922 Catalogue.

# It Matters Little Which Among Flowers Interest You—

If it's Worth-While and of  
Lasting Merit—*New or Old*  
—You'll find it at *Totty's*

## Special Offer to Those in Doubt What to Plant

Here is a collection of Floral Treasures worthy of a place in every garden. In its entirety we offer this as *The Madison Collection*, a total of 86 plants (worth \$21.00) for \$15.00 delivery prepaid.

25 Assorted Chrysanthemums, all types, Early Flowering, Single & Pompons. \$3.00	12 Heliotrope plants, choice varieties . \$2.50
6 Rose Plants, 6 varieties, Hybrid Tea types, all colors. . . . . 6.00	5 Mignon Dahlia plants, assorted colors 1.50
6 Assorted Iris Plants . . . . . 1.50	6 Mixed Dahlia bulbs, fine varieties. . . . . 50
3 Hardy Carnation Plants, suitable for cut flowers all season . . . . . 1.50	20 Gladioli Bulbs. . . . . 3.00
	3 Delphinium plants (two-year-old clumps). . . . . 1.50

*We will deliver the above, to any address at the proper time for planting outdoors for \$15.00  
Half the above collection \$8.50*

Please mention the Garden Magazine when ordering.

Please afford our 96 Page Catalogue a chance to acquaint you with our unusual Offerings

Chas. H. Totty Company, Madison, New Jersey



## Kunderd's Marvelous Ruffled Gladioli

Offer something entirely new and original for your garden. Far removed from the common sorts in size and coloring, their ruffled beauty will make your garden distinctive. No other grower has ever produced anything to compare with these marvelous new types and colors. You cannot afford to do without them in your garden next summer.

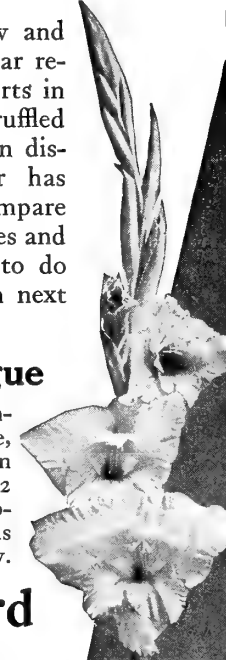
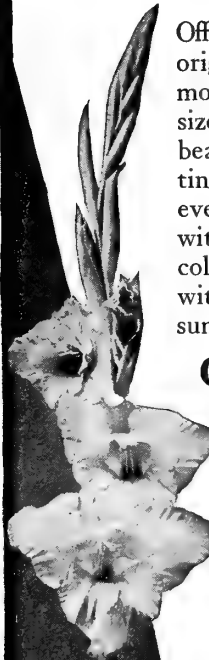
### Our 1922 Catalogue

describes many new sorts introduced for the first time, and illustrates many of them (19 in natural colors). 52 pages of Gladiolus descriptions and cultural directions—send today for a free copy.

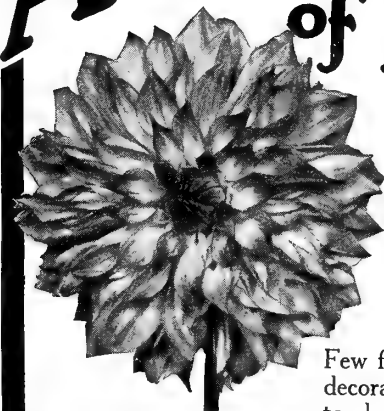
**A. E. Kunderd**

*The Originator of  
the Ruffled Gladiolus*

Box G, Goshen  
Indiana, U. S. A.



# A Garden Full of Dahlias For \$3.50



## New and Rare Exhibition Dahlias

Few flowers, whether used for garden decoration or principally for cut blooms to decorate the home, are as responsive to simple garden culture as our Modern Dahlia. It has made wonderful advancement in size and bloom, habit of growth, and profuse blooming qualities.

In order to further its now great popularity, we are offering this collection of **12 Dahlia Tubers for \$3.50**

—one each of 12 distinct varieties, not labelled, which if purchased separately according to name would cost not less than \$10.00.

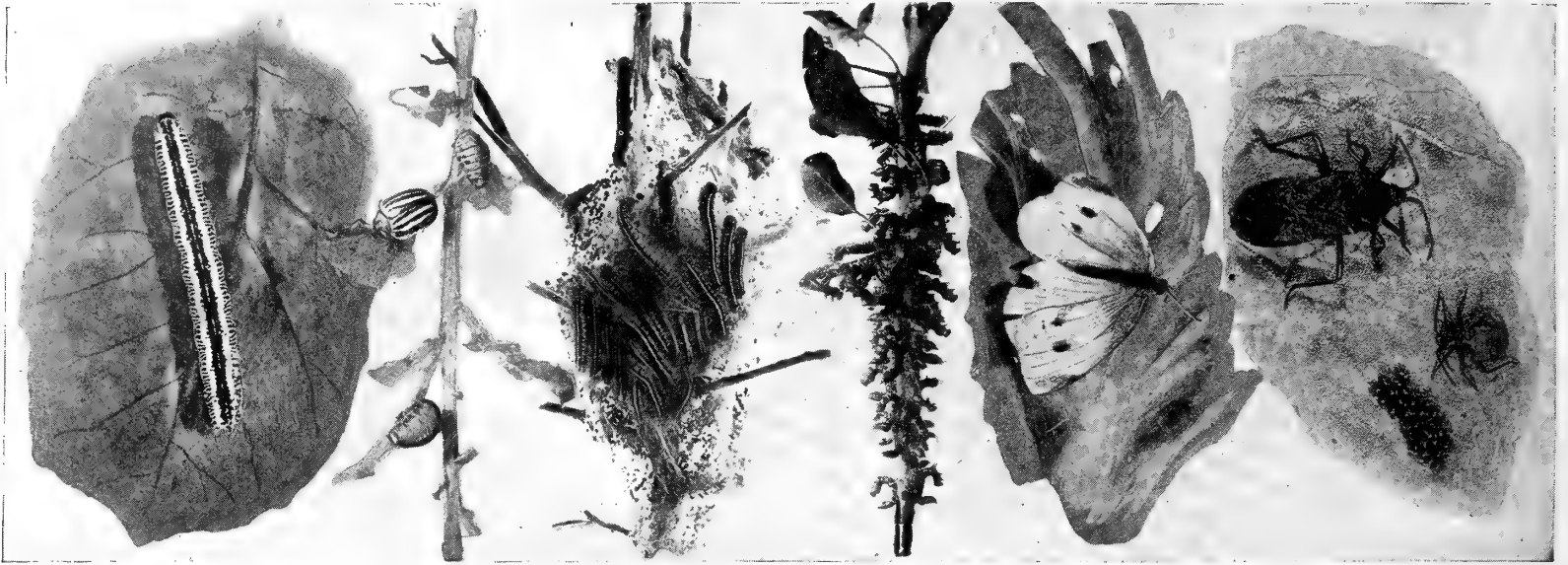
**Order Your Tubers Now** so as to have them ready to plant any time after the tenth of May or when all danger of frost is past.

Mail this advertisement, or present at our store, with check, money order, cash or stamps, and secure this exceptional collection, sent prepaid to any point in the United States

*Our 1922 Spring Seed Annual sent on request*

**Stumpp & Walter Co** 30-32 Barclay St.  
New York City





# One CROP That ALWAYS Matures!

Congenial weather nurses bugs and insects besides the growing crops. It's quite a question which crop will survive. The alert gardener generally takes the initiative. As the first step in the coming campaign against bugs, we suggest that you put in a generous supply of

## Hammond's Gold Medal Insecticides

*They Right Most Insect Wrongs*

*Hammond's Slug Shot* is America's foremost remedy with which to fight all sorts of leaf-chewing insects such as Cabbage and Currant Worms, Potato Bugs, the Striped Cucumber and

Melon Beetles, Aster Beetles, Rose Bugs, etc. Since 1880 it has helped this nation win all the battles with these pests—without damage and danger to plants, human or animal life.

### INSECTS AND BLIGHTS

now published for thirty-nine consecutive years, is a modest twenty-four page book which has been the standard advisor of American home-gardeners on the subject of fighting blights, bugs, and plant diseases. A thoroughly practical manual, every line of it dictated by experience, it deserves a place in every home garden library. Send for your copy—a post card will do.

### Thrip Juice

A contact insecticide that quickly and effectively destroys Aphis, Mealy Bug, White Fly and other pests thriving on plant juice. Equally effective in the greenhouse as outdoors, on trees, shrubs or plants.

### Copper Solution

A most satisfactory preventative against Rust, Leaf Spot and Blight, attacking Grapes, Roses, Tomatoes, and Carnations. It is equally useful to fight Blight and Anthracnose on Beans, Pears and Quinces while it is also an active agent against mildew.

### Grape Dust

A practical, economical and effective remedy against powdery mildew on Cucumbers, Gooseberry, Parsley, and Melon vines. It counteracts the powdery mildew on Grapes, and is equally useful outdoors as under glass.



Slug Shot is easy to obtain and easily applied. Dealers in every part of the country, in cities, towns or hamlets will furnish you Slug Shot. It is very economical, especially in quantities of 5 lbs. and up, together with the handy Slug Shot Tin Duster, with perforated bottom, as shown below.



**Hammond's Famous Gold Medal Insecticides** are sold by seed dealers and merchants throughout the United States and Canada. Ask yours or write us.

**Hammond's Paint and Slug Shot Works**  
Beacon, New York



# The Garden

Vol. XXXV, No. 2

MAGAZINE

April, 1922



*Arthur G. Eldredge, Photo.*

“MAKE ME OVER, MOTHER APRIL,  
WHEN THE SAP BEGINS TO STIR!  
WHEN THY FLOWERY HAND DELIVERS  
ALL THE MOUNTAIN-PRISONED RIVERS,  
AND THY GREAT HEART BEATS AND QUIVERS  
TO REVIVE THE DAYS THAT WERE,  
MAKE ME OVER, MOTHER APRIL,  
WHEN THE SAP BEGINS TO STIR!”

*Bliss Carman*

The true value of flowering shrubs is unforgettably conveyed by such masses as these just breaking into blossom under the warming touch of spring suns; here *Spiraea Thunbergii* makes bright silhouette on the dark of evergreens

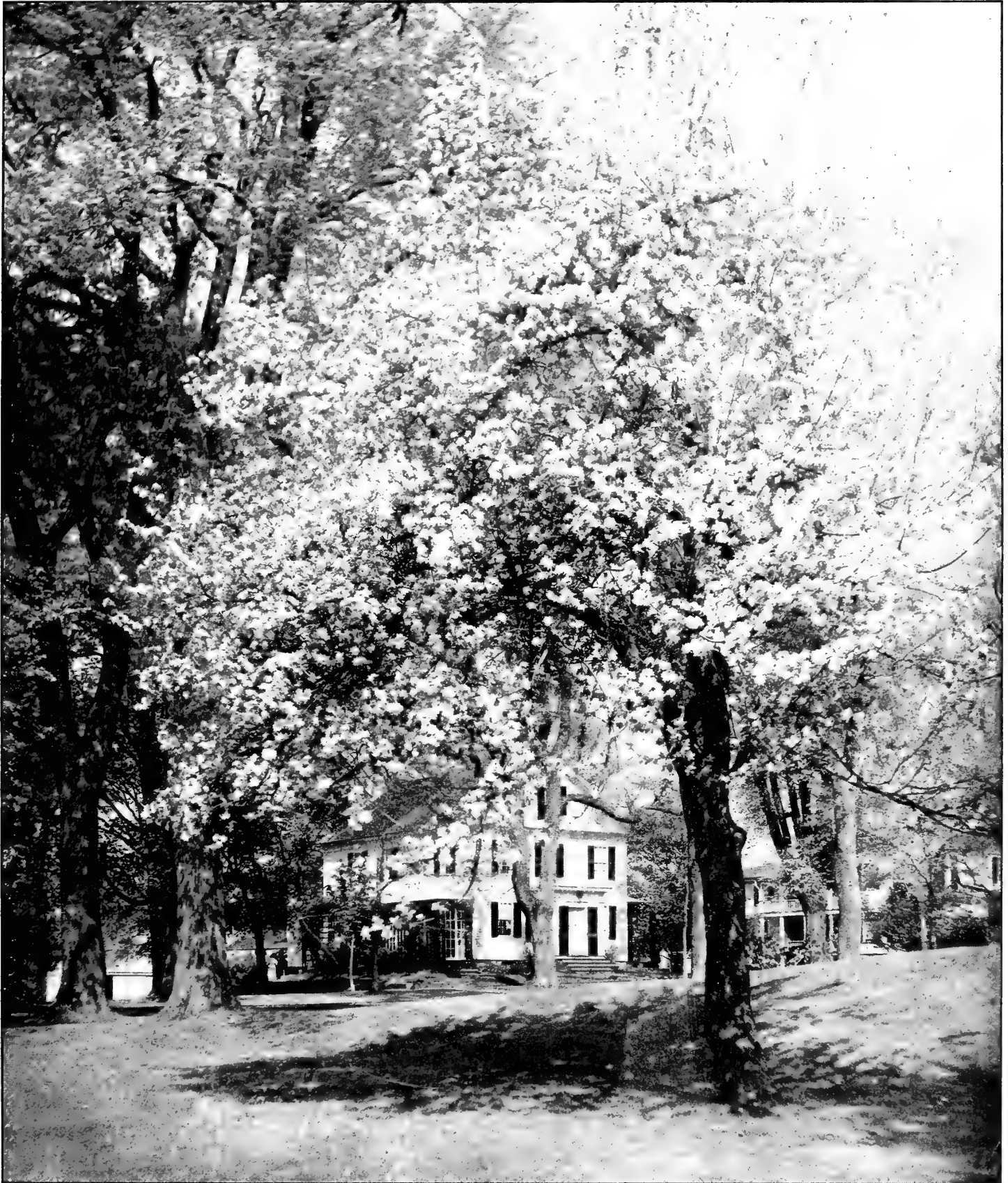


*Mary H. Northend, Photo.*

“ \* \* \* RETIRED LEISURE,  
THAT IN TRIM GARDENS TAKES HIS PLEASURE”  
*John Milton*

There is subtle satisfaction in a garden that fits so naturally, without break or jar, into the world about it and yet has the ordered security man loves in his daily living for the reassuring sense of permanence it conveys





"MYRIAD BUTTERFLY BLOSSOMS OF MAY  
TRANSMUTED BY SLOW-MARCHING SUNS  
INTO STAID FRUITS OF A LATE AUGUST DAY"

*Amer Pindar*

Again we find utility triumphantly asserting itself as the basis of beauty—another proof of the wisdom of to-day's trend toward a more liberal use of fruit trees about the home

# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

APRIL—THE MONTH OF HASTE AND ACTION



Herein are listed the seasonal activities for the complete garden. Details of *how to do* each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for out-door work of any sort New York City (latitude 40) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow *four days* for each degree of *latitude*, for each five degrees of *longitude*, and for each four hundred feet of *altitude*.

(Copyright, 1922, Doubleday, Page & Co.)



**M**AKE haste now to dig, sow, plant, fertilize etc., for all the big things of the coming summer and fall. But "make haste slowly," weather is not a fixed thing, good and bad periods being sandwiched. The actual weather conditions will differ greatly in different sections; in some places winter may endure almost to the end of the month, thus preventing planting outdoors; in others the advent of an early summer may be suspected. When balmy conditions prevail, it is only a matter of a few days when the soil is dry enough to make a start. Therefore see at once that there is no accumulation of work that ought to have been done in the weeks just gone. Be ready to get as much as possible of the "joy" of garden working when the time is ripe. But be not deceived by sudden advances of over-warm spring days nor by late lingering days of winter. The two will overlap and intermingle. Take all possible advantage, keep work right up to the minute, but don't rush! Of course the bulk of the seeds are now in hand ready for sowing. But check over the list. Then look to the stock of sundries and insecticides. Consider each crop's needs and order at once bordeaux, slugshot, melrosine, nitrate of soda, bone meal, etc. Let "prevention is better than cure," be the slogan; for the difference between a good and a poor garden is usually traceable to preparedness. As with seeds, so with everything else that goes into the garden, it pays to buy the best; i. e., from dealers who specialize or direct from the manufacturer where possible.

### Vegetable Garden

Plow or spade the earliest piece of ground as soon as it can be done without the soil adhering to the tools; when it will crumble nicely with raking, plant the hardiest of the vegetables as suggested in last month's Reminder; viz: Swiss Chard, Onions, Turnips, Kohlrabi, Carrots, Beets, Smooth Peas, Salsify, Spinach. They will survive any belated frost and snow. Use a good seeding machine if your plantings are of any proportions. It saves both time and seed.

About a week or ten days later (as circumstances permit) these early plantings to be followed with plants of Lettuce, Beets, early Cauliflower, Cabbage, etc. from the frames after being thoroughly hardened off.

Plant for convenience in cultivating, which will mean a good deal in personal comfort before next fall. Standardize the width between rows, and so save time making adjustments on the cultivators when cultivating. Group together all early maturing vegetables, so that the ground may be used for another crop. Crops that occupy the ground all season should be arranged together.

Early Potatoes to be planted. Treat with formalin solution for scab (one pint commercial formaldehyde to forty gallons of water). Don't omit this; it is no longer an experiment.

Vegetable roots may be set out (Asparagus, Rhubarb, Sea-kale, Chives, Horse-radish, etc.) Onions and Leeks, started indoors for exhibition, may be planted out.

Asparagus beds to be lightly forked over, and hilled up.

Succession plantings of Peas, Spinach, etc. to be made as earlier plantings break the ground.

Small sowings of herbs such as Thyme, Sage, Marjoram, Dill, etc. may be made.

Tomatoes, Egg-plants, Peppers, Muskmelons, and other tender plants may be still sown in the hotbed; Sweet Potatoes, put in to sprout and planted out next month; and a few Cucumber seeds

for an early crop to utilize all the frame space when the other plants are set out.

Lima Beans, Squash, and the tender vegetables mentioned above, may be started in dirt bands, or paper pots for setting out later.

### Flower Garden and Grounds

If not already done, uncover Roses, examine for scale, and if found, spray. When the buds begin to swell, prune back the Hybrid-perpetuals to three eyes, remove all weak wood on the Teas; and cut them back one third.

Plant all deciduous nursery stock as soon as possible. Two essentials for success are planting as soon as received, and putting into well prepared soil. Should the ground not be ready to receive them, heel-in and water well until they can be set out.

Stake or wire all newly planted trees, to prevent swaying by high winds. Water all newly planted material at frequent intervals if the ground appears at all dry, and winds are prevalent.

Replant and rearrange Perennials as the new growths show through the ground to distinguish them. Give all perennial beds an application of ground bone, and point over the surface to incorporate it with the soil, but be careful not to injure dormant crowns.

Compost the winter protective materials as removed; they make fine summer mulch when decomposed.

Vacant flower beds intended for bedding plants to be dug and got ready for summer occupants. Uncover beds of bulbs and rake over the surface soil to keep weeds in check.

Finish pruning late flowering shrubs. Prune and tie up vines on walls, arbors, and trellises.

Sweet-peas to be sown outdoors as soon as possible, so they may root deeply before hot weather overtakes them. Plant out those that have been started under glass.

Asters, and Stocks are very successful from sowings made outdoors this month; and sowings may be made of such Annuals as do not transplant very well; e. g., Mignonette, Alyssum, Poppy, Hunnemannia, Eschscholtzia, Lavatera rosea, Lupinus, as well as Candytuft, Nasturtium, Centaurea, Marigold.

Plant Gladiolus for early flowering.

### The Lawn and Walks

Clean the lawn of weeds, filling holes thus made with good soil, and reseed. As soon as the grass is long enough to reach the blades of the machine it should be cut. Promote a strong root growth of grass by mowing frequently, but never cut extremely close.

Roll light soils where hand machines are used for mowing; but where heavy horse or power machines with a big roller are in use, enough rolling is done while mowing, and particularly on heavy soils inclined to pack and become hard.

As soon as the mud has dried up sufficiently, attend to roads, drives, and walks. Keep the original edges of these as much as possible.

Use the scuffle hoe for weeds on the drive, or a good weed-killer if it can be applied without injuring the edges of the adjoining lawn. Repair ragged edges of turf by inserting pieces of sod, or by adding soil and seeding down.

### Frames and Hotbeds

Useful as these simple structures are for raising early plants for setting outdoors weeks ahead of the time they would otherwise be ob-

tained, they become indispensable as an adjunct to the greenhouse for hardening off stock prior to planting out.

Harden all early planted material by giving plenty of ventilation on all favorable occasions. With longer days and more sun power, water will be required in greater quantity. Water thoroughly, too, avoiding the "little and often" plan which dampens the surface soil, whilst the roots of the little plants underneath are dry.

Provide plenty of covering when a cold night is expected. Weeks of hard work can be undone by one belated cold spell.

Pansies, Myosotis, Daisies, Canterbury-bells, Aquilegias, Foxgloves, etc., carried over winter in coldframes, to be got into the beds of borders they are to occupy to give space in the frames for other purposes.

Annuals, such as Zinnias, Globe Amaranth, Miniature Sunflowers, African Marigold, Early Cosmos, Petunias, etc., may still be sown in the coldframe.

A mild hotbed made up at this time is about the best possible place to grow on Geraniums and other low-growing bedding plants that are making a great demand on the bench space in the greenhouse. With four or five inches of soil and the pots plunged to the rims, the gentle heat will set them growing apace. Keep closed for the first few days; then give air whenever possible.

Don't allow any crowding of the young plants in the frames, or weak, drawn stock will result. If in pots, take out every other row, erecting a temporary frame for them rather than crowd. Seedlings to be pricked-out into other frames (or planted into flowering quarters if their hardiness justifies it) for the same reason.

### The Greenhouses

Plants of every description now require increased water and ventilation. Lightly shade Palms and Ferns to prevent burning.

Pot-on plants that need more root space; and particularly bedding stock, which may then be transferred to a mild hotbed (see under "Frames").

Hardy Annuals, started early and pricked-off into flats, or potted, may go to coldframes to make room for other stock.

Cuttings may still be made of Coleus, Petunias, Ageratums, Achyranthes and other bedding plants. Top-back the more advanced plants to make them sturdy and bushy, and root the tops.

Sow tender Annuals to prick-off when large enough to handle, and then transfer to coldframe.

Calceolarias and Cinerarias, now coming into flower, to be kept free from insect pests.

Hanging baskets for porches, etc., to be filled now, and hung in a cool house until they go to summer quarters. Weeping Lantanas are useful for these baskets.

All early flowering shrubs that are being forced should be placed in a cool house when in full flower. Bulbs of such Lilies as speciosum, if potted or planted in benches, will flower before those outdoors. Continue planting at intervals cold storage bulbs for a succession of bloom throughout the summer months.

Fern spores to be sown now on sand or very fine soil in a warm, moist house; give a position somewhat shaded.

Annuals for outdoor cut flowers may still be sown indoors. Pot-up Cannas that have been started in sand. Keep growing without a check Asters sown for early use. Maintain a buoyant atmosphere in the house containing the bedding plants if it is not convenient to make up a mild hotbed for them.

Poinsettias placed in a warm house will soon throw out young shoots for cuttings. Root these in coarse sand in a warm propagating bench.

Petunias for late use may still be rooted from cuttings. Small plants of Lobelia speciosa, may be potted-on for filling vases at the end of next month.

Bouvardia, rooted early and potted into 2½ inch pots may be set into frames, and either grown on there, or set in the open ground as soon as all danger of frost is past.

Young plants of French Hydrangea may be moved to frames to harden-off and planted out to make fine plants by fall. Cyclamen to be kept growing in a cool, partially shaded position. Feed with liquid manure Hydrangeas to be in flower for Memorial Day.

Propagate Dahlias from cuttings from old plants started into growth on a sunny bench in a cool house.

Plant outdoors during dull or showery weather rooted runners of Violets.

Avoid wide fluctuations of temperature in the Sweet-pea house at this time. If buds are dropping look carefully to the watering. Acid phosphate (an ounce to a gallon of water) is often helpful. Attend to cultivation of the soil, tying, staking, and thinning of shoots as occasion requires.

Roses that are not producing well may be thrown out, the house cleaned down, and a new lot of plants put in. If the cropping system is practised, pinching should be done about the middle of the month for a crop at the end of May. Water more freely and syringe often enough to keep red spider under control. Liquid manure may be more freely given. Pot-up Rambler Roses for next year's use.

Continue rooting Chrysanthemums, pot-on early rooted ones as they show need. Avoid any check in growth through becoming pot-bound.

Carnations in benches will be benefited by a mulch of half manure and half soil to prevent the roots drying out too quickly, as they are apt to do at this time of the year. Varieties with delicate pink flowers will be better for a light shading on the glass—just enough to break the direct rays of the sun. Young plants to go to the frames to be hardened off previous to planting outdoors; which, however, may be done soon after the middle of the month if weather conditions permit. Turn over at the first opportunity the soil to be put into the benches for the young plants.

Snapdragons now need more water. Cuttings put into sand in March will be rooted now, so place into small pots and keep potted-on into the next size larger, and still another one larger yet, if they make rapid growth.

Clumps of Perennials that have been forced, to be planted out, as soon as their usefulness is past, in a small nursery where they may remain for two years to recover.

### Fruits and Vegetables Indoors

Prune out weak wood of fruits and start late trees into growth. Tap smartly such pot fruits as may be in bloom to disperse the pollen and ensure a good set. Give plenty of water to those that have set their fruit, and syringe them each morning and not later than 3 o'clock in the afternoon. Peaches especially need a damp atmosphere; never tolerate anything approaching aridity after blooming is over. Do not thin fruits until after the stoning period. Disbudding the shoots is done by rubbing out every second growth with the finger and thumb.

Melons, Cucumbers, and Tomatoes for summer crops indoors to be started. Personal preference may be followed with Tomatoes, but with Melons and Cucumbers the English forcing types alone can be used.

Branches of Lilac bushes cut and placed in a warm room or greenhouse will produce good flowers, but the color will be white irrespective of the normal color of the variety.

### The Fruit Garden

Fruit trees that do not bear satisfactory fruit may be grafted over to better varieties. In fact, several varieties may be grown on the same tree in the case of Apple and Pear. This work should be done before growth starts, and finished within a week after the buds swell. Planting of young trees to be completed as soon as possible.

Plant Strawberries at once to start new plantations. Rake the mulch from established beds, and dig in well-decayed manure between the rows.

Examine Peach trees for borers by removing six inches of soil from around the base of the tree. Gum and "saw-dust" are the first visible signs of their presence. Clean these away, and run a wire into the holes to kill the grubs. Repeat the examination a week or so to get later attacks.

Watch the Currants as the young leaves develop (especially near the ground) for worms, spray at once as they appear, taking care to wet the under side of the leaves.

Watch for steel gray beetles on the Grape-vine leaves and pick them off into a pan of kerosene.

New plantations of Raspberries and Blackberries to be made as soon as possible this month. Uncover and tie up to trellises or stakes those that have been laid down or buried with earth during the winter.





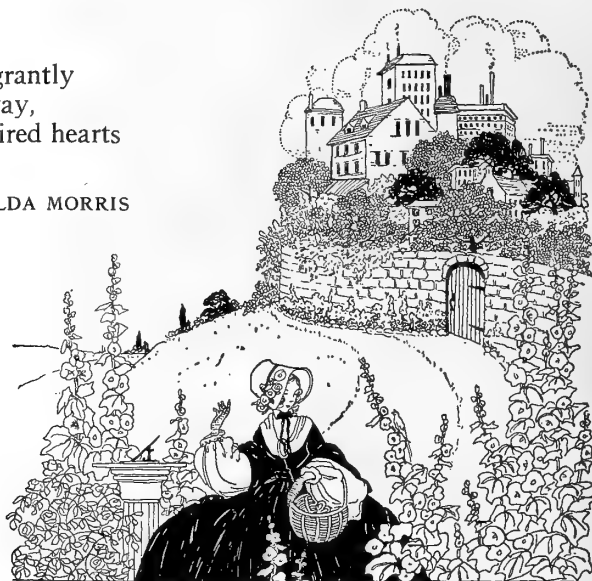
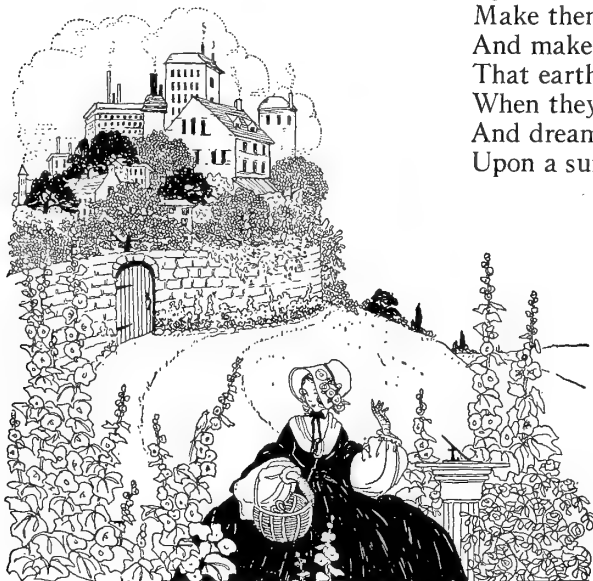
# THERE ARE GHOSTS OF GARDENS

THERE are ghosts of gardens  
In crowded city ways,  
And memories of the fragrance  
Of bygone days.  
Where once has bloomed a garden  
Its spirit hovers yet,  
For rose and branch may fade and fall,  
But earth does not forget.

Oh, folk who plant your gardens  
By wall and paven street,  
Make them beautiful  
And make them sweet,  
That earth be haunted fragrantly  
When they have passed away,  
And dreams may capture tired hearts  
Upon a summer day!

And that is why, in April,  
Or on a summer day,  
Your dreams sometimes to gardens  
Are spirited away.  
Above the city's clamor  
You hear birds sing,  
And catch the scent of lilacs  
Blossoming.

HILDA MORRIS



## A LITTLE CORNER IN NATIVES

FLORENCE TAFT EATON

Wild Flowers that Flourish in the Shade, Giving a Foundation Planting of Graceful Informality

FOR more than thirty years this northeast corner of ours has been planted with wild growths. We have made no attempt to lay out the bed regularly, but specimens are obtained when met with on our rambles and excursions and set where space allows, with the general idea of massing tall Ferns and flowers at the back and centre, lower growing plants in front, and of supplying bloom at all seasons. The early flowering spring plants die down as the season advances and are purposely over-shadowed by later blossoming varieties. We allow Herb Robert to spread over shaded empty spaces. We find that the bed is more luxuriant and less shabby if we keep it well watered in dry seasons; and when planting, as much wood soil as possible is added. Late every fall it is covered with light leaves, enough of which decay, although raked off in early spring, to add a little humus each year.

The accompanying plan and list of wild flowers and Ferns which flourish in this shady niche next our porch may help others solve the problem of bare corners with which nearly every house is afflicted.

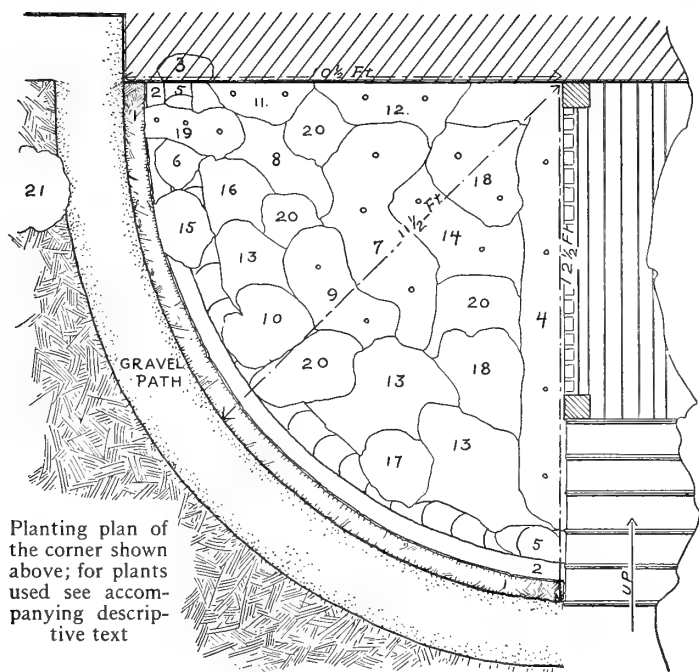
1. Eight-inch grass border which binds in the whole.
2. Eight-inch band of *Viola cucullata*; patches of Mandrake and other vigorous growers have been purposely allowed (as irregularity of planting was desired) to encroach upon it. This Violet border must be rigorously cut each year, as it is a tremendous self-seeder.
3. *Evonymus*—not wild, but included as it best covers the bare space beside the window.

4. Tall Ferns: Cinnamon, Interrupted, and Royal (three forms of the *Osmunda*); also the beautiful Ostrich Fern.
5. Irregular belt of early spring flowers, allowed and encouraged to intrude upon the Violets; False Solomon's-seal, Lady's-slipper—of which we obtain fresh roots each season as, being a biennial, it is a matter of luck if self-seeding is accomplished; Bell-wort—most beautiful, and spreading delicately far beyond its immediate neighborhood; Rue and single Anemone; Columbine; Bloodroot; Hepatica, etc. Among these we set low growing Ferns.
6. Patch of Mandrake—having a great tendency to "spread," and severely cut out each spring.
7. Canada Lily. Note the giant specimen in the picture, the seed-pods of which are retained for self-seeding. One of the most beautiful inhabitants of our bed.
8. Meadow-rue—having a short season, but very beautiful.
9. A slowly increasing patch of *Lobelia cardinalis*—on the successful transplantation and permanence of which we especially plume ourselves.
10. Wild Iris—from which, according to all the plant laws of the Medes and Persians, we should never have succeeded in obtaining bloom in such a situation!
11. Trillium.
12. Jack-in-the-pulpit. We still possess the original grandfather plant, tremendous after thirty years of growth!
13. Giant Solomon's-seal—the tall, graceful sprays luxuriant, and altogether lovely. Increases rapidly.



Charles Darling, Photo.

OUR NORTHEAST CORNER IN SUMMER ARRAY



Planting plan of the corner shown above; for plants used see accompanying descriptive text

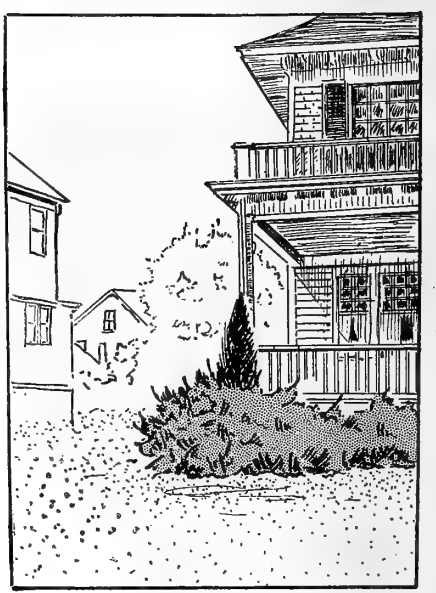
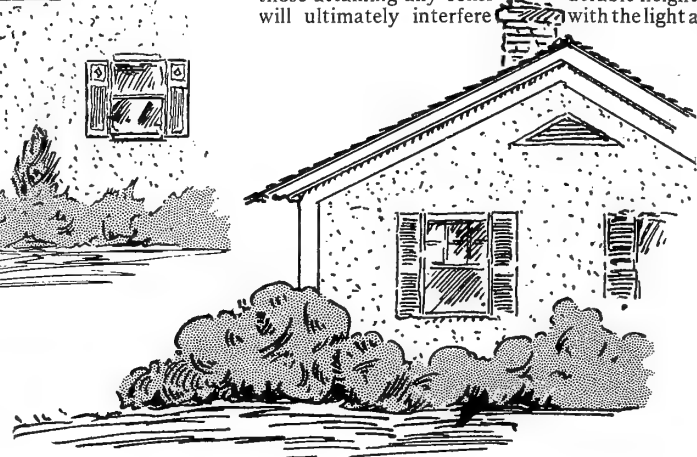
14. Joe-Pye-weed. This we waited to acquire until its blossoming time, as there is a great choice in the coloring of the different specimens. We secured a couple of roots having blossoms of a particularly deep, rich hue, digging them up and setting them carefully and cutting down the stalks severely. Next season it sprouted and grew luxuriantly, as seen in the three-year-old specimens.
15. Black-eyed Susan—one of the most beautiful fall inhabitants of the bed. By cutting off the old blossoms, a long blooming season is secured.
16. Golden-rod. Fine varieties of this, also, should be searched for, as there is great choice.
17. Maidenhair Fern—a beautiful clump, at least fifteen years old. Shabby and over-shadowed by the Cinnamon, at time photographed; but supplying beautiful, tender growth through a long season, if the seeding fronds are freely picked.
18. Clumps of Ostrich Fern, cut back when shabby in early fall.
19. Various sorts of lower-growing Ferns.
20. Different varieties of Michaelmas Daisies, originally selected when in bloom—most beautiful for the fall show.
21. Straying branches of Heliopsis(?)—our most valued late-flowering perennial.



**BASE PLANTINGS THAT HARMONIZE**

Columnar planting for sharp roof lines, shrubs with rounded tops for low roofs. Where deciduous and broad-leaved evergreens are used they give warmth and color to the winter scene making the home attractive during the long, cold winter

**CORNERS THAT NEED CONCEALING**  
 When the floor line or water table of a house is close to the ground, it is well to let turf run up to the porch or paved terrace and concentrate any plantings about the corners. If, however, the dwelling stands high, use shrubs, etc., of a dwarf character along the foundation with taller growing varieties at the corners and in the blank spaces between windows, being careful to exclude those attaining any considerable height as they will ultimately interfere with the light and view



# Foundation Planting Thoughts

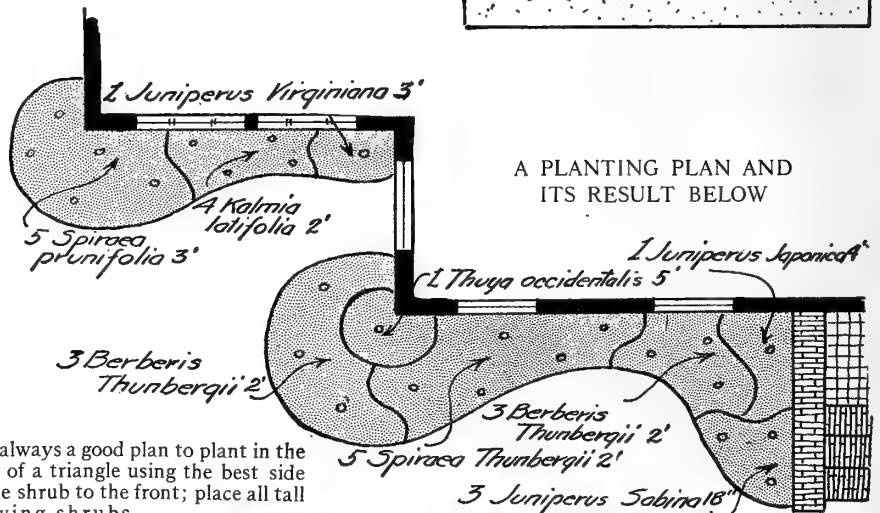
By

**JOHN COLLINS CAMPBELL**  
 Landscape Architect



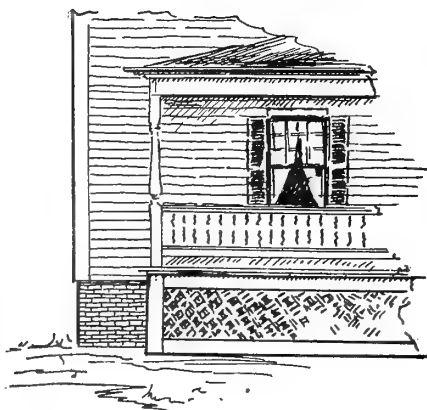
**SOFTENING HARSH FOUNDATION LINES**

This type of planting should always be irregular in line, extending out at the corners and entrances; where space permits it is well to use tall with low growing shrubs to avoid monotony and break harsh angles



A PLANTING PLAN AND ITS RESULT BELOW

It is always a good plan to plant in the form of a triangle using the best side of the shrub to the front; place all tall growing shrubs first and as a rule slightly farther apart than the dwarf ones in front; if the ground shows too noticeably between use a cover, as *Pachysandra*



**THE SUBURBAN EYESORE**

Even the ugliest building can be improved by proper planting; such a corner as this can easily be transformed by vines, some feathery-foliaged shrubs and perhaps a dwarf evergreen or two. Why not apply the remedy?



# TYING THE HOUSE TO THE GARDEN

E. C. STILES

Landscape Architect

## Plants as a Link Between the Dwelling and Its Grounds

### Modifying Severity of Architectural Lines with Shrubbery and Evergreens Selected for the Special Situation

**M**AKING the house belong, as it were, to the land on which it rests is a too little considered detail of the garden work that, however, intimately touches every home maker. A building set gauntly upon the ground without any kind of modification of the line where it joins has a harsh and repellent air—something must be done to knit the two together. This merging can best be accomplished by the restrained use of plants chosen to suit the particular type of architecture with, of course, due reference to the somewhat difficult conditions of growth, the habit of the plant, its texture and color.

That "foundation planting" for the house is one of the least understood of all the many varied phases of planting is demonstrated by the amazing number of strikingly bad examples to be

seen in any residential suburb. It is largely so because the average man does not seem to realize that this phase of planning the residence grounds offers any particular sort of problem. The same man who seriously considers the planting problem involving a question of extensive shrubbery on the lawn and in or around the garden area will refer to a foundation planting as "just a little something green around the house." As a matter of fact this particular detail is of real importance, because any plants employed for this purpose must meet several very definite requirements and because growing conditions close to a house are at best most unfavorable to the successful growth and good development of practically all classes of plants.

The three main objects of foundation planting in general are:



FILLING THE CORNER WITH FRAGRANCE AND CHEER

Here we have a judiciously designed planting of broad-leaved evergreens and flowering shrubs which maintain interest the year through. Home of Mr. Leonard Kebler at Bronxville, N. Y. Clarence Fowler, Landscape Architect



#### INFORMALITY IS THE KEY-NOTE

Wisteria and Climbing Roses, supplemented by Spiraea and Peonies, link this dwelling to the earth with an airy effect-iveness quite unlike the usual "foundation planting" so often merely commonplace and stodgy in composition

- (1) to tie the house to the ground upon which it rests and to minimize the apparent height of foundations;
- (2) to add to the architectural beauty by an adequate foil of foliage offering a pleasing contrast to the lines and the color of the house, and tending to soften the appearance of the base of the structure as a whole;
- (3) to conceal the lines of the foundation and its several objectionable adjuncts.

These points are of relatively greater importance to the owner of the small and medium sized home than to the master of larger areas, because such small buildings are usually high in relation to the ground space which they occupy; have less architectural interest in the foundations; are placed much closer to the view of the passer-by; are usually situated on relatively small lots and so do not have the advantage of a large mass of attendant shrubbery plantings on the remainder of the property.

**F**UNDAMENTALLY desirable effects in a foundation planting may be expressed thus: (1) grace of outline; (2) individual points of interest; (3) an adequate sense of cover for the foundations. It is in the first and last mentioned points—particularly the last—that the planting so often falls short of its purpose.

*To obtain graceful outline.* Employ plants which are in themselves graceful in outline and which will tend to give a soft and

pleasing appearance to the entire mass of foliage; and so arrange the material that it somewhat varies in height and in denseness—that is, by making some portions of the planting heavier than others, the outside line of the mass will be irregular in character, the planting tending to soften the straight architectural lines of the foundation.

*To obtain individual points of interest.* Choose plants that exhibit a variation in the color and texture of the leaves and present an interesting play of light and shadow with a continual variation in the color scheme. Additional interest may be given through the introduction of a judicious amount of profusely flowering shrubbery and some berry-bearing specimens.

*To secure an adequate cover for the foundation.* Select plants of fairly spreading character and supplement them by a cover-planting of smaller, low-headed shrubs to fill the interstices and cover the base of the larger shrubbery.

Putting into practical effect all these principles means that the individual plants in the beds shall be so arranged that they do not produce a straight line along the foundation, keeping them farther distant from the house at points where the planting is to assume thicker proportions, as for example to soften down corners or to fill up angles in the architecture. Solid planting around the house is to be avoided, as rendering a rather monotonous composition, and, furthermore, cellar windows usually

must be free from planting so that light and air be not shut out of the basement.

### The Builders' Legacy Handicap

**N**EARLY always in the construction of the house, the top soil has been removed from around the foundations and a considerable amount of débris (bricks, stones, bits of lath and plaster, etc.) is frequently left around the excavation of the foundation, which is filled in with some of the poor soil left from cellar excavation.

Few people realize how important a part the eaves of the house play in the well-being of the plants in the foundation planting. If the eaves are narrow, the planting at the base of the house is subjected to the full force of the elements—an unusually large supply of water at irregular intervals and an intense exposure to the sun during dry weather. If, on the other hand, the eaves are unusually large and extend far out from the sides of the house, as is often found in the modern bungalow type of construction, air circulation is impeded, and unusually dense shade is always present on that side of the house which lies naturally in the shade, while, worst of all, the rainfall is denied to the plants except in case of storms driving in a slanting direction.

It seems also to be the favorite outdoor sport of the average contractor and builder to run a walk within two or three feet of the foundations, along at least one side of the house, and it is one of the most annoying handicaps with which the home owner has to contend. Either the walk must be re-laid at a farther distance from the house, which should be from five to eight feet for good growing conditions, or only a single row of shrubbery, of extremely limited variety, can be planted.

But the actual presence of one or more of these adverse conditions does not necessarily imply that a successful planting cannot be arranged. The first consideration will be materials to be used.

### Evergreens' Merits and Otherwise

**L**EAF texture and color of the individual shrubs must be considered from an artistic standpoint, the planting being so arranged that the leaf texture of one shrub shall be not at considerable variance with that of its neighbor, nor shall the variation in color between

the individual shrubs be of such a decided nature as to produce a "spotty" effect, and this in direct relation to the architecture of the house itself.

The mistake most commonly made is to plant exclusively and precisely pyramidal and globe-shaped evergreens, occasionally varied with a few specimens of the very low-spreading kinds. This style has been fostered by the inefficient itinerant salesman of nursery stock who is usually working on a commission basis and whose best personal interest lies in the highest prices obtainable; again by the uneducated so-called "landscape" gardener, but in reality a mere jobbing laborer possessing no qualifications beyond the ownership of a lawn-mower and a pair of pruning shears. It cannot be denied that the individual plants themselves have elements of interest, possibly as regards shape or texture, but especially as regards color; and it is undoubtedly true that "these plants will remain green all winter." There are disadvantages, however, from both an economic and an artistic standpoint of the universal use of this class of material. Such a planting as indicated in one of the sketches (Fig. VIII, Page 102) is devoid of any grace of outline, and will never adequately cover any except the very lowest foundations, unless the plants are set so closely together that they have no space for development and consequently die out in a year or two from lack

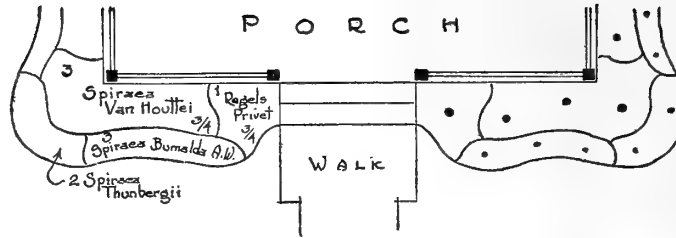


In this greenery that runs with wave-like freedom up to the walls of the house there is no sense of the division that almost inevitably accompanies most types of base planting. The Day-lily (*Funkia subcordata*) vivaciously breaks what might otherwise be too solid a mass

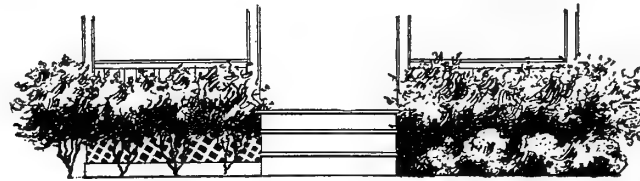


of light and air and root nourishment. Although this kind of plant is slow growing, it will eventually (in the case of the pyramidal forms) reach at least as high as the roof of the porch; and when planted close against a building such material, even under the most favorable conditions of soil, light, and moisture, will not grow well; while under adverse soil conditions and a smoky or dusty atmosphere it will die out quickly.

Such a planting, composed almost entirely of broad-leaved evergreens—such as native and hybrid Rhododendrons, some of the evergreen Azaleas, together with a few of the low-growing Junipers at their bases—in the northern part of the United States (or as used extensively in the southern portion of the United States, the same class of material, plus Boxwood and other broad-leaved evergreens), can be made graceful of outline and afford an



I. In planning how many plants are needed first determine shape and size of area to be planted and select shrubs, etc. (as above right); then place a dot for each individual plant required (as at left); the average shrub usually growing in width a distance equal to  $\frac{2}{3}$  of its height

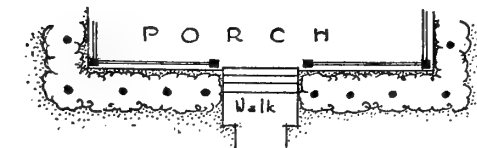


II. A much softer, more finished effect is gained if cover plants are used beneath the shrubbery; this a safe rule to follow though, like most rules, it has its exceptions

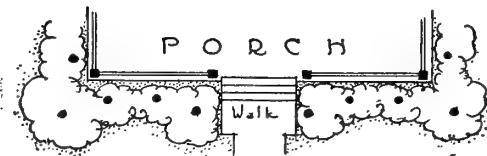
adequate cover for the foundations. Such planting is necessarily costly and requires more than usually good growing conditions to start with. When actually executed in a really worthwhile manner, it is, if anything, a bit too ornate for the average small home. As accent points at the sides of steps or in front of columns, close-clipped pyramidal or globe-shaped Arborvitae and Retinisporas, together with a few of the low-spreading Junipers, may occasionally be introduced into a foundation planting of deciduous shrubbery. As specimen plants in the lawn area or as accent points in the garden, where they will agree in character with the larger ground space offered, such plants will in general find a most fitting use.

**As to Deciduous Plants**

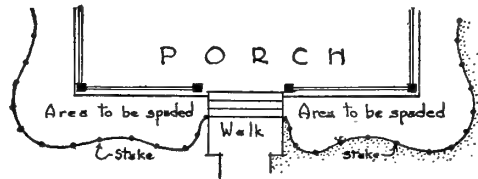
A FOUNDATION planting of deciduous material has certain advantages over one com-



• INCORRECT • METHOD



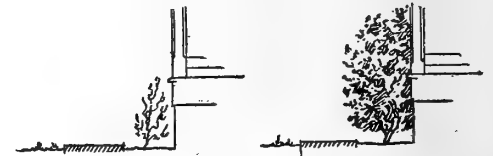
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III. When the time has come to translate paper plans into actuality, begin by outlining the desired area with small wooden stakes; this will ensure getting shape and size exact. Spade up thoroughly, replacing poor soil with good garden loam or a generous quantity of manure dug in to a depth of 18-24 inches. Areas should always be got in good condition before beginning to set out plants



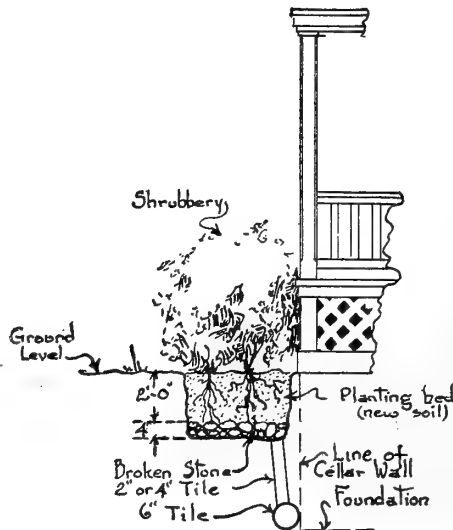
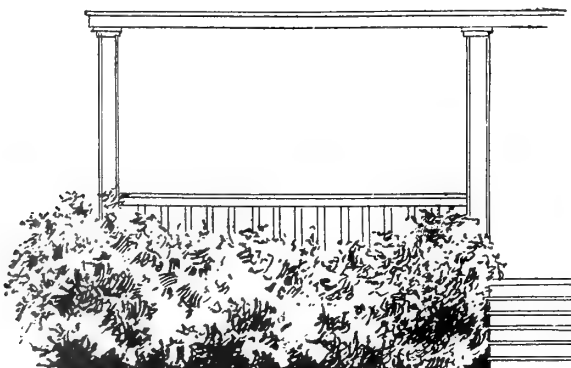
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• CORRECT • METHOD •

IV. It is easy to see how much more attractive a little irregularity and an accenting of corners makes any foundation planting; balance may so be readily secured without an appearance of monotony

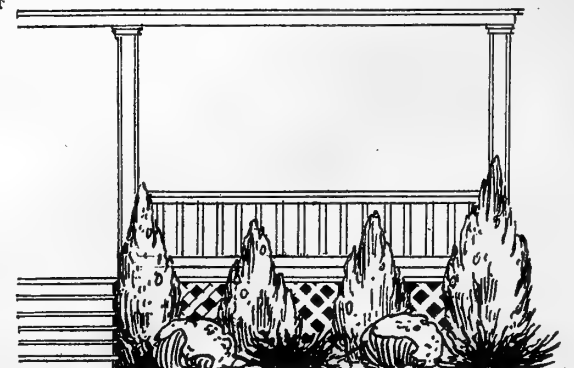
VI. Deciduous planting is thoroughly satisfactory for at least eight months out of the twelve and even in winter, if shrubs be judiciously chosen, does not entirely lose its charm



VII. Good drainage is one of the essentials of success and must be carefully looked to in foundation plantings where soil is inclined to be overly moist

V. When planting in a narrow bed be careful to slant each plant slightly toward the house so that as it grows larger it will not encroach upon the walk, if one happens to be bordering as is usually the case on the small suburban property

VIII. A too consistent use of evergreens frequently results in some such stereotyped effect readily remediable, however, by an admixture of more plastic, airy material



posed of stiff types of evergreens in grace of outline and in the interesting play of light and shade. (Fig. VI, page 102) Such a planting is thoroughly satisfactory for practically eight months out of the year, even in the northern part of the United States; and during the months when it is at its worst, few people are paying attention to the decorative appearance of the outdoors because of inclement weather. If closely twigged shrubs are used, the masses of snow will hang on the shrubbery in a quite decorative and very interesting manner.

When all the various types of houses with which foundation planting may be used are considered, there will be found a wide range of available deciduous plant material. The porches, however, generally have the floors ranging from about two to three or three and a half feet in height above the level, and any railing is about thirty inches above the porch floor. This restricts the height of the average front planting to from four to five or five and a half feet in height. The lower level of the windows at the sides and rear of the house is ordinarily from four and a half to six feet in height, and as likely as not the basement windows are placed between the other windows, so there is not any great amount of high wall space to plant against. All this



WHAT MIGHT BE TERMED A "FLAT TREATMENT" IN FOUNDATION PLANTING

This very simple method of linking lawn and porch has a certain charm of its own, and vines have the added advantage of producing effects quickly; potted flowers and window-boxes can be pressed into effective service too.

means a restricted choice of material, except where we have an unusually high porch or numerous blank wall spaces, to a height of from four and a half to six feet for the shrubbery in the background and from two to three and a half or four feet for use in the foreground. We also have the question of light and shadow,

and in the case of new properties with little or no tree growth, either full glaring sunlight or a decided area of shade.

#### Popular Shrubs for General Use

AS BACKGROUND shrubs, under average conditions of light and shade, some of the lower growing varieties of the Weigela, although rather coarse-leaved, are satisfactory if used judiciously. Then the taller-growing Spireas, although they prefer the sun, may also be used in partial shade; the Hydrangeas are especially good against stone houses; some of the dwarf Lilacs may be used at corners; *Rhodotypos kerrioides* fits in either the foreground or background, depending upon the shrubs with which it is associated; and in particular Regel's Privet, which is not as much used as its merits deserve and which, if intermixed with flowering kinds of shrubbery, is undoubtedly one of the very best shrubs for foundation planting, as it is free branching, of good leaf and color texture, and may be kept at almost any desired height by pruning. For background plants which will stand a considerable amount of shade, there is the Snow-berry (especially interesting on account of the white berries against blue-green foliage); and the old Strawberry Shrub, the dark-colored



ON NORTH AND WEST EXPOSURES TRY AZALEAS

Those shown above are over thirty years old, a magnificent bushy growth covered in spring with literally hundreds of blossoms. Varieties *Hinodegiri* and *amoena* are recommended



FOUNDATION PLANTING THAT IS TWELVE YEARS OLD

These slow-growing evergreens were set out more than a dozen years ago and there have been no replacements or transplantings since. It will be several years more before any changes are necessary. Red Cedar; Japan Cypress in variety including some golden forms (*pisifera*, *plumosa*, *filifera*, *squarrosa*); Mugho Pine; George Peabody and Globe Dwarf Arborvitae; Hemlock; Norway Spruce; and Pfitzer Juniper; with *Ampelopsis* on the house

foliage of which lends an interesting color note; incidentally the spicy odor is decidedly agreeable during the summer-time, when the windows will be open.

As foreground shrubs, first and foremost comes the Japanese Barberry, one of the very best of all shrubs for this purpose, as it can be kept quite low-headed and bushes close to the ground. It has an interesting habit of growth, will stand unusually bad soil and climatic conditions until it gets south of Washington, and is especially interesting during the winter months because of the red berries which completely cover the shrub at that season. The Coral-berry, also a prolific fruiter and with branches drooping to the ground, will stand a considerable amount of shade. Dwarf Spireas, *Deutzia Lemoinei*, Lace Shrub, and one or two of the herbaceous perennials, such as *Funkia*, *Hemerocallis*, and Peonies, will round out most needs. South of Washington the *Abelia* occupies a place in foundation planting which, for all-round purposes, is only equalled by the Japanese Barberry in the North.

These plants are among the easiest to grow and care for and are readily obtainable from all nurseries. If there are large wall spaces with high windows or bits of high foundation against which we may use plants ranging from six to ten feet in height, choice may turn to the Lilacs, Forsythias, Mock Oranges, and shrubs of like character.

#### Practical Application to the Problem

AN EASY and efficient manner of preparing the beds for the reception of the stock is to mark on the ground the outlines of the bed areas to correspond to the bed areas planned on paper, using small wooden stakes. (See Fig. III, page 102) This procedure will save a deal of trouble in digging the areas to the required size. Any poor soil in the bed areas should be replaced to a depth of from eighteen inches to two feet with good garden loam, or the existing soil enriched by digging in a generous quantity of well-rotted manure by thoroughly spading up for a depth of from eighteen to twenty-four inches, or even more. If

this can be done considerably in advance of actual planting, the action of rainfall will thoroughly incorporate the fertilizing material with the main body of the soil. When starting the actual planting, go over the bed areas and with a stake mark out the location of each individual shrub, after which the holes may be dug ready to receive the plants, and a covering of soil quickly thrown over the roots, thereby avoiding any drying out through exposure. If drainage conditions around the foundations are poor and the soil is likely to be unusually wet during heavy rains, it would be well to prepare a drainage area at the bottom of the planting bed and connect this with the usual tiled drain which is placed immediately outside of the footings of the cellar walls. (Fig. VII, page 102) This is to be done, of course, when the original staking is done. If no tile is present, a line of tile may be put in and connected with the storm drainage system of the house, or run into a sinkhole at a considerable distance from the building.

On the arrival of the nursery stock, break out bundles and "heel-in" at a conveniently handy spot in the garden area. This is done by digging a shallow trench in which the roots of the plants are laid at an angle, a generous quantity of earth being thrown over the roots and the lower portion of the plants in order to prevent drying out of the root system. Keep each variety separate so that any required plants may be readily located at planting time.

When planting shrubs in a narrow bed, as necessitated by a walk close to the side of the house, be careful so to place each shrub that it slants slightly toward the building, as otherwise it has a tendency to encroach upon the walk area as it develops size. If properly inclined, a little helpful pruning will keep the head clear of the walk area. (Fig. V, page 102)

A rough rule for determining the distance apart for the plants to be spaced is that the average shrub will grow in width a distance equal to two thirds of its height; the height of the shrub can usually be found in the descriptive matter of the nursery catalogue or reference book.



# RASPBERRIES, BLACKBERRIES, AND DEWBERRIES FOR THE HOME GARDEN



JOHN L. DOAN

School of Horticulture for Women, Ambler, Pa.

## Berries the Season Through—Habits and Cultural Requirements—Some Important Plant Characteristics

**EDITORS' NOTE:**—The average home garden is notoriously deficient in fruit, perhaps because of a subconscious thought that fruits for current needs can always be bought. They can, but not the kind that a gardener can grow for himself. Apart from the matter of intrinsic quality and state of maturity it must be recognized that good fruit is becoming less and less easy to obtain at reasonable prices and that this deficiency of an acknowledged essential in the dietary must be supplied at home. This article is the third of a series especially prepared for THE GARDEN MAGAZINE by Mr. Doan dealing with the various aspects and possibilities of the home fruit garden. "What, Why, and How Much Fruit to Plant" may be found on pages 323, 324 of our February (1922) issue, and "Strawberries for the Home Garden" in March, pages 27-29. Others will follow.

**T**HE Bramble fruits (Raspberry, Blackberry, and Dewberry), following soon after the Strawberries, continue the small fruit season until mid-summer, and, with the Everbearing Red Raspberry, until autumn. All require similar treatment and all the important varieties belong to native species.

Dewberries are trailing and are the most thorny. The other groups are more erect. Blackberries are thorny and vigorous. There are hybrids between the Blackberry and Dewberry also called Blackberries; they are less erect than the pure ones, and always need support.

The Red and Black Raspberries are distinct species and each has a variety with yellow fruit. The Black Raspberries are considerably thorny while the red kinds have few thorns by comparison.

Purple Raspberries are hybrids between the Red and the Black kinds. They usually resemble the Black Raspberries the more closely in bush characters and are treated like them in cultivation.

The flowers and fruits of all the groups are borne upon growths of the current year, rising from canes of the previous year's growth. With the Blackberries these are little more than fruit clusters with a few leaves; but with the Raspberries and Dewberries the shoots are considerably longer.

The Red Raspberry and Blackberry sucker freely, and the Dewberry and Black Raspberry propagate by tip layering.

### Yields

**W**ITH good care and reasonably favorable conditions, the following yields should readily be secured, and often exceeded after the second year.

Red Raspberries	5 pts. per 10 ft. of row
Black Raspberries	7 " " " " " "
Blackberries	9 " " " " " "
Dewberries	8 " " " " " "

The profitable life of a Bramble plantation may vary from five to more than ten years. The most frequent determining factor is the health of the plants. Anthracnose is most likely to shorten the life of the plantation, and probably crown gall would stand second as a menace. Usually the Black Raspberry plantation is shortest lived and the Blackberry plantation longest lived.

### Where They Like to Grow

**J**UST as for other fruits, a somewhat elevated situation with good air drainage is desirable. All Brambles take kindly to moderate shade and may be grown next to buildings, near fences, or close to trees, where vegetables will not thrive. The Dewberry likes a light sandy soil or a sandy loam; the others need moist but well drained, loamy soil. The Blackberry and

Red Raspberry prefer a soil ranging from a rather heavy sandy loam to a light clay loam, but certain varieties seem to have marked preferences for certain types of soil. Black Raspberries do well in a soil that is somewhat heavier; but they may be set more deeply, enabling the canes to stand up better in a rather light to medium loam.

### Land Preparation and Planting

**B**EFORE the plants are set the land should be well supplied with organic matter, deeply plowed or spaded in, preferably in the autumn because the Brambles start growth earlier in spring than most land is ready to be plowed. A heavy sod that has been plowed under and followed by one cultivated crop is a good source for humus; or about 125 lbs. of manure to the square rod is very satisfactory. If the ground has been kept well manured in previous years, all this may not be necessary.

### How They Can be Grown

**P**LANTING may be done either in the fall or in the spring where the climate is not severe; otherwise spring planting is best, and as early as practical, because the strong buds which develop into the young shoots are very brittle after they have started to grow and, if planting be delayed, the plants must be very carefully handled. After fall planting, place over each plant a forkful of straw or similar protective material, or a mound of soil at least 6 in. high, to be removed in early spring.

The Brambles are usually planted in rows spaced according to the vigor of growth, thus: 8 ft. apart for Blackberries, most vigorous of our Eastern Brambles, 7 ft. for Black Raspberries; 6 ft. for Red Raspberries and Dewberries. In the row allow Blackberries 4 ft. apart with Raspberries and Dewberries 3 ft. apart.

Because of its greater convenience in all operations, the hill system is growing in favor. After the first crop, it affords at least equal yields of larger, finer fruit. Distances vary, but about 5 x 5 ft. for Red Raspberries and Dewberries, 6 x 6 ft. for Black Raspberries, and 7 x 7 ft. for Blackberries is satisfactory. Any of the early garden vegetables may be grown as companion crops the first year.

### Cultivation and Cover Crop

**A**FTER the fruit has been gathered, keep up thorough cultivation, starting a rank, quick cover crop, preferably one that will continue to grow in cool weather. Barley, Buckwheat (preferably with Rye), Rye alone, Winter Vetch, and Cow-peas may be used. This crop to be worked under about 4 inches deep the following spring, not disturbing the larger roots of Blackberry and Red Raspberry, as that aggravates the suckering habit.

Suckers will appear anyhow in those plantations after the

first year; of these, from three to five strong canes may be saved about each parent crown, the rest being treated as weeds.

Growers are not of one mind about the fertilizing of Brambles. However, good yields follow the moderate use of stable manure as already given, supplemented in early spring by commercial fertilizers, say 2 lbs. of acid phosphate, and  $1\frac{1}{2}$  lbs. of high grade sulphate of potash per square rod, well worked in.

If a good cover crop be worked into the soil each spring, the addition of 5 lbs. per square rod of a fertilizer containing about 4% of nitrogen, 8% of phosphoric acid, and 10% of potash, will amply supply the needs of the Brambles three years out of four, the manure and supplementary fertilizers being used the fourth year.

The Dewberry is a native of thin soils and aside from the working in of the cover crop should be fertilized sparingly.

### Pruning and Training for Fruit

THE young shoots of the Blackberry and Black Raspberry are usually nipped back to make the main stalks stocky and cause strong laterals to be thrown out. About 2 ft. is a very satisfactory height for the former, and  $2\frac{1}{2}$  for the latter; but if the young canes have passed the desired height, they should not be shortened more than 6 inches, as severe shortening causes weak laterals. Dewberries are not pinched back as they require support under any condition; nor the Red Raspberries usually, as most varieties produce weak laterals, and their tendency to sucker is aggravated. The Herbert Red Raspberry, however, responds to pinching back.

The following spring the laterals of the Black Raspberry and the Blackberry are pruned back, according to their vigor and the location of their bloom. Varieties that carry their bloom near the base of the lateral are pruned more severely than those that bloom further out. But if the flowering habits of the variety are not known it is well to delay pruning until the buds have developed sufficiently to show the flower clusters. Prune away about one third of the bloom on strong shoots and more on weaker ones if there is an abundance.

Prune Red Raspberry canes of average vigor to about 3 feet; stronger ones being left higher. If laterals have been thrown out, prune these according to their strength, 1 ft. or more for the strong ones, the weaker to a few inches. Dewberry canes are first to be tied up to stakes and then pruned to a convenient length, usually 3 to 4 ft.

After fruiting, the canes of the Brambles die; therefore, remove and burn immediately after the fruit has been gathered, thus giving more room to the young canes.

### Supports

THOUGH nipping back Blackberry and Black Raspberry canes may enable them to carry their fruit fairly well, it is better to support them in some way.

When the hill system is followed, there may be one or two stakes to each hill. If one stake be used, the bearing canes are tied to it and the young ones are left unsupported. If two stakes be used, the young canes are tied to one and the bearing canes to the other, an arrangement that helps in gathering fruit and in removing the old canes after harvest.

For the row system, light posts of durable timber may be set 20 to 30 ft. apart with cross-bars of inch wood, about 3 in. wide and 18 in. long, centered on the posts at about 3 ft. high. No. 11 wires are stapled to the upper edges of these near their ends, and the canes are supported between the wires without tying. If Dewberries be so supported, however, the canes are tied, the young ones to one wire and the old ones to the other.

The various troubles of insect and disease that are likely to attack may usually be controlled by faithfully carrying out the following spray program: (1) spray the bushes while dormant with copper sulphate, 1 oz. to 6 qts. of water; (2) spray with Dry Bordeaux or Pyrox, prepared according to directions upon the package, when the young canes are 6 in. high; (3) spray with Pyrox or arsenate of lead just before blooming; (4) spray with Dry Bordeaux when the old canes are cut out, just after harvesting the fruit. Blackberries and Dewberries do not often need spraying.

Whenever any cane looks sickly, cut it out and burn it. If the whole plant should look sickly under good care, or should show orange-red discolorations on the under surfaces of the leaves, dig and burn it at once. When the old canes are removed, cut off several inches below the injured part any tips of the young canes that are wilted or any canes that show elongated swellings. In setting out the plantation, reject and burn any plants that show warty enlargements on roots or crowns.

### Gathering

ALL these fruits are much better when they become fully ripe, but not over ripe, on the bushes. Being tender, they should be picked with the thumb and two fingers, as three points of contact mean less pressure; and they should be laid, not thrown, into the box. Do not gather the fruit when wet, unless it is to be used quickly, and take the berries into a cool, dark place promptly after they are picked. In average summer weather the fruit should be picked every second day.

Black Raspberries are ready to be gathered when they come off readily without the stem. Red Raspberries lose some of their glossiness, also usually turning darker, and enlarge and soften when they ripen. Dewberries and Blackberries turn black three days or so *before they are fully ripe*; when they are ripe they are considerably larger, softer, and more juicy, and the individual drupelets that compose them have increased greatly in size.

### Varieties

BLACK Raspberries begin ripening towards the end of June (latitude of New York City) and usually last two weeks or more.

Plum Farmer and Black Pearl (not Black Diamond) are good varieties; Cumberland is still good, but less healthy than the other two. It is hard to get good plants of Gregg, Kansas, etc.

The Red Raspberries begin ripening almost with the black ones and have a much longer season. Cuthbert and Herbert are excellent, in quality and otherwise. Ranere (St. Regis), the everbearing variety, prefers a light sandy loam. It produces an early crop, then considerable fruit until frost, when the season favors. La France and Latham are two comparatively new everbearing kinds that I have not tested under varied conditions, but they are well spoken of by others, and La France has large, luscious fruit of rich color borne until winter. The standard yellow fruited variety is Golden Queen. In case the Purple Raspberry should be desired, plant Columbian.

The Blackberry-Dewberry hybrid, known as McDonald Blackberry, begins ripening about with the Dewberries, by the middle of July (latitude of New York City) and continues until the mid-season varieties are in. As it requires cross-pollination, every fourth or fifth plant should be Early Harvest Blackberry. Blowers, Mersereau, or Eldorado would be a high quality mid-season variety. Ward is well suited to sandy loams. Taylor is one of the best late varieties.

Lucretia is the leading Dewberry and frequently needs cross pollination, Early Harvest Blackberry or the Austin Dewberry being satisfactory for that purpose. If the soil is not very good, Dewberries may well be omitted.



# MY NEW VENTURE: FLOWER PAINTING

CARLE J. BLENNER

Lifting Flower Painting to the Field of Authentic Portraiture—  
Dignifying the Once Dilettante Pastime by Treating it as a  
Fine Art Requiring Both Accuracy and Breadth of Vision



EDITOR'S NOTE: As our readers have the privilege of seeing one of Mr. Blenner's charming old-fashioned bouquets on the cover of this issue of THE GARDEN MAGAZINE, they will, we are sure, find this little personal account of the portrait painter's conversion to flower painting of particular interest. It is heartening to the gardener that artists of Mr. Blenner's caliber and training are turning seriously to this field of portraiture which, though it has had an occasional devotee like Paul de Longpré and Alfred Parsons, has been on the whole rather overlooked in the past.

On graduating from Yale, Mr. Blenner studied at the Julian Academy in Paris; received honorable mention at the Salon, and since his return has been accorded recognition in a number of ways, winning the Hallgarten Prize at the National Academy, medals at the Pan-American, St. Louis, and Charleston Expositions, at Boston, etc.

The reproduction on the cover is of necessity much smaller than the original painting done in oil on a large scale with a good deal of brilliancy and verve, unfortunately impossible to convey in this reduced and mechanical form. However, as the original with a number of others were on exhibition in New York early in March and will be shown later in Cleveland and Chicago, some of our readers, at least, have the opportunity of judging for themselves of Mr. Blenner's success as a flower portraitist.

A rather interesting comparison is furnished by the February, 1922, cover (also an "old-fashioned bouquet,") done by the English flower painter, Mr. Frank Galsworthy. The technique of these two renderings is quite dissimilar, though both are characterized by sincerity and a genuine appreciation of flowers. Mr. Galsworthy works in water-color in a finished, almost finicking manner, but there's no mistaking the veracity of his treatment and the depth of his first-hand friendship with the things he paints. Mr. Blenner approaches his subject in quite another way, his viewpoint distinctly that of the artist, getting his effects through composition and bold brush work, with oil as a surprisingly obedient medium, gaining in brilliance and luminosity what he loses in delicacy. To both men we gardeners owe a debt of thanks!

**M**OST of my life I have painted portraits and genre subjects. It seems strange that I have not painted flowers before, being such an ardent admirer of them and of beautiful gardens; in fact, all my family are garden enthusiasts. Seeing so many flower paintings, mostly water-colors, done by amateurs and thinking it rather effeminate work is, I fancy, what really so long prevented me from taking up my present hobby.

A year ago last spring, while at my summer studio near New Haven, I chanced upon some Lilacs in blossom, surrounded by Apple trees in full bloom. I gathered a bunch of each in a bright yellow bowl and painted them; the picture was fresh, dainty, and suggestive of spring. It seemed to please the little circle about me, so, encouraged, I started another, quite brilliant in color, of flaming Oriental Poppies and Snowballs. I was then completely inculcated with the lure of this new field and as the season advanced painted the different flowers: Dogwood; Iris; Peonies; Roses; some bouquets of old-fashioned blooms—Phlox, Snapdragons, Delphiniums, Zinnias, Fuchsias, Marigolds, etc.—interesting combinations of color which I enjoy doing most.

In selecting a subject, I am more successful if I take a mass of flowers and put them in a vase or bowl, without a too studied arrangement, then by changing a bloom here and there I often get an interesting composition, some accidental effects helping materially. Advice from nearby florists has been very useful in preserving my bouquets; I was told to put the stems in boiling water, allowing the flowers to steam. This keeps them fresh a few days longer, and I have found it particularly true of Dahlias and Peonies. One must be up and doing, for they soon fade and droop and one of the chief charms of a flower picture is its freshness and purity of color. As soon as the blooms show signs of wilting, I replace them with fresh ones as nearly the same in color and shape as possible and in the same position.

I am fond of big masses of color, not showing many leaves or stems. Artists have each their individual way of seeing things. When painting flowers some present only blobs and splotches of nice color, while others suggest the precise glory of the seed catalogue, and others again strike the happy medium, depicting the blossoms with sufficient botanical accuracy to enable the genuine lover of flowers to recognize his friends and yet with the breadth of treatment requisite to all really good portraiture. It is this last style which appeals to me and which I try to follow.

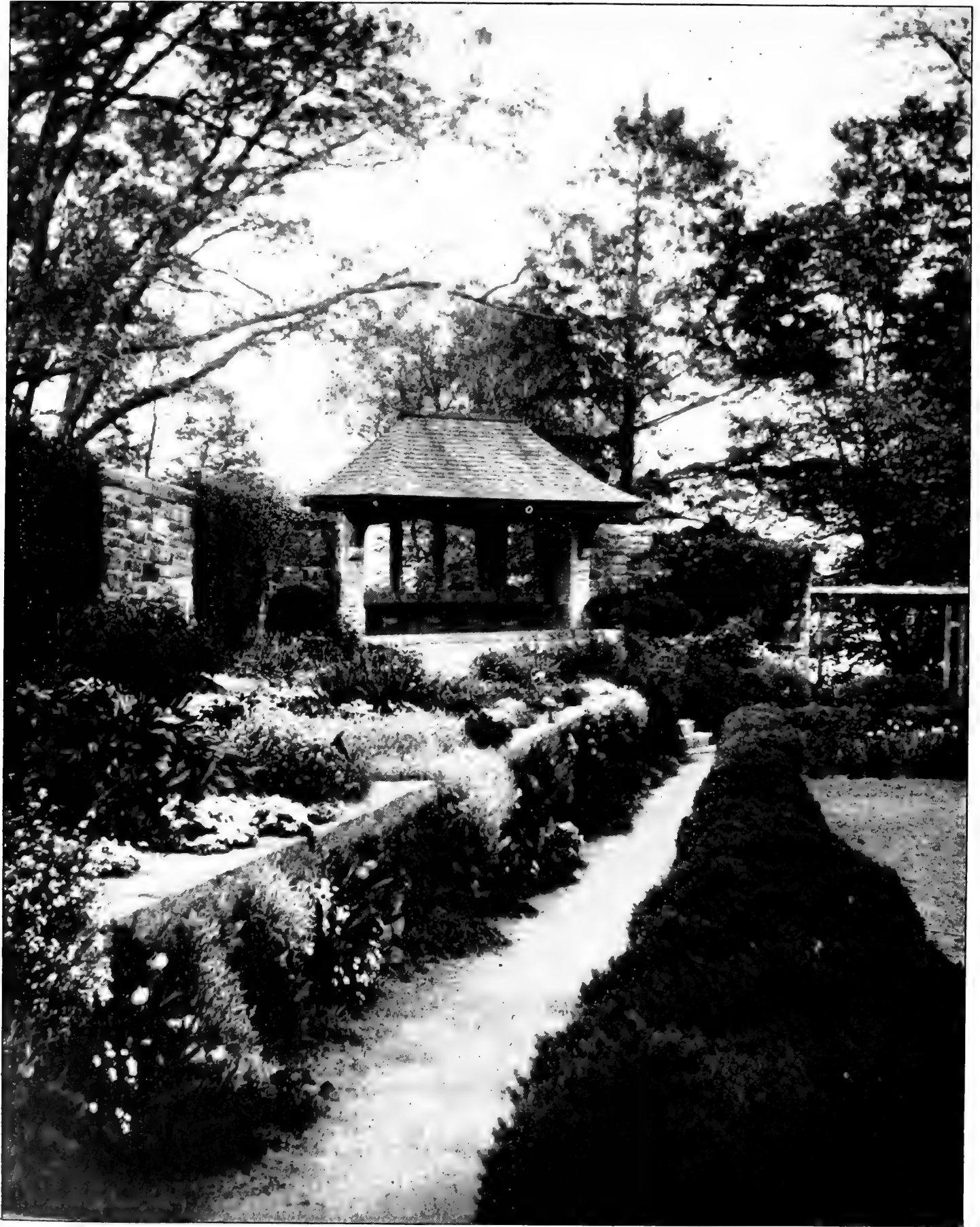
Flowers have character; you seem to feel the class and caste distinctions among them—prim Zinnias; stately Peonies, beautiful and dignified; shrinking Violets; sensuous Orchids with their many varied hues and shapes; then the barbaric splendor of hue in the new Dahlias; the cool, erect Delphinium holding its head high. One realizes with Goethe that Nature has expended all of her powers of color effectiveness and beauty in her flowers—all that is delicate in tints; all that is lurid, splendid, bizarre. To paint flowers one must appreciate their delicacy of form and the rare color beauty of them. After having painted beautiful women for so many years, it is but a step in artistic understanding from the one to the other.

**I**T IS such a joy to get into the country and do a little gardening after a winter's work of portrait painting. Facing my summer studio, I laid out some time ago a little old-fashioned garden; first making a flat terrace, as the studio stands on a hill. Around the central fountain cluster small flower beds containing mostly old-fashioned flowers and bordered by a hedge of Boxwood; the paths are white gravel and in one corner is an old, curved English garden bench. A large English Button-ball tree furnishes some grateful shade during the hottest part of the day. Along one side of this terrace runs a stone wall covered by bright green vines with a mass of Hollyhocks in front. On the other side I built a trellis eight feet high, thirty long, over which eight kinds of climbing Roses scramble at will, and a wonderful sight in June is this mass of beautiful, varied color!

There are several large springs in the lower part of the hill. I made two artificial ponds to drain the land; one circular, in which I put some tubs filled with Pond-lily bulbs, pink, yellow, and the lovely white *Victoria regina*. In the centre I put a larger tub with Lotus flowers, but the water was probably too cold for they did not flourish. Some goldfish introduced a number of years ago have grown to a large size and their glinting, reddish gold is very decorative amongst the rich green leaves. They are useful as well for they feed on the scale which attacks the Lily leaves.

This pool really is quite a picture with the Lilies in blossom, the goldfish swimming about, and a number of glittering blue dragon-flies fluttering above. Occasionally, too, a green frog will come out and sit on one of the leaves apparently to gaze at some beautiful white Lily—a humorous twentieth century "Beauty and the Beast."







SPRING  
In All Long Island Gardens

*"Nethermuir," the home of Mr. Henry W. De Forest  
Cold Spring Harbor, L. I.  
Olmstead Bros., Landscape Architects*

# NEWER GARDEN BOOKS OF NOTE

Volumes for the Garden Maker and Treatises on Growing Nuts, Dahlias, and Roses

**A**MONG garden books of recent date that are general in theme Miss Tabor's "Come Into the Garden" (The Macmillan Company) deserves first mention as a most pertinent piece of pioneering. Not the suburbanite alone, to whom chiefly this timely help is proffered, but all of us are grateful to the little book, for transfiguration everywhere of mere "grounds" into gardens means a more introspective, serene, and altogether saner way of national living.

A stimulus to the development of all the potential beauty lying as yet largely untouched about our doorsteps, Miss Tabor's presentation is also brisk, business-like, and practical. The various considerations are systematically discussed in the order of their importance and in a manner that leaves the reader generally richer. The fundamental whys and wherefores are so clearly and understandingly set forth as to become part of the permanent mental equipment, furnishing the gardener with a sound basis of judgment which will guide him to right decisions in matters of design and planting. From the broad initial consideration of where the house may advantageously be placed on the small property of whatever shape and limitations to detailed instruction about best varieties for the suburban garden, the volume ranges, unfolding in orderly succession and with a sprightliness that makes reading for information an amusement.

A more subjective, rambling, and less constructive treatment of "The Little Garden" (The Atlantic Monthly Press) is found in Mrs. Francis King's latest friendly publication of this name. Perhaps more dessert than meat, it holds, nevertheless, refreshment for the spirit-weary gardener—even gardeners do sometimes "go stale"—inspiration and important suggestion for the gardener-to-be. In form "it looks the part," companionable of aspect as befitting when gardeners talk heart-to-heart of the little gardens of their own creating, and through Mrs. King's friendly chat readers of *THE GARDEN MAGAZINE* will find echoes from our own pages.

**O**N SPECIALIZED topics two notable contributions have been newly made, "Nut Growing" (The Macmillan Company), by Dr. Robert T. Morris; and Mrs. Charles H. Stout's "The Amateur's Book of the Dahlia" (Doubleday, Page & Company). Elsewhere in this issue Mr. Seymour treats at length the startling, common-sense application of modern surgery to the grafting of trees by which Doctor Morris has brought the hitherto difficult achievement of growing nut trees within common reach. Part I, General Notes, is read by the veriest layman with a deal of profit and pleasure so scintillant is it with keen observation, humor and sense. There can be no doubt that Doctor Morris is in the vanguard of a movement of great economic significance and that the extensive cultivation of nut trees will mean not only increased but improved food supply with, presumably, resultant decrease of disease among humans. The opinion of a surgeon of Doctor Morris' ability can be registered as more than a guess!

The many, many growers of Dahlias all over the country may well hail with delight "The Amateur's Book of the Dahlia" for, as an authentic record of Mrs. Stout's work among the Dahlias of her own garden, it has value and significance for growers everywhere. As Mrs. Francis King, in her introduction, aptly puts it: "The garden work that flowers in writing means a permanent benefit to the gardening public—." The mere fact that for more than ten years Mrs. Stout has steadily concentrated on the Dahlia is in itself rather stimulating; the amateur is ordinarily so prone to disperse his energies over a number of enthusiasms that he fails of constructive result in any field. Those of us too busy or too lazy (though in justice to the craft as a whole may it be said that the affliction is more usually business

than laziness) to persist experimentally along a chosen line find such books as Mrs. Stout's a veritable boon. Herself an amateur, struggling single-handedly as it were, Mrs. Stout's viewpoint is our own and we feel fortunate indeed at being thus enabled to profit by her successes without having shared a decade's disappointments. The lovely hued Decorative, Emily D. Renwick, raised by Mrs. Stout, certainly fires one to "go and do likewise;" and, after all, there's really no appreciable limit to the rewards Nature offers the patient! The chapters (XII, XIII) on shows and on color combinations out-of-doors and in have sufficient general application to interest the gardener who is not necessarily a Dahlia grower; Chapter XII, in especial, being full of suggestion for garden club members. It is, in fact, the type of book that might fittingly find place in the library of any progressive group of gardeners and if your club hasn't a library, may we ask why not?

**W**ITH each succeeding year the "Rose Annual" of the American Rose Society achieves increasing importance as a record and as the last word in progress and prospect on its fascinating subject. Indeed, it is doing very much to place the Rose definitely in its relation to the American garden. This year's edition—which is now available to the membership—has the report on the country-wide referendum conducted through the society's members and is therefore an up-to-date record of Rose culture, which will be read profitably by all who really want the latest about Rose growing outdoors.

More extended discussions of the small rose-gardens are included in two bright articles and many Rose notes. Here also will be found the most complete discussion ever published on diseases and insects of the Rose. No reader of this volume who will follow its simple suggestions need submit to either the mildew or the dreaded "black-spot" that remove the leaves of his pet bushes, or endure any of the insects that hunt the Rose.

Captain Thomas, who is both critical amateur and careful hybridizer, and who has for more than ten years tested every Rose produced anywhere in the world, gives his large experience with both budded and own-root Roses, and an enthusiast in Ohio adds some personal experiences with both.

Ideals sought in new Roses are set forth in some ten or more statements by the critical amateur and professional rosarians of the nation. There is an account of the work of the recently deceased Dr. W. Van Fleet as a hybridizer of Roses and other plants, and details are given of a novel contract arranged by the American Rose Society with the Federal Department of Agriculture for the wide distribution of some marvelous new Roses of Van Fleet origination. The American Rose Annual is not purchasable in bookstores but goes without extra charge to all members of the American Rose Society as part of the privilege of membership.

**A**"CHECK LIST OF IRISES" just published by the American Iris Society will be serviceable in arriving at uniformity of nomenclature. Not that the Irises were so badly muddled as some other much cultivated favorites, but that it is well to settle doubts. Those who desire to be correct may now be so.

**A**NEW edition of Sargent's "MANUAL OF THE TREES OF NORTH AMERICA," has been issued (Houghton, Mifflin and Company). This is practically an entirely new work and contains considerably more information and many more references than the former edition, representing the growth of knowledge particularly with the more Southern plants during the last twenty years.





MARSHAL FOCH

A new Gladiolus (not to be confused with the earlier Holland-bred Le Marechal Foch) which bids fair to vie with the popular America; it is described as "a melting shade of pink, with a hint of heliotrope"

## A HANDFUL OF TOP-NOTCH GLADIOLUS

MONTAGUE CHAMBERLAIN

Varieties that Hold the Lead—Present Day Trend from Large Size  
Toward Delicacy of Form—Summarizing Last Season's Exhibitions

**A** GREAT show," said my friend one August day last year as we were leaving the hall in Boston where the Massachusetts Horticultural Society and the New England Gladiolus Society had combined for an exhibition of these beautiful blossoms. It was indeed a "great" show in two ways—probably the largest in quantity, and the best in quality that has ever been brought together the wide world over. That much has been conceded by the men best able to judge wisely. And for this supremacy in quality we must give credit to the skill and the patient care of the American and Canadian producers.

There was a time, and not so very long ago, when the major part of the finest varieties to be seen at a Gladiolus show were of European production, and we still have to thank the growers there for many a good thing. But the day of foreign leadership has passed, and the prize winners of to-day are very largely of our own producing. And their quality is of high rank—such rank as fits them to stand up proudly among the queens of the Gladiolus world.

The exhibition of the American Gladiolus Society was held last year at St. Thomas, Ontario, where the national organization combined with the St. Thomas Horticultural Society—an exceedingly strong and enterprising body. Together these

two companies of Gladiolus growers staged a display of more than ordinary extent and of more than ordinary merit, though it did not quite reach the high level of the Boston Show, either in the numbers exhibited or in their quality.

The reports of these exhibitions which were furnished by the press—both by the newspapers and by the horticultural journals—were most disappointing. They gave names of the distinguished people present, the names of the growers who won prizes, and they told with scrupulous care the things said by the numerous speech-makers—the speech-making at St. Thomas was abundant and the words spoken were a delight to American ears—but we learned from the reports almost nothing of the varieties that won the prizes, the very thing for which the man with a garden has the most interest.

It is worth while endeavoring to make up that loss, and I will begin by trying to answer the often repeated question: "Which was the best variety exhibited?" The truism that the choice of the most beautiful in any given bunch of flowers is purely a matter of individual preference, again found illustration in the differences of opinion as to the best Gladiolus in the St. Thomas Show. One report says that the judges awarded the prize to the *E. J. Shalor*, a tall plant bearing large blossoms of a deep rose pink, while another report states that *Purple Glory* was the

winner. Then we are told by Madison Cooper, an excellent judge, that on the contrary *Marshall Foch* was the finest; while two amateurs, both producers of fine sorts, awarded that distinction to *Fern Kyle*. This last named variety is certainly a beauty, wearing a robe of a rich creamy tint on a form of rare grace. It is still in the seedling class—a débutante, as it were—and has not yet appeared in the catalogues. *Marshall Foch* is of more brilliant style, being clothed in “a melting shade of pink, with a hint of heliotrope.” It has drawn marked attention wherever shown. That variety must not be confused with the *Le Maréchal Foch*, a Holland-bred plant, described by its producer “as the earliest, largest, and purest rose *Gladiolus*.” Others have described its color as a lighter shade of pink than *America*, which it resembles.

FOR some time past our producers have been giving most attention to the improvement of the yellows and the whites. For several years *Golden Measure*, an English variety, has been the leading yellow with *Schwaben* a close second and *Sulphur King* the choice of those who prefer a rich hue to the paler nankeen tints. *Golden Measure* has been used quite freely as a parent by the producers, but Dr. Hoag alone has secured a rival, named *Gold*. It received the highest praise at Boston and St. Thomas, and more than one expert placed it ahead of *Golden Measure*.

Other yellows of note at last season's shows were *Flora* and *Mary Starns Burke*, of the new sorts, with *Niagara* still in an honored place.

OF WHITES there were several that were new to many of the visitors, *White Wonder* commanding most praise, but sharing honors with *Mary Pickford*. The latter is not strictly in the white class, its creamy tint is too strong for admission there, but it is such a beauty that we pardon it for being a bit off color, and the claim has been made that the *Mary Pickford* is better as a cut flower than *Lily White*. Other white varieties that won high praise were *Carmen Sylva*, *Mrs. Prestgard*, *Albaine*, *Snowflake*, and *White Glory*. *Europa* was there and still stands apart as the best white yet produced.

NUMEROUS other prize winners there were—a long list of them indeed, but some received more general praise than fell to the lot of others. *Jenny Lind*, a delicate soft pink, was much admired, and one experienced grower, a man of reliable judgment, pronounced it the best *Gladiolus* at the Boston Show. *Alice Tiplady* was again at the front, hailed as the queen of Kunderd's *Primulinus Hybrids*. Among the throng were *Neoga*, dark crimson; *Anna Eberius*, purple; *Exquisite*, deep rose; *Martha Fernekes*, “almost gray-blue”; *Jap Lady*, purple; *Nymph*, pink lavender, “a ruffled *Mary Fennell*”; *Peach Rose*, deep rose pink; *Crinkles*, peach pink, intensely ruffled; *Sheila*, salmon pink; and such well known beauties as *Mrs. Doctor Norton*, *Mrs. Moulton*, *Mrs. Watt*, *Panama*, and *Orange Glory*. Mrs. Austin was well represented by her *Gretchen Zang*, *Evelyn Kirtland*, and *Herada*. That old stand-by, *America*, was in evidence, for it can still command attention among the best of them, and is probably the most popular of them all. The dainty and delicate *Mary Fennell* was there, and the brilliant *Mrs. Frank Pendleton*, still a queen among queens.

BACK of the prize winners—those patricians—stood the large concourse of plebeians, a throng that, like “the masses,” held many a good sort, but a vast lot of pretty poor stuff. That may be thought somewhat too sweeping, but is it not time to call a halt to the naming of inferior varieties? At all the shows last year there were heaps of flowers staged for display and competition that were only fit for “mixtures.” Also there were many entered for competition that were too

nearly similar to others with a reputation already established to warrant their being admitted.

Mention should be made of the Trial Grounds at St. Thomas, which were much more extensive than any previous effort in that direction. They contained over thirty thousand plants in fine condition, due largely, no doubt, to an efficient system of irrigation with which the grounds were equipped.

ONE feature, found in all the exhibitions, called forth murmurs of regret. It was the evidence that the effort to produce large blossoms has resulted in the sacrifice of graceful form, most noticeable in the displays of *Primulinus Hybrids*—many of those shown being *Primulinus* in name only. All the charm of those first hybrids—the first cross breeding of the *Primulinus* with the large flowered sorts, which produced those dainty blossoms of lovely colors and delightful forms—was gone. Some of the large blossomed varieties were admired, their size and beautiful coloring brought them a degree of admiration, but the charm of the *Primulinus* was not theirs—all that had been bred out of them. In my opinion those plants should not have been admitted to the *Primulinus* class, for the strain of *Primulinus* in their composition is too slight to warrant their being given that recognition.

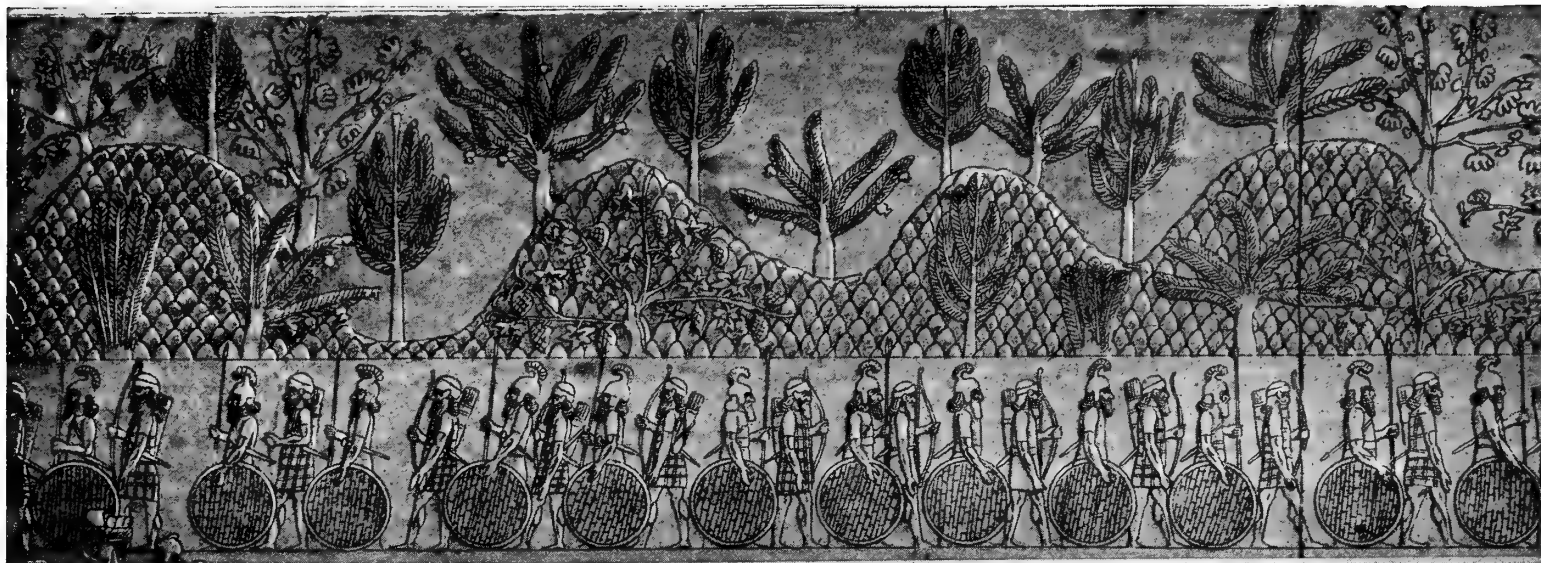
It is encouraging to learn that at recent gatherings of growers the opinion was freely expressed that the craze for large sized blossoms had reached its limit, and that a trend toward a saner policy has already developed. It is time, for everyone—the woman who buys the blossoms for home decoration and the man who plants for garden effect—has rebelled against this sacrifice of beauty for mere size.

An added pleasure, last season, to the people interested in *Gladiolus* culture, was the increased number of amateurs among the exhibitors. The American *Gladiolus* Society has not always favored the amateurs—the real amateurs. It has often failed to make the schedule of classes attractive to the man who had only a little garden patch and only a little time for garden work. Such folk have been carefully fostered by the English societies to whom they have given a generous support, placing the societies in a position of strength and influence that the Americans have not approached.

One cannot but sympathize with the small gardener who, growing only a few bulbs, says, “How can I compete with the man who has thousands?”—the game seems to be all against him; but I do not agree that his plight is as hopeless as it appears, for he has better chances than he imagines. The “law of diminishing returns” seems to apply. The man who has thousands to look after cannot give them the attention that is required to secure the best possible blossoms any given plant is capable of producing. The large grower has to rely upon the chance that out of his fields may come some spikes fit for exhibition. The man with only a small patch to cover need take no such chance. He can be sure of his results, for he can control them.

FEW plants in our gardens will yield so much with so little attention; also, there are few that respond so generously to loving care. Just feed them well, though wisely; give them sufficient water to keep the soil moist around their feeding roots; place them so that the sun will shine upon them every hour of the day, and keep the weeds from the beds—that's all. Let the man with the limited numbers attend carefully to these few things and he need not fear competing against the man with the thousands.

Another feature of last season's exhibitions which it is a pleasure to record is the increased number of small clubs that had their own *Gladiolus* shows. A fine example was the display of the Mansfield (Mass.) *Gladiolus* Society, which staged a show that would have done credit to a much larger body.



GRAPEVINES, CEDARS, FIGS, AND POMEGRANATES ON A BAS-RELIEF OF SENNACHERIB'S TIME

## A PICTORIAL HISTORY OF THE GARDEN—III

H. H. MANCHESTER

Running an Orchard on Shares Four Thousand Years Ago—Dining Outdoors in Ancient Assyria—Flowers that Grew in the Gardens of Asia Minor

EDITORS' NOTE: It is pleasant to reflect that the beauty of the garden has long been a source of delight to men in many lands, and to-day's "high tea" on the terrace is lent an added piquancy by the memory of Ashurbanipal and his queen dining out-of-doors in ancient Assyria with similar enjoyment—and greater state—some twenty-five hundred or more years back.

To follow the footsteps of the garden from its earliest beginnings up through the ages; to trace its passage from Egypt to Asia Minor, Greece, and Rome; to watch its development in the hands of Mohammedan and mediæval monk is a superlatively fascinating pursuit to gardener and antiquarian alike, who will find in Mr. H. H. Manchester an able and dispassionate guide during the coming months as successive accounts appear. The initial articles of this series may be found in *THE GARDEN MAGAZINE*, January, February, 1922.

### IN ANCIENT ASIA MINOR

**T**HE history of the garden in western Asia goes back to the earliest known records. Even leaving out of consideration the Garden of Eden.

The region of the Tigris and Euphrates depended for its prosperity on the control of the rivers. The floods took place between March and May, and were much more sudden and dangerous than in the case of the Nile. A large quantity of the water, moreover, had to be retained for use during the hot, dry months from July to September. This led to a system of canals, which are mentioned in the records almost 5,000 years ago. Ur-nina, the ruler of Lagash, about 2950 B. C., proudly notes on a limestone plaque the names of canals he had built, and half a century afterward King Eannatum records the construction of both canals and reservoirs. Such a plotting of the land by dikes and ditches, and such an artificial system of watering, naturally led to the creation of the individual garden—in fact we find the garden mentioned in the earliest full code of laws which has come down to us.

Hammurabi, (2287-2232 B. C.) who claimed to be the first great king of Babylon and to have united the country, included several provisions concerning the garden in his code, the discovery of which in 1900 has furnished us with so many details concerning the life of that far-off age. Many of the gardens or orchards seem to have been set out on shares, for one section of the code reads: "If a man gives a field to a gardener to plant as an orchard, and the gardener plants it and attends to it for four years, in the fifth year, the owner of the orchard and the gardener shall share in it equally. The owner of the orchard shall mark off his half and take it." The last provision was to

compel the gardener to set out all portions of the field equally. The garden or orchard might also be worked on shares under the following arrangement: "If a man places his orchard in the care of a gardener to manage, the gardener shall give to the owner two thirds of the produce as long as he is in possession of the orchard; he himself shall take one third."

The system of irrigation by dikes and ditches is also mentioned in Hammurabi's code. One of the sections concerning the dike ran in part as follows: "If a man neglects to make his dike strong . . . and a break is made, and the water carries away another's crop, the man in whose dike the break was made, shall replace the produce which has been damaged." A similar law was in force in regard to the management of the ditches: "If a man opens his ditch to irrigate, and neglects it, and the water destroys an adjacent field, he shall replace the crop on the basis of that of the adjoining fields."

At that period the principal fruit trees of Lagash and Babylonia, as mentioned in the records, were the Date Palm, Fig, Pomegranate, and perhaps the Apple. Grapes were apparently plentiful. Among other trees mentioned were the Cypress and Tamarisk. Vegetables noted in the records of the time include principally Onions, Radishes, Cucumbers, and Beans, though others were no doubt grown.

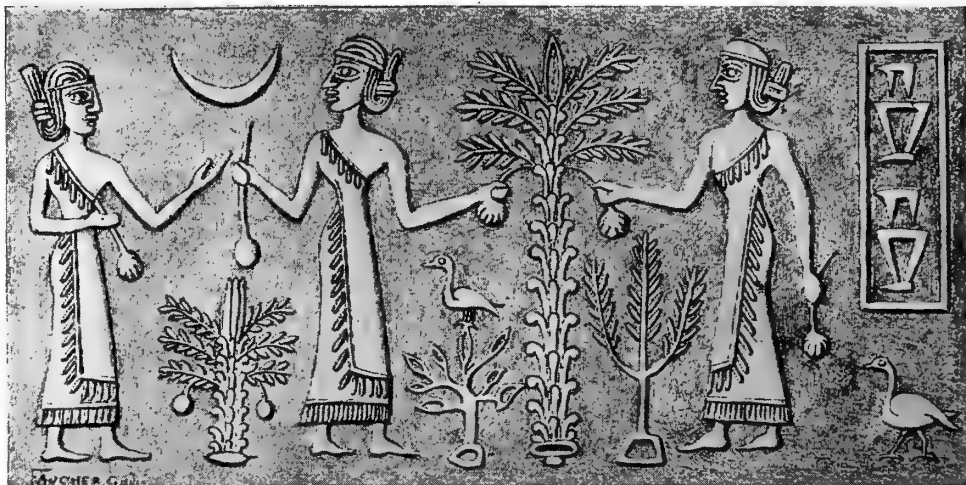
One of the early small baked clay cylinders, which were used for seals and acted as signatures for documents, represents what is probably a nature goddess in a garden plucking the spathes of the male Palm tree, which was used for fecundating the blossoms of the female Palm tree. (Fig. II, page 114) These spathes were tied among the branches of the female



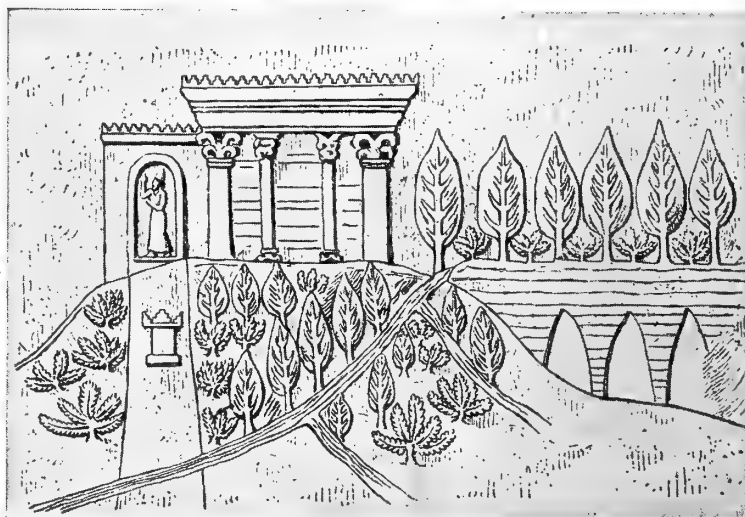
Palm, where their pollen would be blown off on the flowers. The cut of the Palm here is rather formal, and apparently merged with the representation of the "Tree of Life," which occurs frequently in the Babylonian cylinder seals and bas-reliefs.

As long as 3,000 years ago, we find the Assyrians attempting to transplant trees from one country to another, as had already been done in Egypt by Queen Hatshepsut. (THE GARDEN MAGAZINE, February, 1922, page 312.) One of the inscriptions of Tiglath Pileser, of Assyria, about 1100 B. C., declares: "Cedar trees, ukarinu, and allakanu trees, I took away from the lands which I had conquered; trees which none of my fathers had planted, I planted in the parks. Valuable garden fruits which were not to be found in my own country, I brought away, and caused the gardens of Assyria to bear."

Sennacherib, likewise, about 700 B. C., declared that he planned "a great park resembling a mountain, in which were all kinds of fragrant plants, fruit trees, and



II. POLLINATING BY HAND  
Plucking the spathes of the male Palm tree to fecundate the blossom of the female Palm shown on an ancient Chaldean cylinder seal

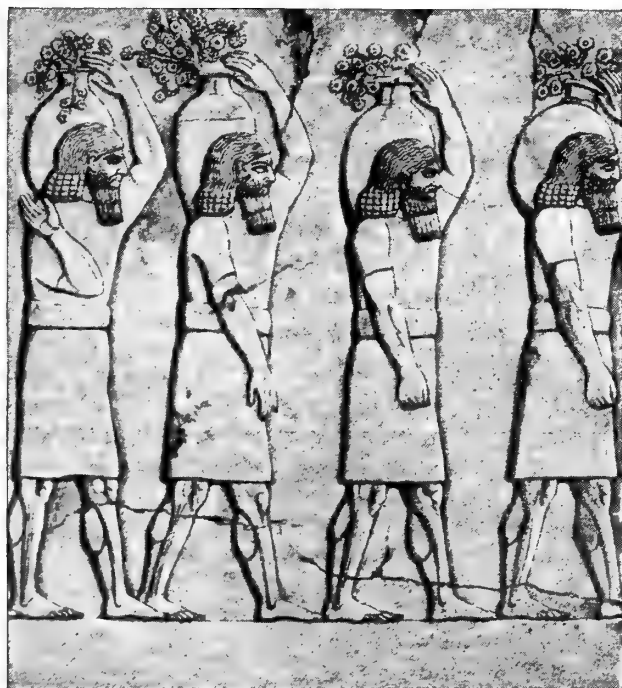


III. TREES ON A TERRACE

Supported by arches (at right); the hillside at the left being also planted with trees and surmounted by a temple; Assyria about 700 B. C.

IV. BEARING FLOWERS AS TRIBUTE

Section of a bas-relief of Sennacherib's time (700 B. C.); a distinct advance in draftsmanship, the slow stately march of these men across the long frieze evidencing considerable feeling for rhythmic beauty



products of the mountains, and of Chaldæa." Several of the bas-reliefs belonging to Sennacherib's reign, and discovered by Layard at Kuyunjik, near Nineveh, include details illustrating trees on artificial terraces and, in fact, on the roofs of palaces themselves.

One of these depicts a temple on a hill with trees not only on the side of the hill, but to the right of the temple on a terrace, which evidently has several pointed arches supporting it. (Fig. III.) Another scene shows the sacking of a town in

Phœnicia. Here we have, in addition to many trees in the foreground, what are probably the tops of trees appearing above the battlements. A detail which makes this identification more certain, is that one of the trees on the tower to the right, appears to have been cut down, and to have fallen part way over the battlement. At the very top of the picture, men may also be seen, probably engaged in chopping down a tree, but the bas-relief has been broken off, and the scene is incomplete.

Before the time of Sennacherib, the Assyrian artist had indicated only the general nature of the trees and plants which he depicted, but in his bas-reliefs appear complete and carefully treated backgrounds in which it is not difficult to distinguish a number of different species of trees. One of the slabs of this series ends in a row of hills covered with Cypresses, Fig trees, Pomegranates, vines, and a sort of dwarfed Palm.

A general view of an estate is given in another bas-relief. Here appears a rectangle in which the trees are arranged in rows, and one may discern a system of watering by canals or ditches.

A detail in a bas-relief found at Kuyunjik represents shadufs at work, of practically the same construction as used in Egypt. In this case the shadufs are one over another, which was the method employed to raise the water to successively higher levels.

The enjoyment of flowers and fruits by the king is indicated in a bas-relief which outlines long rows of men carrying them as tribute, or the spoils of conquest, to the ruler. It is easy to recognize the pomegranate, figs, and grapes among the fruit.

What appears like a pineapple is probably the head or "cabbage" of the Palm tree, which was a favorite fruit at that period. The flowers (Fig. IV), in the reproduction are on so small a scale that it is difficult to identify them, especially as they may have been selected from all western Asia. It is known that some parts of Asia Minor at the time were alive with flowers, which included the Anemone, Poppy, Iris, Gladiolus, Tulip, Rose, Arbutus, and Myrtle.

Other trees of the period mentioned were the Pistachio,

Almond, Walnut, Plane tree, Acacia, and probably the Apricot. The chief vegetables of the time included Pumpkins, Kidney Beans, Vetches, Egg-plant, Lentils, and Chick Peas, besides the ever present Onions and Beans.

The custom of dining in the garden, and probably on the roof garden, was certainly in vogue in those days. It may be illustrated by a bas-relief dating about 650 B. C. of Ashurbanipal and his queen. The king is pictured reclining on a couch, a flower in his hand, and the queen sitting on a tall chair underneath a vine loaded with grapes, with Date and what appear to be Cypress trees on either side. An interesting detail shows courtiers keeping the insects away from the royal heads by means of the clappers in use at the time. (Fig. V, below).

These bas-reliefs enable one to construct a mental picture of the famous hanging gardens of Babylon,\* thus described by Diodorus Siculus (a Greek historian born in Sicily in the first century B. C.), who no doubt took his account from Berosus, the Babylonian priest who wrote a history of Babylonia in Greek during the third century B. C.

"There was likewise a Hanging Garden, as it is called, near the capital, built by Cyrus for the sake of a courtesan, who, being a Persian, as they say, by birth, and coveting meadows on mountain tops, desired the king by an artificial plantation to imitate the lands in Persia. This garden was 400 foot square, and the ascent up to it was as to the top of a mountain, and had buildings and apartments out of one into another, like unto a theater. Under the steps to the ascent were built arches, one above another, rising gently by degrees, which supported the whole plantation. The highest arch upon which the platform of the garden was laid was 50 cubits high, and the garden itself was surrounded by battlements and bulwarks. . . . Upon all these was laid earth of a convenient depth, sufficient for the growth of the greatest trees. When the soil was laid even and smooth, it was planted with all sorts of trees, which both for greatness and beauty might delight the spectators."

Strabo the Greek historian (63 B. C.—24 A. D.), stated that the hanging gardens were reckoned among the Seven Wonders of the World, and that at the side of the steps which mounted to them, were water engines, by means of which persons especially appointed for the purpose were continually employed in raising water from the Euphrates into the garden.

There are no ancient Hebrew pictures of gardens, but several important notices of gardens and garden products may be found in the Old Testament. In the forty-third chapter

\*On page 127 of Lord Frederic Hamilton's "The Vanished Poms of Yesterday" may be found the description of a somewhat similar "hanging garden" more recently built to gratify the whim of a Russian Empress.

of Genesis, we come upon Israel directing his sons to take to Joseph as a present, "a little balm, and a little honey, spicery, and myrrh, nuts (pistachio), and almonds." Of these products four were from trees held in high esteem both in western Asia and Egypt.

The vegetables craved at the time of the Exodus, are plainly indicated in the eleventh chapter of Numbers where the children of Israel, wandering in the wilderness, protest: "We remember the fish which we did eat in Egypt for naught; the cucumbers, and the melons, and the leeks, and the onions, and the garlic: but now our soul is dried away. There is nothing at all save this manna to look upon."—A vivid outcry against a monotonous diet, pacified by the promise of "a land of brooks of water, of fountains and springs, flowing forth in valleys and hills; a land of wheat and barley, and vines, and fig trees, and pomegranates; a land of olive trees, and honey."

The vast size of the Assyrian garden, or rather park, is indicated in the first chapter of Esther, where the king made a feast "unto all the people that were present in Shushan . . . in the court of the garden of the king's palace."

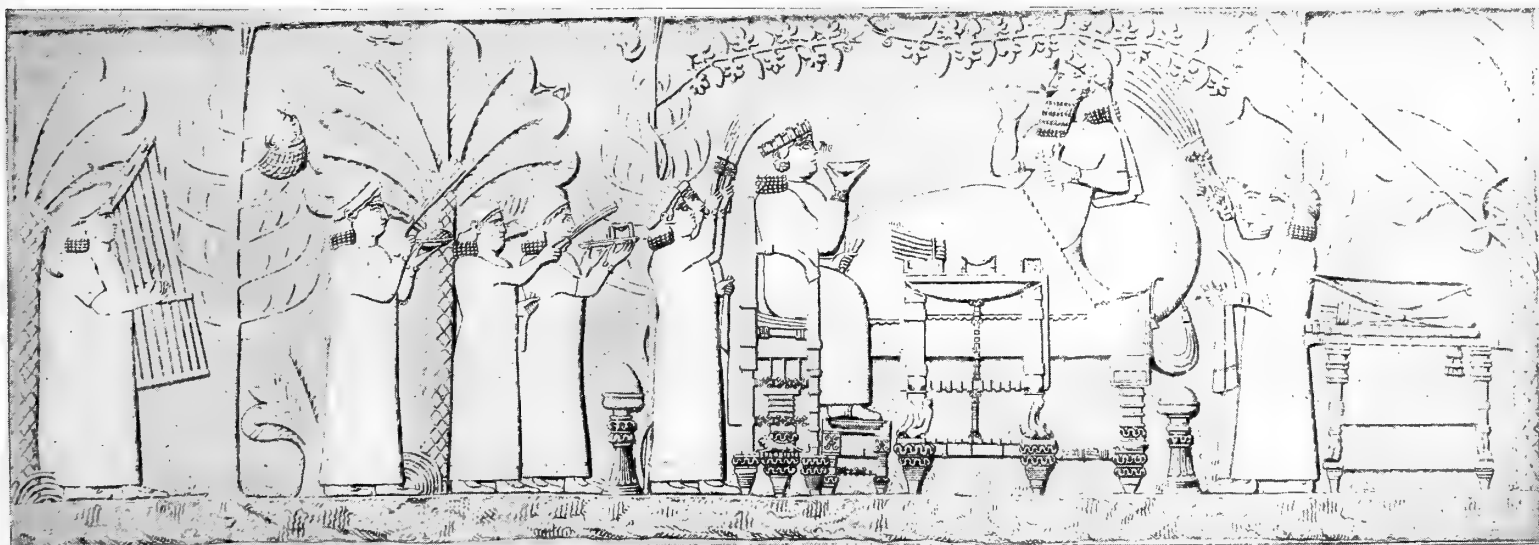
The most definite notices in the Old Testament of special trees and plants occur in the "Song of Solomon," where the church, considered as the bridegroom, is made the subject of many metaphors. Some of the most beautiful have to do with trees and flowers, and mention a number of species which we have not already associated with the period. Note, for example, the following lines:

"The beams of our houses are cedars,  
And our rafters are firs.  
I am a rose of Sharon,  
A lily of the valleys."

The chief spices and incense are apparently included in the following verses:

"Thy shoots are orchards of pomegranates with precious fruits;  
Henna with spikenard plants,  
Spikenard and saffron,  
Calamas and cinnamon with all kinds of frankincense;  
Myrrh and aloes with all the chief spices.  
Thou art a fountain of gardens,  
A well of living waters,  
And flowing streams from Lebanon."

That there were sometimes separate gardens for different products seems probable as the poet states particularly that he "went down into the garden of nuts."



V. "THERE'S NOTHING NEW UNDER THE SUN"

King Ashurbanipal and his queen dining in the garden about 650 B. C. in equal comfort and considerably more state than we twentieth-century folk with our more democratic standards ever aspire to

# SOLVING THE SEASON'S SALAD SUPPLY

ADOLPH KRUEH

Lettuces That Don't Head and Why They Never Can—What the Gardener Can Do to Ensure Daily Salad from April to Thanksgiving

**T**HE one reason why there is any question at all of an all-season supply of salad is that we are asking distinctly cool season vegetables to adjust themselves to mid-summer heat. Endive, Lettuce, Chinese Cabbage revel in cool, moist weather which commonly is not experienced in most parts of the country during July and August, when we most desire refreshing salads.

Five factors determine the degree of our success in growing salad crops: season, soil, moisture supply, strains of seeds, and cultivation. It is up to the planter's ingenuity to figure a way whereby the other four factors may be combined to work against the first (season) for the greatest results. Let us consider them in detail.

The first step is to put the soil in as good condition as possible for the crop, which is not difficult because as a group the salads are not particular. The one thing they *do* require is liberal quantities of quickly available plant food, especially humus. Humus is rotted vegetable matter and is to be incorporated into the surface soil. Fresh stable manure, dug under 6 to 8 inches, Rye and other green crops, plowed under to an equal depth, are beyond the reach of the salad plants. They form humus in due time; but the salad plants must have it at once, and my experience is that it pays to work a generous supply of the commercial article right into the row. Rotted cow manure and well-rotted sod-soil serve the purpose equally well.

Strange to say, moisture supply, the next factor in success is the least important under certain conditions of cultivation. I have raised finer heads of Lettuce right on Long Island during July without irrigation than ever were produced with the help of watering. When the plants do

not get moisture from above, they go down for it—if the soil texture is right. They then form long tap roots with few laterals. Surface irrigation, on the other hand, produced shorter tap roots with bunches of laterals; in a drouth-such plants quickly shoot up seedstalks, even before heads are formed.

Strain of seed is a most important factor. Please note that I say *strain*. Ordinarily we would specify certain *varieties*, but in the case of Lettuce we go farther. There are, for instance, two types of Tennisball Lettuce—the White Seeded, with many variations; the Black Seeded, with fewer. Now, White Seeded Tennisball is like to a bucking bronco—you never know when it will bolt; yet nine out of ten seed catalogues still offer it, for antiquity's sake.

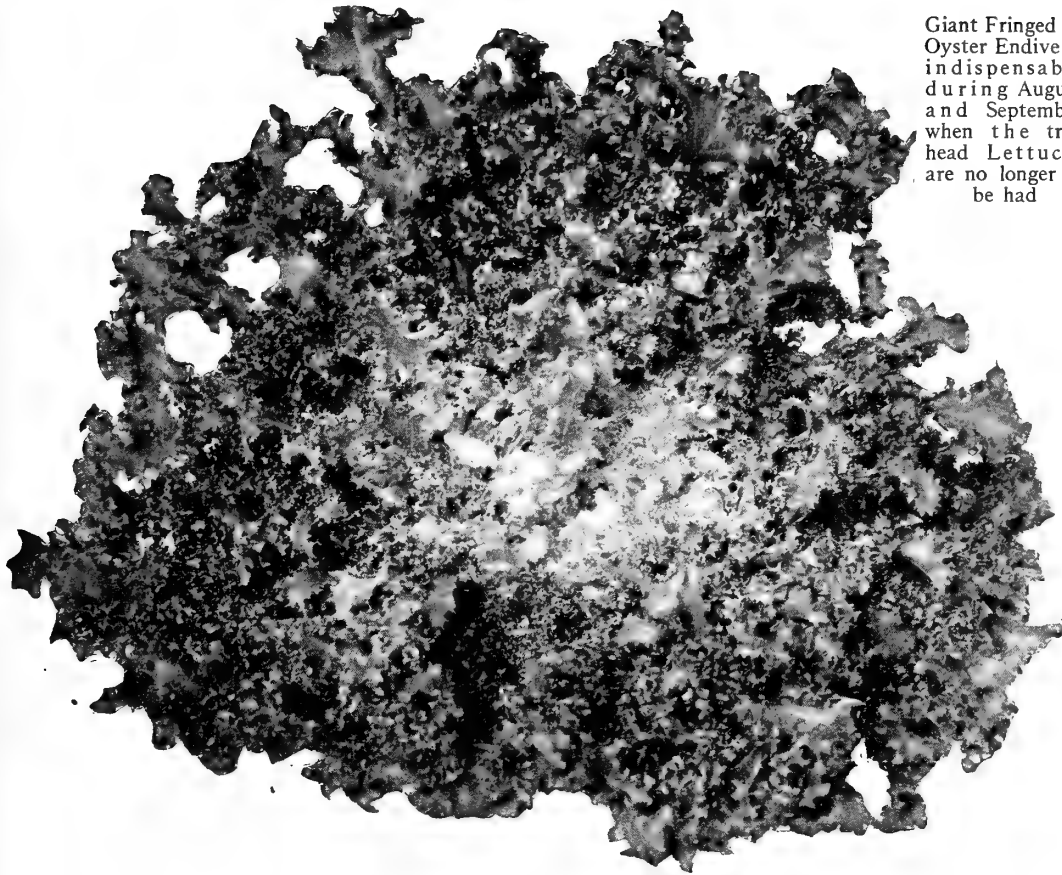
Black Seeded Tennisball, on the contrary, is the best of all the extra early Butter-head sorts for early spring work. May King and Wayahead, which I consider strains of Tennisball, are white seeded, but have characteristics of merit. May King will do well under meaner conditions of soil and season than any other extra early heading variety, while Wayahead is *the earliest*, though somewhat more exacting.

Amazing results may be scored with Lettuce between the middle of April and the end of November, if only proper selections are made. It is essential to choose *a variety that will do its best at the period in which it is to be grown*. May King during May is a wonder; during July it is a joke. New York or Wonderful, during June, is a disgusting looking, flat, coarse plant; with the approach of hot weather in July it fortifies its interior by forming walls reinforced by strong



The Butter-head type leads the Lettuces for compactness in heading and for delicacy of texture and flavor





Giant Fringed or Oyster Endive is indispensable during August and September when the true head Lettuces are no longer to be had

midribs. With no other vegetable is the question of "specific strains and varieties for specific seasons" as all-important.

#### The Programme of Sowing and the Kinds to Sow

**I** TAKE it for granted that the gardener had access to a coldframe during early March in order to provide seedlings of Black Seeded Simpson. As an alternative, most seed and plant establishments are generally prepared during April to supply sturdy plants, suitable for transplanting into the open ground, 10 inches apart in rows, 18 inches between the rows. Where this can be done *early in April*, the gardener will enjoy crisp Lettuce from early in May until the middle of June. But please remember Black Seeded Simpson is *not* a Head Lettuce.

As soon as the ground can be dug and raked (generally about April 15th) sow short rows each of Wayahead, May King, Black Seeded Tennisball, and California Cream Butter. When thinning these, about May 5th to 10th, transplant the sturdiest seedlings wherever there is space in the garden. These four varieties will mature in succession, supplying salad from the middle of June until the middle of July, when California Cream Butter will "bolt" to seedstalks.

The *first week in May* sow All Seasons, Iceberg, New York or Wonderful, and Kingsholm Cos. This will provide heads from early July until early August. While thinning the seedlings of New York or Wonderful, transplant the sturdiest, which will be ready about a week later than those left to grow in the original row. By the middle of August, even Kingsholm Cos will go on a strike; and from then on, for about four weeks be satisfied to do without Lettuce. But Endive sown in May will supply the salads for that interval.

*Early in August* sow a row each of Unrivalled, Crisp-as-Ice, and New York or Wonderful. These will provide salad from the middle of September, when Unrivalled will be ready, until Thanksgiving when the last of New York or Wonderful may be snowed under.

At this time the coldframe will help again. By the *middle of October*, transplant a score each of Crisp-as-Ice and Wonderful into the frame, covering the plants during severely cold nights, and you may enjoy fresh Lettuce of your own growing even up to Christmas, depending entirely upon the severity of the season.

#### Caring for the Growing Crop

**T**HE least understood and therefore least practiced detail in Lettuce culture, the lack of attention which is responsible for 75 per cent. of all failures (balance to be credited to choice of poor strains), is thinning the growing crop. The seedlings *must be thinned* to give ample room for the unhampered development of the individual plant. Do the first "thinning" (which is really cultivation) when the plants are just large enough to be taken hold of, generally 3 to 4 inches. Lettuce seeds germinate from 90 per cent. to 100 per cent. Everyone sows them too thickly. The result is crowded rows, spindly seedlings, a war of "the survival of the fittest," a waste of plant food on the unfit, and permanent injury to the crop.

Thin out so that every Lettuce stands at first 4 inches from its fellow in the row. As soon as the little plants fill that space, remove every other one, now fit for salads. Repeat this thinning out process until the plants stand 12 to 18 inches apart, the small varieties requiring less room, the larger ones as much as 2 feet of space for each head in the row.

From the time that the little plants become individuals on a street rather than babies in a crowded tenement, the hoe or any cultivator should be kept busy. Besides hoeing both sides of the row, stir the soil *in the row*, between the plants. No other vegetable crop I know responds so thoroughly to diligent and thorough cultivation. It will grow fairly well even in soils poor



The Chinese Cabbage Wong Bok, if sown in early August, matures rapidly and is ready for table use by the end of September

in humus, so long as frequent cultivation is practised, and will stand a surprising amount of drouth.

#### Utilities of the Different Classes

THERE are three distinct branches of the Lettuce family, each of specific usefulness at different seasons: (1) the Loose-leaf class, members of which will *never* form heads; (2) the true Head Lettuce; (3) the Cos Lettuce which forms upright bunches of leaves, folding more or less tightly, according to variety.

The first is important only for very early work; it will thrive in lower temperatures, and meaner weather, and get along on poorer soil than any other type. But that's all that can be said in favor. Neither in quality nor in appearance do they measure up to the other classes. The most important of the early Looseleaf type is Black Seeded Simpson. Prizehead—a poor name for a sort that won't head, and positively misleading—ranks second.

Among the Cos Lettuces, the chief value of which lies in their heat resistance, Express or Eclipse is the earliest, but small. Paris White grows larger, does well during early August and is of better quality. Kingsholm is the largest and latest of the three and while of a rather forbidding appearance, it holds a heart of gold.

Head Lettuces, however, are the ambition of every home gardener. They are of two kinds: Butter-head and Crisp-head.

The Butter-heads are distinct from the others in having leaves of markedly delicate texture which seem oily or buttery to the touch. The Crisp-heads lack this characteristic, forming strongly ribbed heads which somewhat resemble small Cabbage, wherefore they are called "Cabbagehead" in some catalogues. The Butter-heads carry off the quality prize, they are best served with French dressing, whereas Crisp-heads are often given a bacon fat dressing.

But there is reason for growing both Butter-heads and Crisp-heads in the home garden. When the best of the Butter-heads wilt and go to seed under August suns, the Crisp-heads, with their tightly folded heads and strong midribs, prolong the salad season for another week or ten days, perhaps.

For perfect succession of delicious Butter-head Lettuces, use the following varieties (the figure after each name indicates the time required to form heads from the time of sowing seeds):

*Butter-heads:* Wayahead, (45); May King, (50); Black Seeded Tennisball, (55); California Cream Butter, (65); All Seasons, (75).

*Crisp-heads:* Iceberg, (70); Harrison, (75); New York or Wonderful, (80).

Crisp-as-Ice is difficult to classify; with Butter-head quality its growth character is Crisp-head. It is the one variety, however, I prefer to all others for late season work. It will stand a remarkable amount of cold weather without injury.

#### The Other Salads

WHILE a member of an entirely different family and lacking the delicate flavor of Lettuce, Endive is indispensable as a salad to fill the gap during August and September. Giant-fringed or Oyster Endive, from seeds sown in the middle of May will yield average plants by the middle of August and, if shaded by either boards or muslin during the hottest part of the day, will do duty while a late sowing of Lettuce is coming on.

We also discovered last year that the Chinese Cabbage was better as a salad than as a cooked dish. Do not sow until early in August and its development will be most rapid, so that by late September, and from that on until snow covers the ground, you can count on gathering delightful, crinkled, well blanched heads, weighing from two to five pounds each. The flavor of this salad is delightfully pungent.

Witloof Chicory is for connoisseurs among salad eaters. This is the French Endive of Europe. Seeds are sown early in April, the plants making a strong growth throughout the season, and the roots are dug in the fall. The tops are then cut back to within an inch of the neck, the roots are shortened at the bottom so that all are a uniform length of from six to eight inches. They are then packed upright in deep boxes, the crowns covered with sand, soil, or moss. After watering, place in a warm cellar. If this be done in the middle of November, a delightful, crisp, aromatic salad will be had at Christmas.

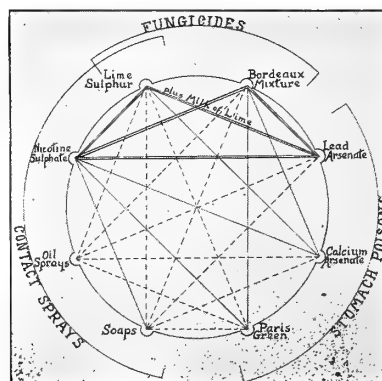
## A 3-IN-1 SPRAY FOR THE BUSY GARDENER

Saving Labor by Uniting Several Ingredients into One All-Purpose Combination

YOU would like to save from a half to two thirds of the time and labor ordinarily required in giving the garden a thorough spray treatment. It can be done, yet there are plenty of gardeners who just have never got round to merely combining two or three sprays—each with a specific purpose and action—and using the manifold protector three or more times throughout the season at such keynote periods as will enable them to do the most damage to the largest possible number of injurious insects and diseases.

The essential ingredients of such a mixture of preventives and remedies are:

1. *Fungicide* with which to overcome or ward off mildews, rusts and other fungous diseases.
2. *Stomach poison* for the destruction of such beetles, caterpillars and other insects as chew the plant tissues and may be killed by materials taken into their alimentary systems along with the leaves eaten.
3. *Contact spray* by means of which scale insects, plant lice and all other sucking forms may be combatted.



Double lines show what may be united into a combined 3-in-1 all-purpose spray. Undesirable combinations are shown by broken lines. The light, continuous line shows possible safe mixtures

Taking our fruit crops (which are perhaps more permanent and easily observed than the average ornamentals) as a calendar guide, the first act of our general spray programme opens just as the Apple blossoms are about to expand. If there is a severe and well-established case of scale on any of the trees, you can advantageously introduce a "prologue" in the form of an application of some recognized scalecide, just before the leaf buds on the fruit trees break. This is a "dormant" spray, and since most, if not all, insect enemies as well as their host plants are dormant at that time, there is no need to waste either poisons or contact sprays by including them.

As soon as the Apple petals have fallen, but before the calices of the tiny fruits have closed, give the second act. From ten days to two weeks later a third spraying will usually dispose of any pests that have escaped the first two applications. Such a course of treatment will be reasonably sure to destroy any infection existing in your own garden.

Later throughout the summer infestations of insects or disease spores may come in from a less thoroughly protected outside

world and future applications of preventive sprays must be timed to meet these emergencies.

AS TO the actual materials available for the "triumvirate spray" use: as the fungicide, either lime-sulphur or bordeaux mixture; as the stomach poison, lead arsenate or—though slightly less desirable—calcium arsenate; and, as an effective and safe contact poison, nicotine sulphate. These materials form the basis of the numerous commercial preparations offered in the stores, which are best for the home gardener to use. Assuming that few gardeners will need or desire to "mix their own" bordeaux or lime-sulphur, it is necessary merely to refer them to the directions printed on the package of the commercial articles as to the amount of water to be added. Indeed it is far from desirable for the average gardener to attempt to prepare his own materials. They are purchasable in a number of forms. This done, the poison (either paste or powder) is added to the preparation just as if it were plain water; then the nicotine carrier is added in the same way. But one precaution is to be observed: if lime-sulphur is used as a base, and lead arsenate added as the poison, there should be included in the mixture milk of lime at the rate of one pound to ten gallons of the liquid.

This prevents the possible development of soluble arsenic which quickly causes foliage injury.

This brings up the thought, why not mix up any spray materials one happens to have on hand and thereby kill several birds with one stone. This is possible only within certain limits, since the combination of certain spray mixtures may (1) partially or completely neutralize the effectiveness of one or more of the elements; (2) form some new compound that will injure the plants treated; or (3) set free some equally harmful substance already present in one of the ingredients, but in a harmless form.

The accompanying chart (adapted originally from California Circular 195 and, for our purposes here, from Massachusetts Bulletin 201) provides a graphic guide as to which spray materials can, and which cannot, safely be combined.

Two important principles to remember are (1) that as a rule the chance of arsenical injury to plant foliage is lessened if spraying is done in dry, comparatively warm weather when the air is circulating freely. (2) While soap may be added to a nicotine spray to increase its adhesive qualities, it should be omitted when the nicotine is combined with other insecticides.



## WHAT CAN I GROW IN THE SHADE?

ALLEN W. EDMINSTER

EVERY plot has at least one spot where the light supply is deficient; and what to plant on the north side of the house is always a problem which is usually evaded by placing the dwelling as near to the north border of the plot as possible and leaving the sunless side bare. The south side may be equally difficult owing to shade of adjoining buildings which sometime very nearly converts the southern

exposure into a northern one so far as the practical problem of its planting is concerned.

Inasmuch as light is essential to the well-being of plants and only a comparatively few will endure without full exposure, choice of available material is very restricted. Obviously the ideal plant for a shady position is one that is naturally an undergrowth plant.

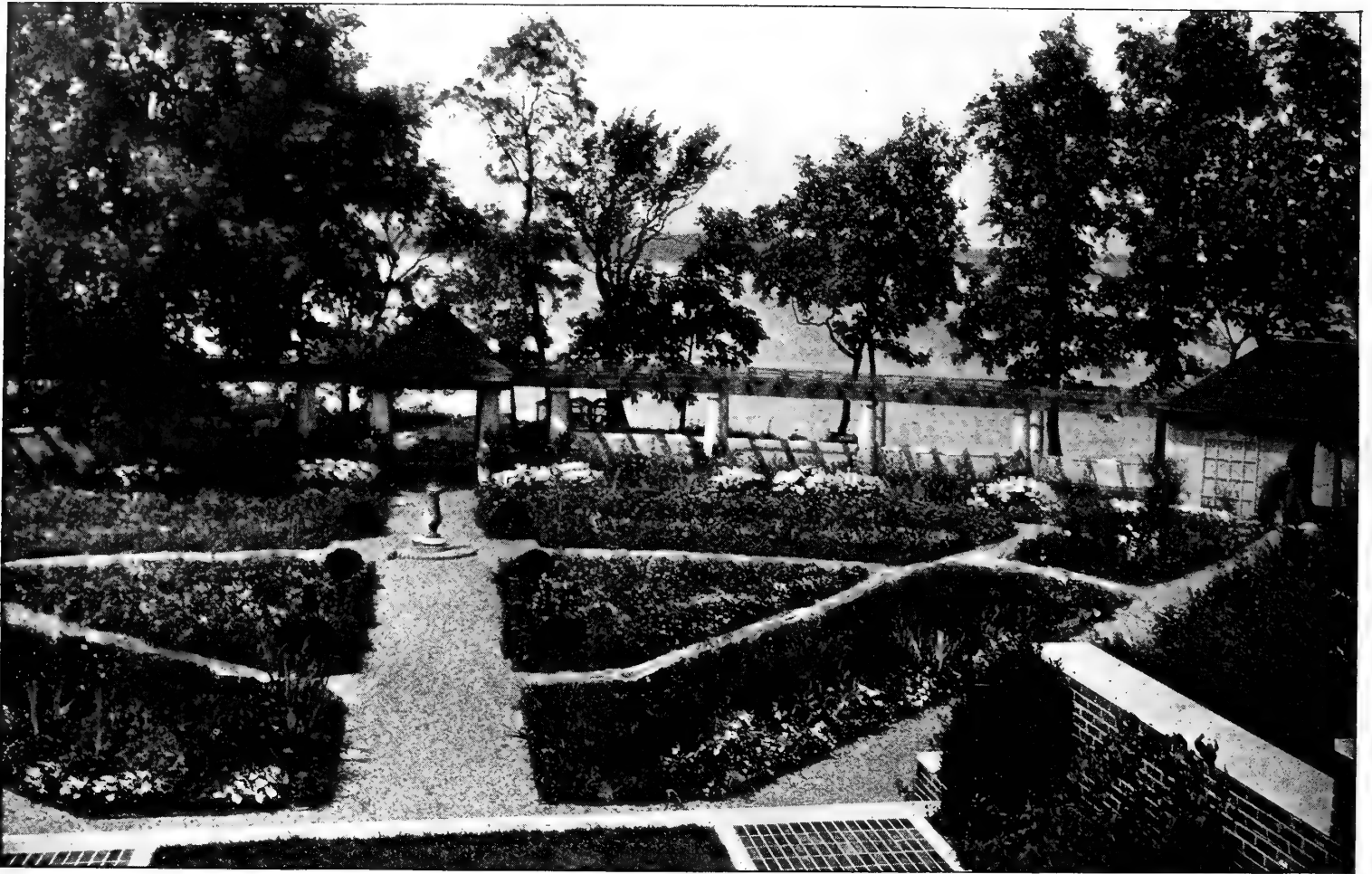
### Flowering Plants Which Do Well in All Shade

NAME	COLOR	SOW SEED IN	MONTH OF FLOWER	HEIGHT	SOIL
Cornflower	Blue, white	April, outside	June to frost	1-2 ft.	Average
Forget-me-not	Blue	April, outside	May to June	6-8 in.	Cool and moist
Godetia	White, crimson	May, outside	June to Aug.	12 in.	Cool
Nemophila	Blue, white, violet	Aug.-April	June to frost	12 in.	Cool and moist
Pansy	Violet, yellow, blue, etc.	Aug.-March	April to frost	6-8 in.	Cool and moist
Bellflower	White, blue	Aug.-March	June to Aug.	2½ ft.	Rich, well drained

### Flowering Plants Which Need Some Sun

NAME	COLOR	SOW SEED IN	MONTH OF FLOWER	HEIGHT	SOIL
Balsam	Yellow, red, white, purple	April inside, May outside	July to frost	18-24 in.	Rich and moist
Verbena	White, pink, red, blue	March, April inside; May out	June to frost	12 in.	In any good
Stock	Pink, scarlet, white, yellow	March inside, May out	July to Sept.	12-18 in.	Rich and moist
Basket-flower	Rosy, lavender	March inside, April out	July to frost	3 ft.	Rich and moist
Clarkia	Rose, white, red, purple, etc.	March inside, May out	July to Sept.	1-2 ft.	Average, not too dry
Zinnia	Pink, purple, scarlet, etc.	March inside, May out	June to Oct.	2½-3 ft.	Cool and peaty





THE GARDEN OF MRS. G. ARTHUR SCHIEREN AT GREAT NECK, LONG ISLAND

With the broad steps as a sort of pivot, the garden radiates out from the dwelling in free sweeping lines and lies like a great, gay fan at one's feet, outspread to meet the blue of near-by waters. Designed by Miss Ruth Dean, L. A.



## THE HOUSE THAT WAS BUILT FOR A GARDEN



ARTHUR W. COLTON

EDITORS' NOTE: Because garden and house are so inevitably linked, so essentially interdependent, we believe that gardeners everywhere will find much to interest and inspire in this series of articles, especially prepared for us by Mr. Colton, which presents some happy solutions achieved by Americans of skill and imagination. Preceding articles may be found in *THE GARDEN MAGAZINE* for December, 1921, January and March, 1922.

### IV. MAKING THE GARDEN A MEDIATOR BETWEEN DWELLING AND SEA

**T**HE production of a country place—with its house and furnishings, gardens, orchards, groves, lawns, vistas, and so on—has this resemblance in complexity to the production of a play, that it can hardly ever be the work of a single artist. The dramatist can control his unity of action, but his unity of effect lies at the mercy of actors, stage managers, scene painters and who not. Into the country place has entered the various purposes of owner, architect, interior decorator, landscape architect, and even the secret and subterranean plots of the plumber. The thoughtful landscape architect tells you that an estate should be planned as a whole, and have a unity of design. One is drawn to add a comprehensive sympathy to one's agreement with this thoughtful theory.

The foundation of every valid canon is the end which it serves,

and unity of design is a canon whose foundation in service is reasonably substantial and distinct. Essentially the end which it serves is economy of attention giving a sense of satisfaction, peace, and the restfulness of a goal attained. The goal is a certain completeness of comprehension. One wants a total impression. Unity of design is a short cut to it. Whatever is left outside the design is outside the single impression, and after all it is unity of effect that is really striven for, and unity of design is only a sensible artifice to that end.

The theory is sound though the end may sometimes be achieved without it, by the processes of nature, of time, of accident. Nature herself knows all about it, and shows her knowledge in every leaf and tree. But what unity of design is there in the forest itself? And yet the forest has unity of effect just

as Emerson's Journal and Pascal's *Pensées* convey the unity of the personalities behind them though in themselves miscellanies. In architecture, most especially in gardens and their relation to houses, there are often happy results born of original incongruities, as if some divinity had shaped their ends, and the conscious stones had grown to beauty. One often builds better than he knows by a certain flexibility and "waiting on the Lord."

THE Schieren place, at Great Neck, Long Island, is the outgrowth of several persons and tendencies in taste, compromised to the demands of a location. The property is about two and one half acres, of irregular shape and contour, between the road and Manhasset Bay. As the house (Aymar Embury, II, Architect) was necessarily a large one, and as there was but one site sufficiently level on which to place it (fortunately this portion of the property was close to the road in one corner), the house was placed there, leaving all the water front available for gardens, lawns and so forth, and restricting the service portions of the building and garage to the corner farthest away from the water and nearest the street.

While perhaps a less formal type of architecture might have been more suitable in this environment, the predilections of the

owner were for the type of house which is here shown and certain requirements as to view, sun and air caused it to be placed without relation to the street line.

The longitudinal axis of the dwelling was selected as the one on which to develop the garden (designed by Miss Ruth Dean, L. A.) because a natural depression and the adjacent property lines and water front suggested a fan-shaped treatment, quite clearly shown in the panorama photograph taken from the piazza. Very little grading was necessary to install this garden. The brick retaining walls were carried along its sides to a tea-house at the left and a bath-house at the right. The centre, opposite the piazza on the main axis, is marked by a sun-dial and a summer-house. The boundary at the semi-circular end of the garden is sufficiently defined by an open pergola, revealing glimpses of the water; and the diagonal axis, leading from the foot of the main stairway to the bath-house at the right, is continued to the pier at the boat landing.

The materials of the house are brick with marble trim, the columns, cornices, etc., of wood, the roof of slate. It was felt that such formal materials would appear out of place in the garden, and therefore a rough white cement finish was used for the garden house, pergola and connecting walls. The architects feel that the unity of garden and house has been satisfactorily



COMMANDING BOTH GARDEN AND SEA

Substantial in character and restrained in line, a house of this type becomes increasingly attractive under the mellowing influence of years and weather. Home of Mrs. G. Arthur Schieren, Great Neck, L. I., designed by Aymar Embury, II



*John Wallace Gillies, Photo.*

A VIEW IN THE SCHIEREN  
GARDEN AT GREAT NECK

A very skilful use has here been made of the natural irregularities of the shore line and a garden developed that, though built up from a plan somewhat formal in character, has taken on a pleasantly tousled and almost riotous air as if exhilarated by the salt breezes



preserved, although the treatment of the pergola and its terminal features is far less formal than that of the house.

THE original placing of the house on the property being unnatural, the design of the garden was studied with utmost care to conceal this fact and to give the house such a setting that its location would appear not only natural but inevitable. The house was an almost literal rendering of the owner's pre-conceived ideas as to plan and elevation, and those ideas presented a number of points of extreme difficulty.

One feels that under blending of time it may gather a peculiar charm, and things which the architects perhaps regarded as regrettable necessities be changed into points of added interest. The tastes of an owner and the demands of the location remain after the architects have departed, and a place that grew conformingly about those tastes and demands, will have the advantage of their continued influence to aid the blending of time.

The public is indebted to Mr. Embury for several useful volumes on American architecture. His "Early American Churches" contains information on the history of certain New England church spires, for instance, which I had long sought for and found nowhere else. His "One Hundred Country Houses" has an interesting chapter on "The House and the Garden," in which he remarks that the Hollyhock is the best of all flowers from the standpoint of the architect, and, from the same standpoint, defines the garden as "the link which forms the intermediate step between the purely artificial building and its natural environment, and therefore of a dual character, partly natural and partly conventional."

There are standpoints and standpoints. There is the standpoint of the rhetorician who remarks that a "link which forms a step" is a mixed metaphor, and mixed metaphors are violations of the canon of unity; the standpoint of the more genial critic who observes that the great poets do not object to mixed metaphors as much as the rhetoricians; the standpoint of garden lovers who will feel that Mr. Embury's definition does not wholly

cover the subject of gardens; and the standpoint of the present writer who observes that, taken with its context, the definition is evidently not intended to do so; that every art indeed has something of that same dual character; but that so far as it goes the definition seems to be sound; and finally that the Schieren garden illustrates its principle.

It is a garden that seems in place between the house and the sea. The open pergola lends to the wide waters its quiet touch of humanity, and the sun-dial adds its comment on mortality.

Like as the waves do hasten on the shore,  
So do our minds hasten to their end.

The virtue of dials is to present the motion of time as a gliding without division—not staccato, as ticked off by the household mechanism of a clock, but noiselessly flowing—like wind or water, and without even their rustle or murmur. The dial or hour-glass with its index shadow or gliding sand is more faithfully indicative of the nature of time than any clock or watch, however minute the vibrations that govern the hands. And because in gardens it is more important that time be measured justly to its spirit than precisely to its letter, and that the thought of time be enlarged and not lessened; because it matters more that the roll of the whole earth be recorded in shadow and silence than that its minute and artificial divisions be exactly indicated by the pointing of a metal index, or the click and recoil of a spring—so it is that dials are rightly placed in gardens.

"The success of any garden," says Mr. Embury, "lies largely in securing proper vistas, and in the successful handling of boundaries. The vista must be interesting in itself, and terminated by a more or less important feature. . . . The question of boundaries is always a difficult one. Their angles must usually be strengthened."

And these principles too are illustrated in the Schieren garden in the interesting and well-terminated vista, the definite and strong-angled boundary. Along any shore a structural garden is a better intermediary than any green lawn between the house and the sea.

## PLANTING FACTS FOR READY REFERENCE

- A high, gravelly soil is ideal for fruit trees.
- Planting trees too deep is a mistake.
- Planting must never be performed while the orchard is wet and sticky.
- When set out, young trees should be cut back at least one half of the previous year's growth of wood.
- The best tree to plant is a young whip about five feet high. Such a tree is more apt to grow without a setback. It may be trimmed to any height it is desired to have the head start.
- It is claimed that trees set in holes blasted with dynamite bear fruit earlier than when set in spade-dug holes. The use of dynamite in tree planting, subsoiling and ditch digging is more extensive every year.
- In selecting large, stocky trees instead of small, well-developed ones, very little is gained. Small or medium-sized trees are better than large, over-grown ones. They live better, grow faster, and become more symmetrical. This holds as true with shade as it does with fruit trees.
- Fruit trees must have proper nourishment, as they are rank feeders.
- For wounds in trees there is nothing better than rosin and tallow.
- Suckers should be removed as fast as they appear. They sap the vitality from the trees, causing too dense a growth.
- A good wash to keep rabbits from gnawing fruit trees is a mixture of lime, carbolic acid and copperas.
- A dressing of wood ashes, or potash, around the base of the tree assists considerably to improve the color of the fruit. It is also necessary for the fruit to have plenty of light.
- The proper distance for planting is 30 feet apart each way for standard Apples; 20 feet for standard Pears and strong growing Cherries; 16 to 20 feet for Plums and Apricots; 10 to 12 feet for dwarf Pears and dwarf Apples.
- Should a tree die, remove all of the root possible, and leave the hole in the ground just as the work left it. In about three or four weeks a new tree can be planted, after the hole has been filled with good soil. Tramp the ground firmly when planting.



# NOW, ANY ONE CAN GRAFT AT ANY TIME



E. L. D. SEYMOUR

Modern Surgery Principles Successfully Applied to Plant Propagation Practices Ensuring High Percentage of "Takes"—Simple Way to Keep Cion Alive—Good-bye to Grafting Wax

EDITORS' NOTE: The arresting importance of Doctor Morris's common sense improvements in such an every-day occurrence as grafting makes us realize that after all the world does move. Of all the routine operations of the garden that of grafting has been enshrouded in mystery and muck, for only a few years ago all sorts of vile compounds of clay and what-not to case the wound were considered essentials in the ritual. Now comes the ray of clear light in the application of plain ordinary cleanliness and a modern sanitation sense.

**T**HOUGH grafting is one of the oldest of the arts of plant-craft, yet the last three or four years has seen greater progress in it than in all the centuries before!

No longer need we cut our cion sticks in the fall and store them away in cellars or coldframes; no longer need we struggle with mallet, chisel, and grafting wax during the piercing winds of February and March lest the sap "start to run" before the work is finished; no longer need we anticipate fifty or more per cent. of failures due to the drying or rotting, choking through not cutting the binding in time, etc. Nor is the kind of plant even of such importance, it would seem—nothing being impossible so long as a fairly close family relationship exists.

And all this because Dr. Robert T. Morris, an eminent surgeon by profession and an ardent horticulturist by avocation, has successfully applied to the ancient art of grafting some of the principles and methods of modern surgery! Doctor Morris does his gardening at Merribrooke, a natural and beautiful country place of several hundred acres in the wooded highlands outside Stamford, Conn. There I found him one glorious November day indulging in some experimental grafting on a mass of tangled wild Grape vines.

On every hand there is something of interest—a native Tulip tree grafted over to the clean-limbed Magnolia glauca; the same species on the plebeian Pumpwood; a Shagbark or Pignut sapling bearing perhaps half a dozen grafts, each of a different variety or hybrid form of Hickory to be tested for the quality of its nuts (for, as is more or less generally known, Doctor Morris is one of the most enthusiastic advocates of nut culture in the United States and one of the best informed authorities); and a native Persimmon (productive at least as far north as Newark, N. J.) grafted over to one or more of the luscious Japanese sorts which Doctor Morris yet hopes to make a practicable fruit crop for a large part of the temperate zone. Hazels are everywhere—some native seedlings bearing healthy shoots of European or Asiatic species, and other seedlings of foreign origin grafted to American sorts, especially the Bonnybush variety, discovered by the Doctor in one of his pastures bearing nuts of unusual size and quality on particularly sturdy, handsome growth.

Scattered in among these combination specimens are individual trees that the casualist would overlook, but full of interest—a Chinese Pistache of no great value outside of its hardiness, but waiting to be top-worked to some of the commercial nut bearing forms; a slender, handsome specimen of the Carolina Hickory, a stranger in these New England environs; the Asiatic Winged Walnut brought up from a collection on Long Island and now of four years' standing in this, its "farthest north" location; an Armenian Apricot also known as Chinese Almond, that blossoms regularly even ahead of the Forsythia, but just as regularly is nipped by succeeding frosts so that it has never yet born fruit; and Chestnut, Walnut, Hazel, Hickory and even Pecan hybrids innumerable, each of them offering possibilities. Among so many riches some jewels are likely to be overlooked even by the owner, as was the native Chestnut he had grafted over to the improved variety Scott more than a dozen years ago, and only

rediscovered last summer, covered with burrs. "The things I forget about," remarked Doctor Morris resignedly, "lead people to think sometimes that I'm untruthful."

Grafting nut trees has long been regarded as most difficult and indeed of late years has been almost discarded in favor of budding. Whereas heretofore a two per cent. success was remarkably gratifying, Doctor Morris is now from seventy to eighty per cent. consistently successful with Hickory, Pecan, Walnut and Chestnut! He has even established Chestnut cions on several kinds of Oak!

Last spring, strong unions were secured between improved Plum and Cherry cions on common Wild Cherry stocks. Cions ranging all the way from an inch to over two feet in length were used. Even with the shorter lengths the grafts often make from three to six feet of new wood the first season. Grafting has been successful in February with wood cut immediately before use, and as late as the first week of September, as well as at all times between, but Doctor Morris suggests from April to July as the preferred time in which to do budding. He asserts, however, that grafting can in his opinion, be done at any time throughout the year!

Cutting and storing of cions in advance of the operation as is now generally done—"mediate grafting" as Doctor Morris terms it—will in all likelihood remain the common method; but a big and attractive field for "immediate grafting" is seen, the cion being cut and at once inserted in the stock. By this method, using as a cion a piece of growing Pear wood in full leaf, a Kieffer Pear was successfully grafted in the middle of August, 1919! A branch was accidentally broken from a dwarf Pear and after it had lain around on the earth for a couple of days a friend facetiously remarked that it might provide some good grafting material. Largely in a spirit of fun, Doctor Morris cut some cions from the wilted branch, stripped off the leaves, set the cions in a near-by seedling Pear stock—and they soon were growing vigorously!

Another interesting case is that of a young European Hazel tree some six inches in diameter which, two years ago, was completely girdled by field mice and presumably killed, at any rate it was cut down flush with the ground and forgotten—until this past spring, two years later, mind you, during which time no suckers or shoots had appeared. In May, 1921, for some unexplained reason, Doctor Morris decided to see what would happen to a graft made on the supposedly dead stump, so he inserted a couple of cions from his Bonnybush Hazel. When seen on November 6th, they had not only taken hold but had made a growth of at least three feet apiece; moreover, the bark of the stump all around the graft had become green and healthy and had started to grow up over the six-inch cut surface!

**W**HAT is the secret? Protoplasm, argues Doctor Morris, is protoplasm whether in plant or animal. In either case it lives, multiplies, thrives and perishes under similar conditions. Why, then, should not the methods and precautions applicable in the one field prove equally useful in the other? Of course,

it isn't all quite so simple a proposition as this lucid explanation would make it appear. Because of his long experience, study, and his natural genius for the work, grafting operations on any sort of stock have become for Doctor Morris as commonplace affairs as a minor operation or an excursion into some individual's abdominal cavity. He instinctively handles his knife and accessories with consummate skill. But because we are not all surgeons is no reason why we cannot follow the directions given in detail in Doctor Morris's recently published volume "Nut Growing" (Macmillan Co.) and here summarized.

IT IS insisted that in plant as in animal surgery there must be perfect asepsis—the prevention of infection by bacteria, dirt, etc. Therefore the cut surfaces of stock and cion must be touched as little as possible, the wounds must be kept as small as consistent with the scale of the operation, and all exposed surfaces after the work is completed must be protected from outside contamination. During the actual grafting process this means simply deftness and care and clean implements; afterwards it is effected by covering the graft with, not grafting wax, paint or any more noisome compound, but simply melted paraffin. This is the adaptation of a practice that proved a godsend in the treatment of burns during the World War. Not only is paraffin cleanly, easy and pleasant to apply and conveniently handled either cold or (with a brush) when melted, but it is waterproof, durable, inexpensive and adapted to filling up every possible crack and crevice into which wax or paint would not reach or in which it might not remain. Thus paraffin not only covers and actually helps to heal cut surfaces, but also it fills up little pockets in which sap might collect and, fermenting, develop injurious poisons. Carrying this disinfecting idea a bit further, Doctor Morris found that if, in an especially vigorous graft, sap tends to ooze out from beneath the paraffin, a small pad of absorbent cotten dusted full of borax and tied over the point of leakage provides an effective protection against otherwise almost certain infection.

Secondly, there must be prevention of evaporation that would dry the cion before the union is sufficiently formed to provide an additional supply from the stock. Here again paraffin does the trick—to the extent that in Doctor Morris's work no graft is completed until not only the cut surfaces of stock and cion, the whole union and the raffia or other wrapping are covered, but also *the entire cion from graft to tip*. This coating checks evaporation and, being translucent, permits the vital action of light on the chlorophyll in the bark to continue unhindered. At the same time it somewhat modifies the heat rays. Furthermore, although it excludes bacteria and checks evaporation, it does *not* suffocate the parties to the grafting arrangement by interfering with their transpiration. In other words it does everything that a protective covering should do, and nothing that it should not.

The third essential is the avoidance of injury of any sort to the cells of the cion between the time it is cut and the paraffining of the finished graft. The delicate cambium tissue must be protected from bruising and from the drying effect of sunlight

and wind—and also from the infection that is almost inevitable if the cions are merely wrapped in moist paper, cloth or moss. This is especially true of cions cut from growing wood for immediate grafting—as in the case of the Pear already mentioned—for which reason this type of grafting has been almost unknown in practical horticulture.

To solve this problem Doctor Morris uses saline solution—identical in purpose and effect to that in which, in surgery, fragments of living animal tissue are kept alive and in condition for grafting for hours and even days. By placing the cions in this solution as soon as they are cut it is possible to hold them over in perfect condition for several days, to shape them exactly and carefully in the evening in the study—instead of out in the field—and to keep them in readiness for the actual grafting operation whenever the worker finds it convenient. This saline solution treatment together with the final paraffining is, without doubt, responsible for Doctor Morris' success with summer, growing-wood grafts and with cions a foot or more in length. The solution now in use as devised for Doctor Morris by Professor Knudson of Cornell so as to be in correct relationship (or as physiologists say, isotonic) to the cell sap, is made up of

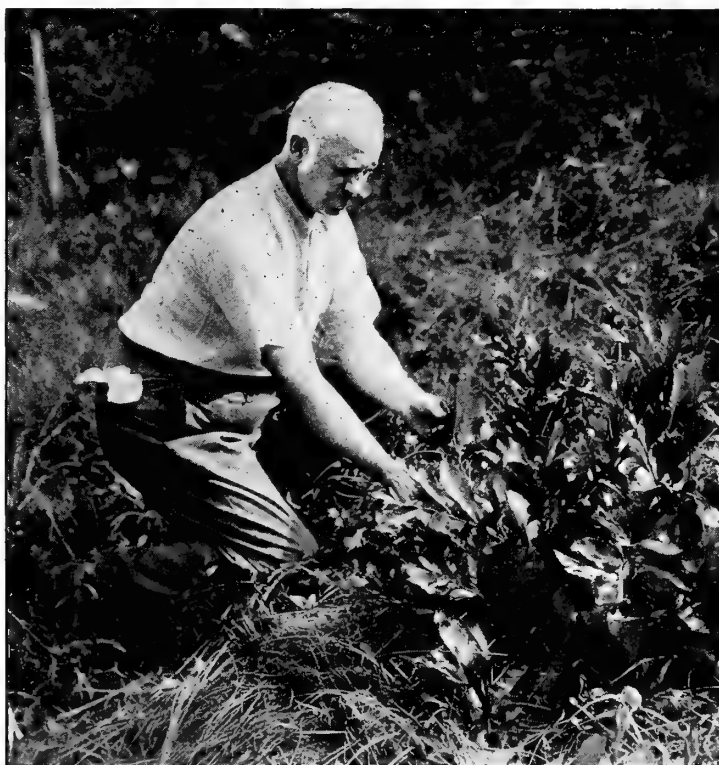
Water	1 liter
Calcium chlorid (Ca Cl)	2.25 gram
Sodium chlorid (Na Cl)	1.25 gram
Potassium chlorid (KCL)	1.50 gram

More orthodox precautions that contribute to the success of grafting operations and which Doctor Morris commends to others desiring to employ his methods, include: the choice of closely related species or varieties; the bringing of the cambium layers of stock and cion into accurate contact; the maintenance of this close contact during the period of union; the bracing of the cion as soon as it begins to grow to prevent its being torn out by the wind; and the careful control of growth from the stock while unions is taking place and after the cion has begun to grow. In this latter connection it is advised that no natural shoot be allowed to start from the stock until the cion has "caught" and is growing vigorously; that after the cion shoot is several inches long a few shoots be allowed to grow (the first year) from the stock in a top-worked tree; but that no such shoots be permitted

to grow after the first year in a grafted sapling, or the third year in a top-worked tree. Heretofore good-sized trees being worked over were completely dehorned; but, finding that cions on such stocks tend to make excessive growth that is especially susceptible to injury, Doctor Morris is now inclined to leave at least one leader on such a tree for a year or two, inserting all grafts below it.

In the matter of maintaining a close joint between cion and stock in the case of the "bark-slot" method devised for working on large limbs or trunks (and which is practically an improved form of what is known in Europe as "crown grafting") Doctor Morris has again appropriated a surgical device in the form of a "Spanish windlass" such as is used to check hemorrhages. This he describes as:

"a strong tarred or paraffined cord with ends tied in a firm knot but hanging loosely about the graft. A wooden skewer or any small twister



DR. MORRIS AT HIS WIZARDRY

As skilful with plants as with humans, Dr. Robert T. Morris is here shown working over an evergreen Alder-leaved Chestnut brought by him last year from Georgia

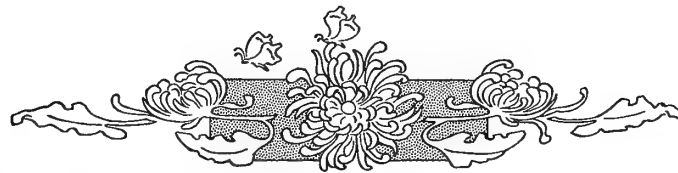


is then inserted into the loop of cord and twisted about until the part of the cord about the stock wound is so snug that it holds the cion in place more firmly than it can be held by any sort of wrapping. In order to prevent the cord from cutting into the bark one or two shields of wood may be interposed between cord and bark. The twister of the Spanish windlass is made fast with a staple driven into any convenient holding point on the stock in order to prevent the windlass from unwinding. . . . If we have cord that is strong enough and slippery enough, as with cord treated with paraffin, the tightening of the cord in the course of growing enlargement of the stock results in automatic unwinding of the cord nearest to the stock and compensating winding up at the twister end. This . . . allows the graft to be left without attention for a year or more excepting for the bracing which should be given all large shoots. If the Spanish windlass is not applied skillfully with the right sort of cord the cord is burst asunder by the growing stock. This, however, does no harm because the graft is by that time well under way."

Doctor Morris's ingenuity is again illustrated in the paraffin-melting pot that he has designed and that should prove invaluable to any one following in his footsteps. This consists of a lantern of the ordinary railroad conductor's type

equipped to burn alcohol instead of oil (to avoid smoking) with a glass beaker to hold the paraffin inserted down through the top within the chimney which both protects the flame and helps to keep the paraffin of the right consistency. A heater of this sort is now obtainable as a manufactured article.

That complicated equipment and difficult manipulations are quite foreign to the improved grafting methods was brought home by noticing a clean and healthy union of two years or more standing on a Black Walnut tree; a union, by the way, that appeared to have resulted from a simple graft such as we usually associate with root rather than top grafting. The surface of stock and cion had been shaped with an ordinary block plane instead of a knife, giving a truer junction and a more certain union than otherwise possible. In fact, Doctor Morris stated that his "block plane method" had given such good results both with small grafts and with larger ones in which he found it best to fasten cion to stock by nailing, that he looked forward to using the plane much more freely in his future work, at the expense of the knife.



#### HARDY CHRYSANTHEMUMS AS THE MAINSTAY OF THE FALL GARDEN

To be had in a wide range of colors and shapes, these virile, late-blooming plants are the summer's last triumph, her final, defiant flaming up into beauty before the chill breath of winter strikes

# THE DAY OF SMALL-FLOWERED CHRYSANTHEMUMS

CHARLES H. TOTTY

**F**OR the last five years there has been a marked tendency among average gardeners toward growing fewer of the large-flowering Exhibition Chrysanthemums, and more and more of the improved Pompon and Single types. The very large flowers needing expert attention and careful treatment are, in fact, of small value except for exhibition purposes, because enormous blooms are out of proportion in the



ordinary room. On the other hand, sprays of the small-flowering types, Singles, and Pompons may suitably be used wherever flowers are needed for decoration.

War-time fuel restrictions did a great deal to wean growers away from the large blooms, since they needed greenhouse protection and a certain amount of heat if they were to be "finished" properly during the month of November. The fall exhibitions in all of the large cities have done a great deal to popularize the Hardy Chrysanthemum during recent years.

So many worth-while Singles have been introduced during the last six years that even the professional grower who tries to keep up-to-date on the subject is bewildered. Some dealers are still content to catalogue the old-time varieties, not realizing what progress has been made and may be seen at the fall exhibitions in the large cities. Many of the newer varieties have been raised by amateurs outdoors, unsheltered during winter by greenhouse or coldframe so there is no question about their absolute hardiness. However, their doing well outdoors is no indication they will not do equally well when grown inside.

Early frosts sometimes nip the early open flowers of the Chrysanthemum but, if the damaged blooms are removed, the remaining buds that were not affected will produce perfect blooms in due season, even though the thermometer has touched as low as twenty degrees.

Among recent introductions of the Single I have been particularly pleased by the following, all of which have proven their worth in many of the fall gardens in various states, flowering from the last of September until the middle of November unless winter sets in very early.

**BRONZE:** Bronze Buckingham, Ida Katherine Skiff, Richard Delafield. **PINK:** Charlotte Waite, Josephine Schlotmann, Stanley Ven, Mrs. Albert Phillips, Mrs. E. H. Wells. **YELLOW:** Golden Mensa, Mrs. Lou Thompson, Vivian Cook. **WHITE:** Mensa, Millicent Piper, Snowflake, Lily Neville. **SCARLET-CRIMSON:** Excelsior, Louis Spears, Mrs. Cleary, Phyllis Lawlor.

For people who have preference for the Improved Pompon type, a selection may be made from:

**BRONZE:** Adelaide, Bronze Doty, Helena Flint, Anna L. Moran. **YELLOW:** Connie Dick, Golden Climax, Indian Hill. **WHITE:** Mrs. Francis Bergen, Frances Huckvale, Mariana. **PINK:** Capt. Cook, Harriet Sykes, Shaker Lady, Nelma Putnam.

Since they carry the flowering season well into the fall, six weeks or more after every other bloom has been wiped out by heavy frosts, the claim of the Hardy Chrysanthemum hardly needs a boost—cheerful in adversity, blooming sometimes until buried under early snows, it gives a suggestion of persistency and courage conveyed by no other flower.

A word regarding culture. It is not necessary to have big clumps to get good flowers. As a matter of fact, if young plants from 2½ inch pots with one or two shoots are set out early in May and pinched several times as the season progresses, they will make larger bushes and give better bloom than if clumps two or three years old, even though well established, are used! The best growers always take up the old plants in the spring, when they begin to grow, and divide several times before replanting.

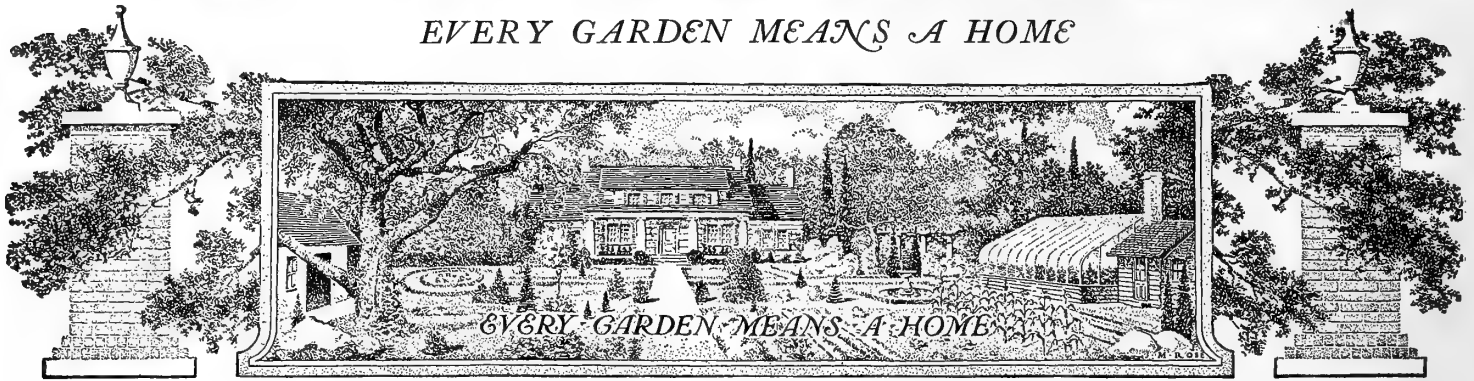
In some places the mortality is high in winter, but it is usually due to rot induced by water remaining at the roots. It is always worth while, however, to make replacements in the spring if you do your gardening with an eye to fall effect, and bloom then can only be had by planting now.

One of the chief charms of the Hardy Chrysanthemum is the great variety of shapes it takes on, ranging from the tightest of little button-balls to flat, spreading, daisy-like flowers



# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



## TOP-NOTCH GARDENING

SOME of the most encouraging letters that reach us from our readers are those based on honest and constructive criticism, which do more than criticize in that they so often point out the progressive step for future guidance. Naturally, among the readers of this magazine there are not only all classes of people but people at all stages of progress in garden practice and horticultural knowledge. With some, an intimate acquaintance with various plants and their varieties is an end in itself. Others see the garden chiefly as a means to supply the household with certain quantities of food supplies in the form of fresh vegetables and fruits of a standard and of a quantity that are not likely to be available in the ordinary markets. Others again will have none of the utilitarian, seeing in the garden rather solace of the soul and æsthetic indulgence. It takes all kinds to make up the gardening world, and each is perfectly justified in his own viewpoint.

As between exploiting the commonplace and demonstrating the greater possibilities of making the most of opportunities, there is perhaps something to be said on both sides. But, after all, even the most ordinary gardening is a technical subject, and as acquaintance with it becomes extended and broadened, the technicalities seem to loom up with a greater and greater importance. Elemental gardening is but the first step in progress and the one thing that will lead us on to higher standards is the striving toward an ideal.

All of this is written touching some correspondence in relation to some of the recent instructive articles that have appeared, particularly on vegetable growing. It is true that THE GARDEN MAGAZINE articles of this character are based on the standards of highest production and perhaps in that respect may be somewhat misunderstood by certain readers; yet, after all, isn't the top-notch effort the thing that is really worth while? And progress in the cultivation of our gardens will be achieved only through the constant striving toward higher returns. It is a first principle of efficiency "to make use of immediate, reliable, and permanent records," but unfortunately in the past gardening has lacked these records—gardening has been blessed with a good deal of belief and imagination, it is true, but with few actual facts and records. It is to remedy such a condition that THE GARDEN MAGAZINE has devoted particular effort during the last few years, as exemplified in such practical articles as Mr. Kruhm's on vegetable growing.

Our attention has been called to the desirability of stating that the articles to which we refer are based on top-notch records of quality production under highly perfected methods of intense cultivation. They are aimed to excite and stimulate the reader and to uncover to his view the latent possibilities that he has probably not yet attained. Care is always exercised that such statements are well based and especially in the work that we have been doing with the vegetables; they are records of many

years of experiments under home gardening conditions that justify all the claims that have been made.

As to the question of necessary or even desirable quantities of a given crop there can, from the very nature of the thing, be no definite expression. One man's meat is another man's poison and personal likes and dislikes must govern requirements; but the data given, based on personal experience of the author, may be taken as a reliable guide—of course, being interpreted in the light of individual requirements and preferences. It would be interesting to know just what is the average requirement of the average family in various crops of the garden. For instance, in a recent article in THE GARDEN MAGAZINE recommending quantities for a family of five, thirty Tomato plants, each calculated to bear thirty pounds of fruit or nine hundred pounds of tomatoes in all, were suggested for a year's supply of five people. It may reasonably be conceded that that yield would greatly exceed the needs of many families, but as a fact it was the actual requirement for the family in question. That the yield per plant is not extravagant may easily be demonstrated, although it is unquestionably not attained by the average plant in the average garden.

Mr. Robert Livingston, to whom the world is indebted for improvement of our Tomatoes more than to any other man and who certainly should speak with authority, writes in this connection, "I believe some of our best growers hereabout (Columbus, Ohio) could show more than thirty pounds from many of their plants in open field culture, but one must have a good season for Tomatoes." This is based on fifteen clusters of three to six fruits in a cluster averaging two pounds per cluster—not an impossible thing on Tomatoes trained to two stalks with good cultivation. Of course garden conditions would show at least equal results. After all, the goal of gardening is making the most of the least space and least opportunity.

## PLANT QUARANTINE HEARING

THE Federal Horticultural Board—presumably, from subsequent statements contemplating further and more drastic restriction on plant importation—announces a "conference on Plant Quarantine" at the offices of the board at Washington, D. C., at 10 o'clock, April 19, "for the purpose of considering the advisability of any modifications—additions to or deductions from—of the classes of plants permitted entry under permit for immediate sale under Regulation 3 of Quarantine 37." Again we urge the reader to write to the Secretary of Agriculture, and also to his representatives in the Senate and House, before the time of that meeting in the terms suggested on page 46 of our March issue.

THE GARDEN MAGAZINE will shortly publish from the pen of Mr. William Robinson an interesting and original study on The Proper Use of Color in Planting. Our readers are to be congratulated on the opportunity thus presented.



# THE OPEN COLUMN

Readers' Interchange of Experience and Comment

## A "Readers' Own" Number!

To the Editor of THE GARDEN MAGAZINE:

RECENTLY I have had the pleasure of rereading a number of copies of THE GARDEN MAGAZINE and felt moved to tell of the inspiration and help received. "The Open Column" especially is helpful, and I would like to see more records of the experiences of amateur gardeners.—G. H. SMITH, N. J.

—And it shall be so! We have been favored by so many really interesting letters from our readers and it is only the pressure of spring activities that is responsible for a lessened number of "Open Column" communications this month. Our May issue will be sanctified especially as a "Readers' Own" number, when this department will be much expanded.—THE EDITORS.

## Starting a Garden Study Club

To the Editor of THE GARDEN MAGAZINE:

WILL you kindly tell me how or where I can get advice or literature on conducting a Garden Study Club?—G. E. CRAWFORD, Bridgeport, Conn.

—We have never come into direct contact with the working of a Garden Study Club, but we make these tentative suggestions which were followed with success by a group of gardening students.

At each meeting a chapter of Loudon's "Encyclopedia of Horticulture" was read by a member, and followed by general discussion of the topic or topics thus presented, especially with a view to their application to the practical problems of each gardener present. Some similar method might prove stimulating and instructive to the amateur gardener. For instance, at a monthly meeting, the current number of such a publication as THE GARDEN MAGAZINE might be brought under discussion and different members made responsible for the introduction of comments on different phases of the subject.

A systematic attack in this way should be more productive of results than a casual plan, and in the absence of an authoritative teacher to conduct the class, a general synopsis cannot readily be drawn up beforehand and adhered to.—ED.

## Large-flowered Chrysanthemums Outdoors

To the Editor of THE GARDEN MAGAZINE:

WHEN Mr. William Currie of New York wrote his letter on "Growing Exhibition Chrysanthemums Outdoors" (page 48 of last issue), he "started something." If your readers order a few plants for this year's growing, as he suggests, they will be most indebted to him when gathering beautiful blooms in the fall.

Ten years before Mr. Currie began I had grown my first order of some twenty, "Mums," following the instructions of an amateur published by Dingee & Conard in the Chrysanthemum section of their Rose catalogue. For many years since that time I have had my year's order duplicated by four to ten friends, none of whom, with one exception however, duplicated my successful results. Next year I hope to see in one catalogue, at least, a list of varieties with large blooms suited for growing outdoors. One grower consented to do this some time ago and is to grow the varieties this season and check up with me at the close.

Mr. Currie's instructions are well worth following—they cannot be improved upon! Yet he, it seems to me, has left some things unsaid; a few supplementary facts are now offered:

Among the varieties mentioned is Elberon, a pink; White Elberon and Golden Elberon are now obtainable. Evidently he has not tried Christy Mathewson and Betsy Ross, two magnificent whites, both earlier than the Elberons which come too late for some folks. It is not advisable to extend Mr. Currie's list further as those mentioned by him will provide more than enough good varieties for the average amateur's garden.

Cheering news to most amateurs will be mention of the fact that many of these varieties winter safely if mounded up with earth, and yield many new shoots from which plants may be grown the following spring. More cheering news is the fact that when pinching off the tops, the pinched-off top, inserted in sand and kept moist, will yield

another plant in a month's time that will bloom with its parent. The six side shoots he mentions, also pinched off, yield a half dozen more.

The crown buds had better be removed and the terminals relied upon for best blooms. I presume this is what Mr. Currie advises when he enjoins removing buds appearing before September 10th. If plants with soil on roots are ordered by express, and potted up in four-inch pots, being suited to six-inch and finally eight-inch, the soil being made richer each time, blooms may be had earlier and plants may be taken indoors in the fall to flower in a cool room.

'Mums do well in a partly shaded position in spring and early summer but in late fall they need warm soil. If grown in pots it is an easy matter to shift them about as the sun changes its position. \*

My records for the past fifteen years are a fund of information but Mr. Currie's letter is all sufficient for the beginner. By all means follow his advice and order some of these large flowered 'Mums immediately. Plant them any time from April 25th on.—HENRY WENZEL, Brooklyn, N. Y.

## Sowing for Fall Bloom in the Carolinas

To the Editor of THE GARDEN MAGAZINE:

IN THE July, 1921, issue I noticed with considerable interest that this was the month to plant a second batch of Cornflowers for late bloom. Please advise me if this embraces *Centaurea imperialis* or Royal Sweet Sultan, and whether if a second planting be made in July, good bloom could surely be had before fall in this region where we are not apt to have a killing frost until late October.

Last season I had some Royal Sweet Sultan which, being new here, was the admiration of all around, but from the very first I had considerable trouble with the plants. Seeds were planted in April, seedlings came up vigorous and strong and grew well. We had a rainy, cold, late spring. When six inches to a foot high the plants began to bloom but, strangely enough, an apparently healthy and strong-looking plant would turn completely brown and die from one day to the next. This happened right along and I could not determine whether it was caused by disease, hot weather, or what.

I moved about ninety plants to a specially prepared bed where I thought they ought to do well and shaded them for a few days. Though seemingly vigorous and continuing to give fine bloom, the plants kept on dying suddenly just as when in the seed bed. What is your opinion? My experience is hard to reconcile with the general catalog statements that Royal Sweet Sultan is of the easiest culture, succeeding everywhere, for I never had plants die off like these.

Also will Zinnias planted in July have time to perfect their flowers for late summer bloom? I have had some fine cactus-flowered ones and would like to try different sorts—the large dahlia-flowered, the lilliput, crested and curled, and conical—and am anxious to have them all grow and do well.—H. C. LANNEAU, Wake Forest, N. C.

—The reference in the July, 1921, issue of THE GARDEN MAGAZINE was, of course, for the common Cornflower, *Centaurea Cyanus*, and anything with the Sweet Sultan would be experimental. If from sowing in April you get flowers in July, you should get flowers perhaps by the end of September and October by a second sowing in July.

The condition you describe would seem to indicate a disease that attacks the woody vessels of the plant. This type of disease is not uncommon in certain groups of plants but there has been no particular study of it and no report made. It would seem to be a bacterial disease and the remedy might be met in soil sterilization. The effect of the disease on the plant is so to choke the woody vessels as to prevent the ascent of water.—ED.

## The Secret of Growing Wong Bock

To the Editor of THE GARDEN MAGAZINE:

AFTER trying for three years to grow Chinese Cabbage my efforts were handsomely rewarded last season. Most catalogues tell us to sow August 1st, but this date has proven too late with me. This time I sowed on July 15th and fine heads were ready to use in late September. The variety was Wong Bock, which makes a compact head and does not need any artificial bleaching, although tying the heads lightly with strips of cloth keeps the outer leaves from breaking down. The secret of growing this vegetable is rich soil, plenty of water, and some quick acting fertilizer such as nitrate of soda. As soon as the plants are up they may be greatly damaged by flea beetles, but these may be held in check by dusting with air-slaked lime or Bordeaux mixture. There is no question but that the Chinese Cabbage will be one of the most popular salad plants just as soon as it becomes better known.

In testing out five varieties of Tomatoes last season I found them blight resisting in the following order: Globe, Manyfold, Matchless, Bonny Best, Ponderosa. Mr. Adolph Kruhm places Bonny Best second, but it did not prove so with me, although the plants seemed to recover later in the season.—A. A. KNOCH, *York, Pa.*

### Some Last Year's Successes

To the Editor of THE GARDEN MAGAZINE:

OUR chief success in plant raising last summer was in Zinnias, which convinces me that good flowers are worth while and that it pays to make an extra effort. The Zinnia is pretty nearly worthless when allowed to degenerate as it will if careful selections and new seed are not looked after every year. We have a bunch of them now that were presented by a friend which look very sorry contrasted with the regal colors of our prize plants. We fancy the staying qualities of the flower. It is pretty nearly an Everlasting and has none of the objectionable strawy quality of the Everlasting proper.

Roses have been a great success. Clay soil, plenty of fertilizer, a steady war on insects, and the plants did the rest. As late as the middle of October, Ophelias, a Columbia or two and some others were still coming into flower. A word as to insecticides. In fighting slugs the ordinary potato-bug spray—arsenite of lead, somewhat diluted so that it will not spot the leaves, has proved very efficacious; a good treatment with this as soon as the slugs appear will usually settle them for the season. Without it I have seen even Rambler Roses skeletonized by one sort or chewed up by the other sort, which does not like the Ramblers quite as well as it does most other Roses. After that, tobacco solutions, made very strong and well followed up, will settle the sucking parasites. We still like the cross supports with a pole laid in from one "X" to the next for the Ramblers, especially the trailing *Wichuraiana* sorts. The method is not elaborate, but it is easy and very effective. Decorative arches are desirable, but they will not work always and they require extra time and space.—JOHN W. CHAMBERLIN, *Buffalo, N. Y.*

### Before It's Too Late!

To the Editor of THE GARDEN MAGAZINE:

IT IS not pleasant to have to criticize an article containing so many fine ideas as are embodied in that by Mark Daniels on "Shore-line Gardens of the Pacific" in the December issue of THE GARDEN MAGAZINE. Yet what reader who has ever known and loved the incomparable natural beauties of the Monterey Peninsula can fail to be struck with the paradox of including a proposition for the artificial planting of these primeval headlands with such unassailable views on essential congruity as those expressed at the beginning of the article!

It is this very tract of "forty or fifty miles of tawny beach and flower-festooned cliffs," with the addition of the glorious but now terribly be-picnicked Point Lobos to the southward, which is showing (alas, with ever increasing emphasis!) how truly it is said that "it is the new countries that suffer most from this lack of propriety and the eternal fitness of things." To this I would say a fervent Amen and underscore the "eternal." For this selfsame bit of shore stands absolutely unique among all the world's loveliest natural beauty spots. Nature has been more than usually lavish here with her own landscape gardening. Once destroyed, what puny effort of man can ever replace it or bring any sort of recompense for the loss? Here are the venerable and absolutely unique Monterey Cypresses, beloved of naturalist and artist alike, in their picturesque confinement to the barest foothold on a few rocky headlands, hemmed in by the dense forest of Monterey Pines (*Pinus radiata*). In the natural state, except for a few trees which are said to exist farther inland on the peninsula, they are found nowhere else in all the world.

In a vain effort to improve upon the already sufficient inherent interest of these trees, the drivers of the old hotel tally-hos used to be fond of linking them with that other sadly persecuted, but magnificent tree, the Cedar of Lebanon. The Monterey trees are in fact as well as in name a true Cypress (*Cupressus macrocarpa*) while the Cedars of Lebanon and true Cedars generally belong, along with the Pines and Firs, to an utterly different group, the tribe *Abietae*. Although there are several species of Cypress endemic to the Pacific Coast, not one of them compares with this one in romance and picturesqueness. Nor is this single tree all, but it stands as the most conspicuous example of the floral life that is either wholly confined to this same delimited region or here attains the peak of its development.

Cypress Point being cut up into villa sites! What is the matter with us in America anyway? Are there not already horrible examples of

this sort of thing in sufficient plenty in old Europe that we must tread the same blind path? Once in a while we are able to point to some puny remnant still left to us of the glory that once was ours, like Muir Woods, and feel ourselves nigh to bursting with pride at our wonderful self-control in not having cut it down. Without in any way depreciating Muir Woods, I can truly say that I have tramped and camped through many a mightier Redwood grove than that, whereas this little stretch of coast line stands absolutely alone—or did!

It is to the lasting shame and disgrace of Monterey County, the State of California, and this nation, that no way has been found to preserve *intact*, both for ourselves and the myriad generations to come, this most exquisite piece of shore, perhaps, in all North America. It is not yet too late to save much of the best. Is it not time to stop and ponder a little before we have "improved" beyond recall the last of our noblest treasures!—S. STILLMAN BERRY, *Redlands, Cal.*

### Will the Madonna Lily Winter Over in Saskatchewan?

To the Editor of THE GARDEN MAGAZINE:

COULD you tell me if the Madonna Lily (*Lilium candidum*) would grow and stand the winters of this western country where we get it as low as 40 degrees below zero? My Tiger Lilies survive the cold and I had a fine show of them last summer.—GEORGE HIGGINS, *Saskatchewan, Canada.*

### Answering Indiana

To the Editor of THE GARDEN MAGAZINE:

YOU might remark to the query from Indiana, page 262 (January issue) that the June Rudbeckia must be *Gaillardia*, and that all *Helianthus* (perennial) spread readily except the tall *H. orgyalis*, *H. grosse-serratus* and *H. Maximiliani*.—STEPHEN F. HAMBLIN, *Lexington, Mass.*

### MORE AVENUE A GARDENS

JUST too late to be described in this issue of THE GARDEN MAGAZINE is taking place the graphic illustration, at the National Flower Show, of the inspiring work done through the Avenue A Gardens towards moulding the character of tenement children on the East Side of New York and giving them a love for gardens and out-of-door gardening. It is an early sowing in the child mind of a very practical antidote to Bolshevism and kindred ailments.

The unique exhibit will have been seen by many of our readers but in the May issue it is hoped to give those who have not attended the Show an idea of what was demonstrated.

THE generous list of gardens, with the interesting names given to them by their donors, which was printed in THE GARDEN MAGAZINE for March has not been increased to the extent desired. It is expected, however, that the list to be printed in the May issue will be an imposing one.

Ten dollars puts a tenement child in control of a garden, 5 by 10 feet, for the entire spring, summer and harvesting season. Some of the gardens are cultivated by several children. Competent instruction and supervision are provided, as well as fertilizer, tools, seeds and sets. The children and their families get the crops they raise which are no inconsiderable aid to the family maintenance.

*Donors may give what names they select to the gardens they endow.*

MRS. THOMAS E. KILAUFF of Ridgefield, Conn., has provided funds for The Mitchell Garden.

MRS. ARTHUR H. SCRIBNER, Mt. Kisco, N. Y., for The Women Voters' League Garden. (This garden will doubtless be assigned to a future woman voter.)

THE LARCHMONT (N. Y.) GARDEN CLUB for The Larchmont Garden.

THE GARDEN COMMITTEE OF THE COMMUNITY CLUB OF GARDEN CITY AND HEMPSTEAD for the Peter Pan Garden.

MRS. GEORGE G. HAVEN, Ridgefield, Conn., MRS. CHAUNCEY OLCOTT, Saratoga Springs, N. Y., MRS. GEORGE B. AGNEW, South Salem, Conn., MRS. FRANCIS M. BACON, MRS. H. H. ROGERS, MRS. LYDIG HOYT, MRS. FELIX M. WARBURG, MRS. IVY LEE, MRS. HENRY TILFORD, MRS. MACDOUGAL HAWKS, MRS. J. H. CRANE, MRS. HENRY I. PARSONS and MRS. R. T. AUCHMULTY, New York City, for gardens not yet named.

THE GARDEN MAGAZINE hopes to print in its May issue a much longer list of acknowledgments.

Checks for ten dollars or multiples of that amount, may be sent payable to the order of Avenue A Gardens Fund, THE GARDEN MAGAZINE, Garden City, N. Y., and will be acknowledged in the next issue going to press after receipt. Contributions will also be received by the Plant, Flower and Fruit Guild, Fifth Avenue, New York City.

# DEPENDABILITY



CAESAR AUGUSTUS SAID, "I found Rome a city of brick. I left it a city of marble." Caesar was mistaken. He left Rome a city of concrete, faced with marble. The marble has disappeared, but the concrete, lasting as the Seven Hills, perpetuates the name "Eternal City."

Fires, neglect, the elements, have defaced the monuments of Ancient Rome, but the mural decorations of the stucco covered walls are as fresh as if they had been painted yesterday.

Atlas Portland Cement is made much more scientifically than was the cement of Rome—and the first bag and the last bag in a thousand are of the same even quality. It is the most

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If you think of building, go to the nearest Atlas Portland Cement dealer and ask him for "The Stucco House" and other literature on home building and on remodeling old homes. He'll be glad to advise you and to explain what Atlas Service means; or write to us about your building problems.

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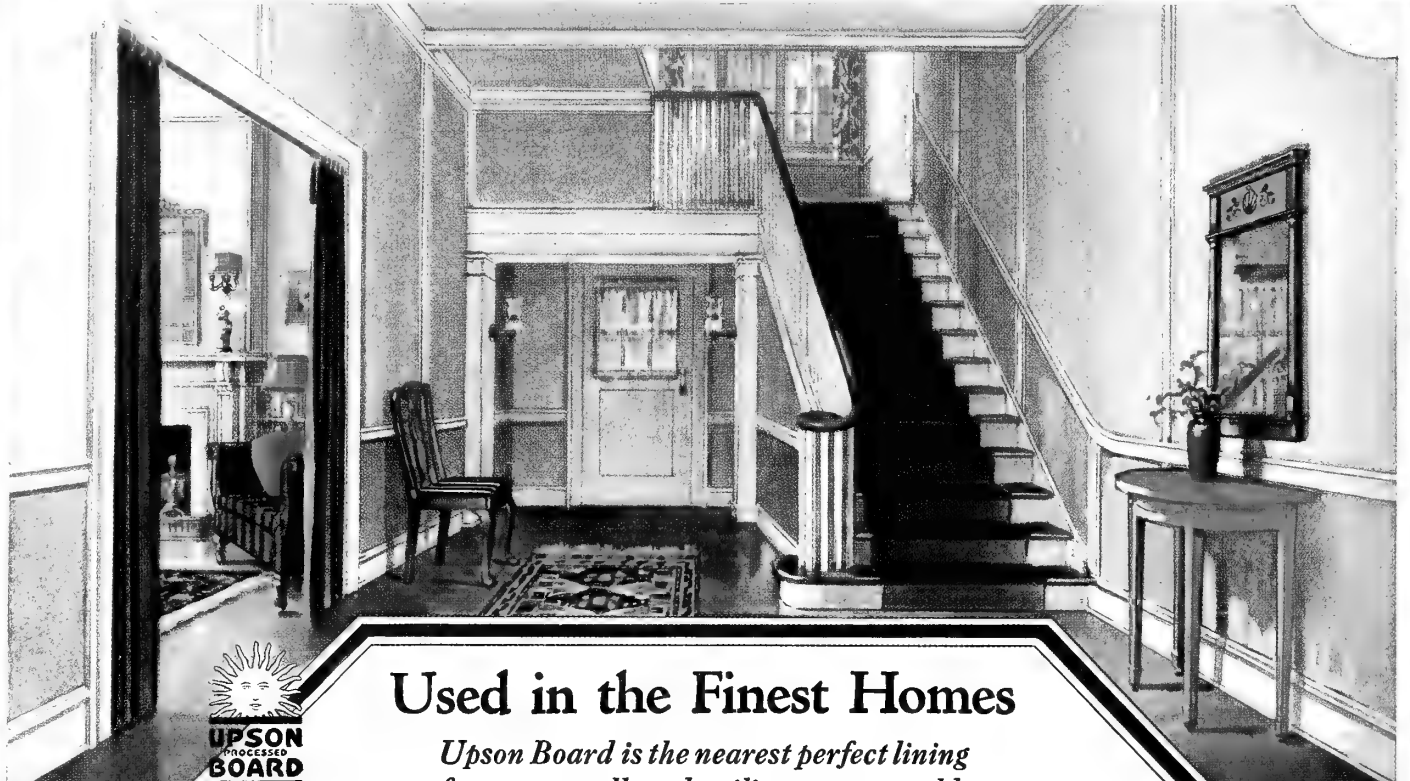
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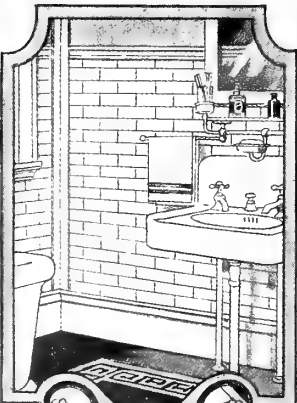
Upson Fibre-Tile makes snow-white sanitary bath-room walls.

It looks like expensive ceramic tile, but costs only one-tenth as much.

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## CHENEY SILKS

*Bleak Winter passes; revealing colours of Easter  
in a purple haze of massed wild violets, a sun-  
gold jonquil—the glowing breast of the robin  
against a delicate tracery of new green leaves.*

So, too, the spirit of Springtime emerges in the gracious tints of new Cheney Silks, fashioned to brighten and refresh winter-weary homes . . . Fabrics indescribably lovely take the names Florentine, Geisha, Shikii, Mysore, Sweetbriar, and Satin—and these, while designed primarily for decorative and upholstery purposes, lend distinctive charm as well, to teagown, blouse, or lingerie . . . To the imaginative, these fabrics suggest charming screens, lampshades, hangings, table-scarves, and cushions. And it is gratifying to know that such effects may be gained at a moderate cost.

Cheney Printed Silks are everywhere obtainable in dress-goods and decorating departments.

CHENEY BROTHERS  
*New York*

# A Gem for YOUR Rockery!

THOSE of you who have admired the quaint handiwork of Japanese Miniature gardens will at once recognize the plant to the left as the Dwarf Japanese Cypress. This is the dwarfest and most compact growing of the Retinispora family. By constant Root pruning, the Japanese keep them as small as a man's fist, after 25 or 30 years of cultivation. Permitted to grow under natural conditions, they average at best, 12 to 18 inches in diameter and height, after fifteen years.

More than a decade ago we started to propagate this rare Cypress. *We have proved its hardiness!* It stands zero temperature without injury. Of deep, rich green color during the summer, it changes to brown tones, with bronze tips, during the winter.

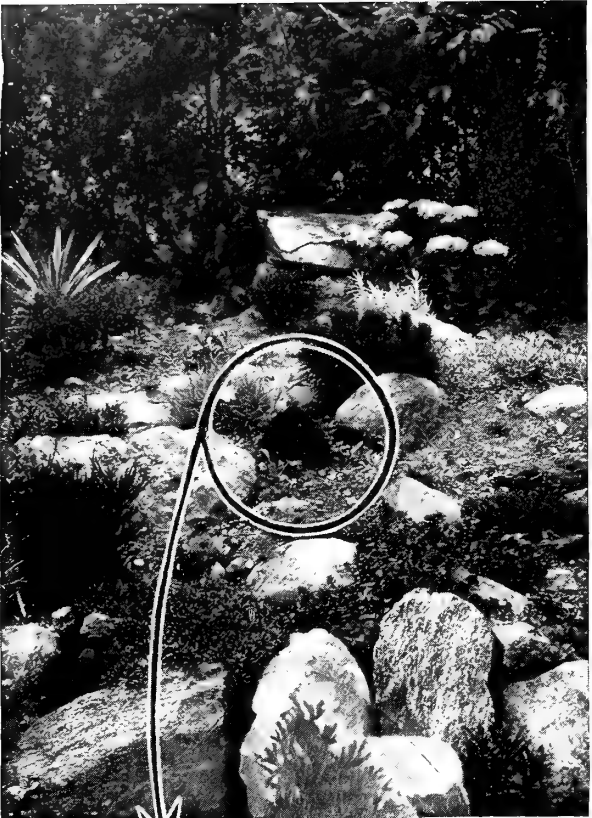
## And it is of Unequalled Charm for Your Rock Garden!

The Rockery has arrived! The rarest is just good enough for this favorite garden spot. Five years ago we started with the purpose to provide *Retinispora obtusa nana compacta* "Pigmea" for American Rock Gardens. We are ready for your orders.


**Special Offer.** Dwarf Pigmy Retinispora, well-shaped, well-rooted plants, guaranteed to thrive in your rockery, \$3.00 each, 2 for \$5.00 postpaid anywhere in U. S. These plants bring to you the Cottage Garden-Grown Standard of Quality—None Better!

*Please ask for Complete Catalogue describing other high-class specialties for garden and Rockery.*

**COTTAGE GARDENS COMPANY, Inc.**  
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Above: The Pigmy Type of Retinispora, half natural size of 5 Year Old Plant.



Alongside: A thriving patch of them growing here at Queens, L. I., New York.





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Doesn't it show you how one of our glass enclosed gardens can be placed within a stone's throw of your residence and fit harmoniously into the picture?

Always when the owner grants us the privilege, we take pleasure in suggesting locations for the greenhouse.

Locations where the conditions will be best for the production of blooms, and at the same time fit in attractively with your general layout scheme.

All of which is why we urge you to send us photographs of your grounds and buildings; or have one of us come and go carefully over the possible locations with you.

For half a century or more, we have been locating, designing and building the finest of the country's greenhouses.

It's your assurance of satisfaction.

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Chrysanthemums bloom in October and November, but the plants are started in the Spring. That means, if you want their glorious blooms for next fall, now is none too early to build your greenhouse.

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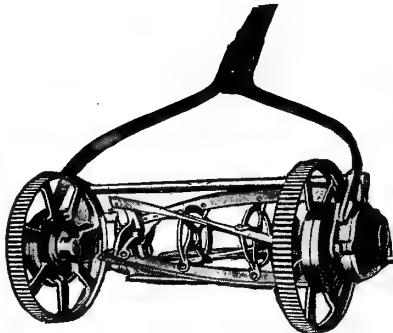


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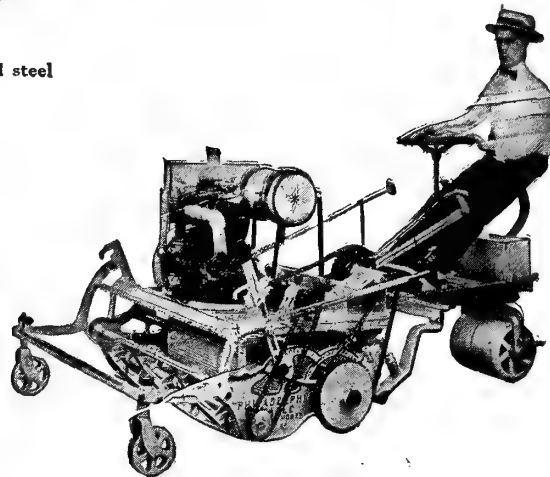
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 Start this spring with a definite plan in mind—  
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 Consider a Box-barberry hedge for the formal garden; shrubs  
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## Hardy Everblooming Hybrid-Tea Roses

THIS collection of well tried standard varieties is known to every Rose fancier as a most satisfactory selection of varieties, either for garden decoration or to supply an abundance of extra choice flowers to cut throughout the summer and fall months. All are extra strong, two-year-old plants, prepared to give immediate results.

**Caroline Testout**—This is the Rose that has given Portland, Oregon, the name "The Rose City." It will be found equally valuable in any garden. A large, full globular flower of a bright satiny-rose, very free and fragrant.

**Duchess of Wellington**—Intense saffron-yellow, stained with deep crimson, fairly full flowers and particularly beautiful in bud form. Delightfully fragrant.

**Hoosier Beauty**—Beautiful, well-shaped long buds and large, full flowers of an intense, rich, dazzling crimson-scarlet. Very sweet scented.

**Jonkheer J. L. Mock**—Very free on long stiff stems. Large size and of perfect form. Deep imperial pink, the outside of the petals silvery rose-white.

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**Killarney Brilliant**—An improvement on Killarney, being larger and more double, also more intense in color, which is a rich glowing shade of rosy-carmine; fragrant.

**Lady Alice Stanley**—A gem and greatly admired by everyone. Perfect in form, color, size, freedom of bloom and fragrance. Color a beautiful shade of coral-rose, center shading to flesh-pink with deeper flushes.

**Lady Ursula**—Of vigorous erect growth, a remarkably healthy grower under all conditions.

Flowers large and of good form, with high center produced on every shoot. Color a distinct shade of flesh-pink; tea scented.

**Los Angeles**—This is by all odds one of the finest Roses ever introduced. The growth is very vigorous and it produces a continuous succession of long-stemmed flowers, of a luminous flame-pink, toned with coral and shaded with translucent gold at the base of the petals. In richness of fragrance it equals in intensity the finest *Marshall Neil*. The buds are long and pointed and expand into a flower of mammoth proportions, while the beauty of form and ever-increasing wealth of color is maintained from the incipient bud until the last petal drops. \$1.50 each.

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**Radiance**—An ideal American bedding variety. A clean, healthy grower, producing its flowers freely even under the most adverse weather conditions. In color, a brilliant carmine-pink and of good form. Truly a Rose for every garden.

**Red Radiance**—A counterpart of Radiance, except in color, which is a clear crise-red.

Price: Any of the above except where noted, in strong, two-year-old plants, \$1.00 each; \$12.00 per dozen; \$90.00 per 100, 25 or more supplied at 100 rate.

We will supply one of each of the Dreer Dozen Roses as named above for \$12.00.

Dreer's Garden Book for 1922 contains beautiful colored plates of new Roses and offers many new and standard varieties. Among them the greatest achievement of Pernet-Ducher's, the New Yellow Rose, *Souvenir De Claudius Pernet*. It also offers Plants of all kinds, including Cannas, Dahlias, Hardy Perennials, Water Lilies, etc.; Flower and Vegetable Seeds; Lawn Grass and Agricultural Seeds; Garden Requisites of all kinds, etc. Illustrated with eight color plates and hundreds of photo-engravings, this book makes an interesting volume which should be in the hands of everyone interested in gardening. A copy will be sent free if you mention this publication. WRITE TO-DAY.

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These Hybrids are very popular and deservedly so, for they are graceful, easy to grow, moderate in price, artistic in colors, which range from sulphur-yellow to chrome-yellow, all shades of orange, with now and then a cream and pink among them, but Nasturtium colors predominate. They are the last word in Gladioli for dainty decorations.

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The bulbs are not large but every one is blooming size and while they last we offer them as follows:

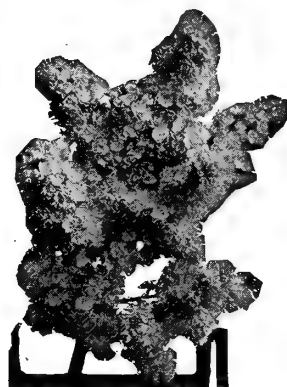
60 cts. per dozen, \$3.50 per 100, 500 for \$15.00.

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Yet their beauty is not limited to the period of bloom, for a collection of rare specimens is attractive and interesting even after the flowers have faded.



### Philadelphus

Norma Banniere, Romeo, and other large-flowering varieties, with the dwarf Gerbe d'Neige and Boule d'Argent.

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New, rose-colored flowers and brilliant orange fruits. Other desirable varieties are here also.

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One of the finest white-flowering shrubs in existence. Also dwarf varieties for foundation planting.

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A meritorious list in varying sizes from 3 to 5 feet.

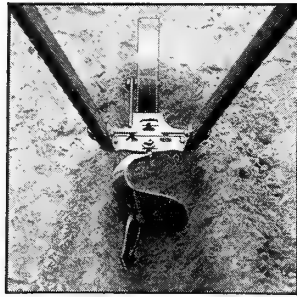
An exceptionally choice collection of Flowering shrubs, Evergreens, Boxwoods, Perennials, including the famous Wyomissing Peonies and Irises are accurately described in

**Farr's Hardy Plant Specialties (7th edition) sent for \$1**

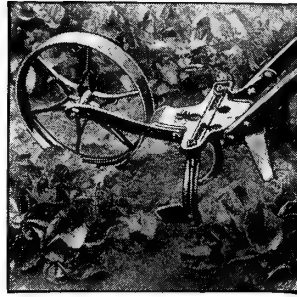
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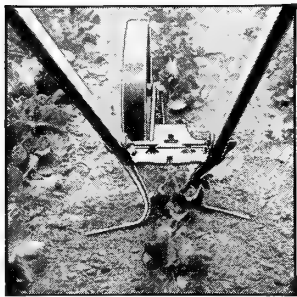




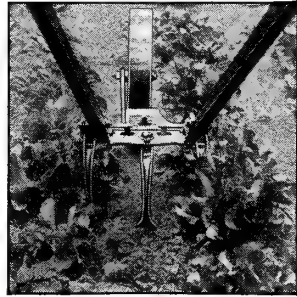
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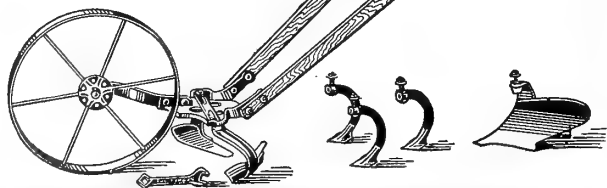
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## Do You Love Roses?

"Of course!" you will exclaim, wondering why we should doubt that anybody loves Roses.

Yet, do you love Roses well enough to want to know all about them, to want to know their history, their development, their cultivation, to want to know what each season brings in the way of novelties, in short, do you love Roses well enough to want to "chum" with them every month in the year?

If so, you ought to join

## The American Rose Society

This organization consists of the foremost horticulturists and rose fanciers of America and is making a bid for more members. Every reader of Garden Magazine is invited to join the American Rose Society at the most advantageous terms. The \$3.00 membership will cost you but \$1.00 this year, since each new member will receive a certificate entitling him to \$2.00 worth of Roses, plants to be secured from any of the leading nurserymen in the Association.

Join now, start now, by writing to

### The American Rose Society

JOHN C. WISTER, Secretary

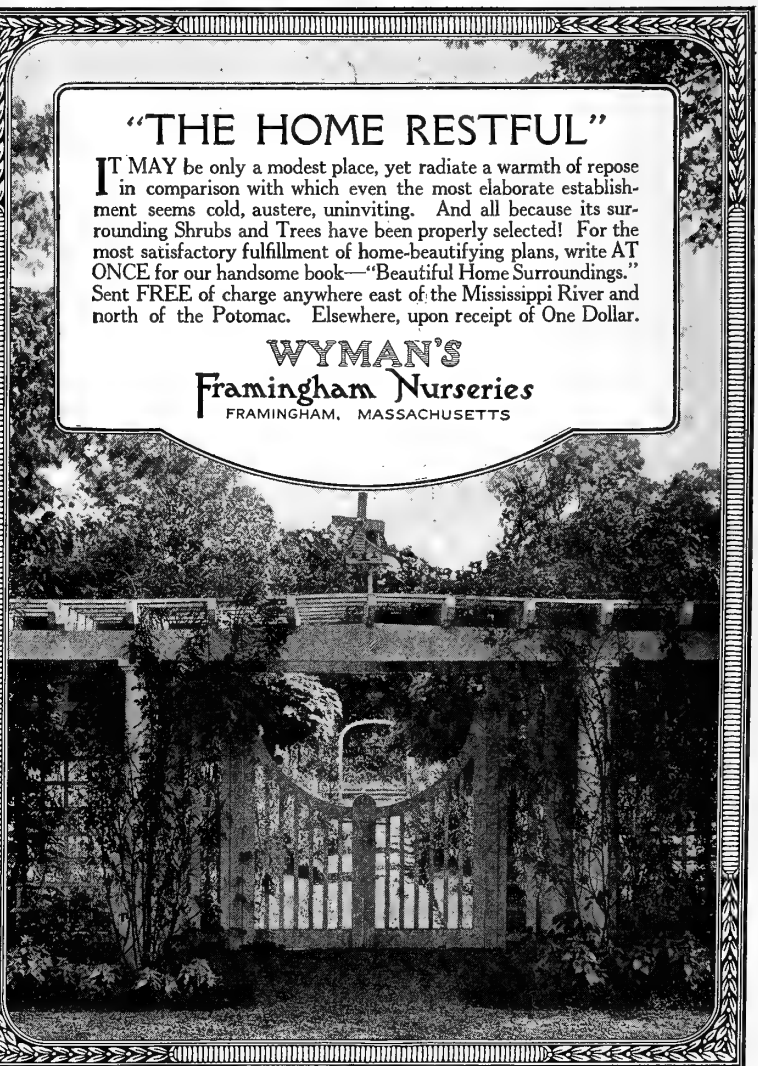
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who will gladly supply additional information.

## "THE HOME RESTFUL"

**I**T MAY be only a modest place, yet radiate a warmth of repose in comparison with which even the most elaborate establishment seems cold, austere, uninviting. And all because its surrounding Shrubs and Trees have been properly selected! For the most satisfactory fulfillment of home-beautifying plans, write **AT ONCE** for our handsome book—"Beautiful Home Surroundings." Sent **FREE** of charge anywhere east of the Mississippi River and north of the Potomac. Elsewhere, upon receipt of One Dollar.

**WYMAN'S**  
Framingham Nurseries  
FRAMINGHAM, MASSACHUSETTS





## Miss "Tumbledown"

Rollicking, frolicking over the rocks, and tumbling into the crevices, just to emerge again at the other end, such are the happy Sempervivums, the form of Globiferum or Hens and Chickens being shown above. This is just one of a vast number of

### Rockery Plants for All Soils and Situations

Among those that prefer dry, sunny soils the various types of Sedum and Sempervivum lead. If your rock garden spot is shady, you will be interested in Santolinas or Lavender Cotton, Bird's Foot Violets, various Primroses and Forget-me-nots. The lastly named also thrive particularly well in moist spots. In short, no matter whether your soil is good or poor, moist or dry, shady or sunny, we have the plants that will help you to

### Better Hardy Borders

To introduce Palisades Popular Perennials, we will send the following fourteen hardy favorites for \$2.50 postpaid.

2 Plants Sempervivum globiferum, as illustrated above. 3 plants Santolina incana, the silvery foliaged Lavender Cotton. 3 plants Bird's Foot Violets. 3 plants Primula veris, English Cowslip. 3 plants Sedum stoloniferum, Crimson Stone Crop.

Any of above 20c each, \$2.00 per dozen. The entire collection of 15 pot-grown plants for \$2.00 postpaid.

### A Helpful Catalogue

Describing the best available in hardy plantland, in a quality procurable only from specialists is yours to command. Our great specialty is pot-grown perennials, plants that will enable you to start a garden any time anywhere. Please write for Catalogue to-day, mentioning G.M.

**PALISADES NURSERIES, Inc.**

Sparkill New York

## William Doogue—\$1.50 A Good Tub Water-Lily

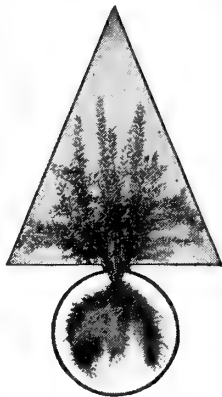
Large cup-shaped flowers, bright pink, with a pleasing fragrance. A garden in itself; all you need besides the plant is a water-tight half-barrel or tub with a little soil and water.

### Send For Our Catalogue

Learn more about the fascinations of Lily culture. Besides a catalogue of varieties, the book contains cultural directions and many illustrations. You'll be interested if you like flowers; send to-day.

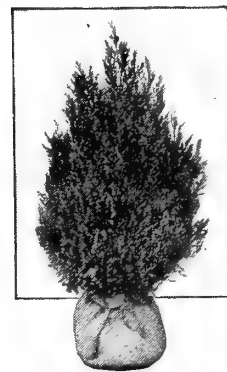
**INDEPENDENCE NURSERIES**

Box M Independence, Ohio



This soil of ours is wonderful for making fine fibrous roots on our shrubs, evergreens and trees. Makes transplanting easy, and quick growth certain.

## It Says Scat To All Your Planting Botherments



Evergreens galore we have. Little chaps that naturally stay dwarfish, and big chaps that keep on getting bigger. All have thoroughly burlapped roots, when shipped.

That's exactly what our new Ten-Ten Book does for you. It smoothes out your botherments about *what* to plant, and *where*. Yes, and *when* as well. It gives you ten best things for shady places.

- Ten best for dry spots
- Ten best for wet
- Ten best for rock gardens
- Ten best roses
- Ten best shrubs or evergreens, for foundation planting
- Ten best vines

- Ten best Iris
- Ten best perennials or hardy plants, for ten different places, and a lot of other tens besides.
- Send at once for this new Spring Ten-Ten Book, that makes selecting all so simple and altogether pleasurable.
- Never had we choicer stock.
- We will pack your order with more than ordinary care, and do our level best in making prompt shipments. Like one of the big greenhouse concerns says, "We believe in pleasant dealing."

**Julius Roehrs Co**  
At The Sign of The Tree  
Box 10, Rutherford N.J.



For foundation planting, we have a goodly lot of the most desirable things in shrubs, evergreens, dwarf Jap maples, hardy plants, not to mention the rhododendrons, laurel, and the bedding evergreen, known as Pachysandra.

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For One Dollar we will send prepaid—Ten Gladioli, in Ten Different Sorts, or Twenty Mixed Gladioli selected.

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Painesville Ohio

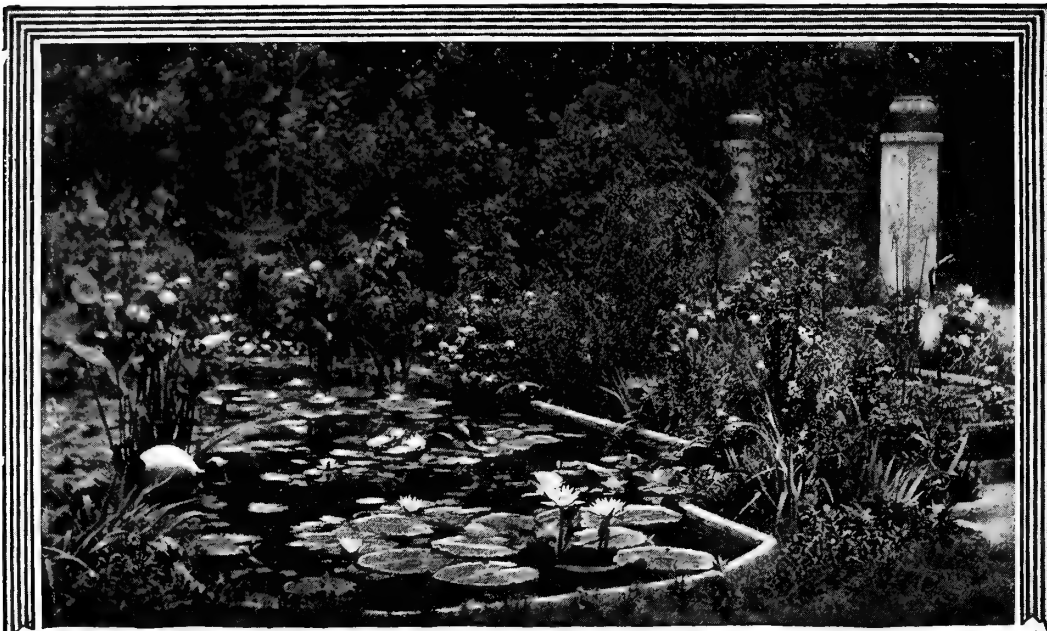


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*Are Gems of Bewitching Beauty  
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A lily pool is always the center of garden interest—and a garden without Water Lilies is sadly incomplete. Fortunately, one may have a water garden at little expense, for if a pool is not to be had, one may use tubs or half-barrels. The tubers, too, are inexpensive—indeed when the blooms open in their loveliness you will be richly rewarded for your investment.

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Almost everyone knows the common Water Lily of ponds and streams, with its waxy white petals and charming fragrance. But in your water garden you may have almost a rainbow of color—crimson, yellow, royal purple, rose-pink, orange-red, lavender, blue—to contrast with the improved white varieties.

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A steel covered roller, studded with four rows of steel spikes which vertically enter the soil, pulverize it finely to a depth of two inches. It absolutely destroys the constantly sprouting weed seeds, besides uprooting seedlings, thus making all fertility available for the cultivated crops.

For putting the seed bed in ideal condition, to crush lumps and clogs that are inevitable after soil is spaded, the "Diamond E" is one of the most valuable tools ever offered. Excellent for working around Shrubbery, Flower beds, etc., and loosening up bare spots in the lawn, working in a top dressing of fertilizer and seed.

*Descriptive Circular on Request*

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They range from 1½ ft. to 4 ft. high, thrice transplanted, their roots in a ball of native loam, burlap tied. The whole shipment, carefully crated and delivered free to the Express office at Framingham, Mass.

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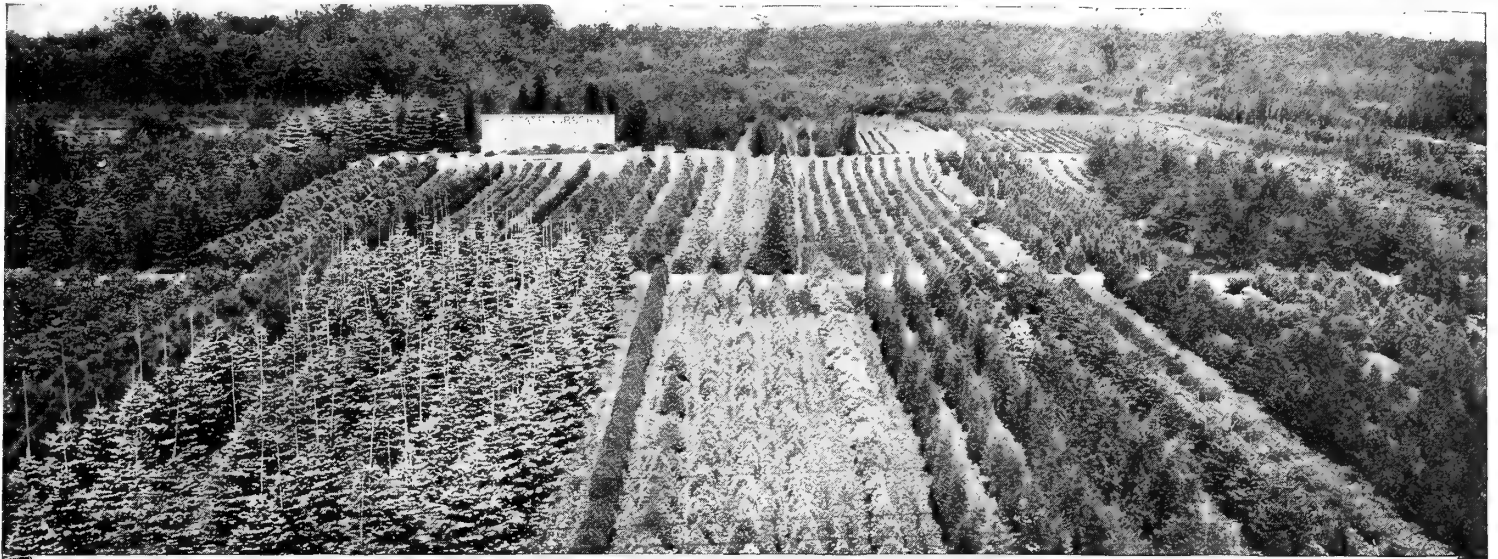
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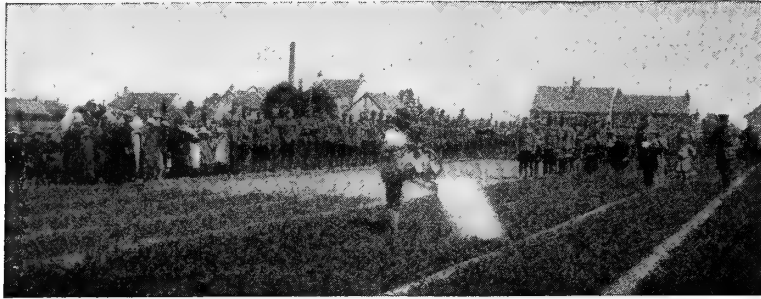
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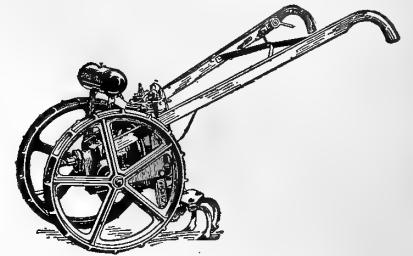
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SIX WONDERS**

	Doz.	100
<b>Mrs. Francis King</b> —Striking shade of scarlet flowers with blotch of brilliant red in throat -	\$.75	\$5.00
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<b>Collection</b> —1 doz. of each of these varieties, 60 bulbs, \$5.00 postpaid.		

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*Full planting instructions with each parcel*

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- Dahlias**
- Gladioli**
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- Phlox**
- Iris, and**
- Hardy Perennials**

is now ready. Send for it, and we will send later our Fall Catalogue of Choice

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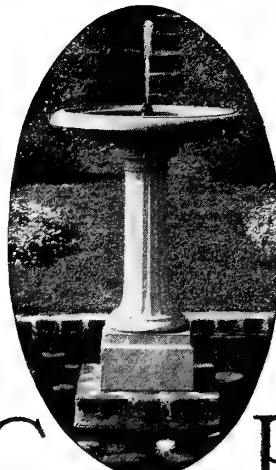
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**GEO. D. AIKEN Putney, Vt.**



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**A Short Cut To Its Possession**

“Owning your own Greenhouse,” is the name of a delightfully informative and abundantly illustrated booklet, that both shows and tells you exactly what you want to know about owning your own greenhouse. Fully tells what it will do for you; what you do to have it, and how we make its possessing entirely free from the usual building botherments. Send for the booklet.

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## Beautify Your Hedge

Keep it Trimmed as Neat as Your Lawn

### THE LITTLE WONDER HEDGE TRIMMER

TRADE MARK REG. U. S. PAT. OFF.

is to the Hedge as a Lawn Mower is to the Lawn  
**PAYS FOR ITSELF IN ONE DAY'S USE**

Revolutionizes Hedge Trimming. Trims every variety grown. Cuts from five to ten times as fast as by hand and makes a more even cut. Operates so easy that women operate them.

An amateur becomes expert with very little practice. Various adjustments and attachments suit it to every shape of hedge and cut desired. In use on hundreds of the largest estates in the country and highly recommended by all.



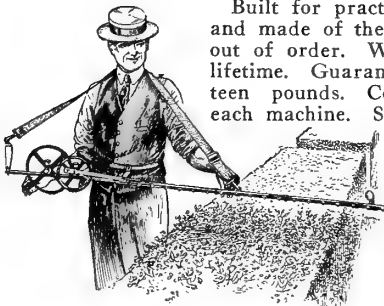
Harrison, N. Y.  
 Gentlemen—Your “Little Wonder” Hedge Trimmer does not only as good work as we formerly did by hand shears, but we keep our hedges in much better shape because of being able to trim them often and we succeeded in cutting in about three hours what it formerly took us three days to do by hand. Wishing you the success your machine so well merits, I am,

HARMON AUGUST

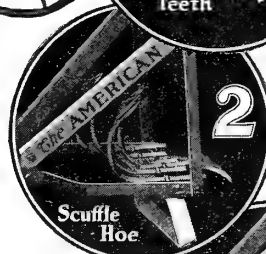
Price, \$27.50, prepaid, East of Mississippi  
 Price, 30.00, prepaid, West of Mississippi

Built for practical use, is mechanically perfect and made of the best materials. Nothing to get out of order. With reasonable care will last a lifetime. Guaranteed for one year. Weighs sixteen pounds. Complete instructions accompany each machine. Sold by leading dealers. If your dealer cannot supply you, write us enclosing check, and we will ship your machine at once. References and circulars on request.

**John C. Dettra Machine Co.**  
 Oakes, Montgomery Co., Penna.



## ONE TOOL-THREE POSITIONS Complete ELEVEN USES



### ELEVEN USES

- 1 Harrowing the Soil  
 Mulching Between Rows  
 Loosening Top Soil  
 Keeping Out Weeds  
 Tearing Out Weeds and Grass
- 2 Shallow Cultivating  
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 Cleaning Paths
- 3 Breaking Hard Soil  
 Making Open Furrows  
 Making Seed Furrows of Any Length  
*Does three hours work in one*

**E**LEVEN uses without detaching or changing a single tool—without the use of a wrench or screw driver! The “Revolving Head” does it. Simply revolve the needed tool into position and lock by turning the hand wheel. Not a minute’s loss of time, no lost or misplaced tools.

### The American Gardener “The 3-Way Tool”

Handle height is adjustable and the hand grips are designed to permit restful hand changes. Built so sturdily that we guarantee it a life time. Selected oak handles, strong steel frame, 14 inch steel wheel. Teeth, hoe and plow forged from tool steel and hardened.

If your dealer does not carry it, your money order for \$6.75 brings you this tool of 11 uses. (Add \$1.00 for extra postage for Denver and points West.) Your money back if it doesn't more than meet your expectations.

The American Fork & Hoe Co.  
 Makers of Forks, Hoes and Rakes for 97 Years  
 TRUE TEMPER QUALITY  
 123 Cedar St.      Geneva, Ohio

The American Fork & Hoe Co.  
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Apple  
Pear  
Plum  
Peach  
Cherry

PLANT TEN FEET APART, BEAR QUICKER THAN ANY, SAVE ROOM, TIME & WORK

Catalogue Free

**VAN DUSEN NURSERIES**  
C. C. Mc Kay, Mgr., Box G., Geneva, N. Y.

— READ DAVID GRAYSON —

## GROUND COVERS

ALMOST every one who sees my garden says: "What's that?" The plant that calls forth the exclamation is only one of those common plants that have become uncommon in the garden—the Cypress Spurge (*Euphorbia Cyparissias*.) Nowadays it is more apt to be found by the wayside or in an old burying-ground. I guess it deserved its banishment from the garden, all right. Its cypress-like foliage, topped early in the season by yellowish blossoms, possesses genuine beauty; but it spreads unmercifully and, on the whole, is best suited for a cover plant. Thus used, it has a value far greater than is generally appreciated. The foliage keeps good all summer, though the new growth coarsens after the blossoms appear.

Likewise unappreciated as a ground cover of distinct value is the common Coltsfoot (*Tussilago Farfara*). Because of its propensity to roam all over creation it is admirable for covering spots that are difficult to keep green. For dry banks, or against a wall, or the stone foundation of a house, it is one of the best of plants. The flower stalks—each with its little yellow dandelion-like blossom—come with the earliest spring and are followed by very large leaves that hide the ground completely and remain in good condition until autumn. In shape and manner of growth the tufts of foliage resemble somewhat those of the Burdock; but with their fresh green and their woolly under side, the leaves are far handsomer. Both by underground suckers and self-sowing, the Coltsfoot increases as rapidly as if it had the world to conquer. If used as a cover near the lawn or garden, the flower heads should be cut off before the seed ripens.

Another excellent cover effect may be obtained by the use of the old fashioned Burnet (*Poterium Sanguisorba*). This grows readily from seed and, being a perennial, takes care of itself thereafter. The beautifully cut, dark green foliage is very profuse and mats thickly to a height of six or eight inches. After the first year, there are inconspicuous heads of dull red bloom. This Burnet, used for flavoring drinks in the olden time, covers the ground well on sandy and chalky soils; it has no particular dislike for soil poverty. In the garden I use it as an edging; it is fine for that purpose, as it is easy to keep within bounds.

The value of the common blue Myrtle (*Vinca minor*) for filling in bare, or semi-bare, spots ought to be almost universally apparent. But if it is, advantage is too infrequently taken of the opportunity. It has the supreme virtue of being evergreen in the North, it will thank you for sunshine and thank you for shade, its blossoms are bright and pretty and in hardness it is in the can't-be-killed class. It ought to be planted more on banks, where the white variety is very attractive.

Nor is the value of *Rosa Wichuraiana* realized to the extent that its merits deserve. Though called the Memorial Rose, there is no reason why it should be relegated to cemeteries. It is beautiful and useful there, but not less so on a bank or rocky ground with good soil pockets, either pinned down close or as a loose cover. This Rose soon provides a virtually evergreen carpet and the single white blossoms make it almost as beautiful as the famous Cherokee Rose of the South.

H. S. ADAMS, *New York.*

# BARTLETT

## Tree Trimmers

### Save Stretching



**YOU** don't have to climb a Ladder when you use this Pruner, made in sections 4 feet long. It joins together easily to make an 8, 12 or 16 foot pole.

No. 1 has a compound lever head and is made with a hook and side lever. It is calculated for heavy work and will cut a limb up to 1 1/4 inches in diameter. Instead of running the rod connecting the knife lever along one side of the pole to a handle lever, we have the handle lever on the opposite side, which allows the rod to cross the pole. As a result one-half the strain is thrown on one side of the pole and one-half on the other which gives about double strength, and instead of the pole warping and bending, it has a tendency to remain straight and stiff. We recommend the No. 1 trimmer as the compound leverage relieves the strain on the pole.

The Compound Lever head makes the large limbs cut as easy as the small. Only best of material used in its construction.

8-foot—2 sections	PRICE
12-foot—3 sections	\$4.20
16-foot—4 sections	4.50
	4.80

Deduct 60 cts. per length if long pole is preferred.

Sent, prepaid, if your dealer doesn't carry them. Ask for circular of Hand Pruners, Saws, Lopping Shears and Long Pole Pruners.

**BARTLETT MANUFACTURING CO.**  
29 East Lafayette Ave, Detroit, Mich.

Special for Spring, 1922

## RHODODENDRONS

IN CAR LOTS

Varieties  
Catawbiense, Carolinianum & Maximum

### KALMIA LATIFOLIA

### FRUIT TREES AND FRUIT PLANTS

Price upon request—also General Price List

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**SAVE THE TREE**  
by using

## Vitamite Tree Bacteria

a remarkable product for promoting new growth and bloom.  
\$3.00 per tree—money refunded if results not satisfactory.

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*Tree*

Plan for Beautifying your home grounds.  
Trained landscape architects prepare it. Use it this spring. Send for it now. FREE.

**CHICAGO LANDSCAPE CO., 79 W. Monroe, CHICAGO**

## Gladiolus

### Dorothy McKibbin

The best early ruffled pink variety yet produced. (See cut for form and vigor.) Dorothy McKibbin has been tested by florists and pronounced first class for forcing purposes, has long, straight, wiry stems, the flowers growing well out of the foliage; extremely early, elegantly ruffled and of a most beautiful shade of pink; has a pure apple blossom tinted throat, blending to bright pink around the outer edges of the petals. It has a wide open flower with many open at a time. Each 35c. doz, \$3.50, per 100 \$24.50, prepaid. 6 at doz. rates and with every half doz. 1 Gold Pheasant free.

**JOHN H. MCKIBBIN**  
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### Pergolas and Arbors

This advertisement shows only a few of suggestive features from our catalogue containing several hundred distinctive garden decorations.

When writing for copy, enclose 20c and ask for catalogue "H-34"

GARDEN HOUSES, LATTICE FENCES  
GARDEN FURNITURE, PLANT-TUBS and FERNERIES  
SUN-DIALS and GAZING GLOBES

**HARTMANN SANDERS CO.**

Main Office and Factory:  
2155-87 Elston Ave.  
Chicago, Ill.

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New York City





# Strawberries

YOU can enjoy them this summer if you plant our field grown Y plants right now. Here are three splendid sorts of recent introduction—far larger and better than the old standard varieties.

**California**—Large fruits of perfect shape and splendid flavor. \$2 per doz., \$3.75 per 25, \$12.50 per 100.

**Buckbee**—Enormous glossy red berries; delicious. \$1.25 per doz., \$2.25 per 25, \$4 per 50, \$7.50 per 100.

**Beal**—Truly remarkable flavor; unusually large. 90 cts. per doz. \$1.50 per 25, \$2.75 per 50, \$5 per 100.

# Raspberries

**New Everbearing White Queen** bears an abundance of almost white berries from August until mid-November. Extra large fruits, free from acid and seeds. \$6.50 per doz., \$50 per 100.

**Kevitt's Hybrid.** Planted now, will yield this fall one pint of large crimson berries to each stalk; twice as many next year. Grows ten feet in a season. \$2.50 per doz., \$15 per 100.

Send for free catalogue which describes these and other excellent, new varieties, besides vegetable and flower seeds. Copy free on request.

**William M. Hunt & Co., Inc.**  
148 Chambers Street New York City



This is a Hicks Tree.

This is not.

## Trees for Street and Avenue Planting

If you want satisfaction, buy the best. If the purchase price is the first essential you will probably get the results shown in the picture in the right hand corner above.

If you are buying future enjoyment, a Hicks guaranteed tree will pay the biggest dividends. Everyone of the trees listed below is guaranteed to produce the results you expect. Note the mass of roots on the maple above and you will understand why we can guarantee.

Here are the best kinds of shade trees for street and avenue planting. For sandy and gravel soil, plant white, red, scarlet oaks; for light sandy loam, chestnut oak, Maidenhair Tree. small leaved Linden, Norway Maple; for moist loam Sweet Gum, Sugar Maples, swamp white oak, cucumber Magnolia.

	3 1/2" dia.	16-18' high	Each	Ten	Hundred
Norway Maples	3 1/2" dia.	16-18' high	\$8.00	\$75.00	\$700.00
Sweet Gum (with ball)	1 1/2" "	8-10' "	3.50	30.00	275.00
Sugar Maple	1 1/2" "	8-10' "	2.00	17.50	150.00
Small leaved European Linden	" "	6-8' "	1.50	12.50	100.00
" " " "	" "	8-10' "	2.00	17.50	150.00
" " " "	" "	10-12' "	3.50	30.00	275.00
Scarlet Oak	1-1 1/2" "	10' "	4.00	35.00	300.00
Tulip tree (with ball)	" "	8' "	3.00	25.00	
" " " "	" "	10' "	4.00	35.00	
Chestnut Oak	1 1/2" "	10' "	6.00	50.00	
Pin Oak	1 1/2" "	10' "	3.00	27.50	250.00
Swamp White Oak	1 1/2" "	10-12' "	2.00	17.50	150.00
White Oak (with ball)	1 1/2" "	10' "	5.00	45.00	
Red Oak	" "	6-8' "	2.00	17.50	150.00
Cucumber Magnolia (with ball)	" "	6-8' "	2.00	17.50	
Maidenhair Tree (with ball)	2" "	8-10' "	5.00	40.00	

**HICKS NURSERIES, Department M, WESTBURY, LONG ISLAND, N. Y.**

Time Saving Shade Trees. Evergreens for foundation planting. Flowering Shrubs and Roses. Hardy flowers in several hundred varieties. Fruit trees and berries of the best varieties.



Mary Steffenson

Write to-day for free catalogue

So beautifully distinct from any other dahlia. The soft colors and tints blend so harmoniously. The most exquisitely formed flowers are carried so gracefully, erect to facing, on the long, cane stiff stems. Size, six to eight inches. Color at base of petal, citron yellow, outer half creamy white,

both yellow and white mottled and overspread rosolane pink. Many petals showing faint yellow along mid-vein. All dusted over with tiny glistening crystal-like particles, as of gold dust. An ideal dahlia for cutting, garden, and for exhibition. Roots, \$5.00 each.

That you may know our dahlias we make the following

**SPECIAL INTRODUCTORY OFFERS**

- 5 beautiful Cactus Dahlias..... \$1.00
- 5 grand Decorative Dahlias..... \$1.00
- 2 Giant Century, 2 unique Collarettes, 2 Ball, 6 in all..... \$1.00
- 5 Peony Dahlias, \$1.00, 1 Pkt. new Decorative Dahlia Seed..... \$1.00
- Above 5 offers, each Dahlia carefully labeled, true to name, and my book on The Dahlia, all postpaid for..... \$5.00

OUR NEW CATALOGUE, THE WORLD'S BEST DAHLIAS, not only shows Mary Steffenson, Queen Elizabeth, Golden West Cactus, and 9 new Century Dahlias in natural colors, but tells the plain truth about the best new and standard varieties, including 12 wonderful new creations, now offered for the first time.

**THE LEADING DAHLIA CATALOGUE FREE**

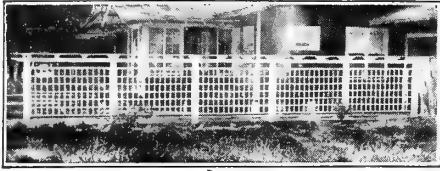
Write to-day. A post card will bring you a copy by return mail.

**PEACOCK DAHLIA FARMS**

Berlin

We are the largest in the world

New Jersey



No. 235 Lattice Fence

## Beautify Your Home Surroundings

BY THE USE OF OUR  
FENCES, ARBORS, TRELLISES, PERGOLAS,  
LATTICE TRIMS, GARDEN SEATS, ETC.

Our equipment enables us to manufacture at low cost a very large line of original designs—the attractive kind. It will be a pleasure to mail you our Free Literature.

Our drafting department will design especially for you—No Charge.

If interested in Fences, ask for our Blue Prints showing many attractive designs.

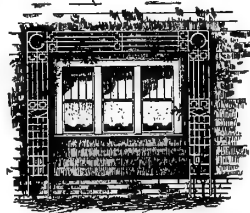
Our Lattice Trimmings for walls both inside and out have proven welcome additions in gardens and homes. We have many styles suitable for the most elaborate mansion or the humblest cottage. *Free Catalogue.*



8 in. wide, 8 in. deep, 36 in. long, \$2.75  
8 in. wide, 8 in. deep, 42 in. long, \$3.25  
8 in. wide, 8 in. deep, 48 in. long, \$3.75

### ALL PURPOSE FLOWER BOX

Can be used as Window, Porch or Balustrade Box. Paneled sides and end, metal bottom, made of beautiful fir wood stained foliage green or seal brown. Sent PARCEL POST Prepaid. Money refunded if not satisfied.



Lattice Trim No. 355

Order them to-day

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5 Lake Street, Crystal Lake, Illinois

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Collections for your Spring Planting

MY special offer lists a special collection for the beginner, and a special collection from my surplus stock for large plantings.

This offer, together with a list of the 700 varieties growing in my garden, mailed on request.

VAN WERT IRIS GARDENS

LEE R. BONNEWITZ, Prop.

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Raspberries, strawberries, grapes, currants—bigger than ever you grew before; each one bursting with rich wine-like juice; the kind you've always wanted.

The kind that you can grow now if you give them Stim-U-plant; the concentrated essence of scientifically perfect plant food for all plants. Stim-U-plant in tablet form; clean; easy to use. No smell—stain—or dirt. Always gives great results with Flowers, Vegetables or Fruits. Great for Lawns.

Price 75c per 100; \$3.50 per 1000. Postpaid.

EARP-THOMAS CULTURES CORP.

80 Lafayette Street New York



## Japanese Gardens

Unique and attractive

Skilfully and quickly constructed by experienced gardeners

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To introduce "Pet Stone" a light grey, non-staining cast stone, a thoroughly tried and tested product of unusual merit, we offer the saucer bath as illustrated for \$2.25, 3 for \$6.00, f. o. b. factory.

HLADKY CAST STONE CO.  
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# Prindle HUMUS

For the Price is the Best and Cheapest Fertility Maker

IT is unequalled for increasing the fertility and yield of the vegetable garden. For producing more and better flowers. For making new and restoring old lawns and tennis courts. Humus makes a clay soil friable and a sandy soil to hold moisture. It has no equal as a mulch for things growing. It has no odor, weed seeds or litter.

\$5.00 for 5, 100 lb. bags, f. o. b. Stanhope, N. J.

H. B. PRINDLE

70 East 45th Street, New York

This Book Sent FREE

# Shows 50 Labor Saving Tools for Garden Work

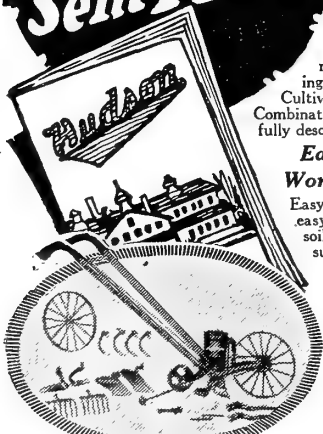
If you are planning a garden you will want this new Hudson Book. Just write and we will send you a copy free and postpaid. See for yourself the many inexpensive working tools that Hudson has designed to make Gardening easier and more profitable. See the marvelous new Hudson Adjustable Cultivator Hoe, the wonderful Rocker Hoe, the Light Push Cultivator, the Combination Seeder and Cultivator (Six Tools in One)—all these and many more are fully described and illustrated in this free book. It is—

## Easy to Work with HUDSON TOOLS

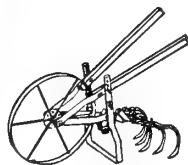
Easy to prepare seed beds—easy to sow and plant uniformly and accurately—easy to keep down weeds and to cultivate and "hill" vegetables—easy to keep soil mulched and loamy—easy to spray. The new low Hudson prices will surprise you. Write for free book to-day.

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Combination Cultivator and Seeder. Really 6 Tools in One.



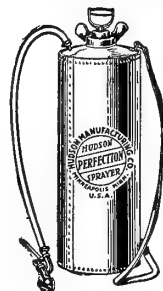
Adjustable Wheel Cultivator with Weed Cutter



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Adjustable Hand Cultivator

Send One Dollar and we will send you five twenty-five cent packages of our

## Elephant Brand Universal Fertilizer

Our special preparation for DAHLIAS, CANNAS, GLADIOLUS, FLOWER and KITCHEN GARDENS. Each package contains one pound net. Delivered free within 300 miles of New York City. Over 300 miles send twenty cents extra for parcel post.

INDEPENDENT CHEMICAL COMPANY  
Dept. A 87 Dey St., New York City

## BETTER GARDENS EASY TO KILL WEEDS AND MULCH THE SOIL

Don't do garden work the slow, backbreaking way. The BARKER makes the finest gardens possible—quickly, easily. Simply push along rows (like lawn mower)—8 blades revolving against underground knife destroy the weeds and in same operation break the crust into a level, porous, moisture-retaining mulch. Aerate soil. "Best Weed Killer Ever Used." Has leaf guards, also shovels for deeper cultivation. A boy can run it—do more and better work than 10 men with hoes.

### Write for FREE BOOK

Illustrated book, postpaid, gives prices delivered to your station, contains valuable information on gardening, letters from users, etc. A card brings it. Write today.

BARKER MFG. CO.  
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# The Dahlia Farm

East Moriches, Long Island, N.Y.

## DAHLIAS

**BYRON STREETER.** A fascinating shade of lilac purple, lightening on outer petals, overlaid with a wonderful bluish sheen. Immense flowers rigidly erect on long stems. Very lasting when cut. . . . . \$2.00

**ARGYLE.** A marvelous flower of rich apricot, suffused carmine, making a gorgeous effect. A fine exhibition variety. A glory in the garden, and a fine shipper and keeper when cut. . . . . \$1.50

**THE MILLIONAIRE.** A mammoth flower, of unusual depth, on good stem. Delicate lavender faintly shaded pink. . . . . \$1.50

**THE PRIDE OF CALIFORNIA.** The American Beauty among dahlias. A huge full centered flower of crimson-red on long strong stem. . . . . \$1.50

**MRS. ATHERTON.** We introduced this grand flower, and each year proves it better than we claimed. A mammoth bloom on strong stem, it is peer of the best in yellows. . . . . \$1.50

*We will send these 5 Decoratives, 1 field-grown tuber of each, postpaid to any address for \$5.00*

**RED CROSS.** English and Dutch growers have pronounced this the best all-round dahlia produced in America. A combination of scarlet and gold flaunting its brazen beauty erect on three-foot stems, it is the most alluring flower in the garden. Tubers. . . . . \$2.50

**WINIFRED.** A fine buttercup yellow peony that drew much attention. The petals twist attractively around a fairly full center, stems are long and strong, and the plants are a mass of bloom till the season's end. Tubers, \$2.00

**LAURA BARNES.** One of the grandest peony dahlias ever introduced. Its immense orange red blooms and long stems always draw spontaneous cries of admiration from visitors. Tubers. . . . . \$1.00

**MRS. J. P. SMITH.** The largest true type show dahlia grown. A mammoth ball of rich crimson. Tubers. . . . . \$1.50

—Write for catalogue. Unique and Free—

A BED OF BEAUTY—100 Gladioli, 10 varieties, prepaid \$5.00. 100 Gladioli, Imperial Mixture, prepaid \$4.00.

THE DAHLIA FARM, East Moriches, Long Island, New York



## Regal Lilies for Everyman's Garden

At last we are ready! For several years we have been building up a stock of lovely *Lilium myriophyllum* and now have thousands of bulbs of blooming sizes. Every home gardener may now enjoy the companionship of this truly regal, fragrant floral beauty. *Lilium regale* (*myriophyllum*) is hardy, literally grows on any well-drained soil and bears charming white flowers, shaded pink outside, with a primrose yellow throat. Blooms in June; 6 for \$3.00; \$6.00 per dozen; \$48.00 per 100.

### Why Not an Entire Garden of Gorgeous Lilies?

Here is a collection of hardy Lilies second to none for the home garden. All are perfectly hardy, bloom different seasons, are good for years:

*Early Flowering:* 6 L. Hansoni; 6 L. Rubellum; 6 L. Elegans.

*Medium Flowering:* 6 L. Regale; 6 L. Tenuifolium; 6 L. Longiflorum.

*Later Flowering:* 6 L. Auratum; 6 L. Henryi; 6 *Speciosum Rubrum*.

A total of 54 Sure to Bloom Lily Bulbs for \$15.00. Half the Collection (3 of each) for \$8.00.

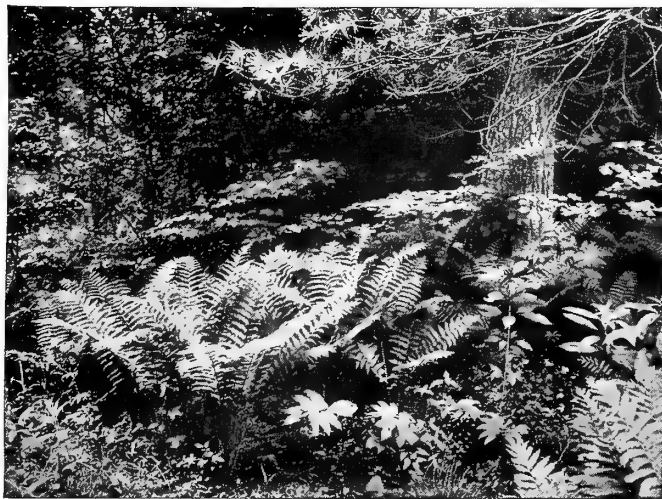
### A Corner in Natives

We specialize in native hardy ferns, plants and woodland species and invite correspondence from those having special problems.

### Horsford's Annual

is ready to introduce to you one of the most complete collections of Lilies, Ferns and Hardy Perennials. Please ask for it.

FRED'K H. HORSFORD, CHARLOTTE, VERMONT



## Bring Your Garden Up-to-Date

TRADE MARK **PAKRO** REG. U.S. PAT. OFF.  
**SEEDTAPE**

Eliminates—Guesswork, Doubt, Backache  
Saves—Money, Time, Seed, Temper

It gives the beginner all the advantages of the expert, and the expert an opportunity to have a better garden with less work and expense.

### A Garden Full of Best Early Vegetables for \$1.00

Fifteen full-sized 10c. packets of Vegetables Seedtape—enough to plant 600 feet of best early vegetables, sent postpaid anywhere in the United States or Canada for \$1.00. If purchased separately from our catalogue this collection would cost \$1.50.

#### ONE PACKET EACH OF FOLLOWING FOR \$1.00

- |                        |                          |
|------------------------|--------------------------|
| Beet, Crimson Globe    | Lettuce, B. S. Simpson   |
| Cabbage, Wakefield     | Onion, White Portugal    |
| Carrot, Oxheart        | Parsley, Double Curled   |
| Endive, Green Curled   | Radish, French Breakfast |
| Kohlrabi, White Vienna | Radish, White Icicle     |
| Leek, Large Flag       | Swiss Chard, Silver Leaf |
| Lettuce, Big Boston    | Tomato, Earliana         |
|                        | Turnip, Ea. White Milan  |

Order your collection *Now*. Mail this advertisement with Check, Money Order, Dollar Bill or Stamps and secure this Garden Full of Best Seeds, ready to plant in the best way.

Write to-day for 1922 PAKRO SEED ANNUAL, "A Guide to Better Gardens." It will furnish you with full particulars about this better, easier method of planting, also about "Pakro Packet Seeds" of same selected quality as those used in Seedtape. A postal will bring it free to any address.

**American Seed & Seedtape Co.**

170 Main Street

Madison, N. J.





The Majestic Douglas Fir

## ROSEDALE SPECIALTIES

EVERGREENS in 77 varieties and many sizes, up to 25 feet. Frequent transplanting assures compact root systems that stand moving well.

FRUIT and ORNAMENTAL TREES and SHRUBS in great variety, including *extra sizes* for immediate effect.

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Why not have a hardy, permanent border which gives you flowers from early April until late November. WE MAKE YOU A SPECIAL TRIAL OFFER. All plants are field grown clumps.

A border 25 feet long and 4 feet wide, including 70 strong plants of the best varieties and blending colors covering the blooming season. Regular price \$15.00.

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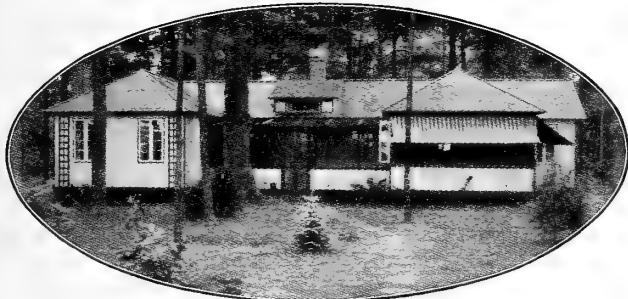
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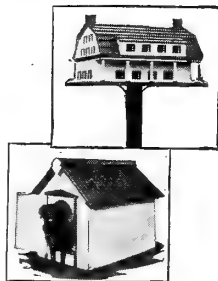
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Larkspur, tall blue spike. Coreopsis Grandiflora, golden yellow daisy. Gaillardia, dark brown and yellow daisy. Sweet William, auricula eyed, or new pink, your choice. Hollyhocks. Fox-glove, Shasta Daisy. Japanese Iris, Liberty Iris, your choice of colors. Achillea the Pearl, bunch of white buttons. Asclepias Tuberosa, orange, very pretty. Physostegia Virginica, tall pink spike.

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America, pink. Halley, salmon. Mrs. Francis King, flame color. Empress of India, nearly black. War, blood red. Peace, white. Schwaben, yellow. Violet King, dark violet. Mrs. Watt, American beauty rose color. Stella, deep pink, white center. Golden West, golden orange. Panama, deep pink.

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Dominion, brilliant red. Mirtle, delicate pink, white in center. Evelyn Kirtland, rose pink. Herada, glittering mauve. White Glory, ruffled white. Flora, beautiful yellow. Mahogany, very dark. Prince of Wales, the finest salmon. Nora, lavender. Excelsior, pink, blood red in center. Wonder, deep rose pink, blue edged. King of the Blues, dark blue.

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**No. 5 6 of the most choice Gladiolus**

Pink Lily, ruffled deep pink. Mrs. Dr. Norton, la France pink, cream center. White Giant, pure white. Chautauqua Red, brightest red. Le Marechal Foch, rose pink. Catharina, lavender.

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Nothing is more beautiful than my Gladiolus Primulinus, with their artistically arranged flowers, and their oriental and pastel colors. Here are 12 fine Varieties. Canaribird, yellow. Flamingo, flamingo pink. Glow, deep orange. Flora, pink white center. Oreole, deep yellow. Orange Brilliant, bright orange and yellow. Regal, ruffled salmon pink. Sunray, yellow orange. Salmonia, salmon. Sweet Orra, cream white, pink center. Silvis, salmon red. Sedan, ruffled yellow, red blotch in center.

Very choice mixture. 100, \$4.00

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**No. 7**

**A very choice collection of Gladiolus Primulinus**

Attraction, salmon. Beauty, rose pink. Firefly, orange with blood red spot in center. Roanoke, ruffled yellow, dark red spot in center. Orange Perfection, brown orange. Sunbeam, deep yellow. Nymph, white veined red. Rose Queen, pink. Capella, deep orange red. Elegance, flame red. Rosea Superba, dark pink.

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**No. 8 6 Gems of the Primulinus**

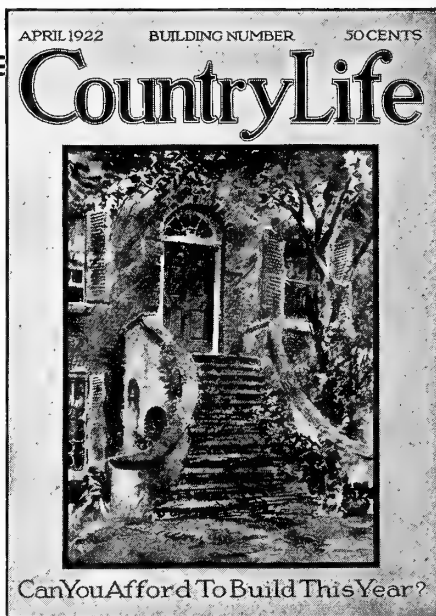
Egret, cream. Jewell, the finest blend in salmon and golden yellow. Golden Nugget, dark yellow. Liberty, deep orange. Darling, fine pink. Sunrise, bright orange yellow blotch in center.

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**Back Yard Gardens**  
**About Fire Protection**  
**Foundations**  
**Correct Furniture**  
**Suggestions for Small Country Homes**

**The Small House**  
**Can You Afford to Build this Year?**  
**Stucco Houses**  
**The Way to Build a Roof**

And besides there are interesting features, like pictures of most interesting estates in America—within the house and without.

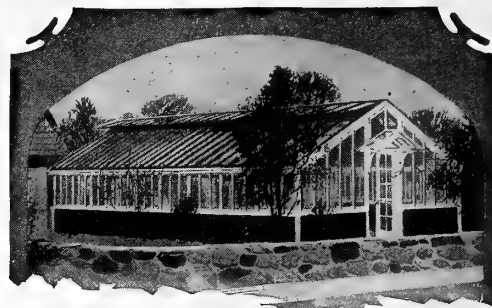
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## Country Life

GARDEN CITY, NEW YORK

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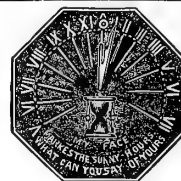
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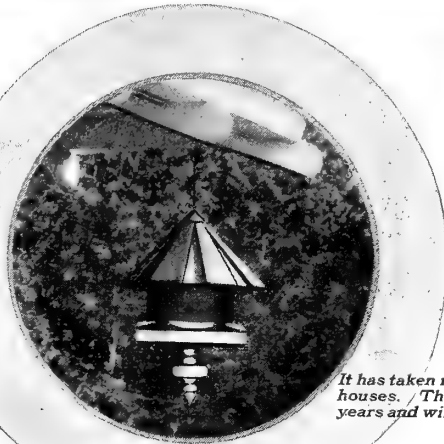


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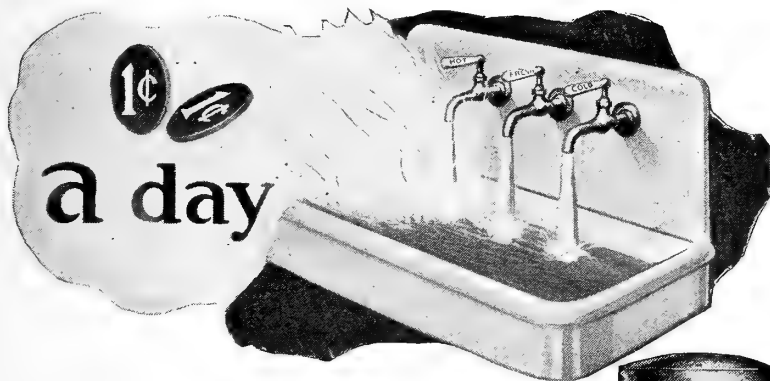
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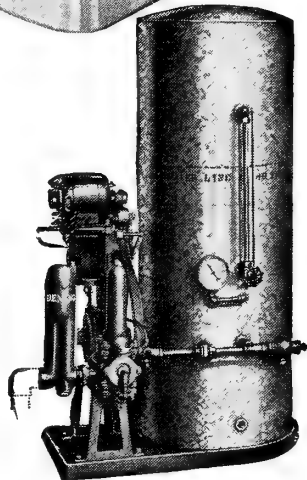
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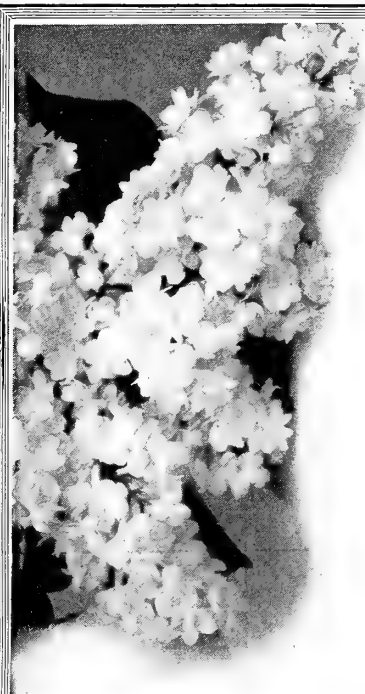
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A BOOK which makes de-lightful reading. By a man who has made gardening his hobby for fifty years. Much practical information, but in no sense dry fact and statistics. LUTHER BURBANK calls it: "The best so far written on garden subjects." \$2.50

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of the Lawyers**

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GARDEN CITY, NEW YORK

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## Special Announcement

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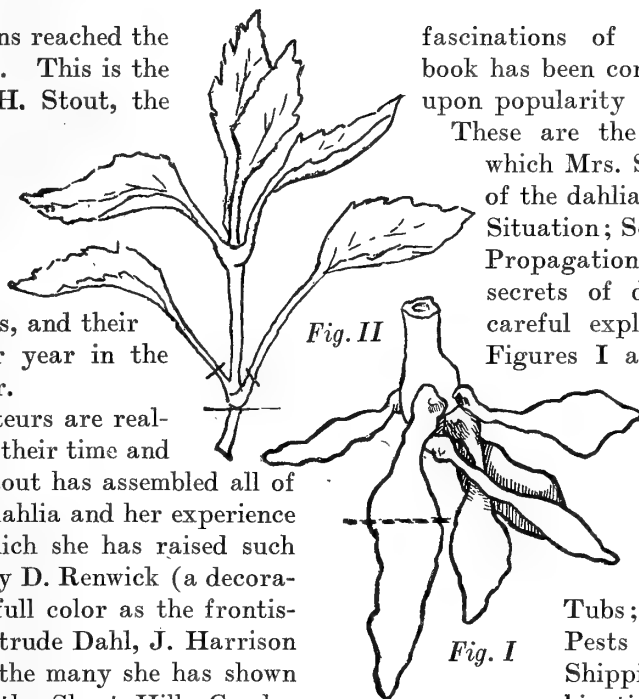
# The Amateur's Book of the Dahlia

By *MRS. CHARLES H. STOUT*

**D**AHLIAS have by no means reached the peak of their popularity. This is the belief of Mrs. Charles H. Stout, the well-known dahlia amateur, of Short Hills, N. J., a successful cultivator, student, and raiser of meritorious novelties. There are many amateurs in America who have had notable achievement in the hybridizing of dahlias, and their number is increasing year after year in the widespread interest in this flower.

A large number of flower amateurs are realizing that the dahlia is worthy of their time and the necessary patience. Mrs. Stout has assembled all of her personal information on the dahlia and her experience of some twelve years, during which she has raised such famous flowers as Sunshine, Emily D. Renwick (a decorative dahlia which is pictured in full color as the frontispiece of Mrs. Stout's book), Gertrude Dahl, J. Harrison Dick. These are only a few of the many she has shown at the Annual Dahlia Show of the Short Hills Garden Club, and at the National Dahlia Society's exhibitions.

Moreover, Mrs. Stout has written of the dahlia in an engaging manner, with touches of appreciative humor; particularly she speaks with authority, and her information is presented concisely, thoroughly. "Of the late-blooming perennial flowers, where is there any," asks Mrs. Francis King, in her introduction to this exceptional book, "to surpass the dahlia? Where is there a more majestic habit, a finer foliage in form and color, a more glorious range of color in the flowers themselves?" With such a subject, Mrs. Stout has looked into every phase of the



fascinations of dahlia growing. No gardening book has been conceived with more complete claims upon popularity and practicability.

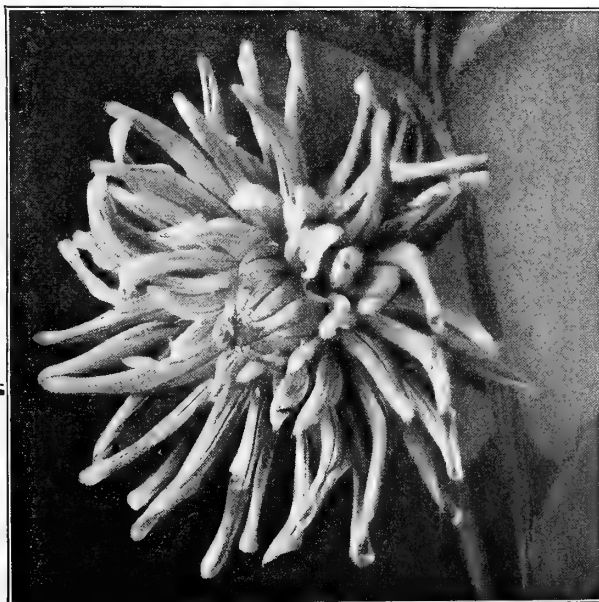
These are the subjects, in separate chapters, which Mrs. Stout has dwelt upon in her study of the dahlia: History; Early Dahlia Culture; Situation; Soil, Composition and Preparation; Propagation (in which chapter many of her secrets of dahlia raising are revealed with careful explanations and sketches, of which Figures I and II, this page, are examples;

(Figure I, Average clump of Tubers ready to be separated.

Figure II, Green cutting as taken from sprout); Breeding, Planting, Staking, Fertilizing; Cultivating, Watering, Disbranching, Disbudding; Dahlias in Tubs; Frost, Lifting and Storing; Pests and Remedies; Cutting, Packing, Shipping; Dahlia Shows; Color Combinations in the Garden and as House

Decorations; Varieties; Classification and Chart. The charts give comprehensive analysis and information of all popular and leading varieties of the dahlia now in cultivation, such as, class, name, originator, color, habit, whether for garden, cut flower exhibition service, and supplementary notes by Mrs. Stout.

As Mrs. King has said, in the book's introduction, "The miracle of hybridization is still ours . . . ; the path is only explored for a little. On that path this book should prove a torch to light the way." Mrs. Stout's practical book will be indispensable to all dahlia growers.



**The Amateur's Book of the Dahlia**

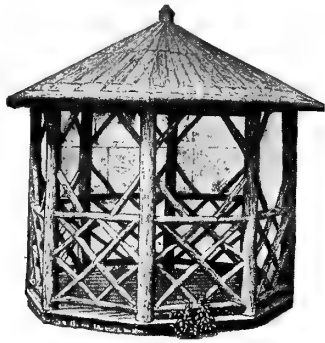
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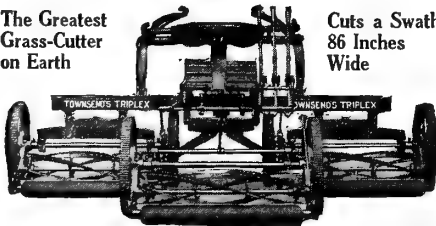
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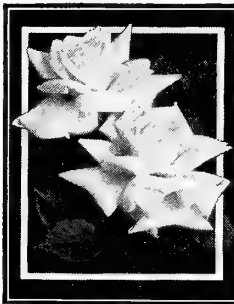
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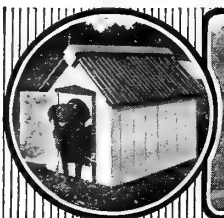
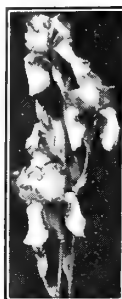
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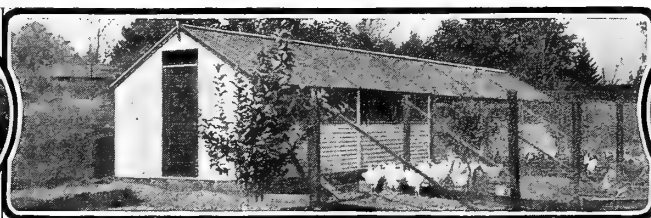
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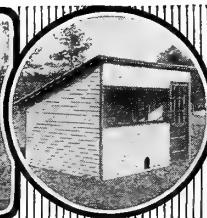
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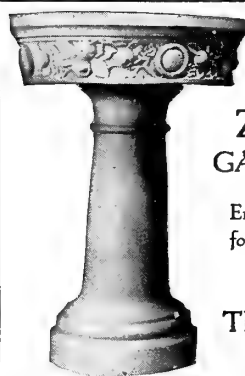
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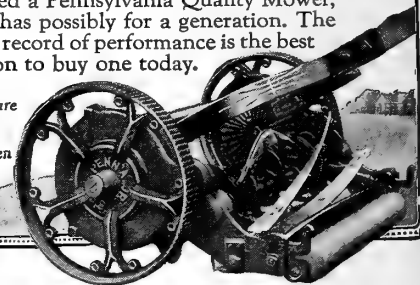
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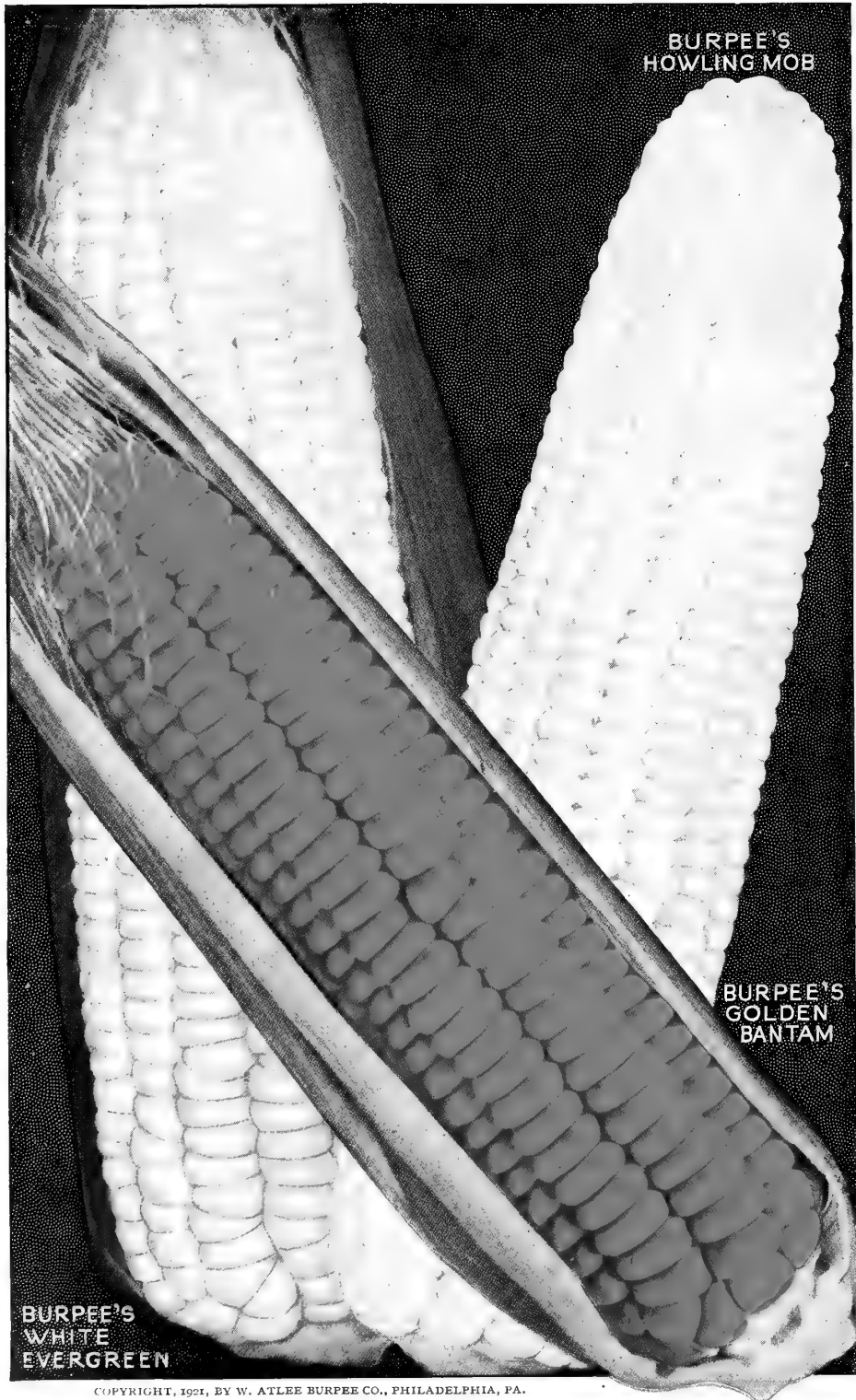
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# GARDEN MAGAZINE



MAY, 1922

25 CENTS

Vol. XXXV. No. 3

May, 1922

*Doubleday, Page & Company*

*Boston*

*Los Angeles*

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*Chicago*





# The Strong Arm of Correct Defense

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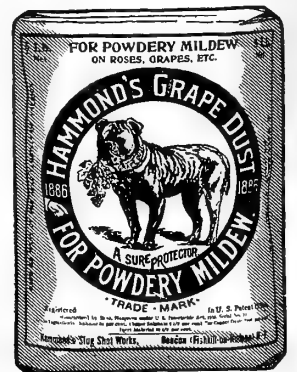
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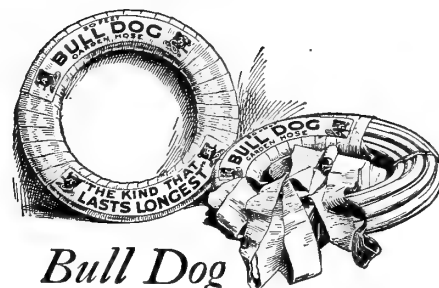
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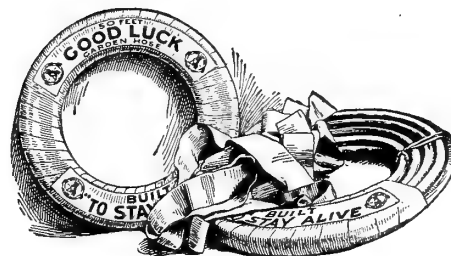
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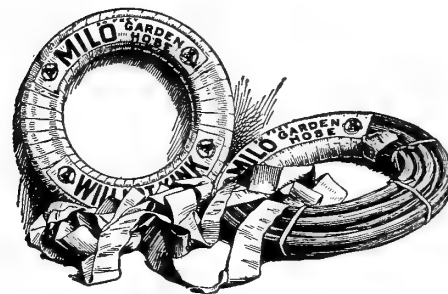
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is by far the most complete and interesting issue I have ever published. It describes and illustrates all the worthwhile native shrubs, evergreens, wild flowers, and ferns. It gives cultural directions that are easily understood and followed. And it tells all about my Service Organization of naturalistic experts and how they can help you in establishing Wild Flower Sanctuaries, Bird Sanctuaries, Wild Woodland Gardens, Rock Gardens, Bog Gardens, Water Gardens—any form of naturalistic planting you may have in mind. Write for your copy *to-day*. You'll find it as fascinating as any novel.

**Edward Gillett, Fern and Flower Farm Southwick, Mass.**  
 286 Fifth Avenue NEW YORK CITY  
 1524 Chestnut Street PHILADELPHIA, PA.



# MAY, 1922

## THE GARDEN MAGAZINE

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LEONARD BARRON, Editor

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For over a year I have worked on a book on Peonies. It is in many respects the most expensive book I have ever published, but then, as a Fan, I count the cost but little so long as the book helps to the end. "Tips and Pointers" published a year ago made a great hit. It was but a stepping stone, however, to "Unvarnished Facts," the 10,000 edition of which is just now being completed. It is too expensive to be distributed indiscriminately, but every reader of *Garden Magazine* ought to have one.

## If You Grow PEONIES or are Going to You Will Want This Book SURE!

To mention just one of the items that make this book expensive, let me mention some illustrations lithographed in eight colors. I am told by far the best color illustrations of Peonies ever published, at a cost of \$750 each. But the illustrations, while good, do not represent the real meat in the book. You will find it to contain the whole truth about Peonies, from the Peony Heaven down to the Peony Purgatory. So sure am I that the book is worth all it costs that I will make you the following liberal proposition:

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When ordering, please mention this special *Garden Magazine* offer, while those who have never heard of me are welcome to a free copy of last year's book called "Tips and Pointers."

*Harry S. Hoops*  
Kenosha,  
Wisconsin



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The bulbs require very little care. Simply plant them in soil from your garden, or use soil from a florist's shop if you live in the city. Keep them in a cool, dark place and water them occasionally until they are well rooted. Then bring them out to the light at intervals of ten days so that you may have a succession of flowers. When the buds are ready to open, you may transplant the bulbs to jardinières, fern dishes, or bowls if you wish.

### Why You Must Order Quickly

We import bulbs to order only and must have word not later than July 1st from old or new customers who want part of this year's shipment. By ordering at once you get a special discount on a quality of bulbs not usually to be obtained in the United States at any price.



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Miniature Hyacinths in separate colors		.70	4.75
Tulips			
Mon Tresor Yellow		.85	6.00
Belle Alliance Scarlet		.70	5.00
Lady Boreel Pure White		.70	5.00
Keiserkroon Red & Yellow		.65	4.50
Rose Grisdelin Beautiful Pink		.65	4.50
Narcissi or Daffodils			
Paper White Monster Sizes		.75	5.00
Golden Spur Select Rich Yellow		.75	5.50
Emperor / Mon-ster Yellow		1.00	7.75
Empress / ster White & Yellow		1.00	7.75
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Booklet lists many other varieties

We have a large list of varieties. If you wish to experience the pleasure of seeing these exquisite flowers blooming in your home or garden next season, we urge you to write at once. Delivery will be made by the end of September or early in October.

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Whether or not you have ever grown flowers you will be fascinated with our booklet, attractively illustrated in color, showing a thousand varieties of bulbs and giving complete instructions for growing them successfully in either your house or garden.

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**Nothing short of wonderful!** "I have in my front window, as the admiration of all the passersby, the finest group of tulips ever seen in this city. With their gorgeous colors, odd shapes and exquisite shades of color, they are nothing short of wonderful." —J. A. S., Portland, Me.

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City \_\_\_\_\_ State \_\_\_\_\_

# The Garden

Vol. XXXV, No. 3

MAGAZINE

May, 1922



*Arthur G. Eldredge, Photo.*

"STARRY DOGWOOD IS IN FLOWER,  
\* \* \* \* \*  
IT IS BEAUTY'S PERFECT HOUR."

*Bliss Carman.*

The gleam of Dogwood against the sober green of Cedars makes a peculiarly effective contrast, linking May's transient glory with the steadfastness of the evergreen; the pink variety (*Cornus florida rubra*) is here pictured



*E. H. Lincoln, Photo.*

"ALL THE AIR IS HONEY-SWEET  
WITH THE LILACS WHITE AND RED."

*Bliss Carman*

Flowers that are a heritage from the gardens of our grandmothers and great-grandmothers seem invested with a special charm, and science has lent the Lilac of to-day fresh grace of form





Arthur G. Eldredge, Photo.

“DOWN ITS ENCHANTED BORDERS  
GLAD RANKS OF COLOR STAND,  
LIKE HOSTS OF SILENT SERAPHIM  
AWAITING LOVE'S COMMAND”

*Bliss Carman*

In its fine balance between the craving of man for orderly beauty and nature's more riotous methods, the garden at "Holmea" is utterly satisfying. Without any appearance of artifice, yet with all the advantages of skilled and knowledgeable care, Lilacs, Roses, Tree Peonies, Deutzias, Iris effortlessly merge their abundant flowering into the native landscape—a point to remember. Garden of Dr. C. S. Sargent, Brookline, Mass.

# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

MAY—MOVING TOWARD THE MAXIMUM



Herein are listed the seasonal activities for the complete garden. Details of *how to do* each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for out-door work of any sort New York City (latitude 40) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow *four days* for each degree of *latitude*, for each five degrees of *longitude*, and for each four hundred feet of *altitude*.

(Copyright, 1922, Doubleday, Page & Co.)

**W**HEN the first flush of spring enthusiasm has expended itself in the planting of early crops, we are sometimes prone to slacken our efforts and that just at a time when more and more attention is essential for the successful future of the garden, and indeed for the comfort and pleasure of the gardener as well. Returns will be in proportion to present industry, and neglect at this time will result in more and much harder work later on. What is pleasant exercise to-day may become a laborious necessity a little later.

### About the Grounds

Any patching of the lawns to be completed at once and don't wait too long before cutting grass. Planting of deciduous stock to be completed and evergreens moved before growth starts. Apply a good mulch after thoroughly watering late planted stock.

Late in the month spray for the elm-leaf beetle, using an arsenate. Before the leaves expand destroy caterpillar nests on the trees by means of a kerosene torch. After the caterpillars have hatched they must be poisoned by spraying the leaves with an arsenate. Prune all early flowering shrubs as soon as they are through flowering. Hydrangeas to be watered with alum water if blue flowers are required, though the effect may not develop till next year.

### Fruit Garden

Many of the small fruits may yet be planted, but not with the same prospect of good crops as assured by earlier planting. Keep hoe and cultivator constantly at work not only to check weeds but to loosen and aerate the soil. Give the strawberry patch an application of fertilizer, raking it in, and spread a mulch of straw or lawn clippings to keep the fruit clean. A sharp lookout should be kept for currant worm which soon strips the leaves off the bushes. Hellebore powder applied with bellows early in the morning while the leaves are yet wet with dew is effective, or arsenates. Spray fruit trees (1) as the buds swell, (2) when the blossoms show pink, and (3) as the last of the petals are falling. Use lime-sulphur 1-40; lead arsenate 1-20; nicotine (as Black Leaf 40) 1 pint to 100 gallons water, for scale, codling moth, and aphid, respectively. Mildew on Gooseberries is controlled by the sulphide of potassium. Sow cover crops in the orchard where intercropping with vegetables or other things is not done; these to be plowed under when a good stand is obtained. If this is not practical, mulch round the trees with leaves, lawn clippings, grass weeds, previously scattering 4 or 5 lbs. of acid phosphate around each large tree as far as the spread of the branches.

### Vegetable Garden

Light and frequent cultivation of early planted crops now breaking through the soil not only prevents the weeds from getting ahead, but prevents loss of much needed moisture by arresting the capillary ascent of water when it meets the layer of well worked surface soil. Thin out young vegetable seedlings as soon as the second true leaves show. Overcrowding is detrimental. Underground worms which attack such root crops as Beets, Radishes, etc., may be controlled by lime, soot, or tobacco dust scattered over the ground before planting, lightly raked in.

Keep the asparagus bed clear of weeds.

Cut off seed pods of Rhubarb plants. If seeding is persistent, the roots need moving, so make a note for future use.

Get in poles for Tomatoes (or, if trellises are used, get them into place) prior to setting out the plants after all danger of killing frosts is past.

Harden off and set out late in the month Egg-plants, Peppers, Muskmelons, Watermelons, and Cucumbers. Weather and local conditions must be the guide if you do not use protectors. Seeds may now be planted in drills or hills. On light soils planting in rows on level ground is satisfactory. Rich ground is essential. Well rotted manure, pulverized sheep manure, and ground bone, are excellent supplements to good natural soil.

Lettuce to be sown every two weeks to keep up a regular supply. After the middle of the month sow the Crisp-head varieties like Iceberg and New York (see pages 116-118 April GARDEN MAGAZINE).

String Beans to be sown regularly every two weeks. All sorts of Pole Beans may be planted now. Set the poles first, using manure and fertilizer in the hill.

Several sowings of Peas to be made during the month, making drills deeper than for the earlier sowings.

Make succession sowings of Beets and Carrots.

Endive to be sown in small quantities at frequent intervals to maintain regular supply.

Corn to be sown as soon as the ground is fit and plant successions at short intervals. Try planting one row each of an early, midseason, and late kind at one time.

Early Celery to be planted out. Seed of late Celery for winter use to be sown at once, if not already done; also Celeriac which requires a long season of growth.

Make up a seed bed outdoors and sow such Brassicas as Late Cabbage, Cauliflower, Brussels Sprouts, Kale, etc.

Chicory, or French Endive, to be sown to secure roots for forcing next winter.

Sow Okra when the ground becomes really warmed.

As insect and other pests will soon become active, see that supplies of necessary spraying materials are on hand.

### Flower Garden

Perennials still to be shifted or thinned out to be attended to at once. Where early plants are not available from greenhouse or hotbed, all kinds may be sown in the open ground for blooming in July. Lupines, Candytuft, Calendulas, Nasturtiums, Eschscholtzias, Lavatera, etc. are better sown where they are to flower, and thinned. Others may be sown in prepared beds, and transferred as occasion requires.

Portulaca, Petunia, and Nicotiana are slow to germinate in open ground, hence allow plenty of time. The more hardy things may be sown early in the month; and the tender ones toward the end. Achillea cut to the ground when it has finished flowering, will give a second crop of bloom late in the season.

Delphiniums to be kept staked up; remove all seed pods, and feed frequently with liquid manure.

Iris need an abundance of water after flowering.

Roses will be opening leaves by the first week of the month; spray against mildew with  $\frac{1}{2}$  oz. sulphide of potassium to a gallon of water. When the buds form, give manure-water. Use whale-oil soap 1 lb. to 8 gallons water for aphid. Cultivate to **keep down**

weeds and to retain soil moisture. Pansies set in the rose bed add not a little to the general appearance, but make cultivation more difficult. Rose blooms to be cut in the early morning before the sun strikes them; if put in a cool place in fresh water for a few hours before being placed in the house they will keep much better.

Sweet-peas need well fertilized ground, plenty of moisture, and the roots kept cool by a mulch.

Bedding out may be started in earnest some time after the middle of the month, according to locality. Begin with the more hardy things and be careful to thoroughly harden-off such tender subjects as Cannas, Coleus, etc.

Prepare a bed for sowing perennials and biennials for next season's garden.

Prepare ground for summer flowering bulbs and tubers, of which the Gladiolus and Dahlias are the most popular; Tuberous Begonias are useful for shady beds; the Evening Star (*Cooperia Drummondii*) has pure white flowers; Lilies include auratum, speciosum, tigrinum, etc., the common Day-lilies (*Funkia* and *Hemerocallis*) may be added.

Peonies will be benefited when the buds show, by surface dressing of sheep manure, nitrate of soda, or liquid manure.

Early Asters to go outdoors as soon as possible in well prepared ground; rotted barnyard manure is best, but failing this, commercial potato fertilizer.

Window boxes to be repaired, and new ones made and filled as soon as possible. A generous compost is essential, since a great number of plants are crowded into a limited space, and they must be well fed if they are to look their best right along. A layer of manure in the bottom of the box, with a compost of three parts good garden soil and one part manure mixed together, and a six-inch pot of bone meal to each bushel of soil will give the plants a good start.

Lily-of-the-valley may still be planted outdoors; rather moist position with some shade suits best.

It is not too late to plant Aquatics. Nymphaeas may be grown successfully in tanks, vats, or barrel ends in pools or sunk in the ground.

### The Frames

These will now be fully occupied with annuals and bedding plants demanding water more freely, and ample ventilation with a view to dispensing altogether with the sash before setting the occupants outdoors. As space is cleared, lightly fork over the soil and prepare to sow perennials, and biennials.

Hills may be prepared, and Cucumbers of the English frame type sown to occupy the frames for the rest of the summer. Melons may be used in this way too.

The young Carnation plants hardening in the frames may be planted outside. Keep well cultivated, and growths pinched, since upon the treatment they receive now depends to a great extent their success next winter.

### The Greenhouses

Next winter's supply of flowers must be thought of now. As soon as possible empty the houses of all hard-wooded plants such as Azaleas, Genistas, Acacias, Bougainvilleas, etc., plunging them outdoors to ripen their wood.

Begonias, Gloxinias, and other flowering plants grown in the greenhouse, to be well fed; Cyclamen and Primulas may be placed in coldframes, and slightly shaded.

Plants of Winter-flowering Begonias need attention before they become pot-bound. Give a light compost made up of a good deal of flaky

leaf-mold, good loam, screened cow manure, and sand, and a temperature of 60 to 62 degrees at night.

The flowering season of *Amaryllis* being past, the plants may be placed in frames, and plunged up to the rims. Give weak liquid manure once a week at first and twice later on; syringe every fine day, and see that they are not in need of water. Any attention given now while making their growth will be repaid when the next flowering season comes.

Gardenias should be planted early. Clean benches and a rich, porous soil and good drainage are necessary. Syringe well every day after planting, to ward off insect pests and mealy bugs. A night temperature of 70 degrees suits.

Stocks for winter flowering to be sown now. Princess Alice, and Beauty of Nice are good types. Grow cool.

Show Pelargoniums now coming into flower will justify all the care given them during the next few weeks. Fumigate to keep free from aphid, and keep the greenhouse cool and airy, with no direct rays of sun on the plants.

Bulbs of *Achimenes* started in heat late in March will now have made some growth, and two or three of the bulbs may be placed together in pans or baskets, and gradually inured to the greenhouse, where they will provide a blaze of color. Light shading is necessary.

*Adiantum* in large pots that were rested during the winter will now have a dense crop of young fronds. Any not repotted will be benefited by weak doses of liquid manure once a week. A little shade will keep the frond a dark uniform color. *A. Croweanum* and *A. cuneatum* require a night temperature of 60 degrees with 70 to 75 degrees sun heat during the day. *A. Farleyense* requires from 65 to 70 degrees at night.

*Chrysanthemums* for exhibition to be kept growing without a check. A good soil is turfy loam, with one third well rotted cow manure and a sprinkling of bone meal. Do not over water, and attend to tying, staking, pinching, and keeping the plants free from aphid.

*Bouvardias* may be planted out in loamy soil, and pinched back three or four times during the summer to make husky plants for lifting in the fall.

Snapdragons for winter flowering to be started.

Melons for a midseason crop to be started now. They will produce a crop in about 14 weeks (September); any of the English forcing types may be used.

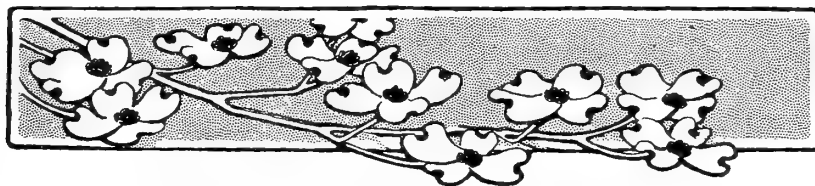
The rose benches to be cleaned out and painted with hot whitewash before any replanting is done. If the plants are to be carried over another year, dry off gradually in order to rest them; but do not over-do it, or they may take a permanent rest.

### Among the Orchids

*Calanthes* may be started into growth in flats of sand. Pot the bulbs when the roots are quite short. Pot firmly and water sparingly until the roots get into the soil. Another useful terrestrial Orchid is *Phaius grandiflora*, which will soon be in flower. It needs a temperature of 60 degrees at night, a good water supply, and weak cow manure to strengthen the flower spikes.

*Odontoglossums* are now in the height of their season. The plants need full sun for some time longer to redden up their leaves, thus making them tough to withstand the heat of summer. All enjoy more water at the roots now.

A temperature of 55 degrees at night is ample for them. A light spraying on bright days is beneficial. Protect the flower spikes from snails by wrapping cotton wool around the base of the spikes.



*When Dogwood flowers are opening, corn-planting time is come*



# WHY DAHLIAS DELIGHT

CHARLTON BURGESS BOLLES

Wide Diversity of Form and Hue—Adaptability to Garden Conditions Everywhere—Freedom from Disease and Insect Pests—Simple Requirements in the Way of Soil and Cultivation

**W**HY do you grow Dahlias? I make various answers, all truthful, to this question I am sometimes asked. Because I cannot help it! Because the rewards are so full for so little effort! Because I love color, and growing Dahlias is an easy way of making my garden as gay and many-colored as an Oriental rug!

Like the Peony, the Dahlia seems practically immune from most of the inevitable pests and plant diseases to which the other favorites of the garden are heir. Hosts of amateurs can be found who have never experienced any trouble worth mentioning. One enthusiast had ten years of complete freedom from pests, but in the next season, in a suburb where poultry keeping was not proper grasshoppers stripped his blooms to the centre. The beginner can confidently take up Dahlia growing, sure of an excellent crop of blooms and tubers year after year, freer of insect and disease annoyances than any other gardener in whatsoever line. Dahlias are a far surer crop than Corn or Potatoes. I once demonstrated, on a measured acre of infertile, hard clay soil, a good crop of blooms and a harvest of large and abundant tubers, while Potatoes and Corn growing alongside were complete failures.

Of course, the list of insect enemies and plant diseases that have afflicted the Dahlia here and there is a considerable one. Insects injure Dahlias in one locality that have never been seen in a lifetime somewhere else.

But one Dahlia tuber absolutely ensures anywhere from a score to half a hundred perfect flowers, sometimes fifty in bloom at one time on a single plant! A dozen, or say twenty tubers, means five hundred or a thousand gorgeous flowers. And how the plants multiply! Each tuber produces from eight to eighteen others—the average is thirteen.

The Dahlia has had its ups and downs in the public's fickle mind. Yet I doubt if any garden bloom has enjoyed a more spectacular rise into favor or more marvellous development, unless one excepts Holland's Tulip craze.

**E**NTHUSIASTS find language inadequate to describe and characterize their favorite. One man, an amateur for years, now giving all his time as a commercial grower to the Dahlia, believes that it is the most gorgeous, brilliant, dazzling flower found in the temperate zone—the bloom that sells at sight as a cut flower. Another grower calls it the flower able to express itself in as many wonderful forms as the Chrysanthemum, but with five times as much variety of foliage. A third devotee claims that it outclasses the Rose in color combinations and number of vivid shades; blooming continuously from mid-July until killed by frost. It may well be deemed the Rose of autumn.

The amateur can raise larger, finer, more beautiful Dahlias than the professional, commercial grower—after he knows how! He can sit up nights with his pets and count it all joy. But numberless flower lovers in the United States have never seen that beautiful, amazing thing, a Dahlia Show.

A clergyman wrote me in February, from a latitude that was then enjoying zero temperature, asking if it was too late to start Dahlia tubers "for this year's blooming." A remarkably successful man whose profession was business engineering had Dahlias planted on his fine suburban property, remarking that he supposed they grew about like Tulips. A hydro-engineer, who has built gigantic electrical installations all over the globe told me sorrowfully that his Dahlias were a failure, and I found that he had planted each field clump exactly as it had been dug the autumn previously.

Many plant the tuber vertically in the ground, with the sprout almost visible, and if the plants are so unfortunate as to be near the kitchen they receive a daily "watering" from hose or dishpan. After frost the poor tubers are laid up on a warm shelf in the cellar, or put near the furnace out of mistaken and unfortunate goodwill. Peradventure, with a different temperament, they are stacked up near the cellar door, and Jack Frost does his perfect work for the commercial brother with a catalog.

**C**ULTIVATION of the Dahlia is comparatively simple. The tuber, or green plant, whichever is chosen, is planted six inches deep in April, May, June, or the first half of July, according to climatic conditions, in soil deeply plowed or dug, moderately but never excessively rich. A generous handful of bonemeal for each tuber may be safely added. The surface of the soil is kept free of weeds; and by a three to four inch deep stirring with hoe or cultivator, drying out of the earth is prevented until blooming time, when cultivation should never exceed two inches in depth, because feeding roots are now near the surface. A top dressing of fertilizers once a week for improvement of blooms after flowering has begun make the results as certain as anything can be in horticulture.

Dahlias, like Roses, abominate wet feet. A generous portion of the soil of the plot should be humus. Fifty per cent. of average, ordinary soil is not soil at all, but air and water. If you can add only twenty-five per cent. of humus (composted, decayed vegetable matter) you increase the air content and at the same time wonderfully increase the ground's moisture-holding capacity. Dahlias are sometimes failures, usually due to too rich rather than too poor soil; too early and too shallow planting, too much rather than too little water. Plants that are tall, luxuriant, rankly growing, bearing few blooms, are either in soil too rich in nitrogen, or they do not have sunshine enough, or they have too much water. Any one of these conditions is likely to result in poor and scanty flowering. The home gardener sometimes allows all three conditions to afflict his cherished plants.

Cultivation with rake, hoe, or horse-drawn implement is the one rule that has no variation, and applies equally to every locality and to all climates. Cultivation will produce fine Dahlias in any soil; the lack of it means failure though all else be supplied.

There seems to be unanimous agreement that barnyard and stable manure is the best of all the animal manure fertilizers for Dahlias, applied well rotted, not green, when the soil is sufficiently poor to require it. Good average farm or garden soil will not need it for a first year's planting.

Bonemeal is the ideal Dahlia fertilizer. It seems impossible to use too much of it. One hundred pounds to three hundred square feet will do no harm; a coffeecupful for each tuber when planted in holes. Decomposing slowly, it will be even better the second year than the first, for Dahlias may be planted upon the same ground year in and year out. Bonemeal is rich in phosphoric acid and affords the plants a slow, safe supply. Seed cannot be produced without this element. With the addition of wood ashes, a generous handful per plant, raked in at blooming time to intensify brilliancy of color and give strength to tuber growth (for all root crops require potash), anywhere, anytime, nothing is better than bonemeal. A complete potato fertilizer with the addition of an equal bulk of bonemeal is a combination that brings excellent results.



*Harry Contant, Photo.*

DECORATIVE DAHLIA KING OF THE AUTUMN

# CONQUERING THE RESTRICTED AREA

E. C. STILES  
Landscape Architect

Utilizing Areas on Different Sides of a Street—Masterly Handling of Separated Plots of Ground to Give the Appearance of One by Eliminating Boundaries



## WHO CAN FIND THE ALLEY-WAY?

A clever conception, cleverly executed to conceal unattractive features which could not be done away with and conveying a sense of unity and seclusion in the heart of a crowded, cut-up district. Vista from the foot of the garden shown above and at left a view from terrace steps

from the garden, the house is apparently directly connected with it, the pairs of steps giving the appearance of but one flight instead of two.

The final element in the success of the composition lies in the clever use of plants in the garden area. Of course, every gardener knows that a design is merely the initial step and that the real test of any successful garden is the ability to develop and maintain it so as to ultimately bear out the ideas of the original

**T**HE little garden herein discussed was stumbled on by chance in a small town of western Pennsylvania, and, from local information, I believe that it may have been the work of the late Oglesby Paul of Philadelphia. Whoever the designer, it is a particularly successful piece of work.

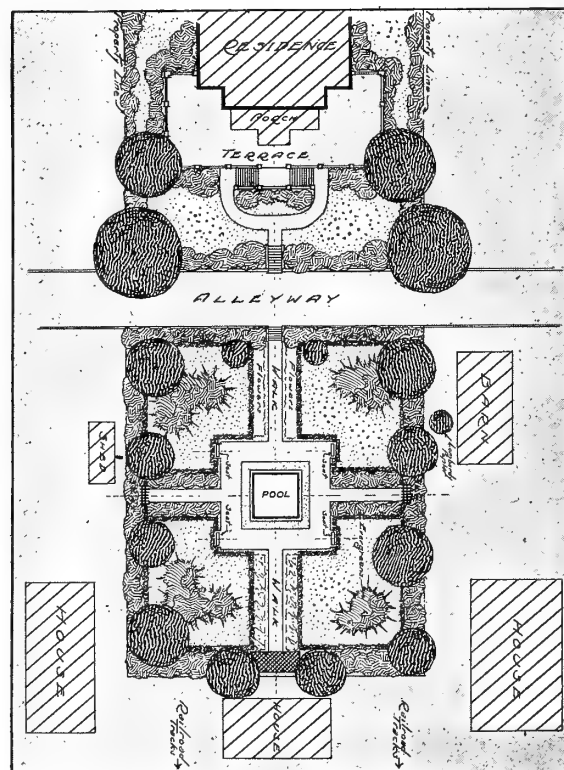
The piece of land upon which the garden has been built is separated from the house by a broad alley-way. The residence proper fronts upon and is well set back from a quiet village street, and there was no room for development except at the rear. The existence of the alley-way was entirely disregarded and land on the other side of it was acquired, and though framed in by sheds, back yards etc., it has been so planted that the very existence of the alley-way is rendered unnoticeable from either garden or house. Cleverly located screen plantings have at maturity entirely hidden every objectionable feature of the surroundings, while at the same time revealing the surrounding roof-lines.

A large stone-flagged and balustraded terrace was run along the rear of the residence; whence one may overlook the garden below without ever a thought of the alley-way. The steps in front of the terrace seem to lead directly into the garden. In a similar manner, when viewed

plan. In a small country town like this, anything elaborate was wisely eschewed and much of this area left in lawn. Gravel walks, a square pool, and hardy Privet hedging—kept very low inside the garden—aided materially in bringing out the general shape of the design. As space was limited, interest was focused at the centre of the garden by the use of the pool with four stone seats around it.

The smallness of the lawn areas is cleverly disguised by evergreen plantings which break the view toward the corners of the garden giving an impression of distance; and two long vistas down the axes of the garden are of such pleasing character that one hardly notices that is really about all there is to the garden.

The beds bordering the cross walks are planted solidly with Peonies, which give a good color note to the garden at one season of the year and interesting foliage for the remainder with a minimum of care. The shrubbery around the edge of the garden is of good old-fashioned kinds kept in order by occasional pruning out of the old wood. Olden-time annuals fill the flowerbeds along the main axis and supply sufficient diversity to sustain interest the season through, at the same time requiring comparatively little attention.



PLAN OF THE PROPERTY





ALL SORTS OF DEVICES FURNISH VARIETY AND SURPRISE

## CONVERTING WASTE PLACES TO BEAUTY

WARFIELD WEBB

Applied Imagination that Transformed a Gully to a Sunken Garden on the Fringes of a Mid-western City

**F**IRST let it be said that the beautiful garden, the attractive lawn does not of necessity have to surround a country mansion, or a home of more than ordinary pretensions. Take a gully such as this one in an outlying section of Cincinnati, before its redemption a waste spot, unkempt and forgotten, and see what miracles may be wrought by planting. This particular section of ground separated a private lane from the main avenue, and was seemingly a place unworthy of any consideration. It was, however, purchased by Mr. Myers Y. Cooper, who, seeing its artistic possibilities, had it cleared, planted trees, shrubbery, and Honey-suckle to brighten up the dreary slopes in their desolation. The lots were later sold, several modern homes builded, and the owners, appreciative of the possibilities, continued to develop the landscape scheme begun by Mr. Cooper.

The result amply justified their efforts—the complete transformation of a desolate gully into a sunken garden that is now one of the beauty spots of “the Queen City.” Flowers in profusion, fountains, sun-dials, pergolas, steps of rough-hewn rocks, rustic seats, shaded nooks—everything that tempts one to linger and enjoy.

The garden is 335 feet long and 267 feet at its widest point, being located between two streets. This once despised and barren waste, transformed in almost fairy-like fashion by man’s imagination and ingenuity, convincingly points the way: so many other spots lie waiting for the gardener’s handiwork. Similar waste places with hitherto undreamed of artistic possibilities are found in and about every city. The value to any locality—not alone in cold dollars, but in essential health and

happiness—of an attractive environment is incalculable. Why should we continue to be oppressed by forlorn city wildernesses when beauty may so readily be had!



STEPPING INTO A SUBURBAN FAIRYLAND

The visitor to the “sunken gully” is immediately keyed to a mood of expectation by the rather mysterious but friendly approach



A SHADED HOSPITABLE  
NOOK

The transformed waste abounds in fragrant, cool, and sheltered places that offer the fortunate suburbanite complete forgetfulness of the dusty haste of near-by Cincinnati

*Photographs by*  
**J. ANTHONY BILL**



PEACEFUL SUNLIT HOURS

The quiet, slowly shifting shadow of the dial pleasantly accompanies the gliding hours spent within the garden where the harassed man of business and the vexed housewife find relief from insistent, petty cares





THE GULLY OF YESTERDAY BECOMES THE  
GARDEN OF TO-DAY

Surely no more conclusive proof of Mr. Cooper's perspicacity need be had; and when judicious planting makes so strongly for saner civic living, it seems a pity not to practise it oftener. Here the dial, stone steps, etc., may be seen in their relation to the whole



# OUR GARDEN OF "GLADS"

ROSE BLAIR MARSH

A 30 x 60 ft. Plot Where Four Thousand Gladiolus in Sixty-three Named Varieties Flourish

**S**OME ten years ago we, then shelf dwellers, purchased a couple of lots in a new addition some three miles from the heart of the city on a wonderful old farm where some big trees had been left standing.

We put up a simple little bungalow on the north lot, which in its unadorned state we called "The Shack"; but now, with its rich planting of vines and shrubbery, it bears the title of "Tawno Ker," Gypsy for "little house."

For a year or more the south lot was a sorry looking spot, overgrown with Burdock and Plantain. The lots had been graded down from a hill and covered with hardpan and small stones, the original top soil some four feet under ground. The man of the house, fortunately, was not easily discouraged, and I think he made a game of picking up the stones, many a wheel-

would follow the man of the house wherever he went. In the meantime the vegetable garden and the small boy grew apace, and a small corner was given to the latter for his very own, to plant and tend.

One of our purchases was a dozen Gladiolus bulbs of well-known varieties. When they bloomed we were so entranced with their exquisite loveliness that we then and there decided it was the flower of all others that we wanted to grow. It took a lot of experimenting to prepare the soil. For one thing, the ground lacked humus, which we supplied with great piles of fallen leaves and decayed vegetable matter.

At the time of planting, a trench six inches deep and six inches wide was dug and the bottom heavily fertilized with sheep manure thoroughly worked in. The corms were then planted about the distance of a number-one corm apart, and the rows six inches apart. These double rows were planted about sixteen inches apart, for ease in cultivating and to get the greatest number in a given amount of space. It was found advisable, because of the stiffness of the soil, to use a little clean sand right on top of the corms. This makes a parting strip and greatly facilitates harvesting the corms in the fall.

The bed, about thirty by sixty feet, last summer contained four thousand corms in sixty-three named varieties of Gladiolus.

At first we grew Gladiolus for our own pleasure and the joy that comes from giving. During the War many flowers were sold for the benefit of the French Relief; in fact, we called it our patriotic flower, as it helped us in doing our mite.

A market for our flowers came unsolicited when, two years ago, a florist called to see if we would sell the blooms. It had been a season of drought and he was having difficulty in obtain-



"TAWNO KER"

After we did some planting our little house took on a friendly aspect and became a home

barrow load, and of preparing the soil for our first garden, during his leisure hours. In the neighborhood was a teamster's barn whence came stable manure, and at one time thirty loads were spread, along with good black earth from a building site near.

**T**HE first venture was a garden which supplied our table with fresh vegetables, some of them actually looking like the pictures in the seed catalogue, but as one must have food for the soul as well as the body, some Dahlia roots were also planted; they bloomed and were a joy to behold.

Trees were allowed to grow around the sides, until a thick screen shielded the garden from the street, giving a delightful privacy, and three drooping Elms in the side yard we call "The Bower," and in the shelter of their shade were chairs, a couch and the afternoon tea table. The northern mocking birds built a nest in the little Haw tree right by my bedroom window and greeted my waking each day, and saucy robins



"THE SHACK"

What a rootless, unlovely thing is a house without growing greenery to knit it to the earth — no wonder we delight in the transformation pictured above and in our garden of "Glads" (running along the left of the bungalow screened from view by shrubs, etc.

ing Gladiolus. The first year's sales netted over fifty dollars, and this last season's almost one hundred and twenty.

**T**O WALK in the "garden of the Glads" in the early morning is to feel the very presence of God; no evil thought can enter your consciousness and, gazing at the indescribable beauty of the, to me, most wonderful flower in the world to-day, you cannot fail to absorb some of its nature into your own. The Gladiolus grower who perfects a new variety performs a mission for all mankind.



# WILL YOUR TULIPS COME BLIND?



A. B. STOUT

Director of the New York Botanical Garden Laboratories

Failure to Flower One Year May Be Overcome the Next—Summer Growth a Critical Stage for Flower Foundation in the Bulb—Benefit of Early Summer Planting

**N**OT infrequently Tulips "come blind" or fail to flower, and when the number of such plants in a display planting is large, the color effect that was foreseen last fall is greatly impaired, to the disappointment of the grower, who perhaps indulges in some hard reflections on the bulbs and their source.

A blind Tulip, of the type very commonly seen, is one that does not bloom, but whose bulb is of such size that a flower was to be expected from it. It produces one or more green foliage leaves, but the upper part of the stem ends in a mere blackened stub. The flower is completely blasted and dead, and the plant has the appearance shown in the accompanying illustration. Such a blind plant is quite different from a purely vegetative plant grown from bulbs of small size and having only a green vegetative leaf directly from a bulb scale. Such small-sized bulbs are not sold by the bulb producers, but are grown for one or more years in a vegetative condition until they become of the size for blooming and producing large flowers, and of course occur in the garden when the flowering bulb "multiplies" into a number of younger ones.

The excessive blindness that occurred among large display plantings of certain Tulips at the New York Botanical Garden a few years ago gave opportunity for a study of the conditions involved which led to some definite conclusions as to the cause of blindness and how it may, in some degree, be avoided.

The possibility of fungous infection as a cause of blindness has been carefully considered. A parasitic fungus (*Botrytis parasitica*) causes death and decay of bulbs, stems, and leaves and is sometimes very troublesome to Tulip growers, especially in Europe.

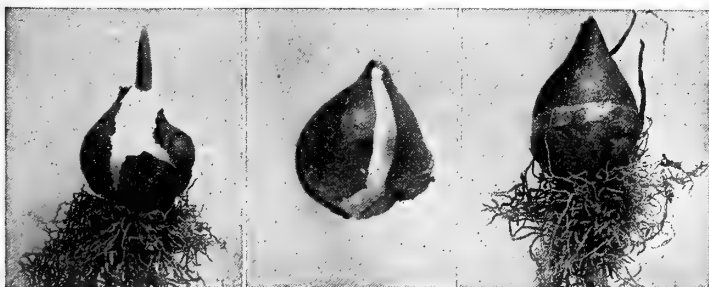
little as one gram. All were sound and solid. They were weighed, numbered, stored in a cool, dark basement during summer, and properly planted out-of-doors in the autumn. With very few exceptions, the first bulb and often also the second in size obtained from these blind parents produced fine, vigorous plants with excellent flowers. The plants ceased to be blind, made robust growth, and showed no sign of being "run down" and worthless. Such results show that, if properly handled, blind plants of Tulips may bloom splendidly in a following season.

In these tests, bulbs of a surprisingly small size produced



HOW "BLINDNESS" WORKS

Above at left are two fine flowering plants from sister bulbs of a "blind" mother bulb of the previous year. Blind plants do not remain blind year after year but with proper handling come into bloom again. At right are two "blind" specimens showing completely blasted flower stalks



BULBS OUT OF SOIL AND STORAGE

Bulb of La Reine (left) from soil in autumn; bulb of La Reine (centre) from storage at time of planting; a Darwin bulb (right) from soil on same date as La Reine and showing the later development of flower stalk in that group

It is, however, evident that this fungus, although sometimes present on blind plants, is not the cause of the blindness usually seen in Tulips.

Growers of Tulips sometimes believe that blindness is due to a "weakened" or "run down" condition of bulbs. In order to obtain evidence on this point, bulbs of blind plants of such varieties as Rose Grisdelin, Cottage Maid, Chrysolora, and Crimson King were dug at the end of their growing season. The new daughter bulbs had formed as lateral buds to the mother bulb (which had, of course, died after blooming) and were of various sizes, the largest or first bulb of a set weighed from 11 to 40 grams while the smallest sometimes weighed as

flowers. In some cases an entire set of as many as six sister bulbs bloomed, the smallest of which weighed only  $2\frac{1}{2}$  grains (which is less than 1-10 of an ounce) and was scarcely larger than the end of one's little finger. Small bulbs lateral to a large bulb and enclosed in its outer scales sometimes bloomed as shown in accompanying photograph. When such small bulbs form flowers instead of remaining vegetative for a year or two and becoming larger, they are often unable to make new laterals except of very small size, and often they make none at all. The blooming of small bulbs is undoubtedly one of the conditions that causes a planting of Tulips to "run out."

**I**N THE further search for the conditions causing blindness, special study was directed to the changes that occur in Tulip bulbs during the summer. When a bulb is left in the earth during the summer, roots are formed which make vigorous growth and obviously take water into the bulb. Important changes also take place within the bulb. If a large bulb be taken from the ground late in summer or early in autumn and cut open lengthwise the already formed flower is found. The stem with its leaves and flower is all ready like a "Jack in the Box" to push up through the earth. Summer is, hence, not a

time of dormancy and rest for Tulip bulbs that remain in soil.

Neither do bulbs remain dormant when stored "dry" in the cellar. They do not form roots as they would if they were in the ground, but they swell somewhat and the flowers are formed within them. If some of the bulbs bought for planting in autumn are cut open, the flowers will be found to be well formed within.

During the summer, the formation of flowers goes on to a remarkable degree whether the bulb is stored dry or is in the ground. Summer is indeed a critical period in the formation of flowers that are to open in the air during the following spring. Bulbs in storage are forced to make this development under conditions that are unnatural or at least different from those which bulbs left in the ground experience; but the general practice of storing bulbs in a cool, dark place during summer undoubtedly in some degree meets their natural needs during this critical time.

Examination of bulbs at planting time in autumn shows that blindness, so noticeable in the following spring, is already in evidence in the dead flowers that are present within the bulb. In the first appearance of blindness (as is plainly evident in an afflicted bulb cut lengthwise) the flowers are well formed as to size, but a zone of dead or dying tissue is visible at the base of the flower. Soon the entire flower is a dead and shrivelled mass. If the blasting occurs earlier or becomes more extended, one or more of the uppermost stem leaves are included in the dead portion. The rest of the bulb may be quite sound, but invariably it is less solid than one that exhibits no blasting. The scales are often more soft, less juicy, and less compact, especially in comparison with bulbs that have lived in the soil during summer.

Blasting or blindness of this type is obviously due to unfavorable conditions arising during storage and transportation. When many bulbs of a shipment come blind, as sometimes occurs, the cause may be over-heating for a time. Bulbs growing in the ground develop roots during summer and early autumn and can obtain water in a way which stored bulbs can not do, and hence excessive dryness may be a factor in causing

blindness as is suggested by the somewhat shrivelled appearance of bulbs whose flowers have blasted during storage.

It seems certain that blindness of the sort here described may be largely avoided if bulbs be planted early in summer instead of in autumn. In making replantings this can readily be done. Bulbs can be dug at the end of their bloom and growth, the daughter bulbs can be sorted and replanted in groups according to size. Shallow rooted annual plants can be grown over them during summer and in autumn shallow tillage with dressing of manure will prepare the bed for winter.

Commercial bulbs that are purchased in quantity for autumn planting can be examined for blindness. Select a few bulbs at random and cut them open lengthwise. If blasting is found to be frequent, the lot should be rejected for use, at least in special display beds. If no blasting is found, planting can be done with the assurance that a fine exhibition of bloom in the spring is not to be marred by blasting that developed during the previous summer.

Varieties seem to differ widely in regard to the development of blasting, even when kept under identical conditions of storage. Some varieties (White Jewel, Cramoise Brilliant, and La Triumphant) also combine with blindness certain sorts of abnormal and premature growth of the daughter bulbs which make them undesirable for propagation, at least in regions about New York City. The early blooming sorts have, in the experience of the New York Botanical Garden, blasted more than the late blooming varieties, and for this reason Darwin Tulips are now being used almost entirely in the garden for the display plantings.

It would seem that blindness might well develop after bulbs have been planted in autumn through an excessive development of the flower stem during periods of warm weather followed by cold, but such conditions have not produced blasting to any extent. Blindness has been found to occur before planting in autumn and to be due to unfavorable conditions which the bulbs have previously encountered.

A very practical lesson to be learned from all this is that the earlier the planting for next year's bloom is done the better.

## GRAFTING ON THE WILD CHERRY

ARCHIBALD RUTLEDGE

How a Useless Member of the Plant World Was Converted Into an Effective Citizen of the Orchard

**F**OR a good many years I had been having trouble with young Cherry trees that were grafted on ordinary tame stock. The grafts would thrive for a year or two; then they would die. Some would even bear rather generously; but then the backset would begin. On the principle that a wild strain is usually more vigorous than a tame one, in plant as well as in animal life, I went out literally into "the highways and hedges" and selected a few stocky, well-rooted wild saplings. These were about three feet high and perhaps half an inch in diameter six inches above the ground. These I set in a nursery-row that was favorable to quick rooting and fast growing.

Early one March I grafted these wild seedlings. Each one was treated differently. One I cut off a foot above the ground, and at that point inserted a strong scion from a Governor Wood, using the cleft-graft system. A second I cut off only a few inches above the ground and cleft-grafted it with a Tartarian. The third (which had been pruned into a typical fruit-tree of vase-shape design) was top-grafted with Yellow Spanish. For

this grafting, a little wax, some strips of cheesecloth, and adhesive tape were used. The scions were secured from friends who had trees of known high qualities.

All the little trees so grafted thrived well the first season, and from the nursery-row were transplanted to their permanent situations. They have developed in most gratifying fashion, and so far have shown not the slightest tendency to decline. They appear to have a native vigor that augurs well for the theory that wild roots mean strong trees. Two of these trees are now bearing; and the fruit is as good as that of the parents of the scions. Apparently, therefore, this discovery is a valuable one; and it is of a kind that the average man can use without difficulty.

I have called it a discovery; but perhaps it is known by some people. Lately I mentioned it to an old orchardist, and he said that he had heard of it. A mountaineer likewise confirmed my opinion, declaring that he would never graft on any Cherry but a wild one, as he had had better success with that kind. Perhaps the matter is open to valid objections; but at present it appears to me altogether worthwhile.



# CURRANTS AND GOOSEBERRIES IN THE HOME GARDEN

JOHN L. DOAN

School of Horticulture for Women, Ambler, Pa.

Lusciousness, Delicacy, and Juiciness of These Fruits  
Realized to the Full Only When Grown Where Used



EDITORS' NOTE:—Apart from the matter of intrinsic quality and state of maturity it must be recognized that good fruit is becoming less and less easy to obtain at reasonable prices and that this deficiency of an acknowledged essential in the dietary must be supplied at home. This article is the fourth of a series especially prepared for THE GARDEN MAGAZINE by Mr. Doan dealing with the various aspects and possibilities of the home fruit garden. "What, Why, and How Much Fruit to Plant" may be found on pages 323, 324 of our February (1922) issue; "Strawberries for the Home Garden" in March, pages 27-29; "Raspberries, Blackberries, and Dewberries," April, pages 105, 106.

**T**HE half-ripe sharply acid gooseberries and the hard, green currants which the ordinary person knows in the store do not tell what these fruits really are, nor do the thick, neglected bushes in the corner of a poorly kept garden do justice to their possibilities. It is, in fact, almost impossible to get ripe gooseberries from an outside source. To have this excellent fruit at its best one must grow it; and when gathered at the proper time from well kept bushes it is something worth while, indeed. If gooseberries ripen thoroughly before they are gathered, they make an excellent dessert without sugar. The large berried kinds are a favorite fruit among the peoples of western Europe; yet our smaller native varieties are even better in quality, but we haven't learned to grow them for ourselves. Ripe gooseberries make even better tarts and pies than currants and are excellent for jam and preserves.

Thoroughly ripe, well sweetened currants make a good dessert, and, mixed with raspberries, they form an appetizing combination; and a dish heaped with the clusters of beautiful red fruit, a few amber bunches of the so-called white varieties being mixed in, makes a very attractive centre piece for the breakfast table.

And the pies, the tarts, and jelly that currants make! And how often a little of their juice is added to that of other fruits to make them jelly.

Few drinks are more refreshing on a hot summer day than currant shrub or a mixture of the juices of the currant and other fruits.

Nearly all the currants grown in America are red-fruited ones and indeed they are the most beautiful and productive. The white-fruited currants, belonging to the same species, differ in being milder in flavor, less vigorous in growth, and less prolific.

The European Black Currant is a totally different thing, is much less productive and less desirable in quality, less adapted to our climatic conditions, and so is seldom grown.

The Golden or Missouri Currant, a favorite bush of old-fashioned lawns, will be familiar as a fragrant yellow flowered shrub in early spring, but very few probably realize that its black fruit makes high-class jam and preserves. It endures well the hot summers of the prairie states and is hardy in most of the North. A few varieties are occasionally grown for fruit.

The gooseberries of western Europe, which grow fruit as large as plums, are sometimes cultivated in this country, but thrive only in cool, moist regions. From our wild Gooseberry with its very small prickly fruit have already originated remarkably productive garden varieties with much larger smooth fruit. Crossing these with the European kinds is giving us yet larger fruited varieties.

## Site, Soil and Growing Conditions

**C**OOL, moist conditions are necessary for both the Gooseberry and Currant. They endure the winters of Maine without injury, but they suffer from our summer heat. They need a cool northerly slope, or, still better, the north side of a fence or building, and south of the Potomac and Ohio rivers

are usually successfully grown only in shady situations. They bloom very early, when the Peaches and wild Plums are in flower, and obviously, therefore, should not be planted on low ground, subject to late frosts; the Currant should never be planted in wind-swept situations, for the rank young shoots, which are very brittle at their bases, are likely to be snapped off.

When the Pussy Willows that announce the break of spring are still at their best, the Gooseberry leaf-buds are unfolding, and the Currant bushes are not far behind; so from the Great Lakes eastward, except in the coldest parts of New York and New England, autumn is a better time than spring to plant them. But be sure to mound the soil 8 to 10 inches high about the bases of the fall set bushes and to remove it the next spring. Spring planting is of course quite practical and general, but if you do plant in spring, let the ground be prepared the preceding autumn, if possible.

Let the soil be strong, rich in humus, cool, and moist, but not wet. A heavy loam or well drained clay loam is ideal. But, even on a light soil, success may still be had by keeping the bushes deeply mulched with leaves, straw, or lawn clippings.

Set the bushes not closer than 5 x 5 or 4 x 6 ft., a little deeper than they stood before digging, and if the bases of covered branches take root, so much the better. Healthy, vigorous one or two-year bushes are by far the best for planting.

No other bush fruits so need liberal fertilizing nor respond to it so generously. Unless the soil be rather rich already, work in 150 to 200 pounds of manure per square rod when the land is prepared. Cover crops are manure savers. Grow them regularly, then apply from 7 to 10 pounds per square rod of a commercial fertilizer (one that carries 2 to 4 per cent. of nitrogen, 8 per cent. of phosphoric acid, and 10 per cent. of potash) each spring for two years and apply the amount of manure mentioned above the third year. This will be ample for a plantation in full bearing.

Let the first cultivation of the new plantation be deep and thorough, and stir the soil about every ten days until July. The roots of both Gooseberry and Currant grow near the surface, so let cultivation become more shallow as they spread.

Just before the last cultivation sow a suitable cover crop broadcast and work it in. A quart per square rod of equal parts of Rye and Vetch, or Rye and Buckwheat is a good mixture. Rye is a cover in the winter and a pump in spring. Its rapid growth quickly removes the excess of water from the soil in early spring. As soon as the ground is dry enough, spade the cover crop under four inches. Do not delay or the ground will become too dry.

## Pruning and Training for Fruit

**B**OTH Currant and Gooseberry bushes dread the summer sun. Therefore, when pruning leave the tops dense enough for the foliage to shade the fruit and branches. Do the pruning at any time while the bushes are dormant, and let them

take their natural form; don't try to make "trees" of them. Most of the best fruit grows on the two and three year branches. The older wood is weaker and is best cut out as far as it can be spared. Removing it encourages new growth, but too many branches spoil the bush. From six to ten strong ones are better than more. Remove all very low limbs.

So far as is practicable, let two or three strong new shoots grow each year, and cut out as many four year branches. If a good shoot does not grow quite where it is needed, bring it to the desired position and brace it there by a piece of pruned cane worked in among older branches. Prune tall young canes down to the desired height. Shorten back the strongest one year growth on two and three year branches a third or half. Gooseberry bushes are much less regular in their growth than Currants and though the same principles apply, each bush is an individual problem as interesting as a game of chess. Many of the strong young shoots of such varieties as Downing and Pearl spread out too low. Lift up each low young cane you need between two older branches and slip a portion of a pruned cane across above them and below it. Before midsummer it has grown into its new position.

The pruning knife and hand shears are the handiest tools for pruning Currant bushes. But every Gooseberry has its thorns and comfort requires the long-handled shears.

#### When the Fruit is Ready to Gather

SO DELICATE and tender is the fully ripe fruit that gathering it is something of an art. It is because of the tenderness that really ripe fruit cannot be had at the market, and is the strongest reason for growing currants and gooseberries in your own garden.

Grasp the stems of the clusters of currants at their bases with the thumb and forefinger, taking care not to crush any berries, and lay them carefully in a quart box or some shallow vessel. Take the fruit promptly to a cool, dark place that is moist, but not damp. Currants used for jelly are usually gathered before all of the berries of a cluster are fully colored. But, for other purposes, if you would have the largest yield and cut down your sugar bill, let the fruit ripen on the bush.

The practice of stripping green gooseberries from the bushes with gloved hands and running them through a fanning mill to blow out the trash, blackens their reputation and is a sin against those who eat them. Don't be guilty. Let them get ripe, then put a clean, shallow box, two feet long and wide beneath the bush, hold up the tip of a bearing branch that is over the box with the left hand, and with the right pull off the fruit that hangs thickly beneath and drop it into the box. Wearing gloves and using this method, one may gather the fruit rapidly and easily. Currants and gooseberries stand handling better than other small fruits and keep better, on and off the bushes.

#### Their Endurance and Troubles

DON'T let the bushes bear the first year. There should be a little fruit the second year, half a crop the third year, and a full crop the fourth year. With the best care, the bushes may live and bear for twenty-five years or more; but they have usually passed their best days at half that age.

The branches afford the San Jose scale excellent board and lodging when the parasites leave him alone; and the leaves are exactly to the liking of the more fastidious currant worm. Currant borers and aphids also disturb their peace, and the leaf spot attacks them impartially. The European Gooseberries

are very subject to mildew, and in some localities Currants suffer seriously from cane blight.

Formidable as the list seems, these pests may usually be readily controlled by following the suggestions here given:

- I. To Control Scale: Before the buds unfold, spray the bushes thoroughly with a preparation of commercial lime-sulphur, diluted with eight times its volume of water; or with a miscible oil, diluted according to directions.
- II. To Control Currant Worm and Leaf Spot: When the white Flowering Dogwoods are in full bloom, spray thoroughly with pyrox at the strength recommended for codling moth in the directions that accompany the material.
- III. To Control Aphis: Examine the dormant Currant bushes carefully, and if tiny shining objects are found near the buds at the ends of the young branches you may expect aphides (plant lice). When these first hatch, spray the under surfaces of the leaves thoroughly with a solution of whale oil or fish oil soap dissolved in soft water, 3 ounces to the gallon. Repeat this spray in about a week, and oftener if needed.
- IV. To Prevent Mildew: If English Gooseberries be grown, spray with a solution of one ounce of liver of sulphur to two gallons of water when the leaves begin to unfold, and three times later, at intervals of ten days.
- V. To Control Currant Borers: Two kinds hatch from eggs laid in the young canes and eat their way downward through the pith; they may be controlled by cutting off all sickly looking canes several inches below the part affected in summer and again when the leaves come out in the spring, and burning them.
- VI. To Check Cane Blight: If Currants are attacked, the canes turn sickly, shrivel, and die at any time during the growing season. Frequently the attack is on bearing canes, when the fruit is half ripe. Dig out and burn every affected bush.

Unfortunately Currants and Gooseberries are hosts of one stage of the pine blister-rust. This disease attacks the five-needled Pines, of which our native White Pine is the most important. However, if the Currant and Gooseberry bushes be planted nine hundred feet or more from the Pines the danger is avoided. But in some New England and North Atlantic states both the sale and planting of these fruits are legally restricted.

#### Varieties

RED CROSS and Fay are well-known, fairly early red Currants. Perfection, which is a little later, is reliable and productive. Wilder, a rather late variety, is very prolific and is probably more extensively planted than the other kinds. Diploma is very promising. White Imperial and White Grape are the leading white Currants.

Downing, our leading Gooseberry, is of a greenish color, very productive, good and fairly large for an American variety. The Pearl closely resembles it. Poorman, with pinkish-red berries, is a very promising kind of good quality. Industry, which is a large, dark red of good quality, is the best known European variety in this country. Chautauqua is a pale green variety of excellent flavor and of European ancestry, and is probably as meritorious as the Industry.





# SOLVING THE INTRICATE PROBLEM OF THE SMALL GARDEN



As Typified in the Gales Garden at Great Neck, Ruth Dean, Landscape Architect, Presenting a Concrete Application of the Governing Principles of Practical Garden Design

EDITORS' NOTE:—Among the various gardens displayed at this season's Architectural League of New York Exhibition this of Mrs. George N. Gales at Great Neck, L. I., stands out as a conspicuously successful example of what may be achieved on the small suburban property where seclusion is so much needed and so seldom had. Miss Dean's refreshing solution of the problems that beset the many who are doomed to live in restricted areas points the way to a better and more satisfying type of treatment than is commonly found.

**B**ECAUSE a place is small that does not mean that there is no need for the services of a landscape architect. Quite the contrary is true, as a matter of fact, for the problem of applying definite rules becomes greatly intensified where they may in a way be said to overlap each other. On the large place, each living issue can be given free play, which really renders its design and planting a far simpler affair than that of the limited area. Here even one mistake becomes unpleasantly obtrusive because there is no possibility of sauntering away from it, no opportunity for distracting the attention by points of interest elsewhere, so it is very well worth while to be sure that the initial plan of your garden and grounds, however small, is a wise one.

Often the house is completely built before any thought of planting comes to mind, and frequently, too, the owner harbors prejudices which nullify all the fundamentals of good design, thus besetting the way of the designer with untoward difficulties. Exempt from such hindrances, however, the Gales garden has particular significance for owners of little gardens everywhere, being that all too rare thing—the modest property understandingly studied and landscaped and having, in consequence, a convincing unity of effect in which dwelling and garden peaceably share the honors.

Its plan is, in the first place, advantageously compact, the house being so placed that the property is not wastefully cut up (Rule No. 1), nor is it crowded in appearance, because no attempt is made to have the driveway reach the door, as the house is only forty-five feet from the road. Garage, coal hole, service wing, laundry yard etc. are grouped together (Rule No. 2) and planted out (Rule No. 3) so that guests sitting on the piazza are not diverted by an arriving grocery boy, or flapping clothes. There is enough lawn in one stretch to furnish a foreground for the house (Rule No. 4),

**SIX RULES TO OBSERVE**

1. Don't cut up space	4. Give the house a foreground
2. Group service portions	5. Aim for privacy and unity
3. Screen service wing	6. Relate all elements logically

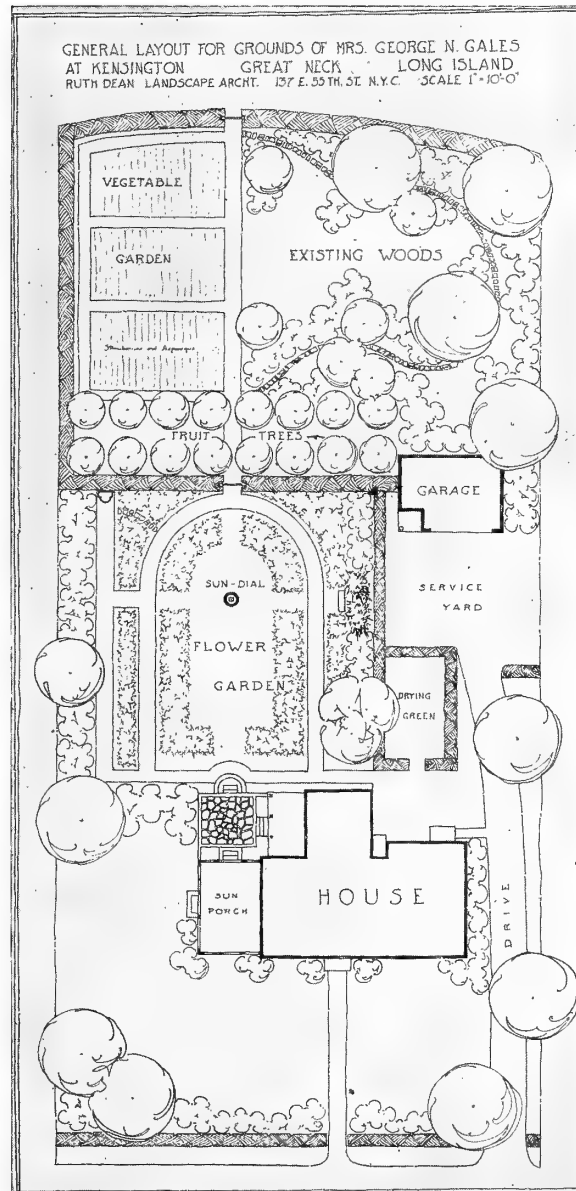
and two-thirds of the property is left on the other side of the house for flower garden, vegetable garden, children's playground and orchard (Rule No. 5).

All these things are possible on a place one hundred and twenty-five feet by two hundred and sixty feet simply because the house and grounds are so planned that one part leads logically into the next (Rule No. 6). The main axis extends from the living room porch through the flower garden, orchard (if two rows of fruit trees may be called an orchard) and vegetable garden to the rear gate on the neighboring street. Looking down this vista, which might easily have been spoiled by failure to adhere to rule number six, the extent of the grounds is agreeably magnified, and one has the feeling that the gate at the far end leads out to a little country lane winding on through fields beyond rather than to one of Great Neck's most occupied streets, as it in reality does.

Within the property a bit of native woods, spared by a thoughtful real estate agent, lie on one side of this main path, and supply a happy playground for the children of the family.

**T**HE flowers are collected into the flower garden proper (except for the cutting beds that border the vegetable garden paths) and are not allowed to straggle aimlessly along the edge of the irregular shrub borders which bound the property. Nothing so cuts down the extent of a place as this interruption between lawn and shrub border. In addition to the messy, untidy appearance such borders possess for two-thirds of the time, they interrupt the easy flow of grass into shrubbery.

The beds in the flower garden are few and fairly big; again a rule springs up to cover the case; repose and a sense of space are to be gained by elimination. Many narrow beds give a cluttered appearance to the garden, just as a lot of furniture crowds a small room, making it



**MAKING THE MOST OF A 125 x 260 FT. PROPERTY**

A small suburban place that combines beauty, economy, privacy, and diversity. The reduced scale above is 50 ft. to the inch





*J. Wallace Gilhes, Photo.*

#### THE PATH THAT LINKS GARDEN AND HOUSE

What possible excuse can there be for the continued existence of the "backyard" with all its raw edges when this may be had instead! A pleasant invitation to linger and enjoy is extended by the aptly placed bench of modest and gracious design



*J. Wallace Gillies, Photo.*

#### THE GARDEN IN MIDSUMMER GARB

From the sun porch one steps out on a little paved square (see plan page 181) to get this lovely sweep across the garden which gives an impression of both serenity and sprightliness as every really well planned and well tended garden should

seem even smaller than it is. Moreover there is a cultural reason for making perennial borders reasonably wide; we all know the disagreeable habit that most perennials have of showering blossoms on us for a few brief weeks, and then fading out of sight completely. We rush to fill in the hole with willing annuals, but it requires some time for the annuals to take a foothold and start blooming, and in the meantime the hole gapes at us. If the border is a narrow one, say only one or two plants wide, it is apt to be a series of holes most of the season; but if broad enough for five or six ranks of flowers, one group can hide the fading of another, and the whole border can be kept looking presentable. Borders ten feet wide, with paths at least four feet, six inches, is another rule the observance of which contributes to the general dignity of the small garden. Perhaps it would be better to say that perennial borders ought to be about twice as wide as the paths, because some gardens must be so tiny that it becomes necessary to reduce the width of paths to single-file, so to speak. Four feet, six inches, by the way, is about as narrow a path as two people can walk abreast on comfortably.

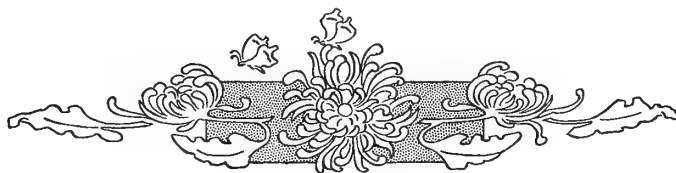
The flowers themselves on the smallish place must be dependable sorts that will furnish big returns for the trouble they cause; and they must be planned for succession of bloom so that no week is vacant of interest. In planning this feature of a garden, Miss Dean's method is to take a succession of groups of two or more flowers, depending on the size of the area—which bloom at the same time and look well together, and lay out the garden with these as its back-bone. For example, begin with salmon Poppies and Italian Alkanet in May and follow these

by Phlox Miss Lingard and Delphinium in June, Monkshood Sparks variety and Phlox Peach-blow in July, and so through to Monkshood Napellus and Anemone japonica in the latest fall. Placing groups of these combinations all around the garden so that the whole garden will present a fairly uniform appearance at any given season, among these plants lesser quantities of flowers are woven to give desired diversity, to furnish the minor surprises, the side shows, so to speak, and to fill in the gaps.

**I**N THE small garden one must have extra regard for the jarring note—the mauve that turns out magenta, the scarlet that shows the pinks up plum-color. In a garden where almost everything can be seen at once, the color scheme has to be conceived as a whole and nothing admitted which is going to disturb the peace of any of the occupants.

The shrub borders in the Gales garden are as narrow as they could be made, and still shut out the neighbors. About ten feet along the property line is all that is allowed for shrubs, and these are mostly tall ones that get well up before they begin to spread; Witch-hazel, Red-bud, some Sumach with Sweet-brier Roses and Viburnum Carlesii for their fragrance, shut in the flower garden. Elsewhere there are the more spreading garden shrubs such as Lilac, Weigela and Ninebark; and at several points Cedars for their depth of green; and, where space permits, White Pine, whose spreading, indeterminate, misty foliage sets at naught the most arbitrary property line.

Given the same set of conditions, which are those of the average suburban problem, how often is the solution a similarly straightforward and satisfying one?



## HOW ACID IS AN ACID SOIL?

EDGAR T. WHERRY

Smithsonian Institution

### Aniline Dyes Supplanting Litmus Paper—A More Convenient and Exact Way of Testing Soils to Determine the Precise Degree of Sweetness or Sourness

**T**HE significance of the "plant-foods," lime, potash, nitrogen, phosphorus, etc. has been extensively studied, and is more or less familiar to every gardener. There is, however, another chemical feature of soils which has attracted less real attention, although much talked about, namely the acidity (and its opposite, alkalinity). Acidity and alkalinity, if strong enough, can be recognized by their taste, acids being sour, alkalies bitter (or "soapy"); but to detect the minute amounts present in ordinary soils recourse must be had to indicators. These are dyes which change their colors when subjected to the action of acids or of alkalies. The most widely known indicator is litmus, which becomes red when brought into contact with an acid solution, and blue with an alkaline one. Litmus paper is actually used to some extent in testing soils, but its color change is difficult to recognize in many cases, and at best permits only a very rough estimate of the strength of the acidity or alkalinity. In recent years, however, a number of more brilliant indicators have been developed, (they are put up in a convenient set and are purchasable with palatte, etc., complete) and by using a series of these it is possible to determine readily the actual degree of acidity or of alkalinity shown by a given soil.

Several years ago Mr. Frederick V. Coville of the U. S. Department of Agriculture demonstrated that by keeping the soil acid it is quite possible to cultivate certain plants that have in the past presented problems to the gardener, such as Blueberries, Trailing Arbutus, and others belonging to the Heath family. In view of these results it occurred to me that it would be desirable to study the preferences for soil acidity of other wild flowers reputed to be impossible to grow in cultivation. A method was therefore worked out for carrying the above mentioned indicators into the field, and making tests at the places where the plants grow. This method is outlined here.

A sample of soil a gram or two in weight is shaken from living roots into an empty vial, and 5 cubic centimeters of the most nearly neutral and salt-free water available is added, the vial being shaken well to insure complete mixing. After the soil and water are thoroughly mixed, the solid matter is compacted with a stick, and the vial is supported at an angle of 45° and allowed to stand until the bulk of the suspended matter has settled. The more or less clear liquid is then decanted off into a depression in a porcelain plate (artists' "slant" or chemists' "spot-plate"). A tiny drop of the solution of an indicator, the color changes of which occur near the neutral point, is then



placed in an adjoining depression, and with the aid of a stick or pencil the clearest part of the soil extract is caused to flow over and mix with the indicator. Bromthymol Blue is used as a first indicator, because it at once classifies the soil. If the soil be neutral, a green color develops, yellow indicates acidity, and blue shows an alkaline condition. If the acid color of the indicator is shown, the process is repeated using another indicator which shows its color changes at a higher degree of acidity and so on in succession as shown by the diagram. If the alkaline color appears another indicator changing color at a higher degree of alkalinity is then used. This is continued until either an intermediate color of one indicator, or opposing extremes of two overlapping ones, are obtained. The specific acidity or alkalinity can then be read off from a chart or table of the indicator colors.

AS A result of the testing of many hundreds of colonies of wild flowers throughout the Northeastern United States, Mr. Coville's conclusions as to the requirement of members of the Heath family for acid soils have been abundantly confirmed. Nearly all of the 50 species of this family studied have been found to be in the most flourishing condition when the soil was mediacid or subacid. There were a few exceptions among the Pyrolas, which thrived in minimacid or even neutral soils. In other plant families some species have been shown to favor acid soil and others neutral or alkaline soils. Among the native Orchids, for instance, most northern species stick closely to neutral soils, and most southern ones to acid soils. Similar relations hold in the case of Ferns. It is hoped to publish sometime a list of several hundred wild flowers, with their preferences in this respect indicated, but sufficient data have not been obtained as yet.

Most of our ordinary garden plants are those favoring neutral soils, and our ordinary methods of cultivation, fertilization, and liming tend to bring soils to neutrality or even a slight degree of alkalinity. It is, however, well worth while to develop also acid soil gardens, for in these we can grow in cultivation many beautiful Rhododendrons, Azaleas, Laurels, Orchids, etc., which will in ordinary garden soil never really thrive, and usually die as soon as the acid soil adhering to their roots when first transplanted is neutralized by the soil in which they are placed.

In making an acid soil garden it is not sufficient to dig a small hole and place in it the balls of earth adhering to the roots of the plants being introduced, for moles, earthworms, beetles, etc. will soon mix the alkaline garden soil with the small mass of acid soil, and this together with the circulation of underground waters, will soon lead to the neutralization of the acidity and the death of the plants. The bed must be dug out to a depth of two feet or more, and its area made as large as practicable; it should then be lined all around with acid peat, decaying wood, sphagnum moss, or similar materials, to prevent the introduction of lime by circulating ground water. The filling should consist of a mixture of neutral sand and the same acid humus-yielding materials, pine needles, fresh oak leaves, etc. The bed should not be watered, moreover, with the usual city water, for in most places this is likely to be alkaline. Instead, rain water should be collected in a barrel, made acid by throwing in some bits of pine bark, and used when required in dry weather. In such a bed one can grow successfully the many beautiful plants of the Heath family; Pink Slipper-orchid and Fringed Orchis; Clintonia or Wood-lily; painted Trillium; Bunchberry; Box-huckleberry; Twin-flower, and their various companions, so often seen in woodlands, but rarely in gardens.

**TABLE OF INDICATOR COLORS**  
(As seen in very dilute solution in depressions of porcelain plate.)

Descriptive Terms	Superaacid	Mediacid	Subacid	Minimacid	Minimalk.	Subalk.	Medialk.	Superalk.						
	← Acid			Neutral	Alkaline →									
Specific Reactions	3000+	1000+	300+	100+	10	3+	1	3+	10	30+	100+	300+	1000+	3000+
Bromphenol Blue	OLIVE GREEN		VIOLET											
Methyl Red	ROSE		ORANGE		YELLOW									
Bromcresol Purple	YELLOW				BROWN		VIOLET							
Bromthymol Blue	YELLOW				GREEN		BLUE							
Phenol Red	GREEN				YELLOW		ORANGE		ROSE					
Phenolphthalein	LIGHT BLUE						ROSE							

← bog peat →      ← leaf mold →      ← "alkali" soil →  
 ← upland peat →      ← limestone soil →

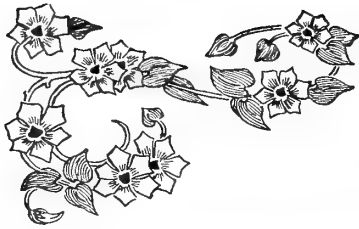
The first test is made with bromthymol blue; a change to green indicates a neutral soil; yellow shows acid; if remaining blue, an alkaline condition is shown. The other indicators are then used in succession upwards or downwards as the case may require

SOME SUMMER ANTICIPATIONS

"BOOK Week" in Chicago was a sort of prolonged and glorified garden party which offered the always welcome opportunity of personal chat with our subscribers, and we are just back at the desk in stimulated mood full of pleasant plans for the coming months. Of prime interest to our people is the privilege of finding in an early issue the LATEST MESSAGE of WILLIAM ROBINSON, dean of gardeners, familiarly known to us all through his "English Flower Garden." Rather a pretty compliment is paid to the perceptiveness and receptiveness of his American audience by Mr. Robinson in giving them directly through the pages of THE GARDEN MAGAZINE this series of articles containing the crystallization of his matured thought ripened and enriched by many years' experience. Even a cursory study of "Home Landscapes," Mr. Robinson's latest book, reveals a fundamental similarity of aim with that of Dr. Sargent (examples of whose work may be found on pages 167, 193 of this number). Is it not significant when these two most constructive of modern-day gardeners on opposite sides of an ocean express themselves in like ways? Both emphasize, moreover, the satisfying character of the woody plant—trees and shrubs—as the basic "stuff" upon which a good garden is builded.

IRIS TIME in June again! And for the lover of Iris fresh light on the CULTURAL HANDLING of the BEARDED GROUP with a series of carefully made photographs by Mr. A. C. Army of the University of Minnesota. The fascinating yet irritating family of MEDITERRANEAN IRIS is ably championed by S. Stillman Berry; and, in response to many requests, we hope to reprint in substance at least a very successful account of IRISES FOR A SUCCESSION OF BLOOM.

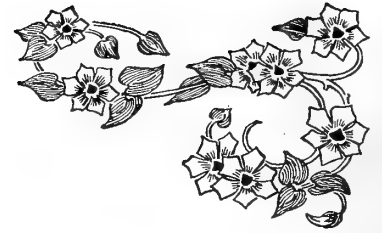
There are a number of other things we would like to tell about—such as the HISTORY OF IRONWORK AND ITS PRESENT-DAY GARDEN USES by Mr. Arthur W. Colton, already known to our readers through his able series "The House That Was Built for a Garden," and more widely known as essayist and poet—but it is here possible only to touch on one or two "high spots" and leave the rest to your imagination, with the passing assurance, however, that you will find something you want on a number of subjects besides. Let past performances be the guarantee for the future!



# AT FLORA'S FEET

LEONARD BARRON

Impressions of the Year's Big Flower Shows at New York and Indianapolis



A GARDEN OF ROSES

Roses of many hues and for all sorts of purposes—stalwart bedding Roses, graceful climbers, and appealing little trailers—were effectively congregated in this Gold Medal winning display of Cromwell Gardens (A. N. Pierson)

after all, is the ultimate goal of all gardening—was permitted to enter in. No indeed. That was not proper!

To-day how different! The appeal is made frankly to the public's sense of beauty, with perhaps little to cater to the experts' more minute examination. And in proportion as the old style is distanced does success seemingly attend. Never should it be forgotten that the new pace for New York was set by the visit of the National Flower Show under the direction of the Society of American Florists in 1913. The credit for the further development is due chiefly to the Horticultural Society of New York and particularly its treasurer, Mr. F. R. Newbold, through whom the active coöperation of the Garden Club of America has been secured. Thus the New York spring flower show assumes the dignity of a national event, even more so indeed than does the actual National Flower Show which this year was welcomed by Indianapolis. This latter, national in being, visiting different centres in succession, and stirring local activities into an awakening, justifies itself, however. That New York has ridden onward better than any other centre is perhaps only the natural response of the metropolis. It has a considerable population of its own and it is a pivot of attraction for people elsewhere.

It was the Rose gardens of the two Piersons at the 1913 National Show that set the pace. Suddenly the horticulturists realized that the public was not so greatly concerned in the balanced niceties of individual varieties as in the spectacular effects of mass grouping in suitable environment. The lesson learned, successful flower shows followed, leading up to the peak of success attained this spring.

But there was only one Rose garden this year, instead an Azalea garden (Bobbink & Atkins) struck a new note and showed that the great Easter plant will be with us again. It is

**W**HILE the ancients bore gifts to the goddess of spring and made obeisance to the personification of flowers, the modern American in his thousands takes the direct course and pays his tribute to the gate-keeper of the hall of flowers wherein he enters to worship or admire the realities themselves. The New York Flower Show has become indeed something more than an "exhibition" of plants. It is a gala display of their effectiveness and decorative possibilities. Only a very few years ago the conception of a flower show was a gathering of examples of the cultural skill of the grower, arranged in orderly way on benches or tables where the technicalities could be analysed for the benefit of other technical growers. Nothing of the appeal to the sense of beauty, of color harmony, of charming mass etc., etc.—which,



SPRING IN FULL SWAY

Familiar favorites—Hyacinths, Tulips, and Daffodils—in massed planting filled this small formal garden with refreshingly clear color, and accessories of various kinds were used as accent points in the design. (F. R. Pierson)

significant, too, that Rock Gardens on a "practical" scale—you could walk through them—have assumed a dominant place in the scheme. A straw in the winds of public opinion as it were! And indeed the rock and shrubbery combination effect of Julius Roehrs Co. so closely approached reality as to carry conviction. Each year these "gardens" are more and more real as our photographs show. A new note in these features was struck by Wadley & Smythe's formal effect with large specimen Oranges, Azaleas, etc.

In the cut bloom displays which varied through the week, one really notable novelty was the Pernetiana Rose Souvenir de Claudius Pernet (Totty) with the distinct characteristics of that gorgeous group, in color the yellowest of any Rose and of a clear, pure hue. The plant is thickly set with spines which, however, are not strong; the foliage is true to the group to which this plant belongs. One other Rose renamed for the occasion in honor of Mrs. Warren G. Harding is that formerly known as Dark Pink Columbia, varying in shades of deep pink, somewhat uncertain in color, yet pleasing withal.

Among the special features that drew crowded attention from the public, the corner given over to the Orchid Society and the group of model gardens, in competition for the Garden Club of America prize, ran neck and neck. Both these appeal to specialists. The garden models, intriguing and fascinating, but beyond that, what? The Orchid display showed that the activities of the new society have been productive of good results.

Dinner and luncheon table decorations competing for the awards of the Garden Club of America added a feature of no small interest and brought out a larger number of arrangements than ever resulted from the professional classes of other years and in fact served a much more practical end.

ONE feature the two shows (New York and Indianapolis) had in common was supplied by Burpee's Sweet-peas magnificently staged in lightly arranged bunches of individual varieties against a background of black velvet. Much progress has been made in this strain of Winter-flowering Peas, having markedly waved standard and wings, adding considerably to the decorative value. Gardeners report that the winter-flowering type has certain advantages in the real North, blooming earlier when planted outdoors so that in regions where the ordinary garden Sweet-pea has been difficult to manage it may be well to give the newer strain a trial. The variety of colors to



A ROCK GARDEN THAT WHETTED CURIOSITY

To many visitors one of the most alluring features of the New York Show, this garden took the fancy of the judges as well and carried off a Gold Medal. (Julius Roehrs)



ANOTHER INTERESTING ROCKERY

There is much to enjoy and to learn both about plants and their setting where a great group is staged as here. (Bobbink & Atkins)



WHERE BLOOM RAN THE GAMUT OF COLORS

It is something of an achievement to bring hundreds of plants into flower at just the required moment and this season's amateur showings were quite breath-taking in their loveliness. (Mrs. Payne Whitney's exhibit)





THE NATIONAL FLOWER SHOW RECENTLY HELD AT THE INDIANAPOLIS FAIR GROUNDS.

The huge hall with its unbroken vistas and facilities for receiving plants (wagons may be driven right into the building along the broad pavements shown above and unloaded wherever desired) offers ideal opportunity for effective display and about 75,000 visitors viewed this season's show. The Rose garden, and beyond it the collection of Acacias occupying the centre

choose from is surely great enough to please everyone. Unquestionably the light orange Mrs. Kerr took the popular fancy of both New York and Indianapolis. In light pink, our choice hangs on Peach Blossom. Among the novelties for later introduction to which awards were made are Lady Fair, a paler pink than the one just named; Spokane, bright orange scarlet; Milkmaid, white ever so daintily shadowed with a lilac flash; and the deep bright rose Chevalier.

The Indianapolis show partook the more of a "florists' exhibition," yet with marked progress in the arrangements for display—to a large degree due to the fact that Arthur Herrington was manager of both shows. The hall offered by the western city was about twice the size of the Grand Central Palace, and had a sunken central area and low roof, an ideal arrangement. Curiously, both shows drew about the same attendance—seventy-five thousand each in the week's duration. Thus is Indianapolis seen as no mean city for the gardener!

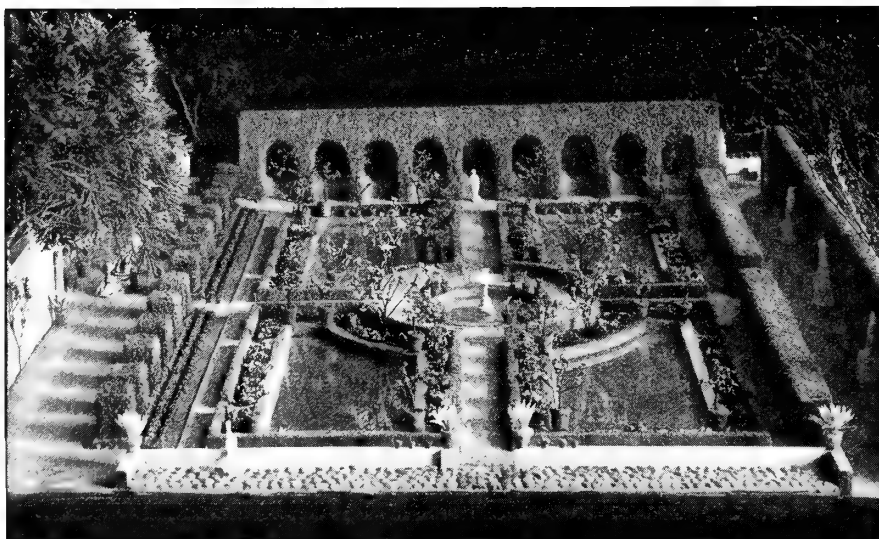
The far famed Acacias of Mr. Roland, which a few years ago

startled New York, dominated the centre of this great area, one hundred plants arranged in two immense half circles, and again carried their lesson to any one with a greenhouse who would have an ideal expression of spring—bright, light, airy shades of yellow.

But it was a florists' festival in a veritable orgy of Roses and Carnations—40 entries in the 100 cut Roses and sixty in the 50; and in the Columbia class about ten competitors each staged 50 blooms! Roses! and Roses! ! and Roses! ! ! And Carnations! nine lots of 100 blooms! So went the homage to Flora!

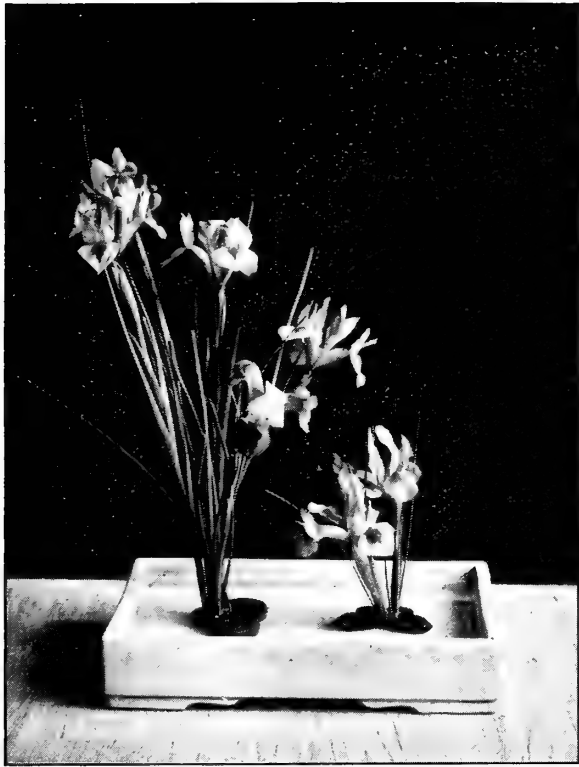
One distinct novelty from California (Wright, Los Angeles) is a greenhouse Maidenhair type of Fern, resembling the much esteemed Farleyense; though somewhat smaller, it is far less delicate and indeed stands hard usage.

A tribute must needs be added to the Indianapolis Public Library which displayed meanwhile a rich and up to the minute collection of garden books and magazines actively encouraging the townfolk to read and learn.



PRIZE-WINNING MINIATURE GARDEN AT THE NEW YORK SHOW

Designed and executed by Mr. Charles Willing, Chestnut Hill, Pa., whose skill won him one of the Frank Galsworthy flower paintings beloved of gardeners. There were a number of entries in this class and tremendous popular interest in this feature of the show which was sponsored by the Garden Club of America



SPANISH IRIS IN JAPANESE FASHION

Iris lends itself particularly well to "full-length" treatment, as it were, because of its interesting habit of growth; we would like to see it more often displayed with the fundamental simplicity of the truly Japanese arrangement which affords each flower-stalk full opportunity. Awarded Third Prize by the Garden Club of America; Mrs. Robert Mallory Jr., Rye (N. Y.) Garden Club, exhibitor



BIRD-OF-PARADISE FLOWER  
(Strelitzia reginae)  
IN BRONZE DISH

This native of the tropics with its banana-like foliage and bizarre orange and blue-purple blossoms won First Prize in the Japanese Arrangement Class staged by the Garden Club of America; exhibitor, Mrs. Frank Littleton, Fauquier and Loudon Garden Club, Va.



JAPANESE ARRANGEMENT OF FORSYTHIA

"Highly Commended" by the Garden Club of America, this arrangement was to the layman's eye the most pleasing of the group

both in line and color; the clear bright yellow of the Golden-bell happily in harmony with the rich brown of bronze. Mrs. Elmer MacRea, Greenwich (Conn.), Garden Club, exhibitor

From  
The New York Flower Show

Japanese Arrangements

exhibited by

The Garden Clubs

and

A New Rose



THE NEW YELLOW ROSE

Souvenir de Claudius Pernet shone conspicuously among a galaxy of competing beauties at the New York Show, partly perhaps because

a good yellow is the rarest of Roses. This Totty introduction is the clearest, most glowing yellow yet seen and, being a Pernetiana, may be accredited with the cultural characteristics of its type, including a predilection for clay soils. Gold Medal, Special Prize



CEDAR À LA JAPANESE

This arrangement depends primarily on line for its effect, the subdued green of Cedar and the creamy porcelain rendering color a subordinate affair. Awarded Second Prize by the Garden Club of America; Mrs. Seton Lindsay, South Side Garden Club of Long Island, exhibitor

# TEACHING POOR KIDDIES TO GARDEN

**I**NSPIRED by the article in THE GARDEN MAGAZINE for March describing the work done by the Avenue A Gardens to give New York's tenement children a new and wholesome interest in life, a gentleman in Elizabeth, New Jersey, writes to us that he has laid out fifty small gardens for the use and instruction of poor children in that city.

Thousands of visitors at the New York Flower Show availed themselves of the opportunity to see with their own eyes how the work is carried on in the Avenue A Gardens. Two of the 5 x 10 plots were shown, one of them with relays of the children engaged in planting and cultivating, the other with a generous growing crop of vegetables and flowers. Members of the Plant, Flower and Fruit Guild were in attendance to explain the work and accept the ten-dollar subscriptions for the maintenance of individual gardens. The interest of the New York public is shown by the receipt of something more than two thousand dollars, enough to keep more than two hundred children off the streets

and engaged from spring to winter in out-of-door work-play and practical education in gardening.

Not the least valuable feature is that the interest of the children in what they are doing extends to their older relatives, and in several cases has led to families deserting the tenements to live where they could have a bit of ground on which to grow things. Of course these last are rather exceptional instances, but there is not a single one of the six hundred plots which is not yielding some child a new and better knowledge of what this earth can give in the way of occupying one's time and energy.

When this reaches our readers' eyes, the planting work in the Gardens will be in full swing. The young agriculturists are impatient of interruption in their important occupations, but those who drive or walk through Avenue A in the neighborhood of the Rockefeller Institute won't need to ask where the work is going on. It is plainly visible through the iron fence surrounding the three city blocks and it is a sight worth seeing by any one interested in America's future citizenry.

**T**HE response to the appeal for funds to carry on the work of the Avenue A Gardens has been so generous that the acknowledgments will have to be printed on the installment plan. As there are six hundred gardens, the funds in hand are not sufficient to provide seeds, tools, supervision, and instruction for all of them so THE GARDEN MAGAZINE is still willing to accept contributions of ten dollars, each of which provides for a garden and entitles the donor to give that garden a name.

Checks for ten dollars, or multiples of that amount, may be sent payable to the order of Avenue A Gardens Fund, THE GARDEN MAGAZINE, Garden City, N. Y., and will be acknowledged in an early issue going to press after receipt. Contributions will also be received by the Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City.

The required amount of ten dollars to maintain each garden has been received from the following:

- MRS. SIDMON McHIE, New York City, for The Sidmon Garden, The Gloria Garden
- THE LARCHMONT GARDEN CLUB, Larchmont, N. Y., for The Larchmont Garden.
- THE FLUSHING GARDEN CLUB, Flushing, N. Y., for The Flushing Garden Club Garden.
- MRS. H. F. BOARDMAN, New York City, for Buddie's Garden.
- MRS. B. W. MORRIS, Mt. Kisco, N. Y., for The Walter Platt, Jr. Garden.
- MRS. J. H. HUNT, Greenwich, Conn., for The Kirke La Shelle Garden.
- MRS. ROBERT BACON, New York City, for The Hope Garden.
- MRS. E. C. BACON, New York City for The Corners Garden.
- MRS. H. VAN RENSSELAER KENNEDY, for The Baby Marion Garden.
- MASTER WINTHROP ROCKEFELLER, New York City, for The Winthrop Garden.
- MRS. JOHN D. ROCKEFELLER, JR., New York City, for The Laurance Garden, The David Garden.
- MISS FANNY NORRIS, New York City, for The Good Luck Garden.
- MR. T. A. HAVEMEYER, New York City, for The Havemeyer Garden, The Arthur Herrington Garden.
- MRS. JAMES BOWEN, Cold Spring Harbor, N. Y., for The Edson Garden.
- MISS ELIZABETH BOWEN, Cold Spring Harbor, N. Y., for The Elizabeth Garden.
- MISS MAUDE WETMORE, New York City, for The Joy Garden.
- MRS. VICTOR GUINZBURG, Chappaqua, N. Y., for The Ralph Garden, The George Garden, The Frederic Garden.
- MRS. JOHN PALMER, New York City, for The Ettie Garden.
- MRS. HOWARD F. CLARK, Great Neck, N. Y., for The Edith Garden.
- MRS. RICHARD L. BECKWITH, New York City, for The Christadora Garden.
- MRS. G. SCHIRMER, New York City, for The Elsie H. Fay Garden.
- MRS. HENRY MARQUAND, New York City, for The Knight Garden.
- MRS. BURKE ROCHE, New York City, for The Eileen Garden.
- MISS M. R. CROSS, New York City, for The Bearfort Garden.
- MRS. EDWIN G. MERRILL, New York City, for The Two Little Sisters Garden.
- MISS GENEVIEVE BRADY, New York City, for The Genevieve Garden.
- MISS VICTORIA BRADY, New York City, for The Victoria Garden.
- MRS. MONROE D. ROBINSON, New York City, for The Dorothy Douglas Robinson Garden, The Three Arts Club Garden.
- MRS. JOHN A. CARPENTER, New York City, for The Dinny Garden.
- MR. SAMUEL SLOAN, New York City, for The Katharine Sloan Garden.
- MRS. EDWARD SANDFORD, New York City, for The Edward Sandford Garden.
- MRS. J. F. CHAPMAN, New York City, for The Fred C. Heighe, Jr., Garden.
- MR. WM. HUNT DICKINSON, New York City, for The Andrew Dickinson Gardens (5 plots).
- MRS. T. T. GAUNT, New York City, for The Fannie Marshall Gardens (5 plots).
- MISS MABELLE LANE, New York City, for The Fan-Tom Garden.
- MRS. FRANK MONTAGUE, New York City, for The Danforth Garden.
- MR. ALBERT A. BRENNAN, New York City, for The Beulah Garden.
- MRS. E. BAILEY, New York City, for The See-Us-Grow Garden.
- MRS. LEA Mc I. LUQUER, Mt. Kisco, N. Y., for The Lea S. Luquer Garden, The Evelyn P. Luquer Garden The Thatcher P. Luquer Garden, The Ellen P. Luquer Garden.
- MISS ADELE MERRILL, New York City, for The Toodles Garden.
- MRS. THOMAS DENNY, New York City, for The Louise Garden.
- MRS. STEWART ELLIOT, New York City, for The Eliza Josephine Garden.
- MISS AGNES COCHRAN, New Canaan, Conn., for The Elizabeth Garden.
- MRS. ELLIOT SMITH, New York City, for The Anna Garden.
- MISS ETHEL SPEARS, New York City, for The R. Lazys Garden.
- MRS. A. T. VAN LAER, Litchfield, Conn., for Little Joan's Garden.
- MRS. J. J. RADLEY, Stamford, Conn., for The Gerald Garden.
- MRS. JAMES STEEL, New York City, for The Lillian Garden.
- MRS. IRA BARROWS, New York City, for The Sarah Barrows Garden.
- MRS. CHARLES K. MORRISON, New York City, for The Eleanor Garden.
- MRS. FREDERICK GELLER, Bronxville, N. Y., for The Bronxville Garden.
- MISS A. R. RUSSELL, New York City, for The Garden of Joy.
- MISS ELIZABETH MAN, Richmond Hill, N. Y., for The Two Lucys Garden.
- MRS. BLEWETT LEE, Atlanta, Ga., for The W. N. F. Garden.
- MR. H. F. GURNEY, New York City, for The H. F. Gurney, Jr. Garden.
- MISS M. MOYCA NEWELL, New York City, for The Apprentice Garden.
- MISS KATHERINE MAYO, New York City, for The Half Deck Garden.
- MRS. A. I. UNDERHILL, Babylon, N. Y., for The Babylon Dahlia Garden Garden.
- MRS. D. P. HAYS, Pleasantville, N. Y., for The Daniel P. Hays, Jr. Garden.
- MRS. JAMES B. TAYLOR, New York City, for The Seldom Seen Garden.
- MR. A. H. LIPPINCOTT, New York City, for The Stockbridge Garden.
- MRS. A. H. LIPPINCOTT, New York City, for The Weathersfield Garden.
- MRS. W. B. CLARK, New York City, for The Little Michael Garden.
- MRS. L. S. BIGELOW, New York City, for The Deborah Garden.
- MISS DEBORAH BIGELOW, New York City, for The Minsy Garden.
- MR. C. F. MEYER, New York City, for The Myra Garden, The Betty Garden.
- MRS. CHARLES DE RHAM, JR., New York City, for The Lieut. C. de Rham, Jr. Garden.
- MRS. ADOLPH ZUKOR, New York City, for The Paramount Garden.
- MISS MILDRED SAWYER, New York City, for The Babies Hospital Garden.
- MR. PHILIP SAWYER, New York City, for The Budge Garden.
- MARTHA KEEP, New York City, for The Orthopedic Hospital Garden.
- MISS RUTH SCHOELLKOPF, Buffalo, N. Y., for The Arden Garden.
- MRS. E. S. AUCHINCLOSS, New York City, for The Keewaydin Garden.
- MRS. F. J. ABBOTT, New York City, for The Perseverance Garden.
- MRS. LIZETTE J. HAMMOND, New York City, for The René Ross-Hammond Garden.
- MR. JULIAN MYRICK, New York City, for The William Washburn Myrick Garden.
- MR. WALTER JENNINGS TAYLOR, New York City, for The Walter Jennings Taylor Garden.
- MR. HENRY STILLMAN TAYLOR, New York City, for The Henry Stillman Taylor Garden.
- MISS CARROLL McCOMAS, New York City, for The Carroll McComas Garden.
- MR. ALVIN UNTERMEYER, New York City, for The Alvin Garden.
- MRS. CHARLES H. KEEP, New York City, for The Buffalo Garden, The Town Hall Garden.
- MRS. R. P. STEVENS, New York City, for The Ray Garden.
- MR. JAMES LINCOLN ASHLEY, New York City, for The Edith Garden.
- MRS. CHARLES M. NEWCOMBE, MRS. J. A. HADDEN, MR. C. S. SANDS, and MRS. JOSEPH WALKER all of New York City, for four plots not yet named.
- THE DOUGLSTON (L. I.) GARDEN CLUB for The Douglaston Garden Club Garden.
- MR. ARTHUR McCAUSLAND for The Molly Garden.
- MRS. J. P. MORGAN, JR., for Two gardens not yet named.



# GARDENING WITH WILD FLOWERS

AMELIA LEAVITT HILL

Bringing the Very Being of the Countryside into Intimate Association with the Home—Wherein “Wild” Gardening Differs from “Native”



**A**S WE walk through the country lanes in their summer glory beside which the transient beauties of our gardens often fade into insignificance, who has not felt a wish to transport some part of their loveliness nearer home? Indeed the wish, which may seem born of indolence, would be thought well worthy of accomplishment to those less sated with the charms of our summer fields than we. The wild flowers of one part of the world are the garden flowers of another—the Englishman and Frenchman cultivate our Goldenrod and purple Asters as assiduously as do we the Poppy of Flanders' fields, the Daffodil of England, or the counterpart of the Mourning-bride which borders the country roads of France. Let us not be superior to the beauty which lies nearest, and let us, too, save a corner of our gardens in which the glory of American fields and forests may be cultivated, and if possible made lovelier by the care and cultivation under which all flowers must show some improvement.

Another advantageous use may be made of the wild flower garden—to brighten a spot to which little care can be given. Perhaps you have an old homestead, or a summer camp, occupied only for a short time every season yet which, in the few weeks of its occupancy, you long to see embowered in blossoms, and wearing the aspect of brightness flowers alone can give. In such a case a bed of wild flowers, once planted, will go on almost forever. They are, in their native state, a practical example of the survival of the fittest; the result of ages of neglect, and of struggles with adverse conditions, where they have been forced to hold their own, unprotected from winter frost and snow, against stalwart weeds of every kind. Used to such surroundings, therefore, what can be more sure to succeed than a garden where such flowers predominate? And when a little tending is awarded, they make splendid response.

When it is part of a formal garden, the wild flower bed had best be

separate from the rest and should under no circumstances share in its prim hedges and straight-cut paths. Here is an opportunity for one of the “nooks” beloved of landscape gardeners—place it against a background of woods, if possible; let a winding, rustic walk lead up to it, and let no civilizing note creep in. If you are fortunate enough to have a brook or pool in your domain, this may be made a central feature upon which to work, set deep in wild Forget-me-not and Cowslip, great masses of Cardinal-flower, with touches of Purple Fringed Orchis and yellow Loosetrife here and there. At the back of the picture, marking the separation of garden from woods, the heavy leaves and great pink heads of the Joe-Pye-weed make a striking and effective screen some eight feet high.

Water is so valuable a feature of the wild garden that,

if none be ready to hand, let it be secured by artificial means whenever feasible. The likeness of a brook may easily be obtained by the laying out of a little waterway in the form of a series of pools, interposed with rocks and hummocks for the appearance of greater “reality,” lined with cement and filled by means of the garden hose. To be sure, the result will be stagnant, but if carefully done, the bottom covered with white sand and a few gold fish introduced to prevent mosquito larvae, this will be found not to detract from the effect. As a brook of this kind does not provide wet ground near by in which to set out moisture loving plants, in making it, concrete compartments should be built, connecting with the water in a way that will keep the soil in them moist so such plants may be grown. The openings connecting these compartments with the brook must be small and covered with coarse wire netting so that water may penetrate without permitting the earth to wash out. The clumsy outline is soon concealed by the plants, while any slight muddiness in the water may be prevented by a sprinkling of sand over the earth.

The building of a pool is,



LADY-SLIPPERS GROWING AT WILL AGAINST SHRUBBERY

There are four or five species of these hardy Orchids, sometimes also called Moccasin-flower, available for northern gardens. Oddly individual, they add distinct character to any “wild” planting and flourish best in rather moist, cool spots. (Cypripedium reginae here shown)

of course, a simpler matter, and here, too, connecting compartments should be left for semi-aquatic plants. In this, as in the brook, irregularity and absence of formality must be the gardener's aim. Lilies, if introduced, should be of the wild varieties, or at least not differ too widely from them, nor is there here a place for the Lotus, or for any distinctively tropical plant, however lovely.

THE "wild garden," be it remembered, is something quite apart from the "native garden" which, though composed exclusively of flowers growing wild in its particular locality, may yet be set out as formally as any other. Obviously, the mere geographical origin of any plant does not necessarily unfit it from becoming, let us say, a part of a geometrical design. The wild garden, however, has a distinctly different aim. Here flowers are set out to produce a natural effect, which is primarily a matter of treatment rather than of materials. Therefore, the presence of native flowers solely is not to be insisted upon—any dainty, graceful bloom not obviously unsuited by character to natural use may well be added, thus increasing the interest of the tiny wilderness.

If no woods are available, a wall may be successfully used as a background for the wild garden—not a carefully laid wall, or even a dry wall, gay with many-colored blossoms, but an old, moss-grown mass of field stones, if you are fortunate enough to boast one. Cover it with Woodbine, with Clematis paniculata, with the Ground-nut, whose inconspicuous crimson-and-pink frilled blossoms send forth so delicious a perfume in the early fall. Let an occasional peeping boulder be left to show upon what the vines are massed; and before them set your tall sheaves of Elecampane, of Mullein, of Fireweed and Milkweed, and the gorgeous giant Joe-Pye-weed. Beneath these set the flashing red of Field Lilies, the yellow bells of Canadian Lilies, blue Vervain, Meadowsweet, Hardhack, or the Blackeyed Susans.

The "ordinary garden flowers" included with them must, of course, be left largely to the taste and judgment of the individual gardener; but the native blooms should form, in large measure, the backbone of the wild garden.

MANY nurserymen now specialize in plants of native flowers and of named varieties of certain groups, and to buy directly from them is a method preferable either to the doubtful outcome of "wildflower mixture" of some seedsmen—for what flower enthusiast does not prefer to know his flowers by name?—or to the old-fashioned way of starting out, trowel in hand, along the country roads, to dig up incontinently any plant which may strike your passing fancy.

The reasons for this are manifold. First of all, the grower grows with transplanting in view; he ships at the proper season, so that the risk of the garden owner is reduced to a minimum. He indicates the proper conditions under which plants should be cultivated in order to produce the best results. To be sure, wild flowers are hardy, and bear considerable rough treatment uncomplainingly; but they grow where they can, in many cases, not where they thrive best; and the trowel-armed amateur too often goes to considerable trouble to duplicate conditions in which he found a certain plant, only to discover later that the same plant does far better in the garden of a friend in quite different environment. Then, too, he who selects his flowers by the wayside transplants them while in bloom—the time when such treatment is especially dangerous. His garden is thus apt to become merely a group of flowers which bloom all together and only at a given time, for few of us are fortunate

enough to extend our collecting during the entire summer. Again, there are wild flowers which prefer poor soil, and which are spoiled by kindness. So, from the standpoint of both flowers and gardener, it is decidedly better to purchase one's native stock from a grower.

Another very real objection to the collecting of wild flowers by the amateur is the serious harm which has been done to our native plants by an indiscriminate gathering of them along the countryside—some of our most beautiful plants are, in consequence, in danger of total extinction. A striking instance of this is the Mayflower or Trailing Arbutus, which is almost exterminated in some localities because of such destructive gathering.

ANOTHER pleasure of the garden in which wild flowers predominate is the exchanging of varieties with friends at a distance. Perhaps in their own gardens they are cultivating some of their own native plants; perhaps, in the absence of garden facilities, they have tried to content themselves with a more thorough knowledge of the inhabitants of neighboring fields and woods. By exchanging bits of garden lore with them, one may often unearth a variety of plant superior to that already familiar. For instance, the feathery pale purple Aster of New England, or even the deep purple one (whose tiny centre is filled with a mass of yellow and purple stamens vividly recalling to the feminine mind "French knots") commonly sold as perennial Aster, both here and abroad, is far inferior to the less grown but more showy large purple Aster, with a large yellow centre, so usual in southern New York and in New Jersey. In England the variety of Goldenrod most commonly seen in cultivation is the straight, spiky one which recalls the stiff and characterless Silverrod; while the spreading sort, reminiscent of the American Elm in shape, is not seen at all.

Among flowers which worthily plead for entrance into the garden are: the wild Columbine, in red and yellow, full of airy grace; various varieties of wild Phlox—especially a lovely shade of deep rose, which seems to thrive in the worst soil and the fiercest drought; Sweet Mary, or Monarda didyma, a garden standby; also its twin brother, the Purple Bergamot, a rapid grower, free bloomer, and as I can testify from experience, practically indestructible; the yellow Dog-tooth Violet that covers your beds with a creamy carpet in spring; the Mountain Laurel, which lights the June hills of New England with a rosy snow; brilliant-hued Rhododendron; Sumac with its crimson glow—but why enumerate further? The fields are full of these and others as alluring, to possess which it is only necessary after a walk abroad through Nature's nursery, to return and find your favorites listed in the catalogue.

Under no circumstances, let me again insist, should the natural garden be formal. Massing should be its aim, like that of the impressionist artist, who throws great sweeps of color on his canvas. And in corners where delicacy is desired, what can surpass a bit of woodland, blue with Hepaticas in spring, sweet with hidden Mayflowers, and later gorgeous with the blooms of the showy Lady-slipper? But to set Lady-slippers down either side of a garden walk, or to border a gravel path with Hepatica, is to force the little woodland maiden into the paint and tawdry finery of the provincial town, and to attempt with only moderate success an effect which other blossoms, more suited to the purpose because of their very solidity and lack of daintiness, would carry off better. For environment is a force to reckon with, in the lives of flowers no less than in our own; and nowhere is it more felt than when dealing with the intangible charm of the wild garden.





*J. Horace McFarland Co., Photo.*

#### PHLOX AND FORGET-ME-NOT BLOOMING IN UNTRAMMELED FREEDOM

Again it is to Dr. Sargent that we turn for the perfect example of gardening in nature's manner; all such bits of deliberately created beauty (which abound in his garden at Brookline, Mass.) seeming so fundamentally part of the native American landscape that we are more than ever convinced of the wisdom of studying nature's ways. This is happy proof that "wild" gardening is primarily a matter of treatment rather than of materials; and, after all, the domesticated inhabitants of present-day gardens trace their ancestry out into field, forest, or glen



# THREE RELIABLE EVERGREENS FOR THE NORTHERN GREAT PLAINS

MAYNARD N. HARDY

**D**ESIRABLE as coniferous evergreens are for any prairie region they are seldom seen. The chief reason for this condition is the belief on the part of the plainsman that they will not grow. Fortunately there are a few species capable of withstanding the severe climatic conditions of the Northern Great Plains, that vast region including the western half of the two Dakotas and the eastern parts of Montana and Wyoming up to five thousand feet elevation.

In no part of the country and with no class of material is it so important to start with the right kinds as in planting evergreens in this region. To thrive here for a long series of years, trees must at times tolerate forty degrees below zero without snow on the ground and what is perhaps a more severe test, they must go through some winters without perceptible moisture at the roots. In the summer temperatures as high as one hundred and ten in the shade are not uncommon. This heat is sometimes accompanied by a blistering, dry, hot wind from the southwest. Both winter and summer the atmosphere is dry and the sunshine brilliant.

Conditions like these play havoc with all conifers native to the relatively humid Eastern part of the continent. But turning from the East to the Rocky Mountain section we find a race of coniferous evergreens adapted to the plains.

The hardest and most abundant conifer throughout the Western mountains is the Western Yellow or Bull Pine—(*Pinus ponderosa*). This is a two-needled Pine. The needles are six to eight inches long and remain on for three years. This tree is a little difficult to establish, but when once established it can withstand any conditions likely to be met with. It has a very strong tap root. Two year old seedlings only four inches high have tap roots more than two feet long. C. B. Waldron of North Dakota is authority for the statement that this Pine requires only one-sixth as much moisture as the average deciduous tree, due to the resinous sap and limited leaf surface which greatly reduce the rate of transpiration from the growing tree. Where moisture is the limiting factor in tree growth, economy in its use is a matter of first importance. This is not a new tree, but its

merits are overlooked by most tree planters. It is destined to become the leading tree for farm windbreaks in the Northwest. In the winter a double row of this Pine offers more protection than ten times as many deciduous trees. Leaving nothing to be desired in hardiness and resistance to drought, its chief use will be as a protection and background for other plants.

We must turn to the Spruces for our best evergreen ornamental material. The Black Hills Spruce (*Picea alba*) and the Colorado Blue Spruce (*Picea pungens*) lead all others in reliability. Like all Spruce, these are shallow rooted and do their best under cool, moist conditions. However, they thrive on the dry atmosphere and sunshine of the plains provided they do not have to compete with grass and weeds for the limited moisture. If planted on the lawn they need two or three soakings during the growing season and especially one late in the fall that their roots may be moist during the winter.

The Black Hills Spruce, from the Black Hills of South Dakota, is a geographic form of the familiar White Spruce. It is dark green in color although a few specimens are glaucous. It is a small tree with short needles and a very compact habit of growth. These modifications make it better suited for the extreme temperature and moisture conditions of the plains than the ordinary White Spruce from Minnesota or farther east.

The Colorado Blue Spruce completes the trio of reliables. The beauty of this evergreen is familiar to all. In nature about five per cent. of the trees are really blue, the remainder are various shades of bluish green, light and dark green. When the new foliage appears in the spring no two trees are exactly alike. This characteristic gives great variety to a planting which might otherwise appear monotonous, providing the real blue form is not used to the exclusion of the equally beautiful green and intermediate forms.

This does not by any means exhaust the list of evergreens which can be grown on the Northern plains, but if these three species are carefully planted and cared for they make a reliable background or framework and no disappointments will result; other sorts may be added later under their protection with a good chance of thriving.



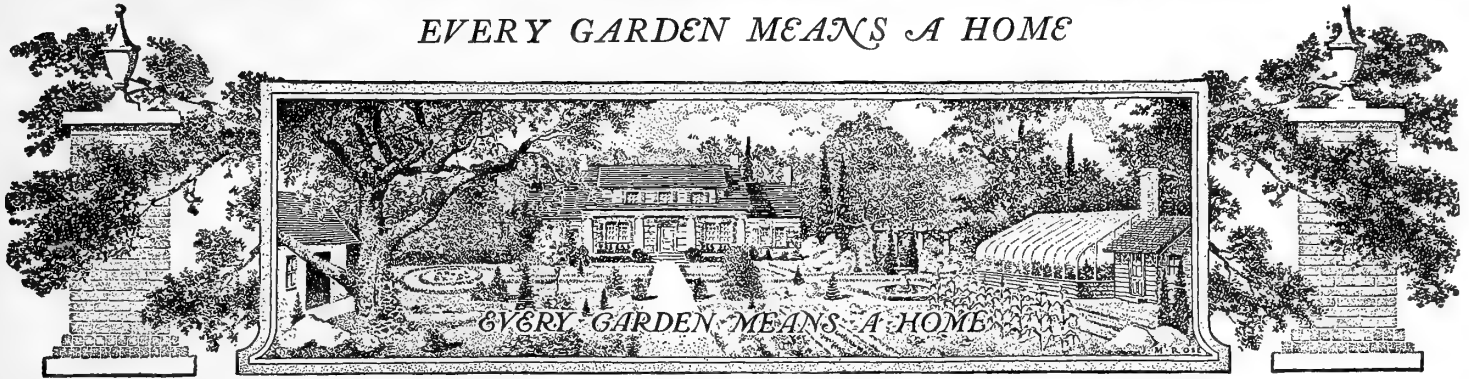
Colorado Blue Spruce (*Picea pungens*)

Western Yellow Pine (*Pinus ponderosa*)

Black Hills Spruce (*Picea alba*)

# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



## THE BOGIES OF PREPARATION

AS ONE reads the conventional books and papers on garden practice there grows up an appalling spectacle of precision and definite formulæ in the handling and growing of particular plants. That, unquestionably, has done much to suppress the activities of the average would-be gardener. Nearly all the writers on practical gardening have approached the subject from their own view-point and assuming that others have at their command an abundant supply of different kinds of available soil have dictatorially laid down proportions and quantities for this, that, and the other crop so that primary steps of cultivation bore no inconsiderable resemblance to a physician's prescription for the compounding of drugs.

It is perhaps natural, certainly excusable, that the skilled technician should interpret himself in the terms of perfection; but it is a mistake not, at the same time, to state that these things, though the most desirable, are not pre-requisite essentials to success. Besides, success may be of degrees, and the individual gardener is usually satisfied with an average result rather than perfection of exhibition standard.

Then again, convention and rule-of-thumb repetition of stereotyped formulæ all come easily and so few actually speak from the experience of trial and observation. This was forcibly brought out in one of the articles on Rose growing in the *MARCH GARDEN MAGAZINE*. Mr. McFarland there had the temerity to hold up to question the time-honored prescription of extra deep soil preparation for the growing of Roses—the prescription that has been talked about and written about in the face of the very obvious fact that hundreds of people are growing Roses successfully, or at all events successfully enough for their personal needs, without all the such laborious and costly preparation called for by the conventions.

This article has awakened a responsive chord in several quarters and one reader of recognized standing in the horticultural world writes: "I have long been half convinced of the soundness of Mr. McFarland's philosophy, and that the three foot rule for Rose soil preparation was largely bunk—yet, notwithstanding, I have gone on and on teaching my students the same old stuff." And a good many other readers have perhaps themselves awakened to the realization that for the first time they were achieving success along unconventional lines and were doing this without knowing it. Without realizing the wherefore, they still stood appalled at any innovations because in the books they were told they were to have this, that, or the other requirements as a matter of dire necessity before the cultivation of a particular plant could be attempted.

Unquestionably, we have been binding ourselves with fetters of convention in gardening as well as in other things, afraid to be original or not capable of thinking for ourselves, and yet it is the individual's own course of progress that holds the greatest opportunity for future possibilities. What a lot of things we

know or imagine we know because we have heard them repeated over and over again, which, when put to the test, are found to be not so! In this respect gardening is a fine discipline for the mind and the soul, not that it is an eternal struggle against adversity as one horticultural divine has expressed, and therefore a most pious occupation, but that it does offer the greatest field for the reflective intellect and at the same time mental and physical recreation. To the inquiring mind, gardening is full of fascinating, broadening possibilities, ever and anon returning new surprises in exchange for the inquirer's enthusiasm. One man defying all the laws plants Roses and gets good blooms; another plants bulbs "too late" and harvests flowers; the third, ignoring the instructions of the planting tables, plants deeply because experience has told him that otherwise his plants blow over; and so on. Not that the table was wrong, but tables can after all only express an individual experience and there is nothing so certain as the uncertainty of certain certainties of gardening.

And so among the gardeners there is a pooling of human experience and interchange of ideas that is pleasing to the reflective and inspiring to the prospective, and where gardeners meet together they chat in friendly interchange of thought as "in after dinner talk across the walnuts and the wine." And so in friendliness the neighbors chat and in their confidences contribute to the sum of knowledge. *THE GARDEN MAGAZINE* welcomes in this particular number such amicable reciprocity of experience among the neighbors and takes pleasure in featuring it through several pages of the issue.

## PLANT QUARANTINE AGAIN

THE further postponement of the "conference on plant quarantine" called by the Federal Horticultural Board until May 15th still leaves time for our readers to express themselves to the Secretary of Agriculture, and to their representatives in Congress. Objection is not to a reasonable quarantine against actual menace of disease or injurious insects, but to the attitude of the Federal Horticultural Board in abrogating to itself the right to determine (as a part of quarantine regulation) what particular kind of plant, and even what *varieties* of a given plant may be "necessary" for the trade of the country.

It is not a reasonable *quarantine* when an office of the Department of Agriculture dictates the kind of plant and quantity of a particular variety, even, that shall be admitted quite regardless of the question of disease menace. Readers of *THE GARDEN MAGAZINE* should also bear in mind that the Board's Chairman has definitely asserted that the mere adornment of private estates is not sufficient use of plants to justify their introduction.

There is further evidence, too, that other officials of the Department of Agriculture are looking to the imposition of further restrictions; indeed, speaking before the Society of American Florists at the annual convention last August, the Horticulturist

of the Department, Prof. L. C. Corbett, definitely asserted that in his opinion the restrictions would be increased rather than lessened. Is this coming conference then the official step toward that end?

From the first THE GARDEN MAGAZINE has suspected that the Department of Agriculture was construing the powers of a quarantine for a distinctly different purpose. Dr. Marlatt, the Board's Chairman, has indeed made the belated statement that the idea behind the Board's administration of Quarantine 37 is to completely *exclude all plants from abroad!* It may or may not be a question whether *all* plants now ordinarily used in adornment of private estates can be produced here of an equal quality; that is not the crucial point after all. Rather it is the right of the Board to use a measure of sanitation for the purpose of dictating to the horticulturist what given varieties of Peony, or Iris, or Rose, or what not, it, in its bureaucratic wisdom, considers are needed for the ornamentation of our gardens.

IT MAY be submitted that since the Board *is* willing to admit plants *commercially* all the exigencies are satisfactorily met. The Board appears to hold that the nurserymen and florists are the proper media for the introduction and distribution of new plants, and that they keep sufficient eye abroad to see that American gardens are up to date. The facts, however, are quite otherwise.

It is perfectly well recognized among the real builders of gardening in America that the amateur is the great pioneer. The investigative spirit and the disregard for expense on the part of progressive amateurs—such as form the family of GARDEN MAGAZINE subscribers—the enthusiasm of genuine lovers of gardens and the great botanical gardens are responsible for bringing in the new things. In both cases other amateurs see them and desiring them, create the demand

which forces importation by the trade. Dr. Marlatt's disbelief of this obvious fact is absolutely at variance with a hundred years of experience and with all the knowledge of any one who has kept in touch with the trend of horticultural endeavor. It simply again emphasizes the sheer wrong of putting a man, however sincere and able, to do a thing with which he has no sympathy and no intimate acquaintance.

There is a basic inconsistency in the attitude of the Federal Horticultural Board as well as a basic wrong. If those plants which Dr. Marlatt is willing to let come in for propagation purposes are not for "the mere adornment of private estates," what are they for? When Mrs. B., a private individual, endeavors to import new Astilbes for adorning her private estate, it is wrong and a danger that must not continue. If, however, B. & Co. (dealers) import them and sell their immediate product to Mrs. B. (amateur) that is right! Under what color of law or equity is it within the scope of any government official to tell any individual what he wants, or where he is to get it, if that individual has the price and if its introduction is not a danger to his neighbors?

You, garden owners of America, must act promptly in presenting your case, not to the Federal Horticultural Board, but to the Secretary of Agriculture insisting on your rights as citizens; also write to your senators and representatives in Congress urging that the Department of Agriculture attend to its legitimate fields of activity and stop this endeavor to control (and as we fear, strangle) the development of horticulture in the United States.

SEEING THE ITALIAN VILLAS," by Leon Henry Zach has been reprinted from *Landscape Architecture* in pamphlet form and may be had upon application. It is a concise itinerary of villas worth visiting, their whereabouts, and how to reach them.

## THE OPEN COLUMN

*Readers' Interchange of Experience and Comment*

### Alpines of Our Own Sierras

To the Editors of THE GARDEN MAGAZINE:

I HAVE read with delight, Clarence Lown's and Louise Wilder's articles on Alpines and their culture in your February number. As for the references to Miss Jekyll, she has been a life-long inspiration! Years ago, after reading her "Wall and Water Gardens" I had a dry wall built and a pool dug within a week, and within a year had gathered, from the Alleghanies and the Adirondacks the makings of a veritable pool in the forest. For a background native Rhododendron and Azalea tumbling over a dry wall set thick with Walking-leaf Ferns; and where the rough banks sloped down to the water's edge, the Sarraceas, Swamp Orchids, and Sundew did nicely. At different times, I had thirteen different native Orchids bloom for me in this very small corner of Long Island, within the limits of New York City (where I then lived).

I have wondered in reading the articles referred to if our native enthusiasts have ever seen our own true Alpines in the High Sierras, though I doubt the possibility of naturalizing them at lower altitudes.

When you get above eight thousand feet, the Heath family is the most conspicuous and they are true Alpines, forming mats of thickly set leaves and showery flowers.

The Brianthus or Red Heather carries splendid heads of magenta flowers which make sheets of color among the rocks. The Labrador Tea (*Ledum glandulosum*) is more of a shrubby bush with broad white flower heads topped with a hazy lace of stamens. But of all our Heaths, and indeed of all Sierra Alpines that I know, the most enchanting is the Cassiope (*C. mertensiana*) or White Heath. I was only fortunate enough to find it once in its native haunts, at an altitude of about ten

thousand feet, at the very end of August. In turning the corner of a great wall of rock, fringing a cleft along its base I came upon the Cassiope, there where the croziers of the Ferns, with unbelievable optimism, were just uncurling from beneath the edges of the snow banks.

The leaves of the White Heath are closely pressed along the stems, quite like a branch of *Arborvitae*, and every few inches on a delicate wiry stem, perhaps an inch long, hangs a dainty little bell, quite like Lily-of-the-valley in texture and in shape.

The altitude, of course, makes some difference, but I should say that from eight to twelve thousand feet was the stronghold of the most beautiful Sierra Alpines.

The wonderful blue *Polemonium* (*P. eximium*) I have only found in the neighborhood of twelve thousand feet, growing in among the most impossible looking rocks. Although I have found it several times (near the top of Mt. Dana and again in the Kings River Country, just north of Mt. Whitney;) I have always been a little late to see it in its blue glory. The Alpine Willow Herb (*Epilobium obcordatum*) I have found at ten thousand feet and above. Its low small-leaved stems are lost beneath the beautiful silky, rose-pink flowers. The Alpine Primrose (*P. suffrutescens*) is very much the same in color and in habit of growth, tucked close around the base or in the clefts of granite rocks, but the flowers are not so showy and the leaves form dense little rosettes at the base in true alpine fashion. There is only one of the rare Alpines that I have sought in vain, the *Androsace* (*A. septentrionalis*) but it is always well to keep something yet to hope for and climb for. The Alpine Sorrel (*Oxyria digyna*) is as lovely as any flower with its brilliant crimson heads of seed elbowing the Primroses and *Epilobiums*,



There are of course an endless number of beautiful Gentians, Dodecatheons, Pentstemons, Larkspurs, Asters etc. around ten thousand feet, but they always seem to belong to a lower world and not quite deserve the high title of Alpines.—MARIE MEIÈRE, *Los Altos, Cal.*

### "Sweet Lime"

To the Editors of THE GARDEN MAGAZINE

We read the letter of one of your subscribers on page 327 of your February number and took up with the Apothecaries Hall Co. of this city, which does a very large wholesale business and has a fertilizer department, the question of the purchase of "sweet lime," and they never heard of it. They can find no reference to anything of the sort; nobody can advise me. They refer me to agricultural limestone and hydrated lime and ground limestone and Swedish lime, but nothing about that which is "sweet." Would not it be well for you, recognizing the fact that there are many of us who have little information or knowledge of things suburban to give us some information on the different kinds of lime?—N. R. BRONSON, *Waterbury, Conn.*

—Of course I am sorry that some readers have been annoyed about the expression "sweet lime." Time out of mind it has been synonymous for slaked lime, is a commonly accepted term in chemistry and is used in text books. I presume it is called "sweet" because the slaking process renders it a sweetener of soils.—A. RUTLEDGE.

### Of Course Sweet-Peas Can Be Transplanted

To the Editors of THE GARDEN MAGAZINE:

OUR "garden neighbor" in Seattle, Inez Fraser (see March GARDEN MAGAZINE, page 47) may be interested to learn that every grower of high class Sweet-peas raises his plants in pots or boxes and transplants. I was doing this nearly 30 years ago. Sweet-peas—whether raised indoors or in the open—readily transplant, but it is not wise to so treat plants that have grown more than six to eight inches unless raised in pots. In this section of the country so different from that of Seattle, one cannot hope to sow in the open much before April; therefore to get strong plants that will bloom strongly before the hot weather, indoor or frame sowing is essential.

Already (March) I have on hand several hundred seedlings up in boxes. Though neighbors tell me I cannot hope to grow Sweet-peas on my soil, twenty years of experience in growing them leads me to quite another belief. Green Peas cropped well last season and where these thrive so will Sweet-peas; at least I figure it so.—T. A. WESTON, *New Jersey.*

### Circumventing Moles and Ground Mice

To the Editors of THE GARDEN MAGAZINE:

LIKE many other readers of THE GARDEN MAGAZINE I have had great difficulty in raising Tulips, and have planted them by the hundred and had but a bare strip of ground for my reward in the spring. But now I plant Tulips with a serene assurance that I will see blossoms from the bulbs I put so carefully in the ground. My experience may be helpful to others unless the moles and ground mice of other gardens differ from the inhabitants of my grounds. I have found they work only in the loose soil of beds and borders and in the lawns. One fall I put Tulip bulbs in a narrow strip close to the foundation of my house—every one came up and bloomed; nor have I lost any of them since from the ravages of their deadly enemies. Since this success I have planted the bulbs along the side of the garage with the same result. Of course, the soil in such locations is not very good, but Tulips are not extra fastidious, and they flourish in spite of that. Apparently the moles like to work in the open where they can extend their runs in any direction they choose. Perhaps they also dislike grit and the constant passing of human feet. Whatever the reason, they do not work about house foundations here, although I have not put any barriers of board, stones, etc. in their way. I will be very glad if this hint helps others. This method of raising the Tulip restricts the plantings, but "safety first" is my motto.—A. H. B., *Del.*

—Inquiry was made in September issue of THE GARDEN MAGAZINE for a way to eliminate moles. If Maryland is as congenial to the operations of this tunneling pirate as Oregon, the lady has my profound sympathy. A map of the subways within my garden domain would be a most interesting exhibit. What a splendid irrigation system one might have if only these industrious workers could be harnessed.

Many remedies are brought forward for this pest, but, after much

experience of ruination and trials of different things offered, I have settled down to traps and tobacco. Traps that are made for the purpose will really catch a good many, using a little pains and patience, and thus reduce the colony considerably. But if one has a seed-bed or Tulip patch that must be protected, then just permeate it with nicotine. It will nauseate the moles and fertilize the soil. One good smell of the tobaccoed patch will start them off to sweeter fields. Instead of plowing straight down the rows of newly planted Peas they may cross it in haste, but that is enough.

I purchase sacks of tobacco stems from the cigar factory and, when convenient, run them through the straw-cutter for easier spreading. Some are put down into the bed before filling up and another sprinkling strewn on top for the rains to flavor the ground. The stems are inexpensive and probably worth their cost for fertilizer alone.—CHAS. F. BARBER, *Portland, Oregon.*

—If Mrs. Applegate of Maryland is still waging war against moles, may I offer a remedy which I have used very successfully for more than fifteen years and which I have recommended to many people, who have reported equal success?

Punch a hole in the runs with a cane or stick every ten or twelve feet, dropping in each hole a Castor-oil Bean. The rodents are very fond of this seed, but they never live "to tell the tale." This method is inexpensive and effective—if Mrs. Applegate tries it, I hope to hear that she finds it so.—CHARLES W. EBERMAN, *New York.*

—Concerning the inquiry of W. A. Shafor, Hamilton, Ohio, about the depth to which the troublesome mole goes, W. H. Hudson says (either in "The Book of a Naturalist" or in "Far Away and Long Ago") that if fine woven wire is sunk three or four feet around a garden, no mole can ever get in, and that it is the easiest thing in the world to keep them out. We haven't had a chance to try this ourselves, but control them in a measure by putting poisoned raisins in their runways.—MRS. P. S. HERBERT, *Tacoma, Wash.*

—Do not waste energy telling the sufferers from field mice about arsenic or strychnine or any other poisons that might kill one mouse out of the hundreds. I worked for over two years before I learned of Parke Davis' "Azoa" that is a germ-carrying poison so that the destruction goes on till all have disappeared.—MRS. WM. T. SAMPSON, *Hancock Point, Me.*

### Anemones in Hawaii

To the Editors of THE GARDEN MAGAZINE:

I AM not having anything so pretentious as a rock garden, but I want to put some rock plants in an excavated garage which has a grotto effect of boulders. THE GARDEN MAGAZINE has helped me immensely in planning my front yard, and so I am looking for further suggestions. I often wonder why no one mentions Spring Anemones. Is it because they won't grow outdoors in your colder climate? With us they begin blooming in January (picked my first 18 blossoms last season on Jan. 6th) and last until June. The stems are from eight to twelve inches long and the flowers a wonderful array of colors. Everyone that sees them, immediately becomes a Spring Anemone enthusiast. They grow readily from seed if left in the seed bed until they bloom and then transplanted after they have ceased blooming.—JESSIE C. BARLOW, *Waimea, Kauai, Hawaii.*

—The St. Brigid Anemones (*A. coronaria*) do not do well in this part of the world because they suffer from summer heat as much as from the winter cold. They are grown to some extent by the florists under glass and can be seen in limited quantities. Outdoors the plants have an irrepressible tendency to start growing before spring arrives, and consequently they get their heads nipped off and never come to bloom. Such plants as we do see here are grown in coldframes with protection. The fact is that very few people will take the trouble to nurse the plants to such a degree as this. They want easy results. On the Pacific Coast—the northern part of it, at all events—Anemones are grown successfully.—ED.

### A Novelty Border for Your Flower Bed

To the Editors of THE GARDEN MAGAZINE:

A FRIEND had a small bed of volunteer Petunia plants soon to bloom, and she was debating the question of a border for the bed. A Grape arbor had been pruned and the cuttings lay on the ground near by. My friend began, absent mindedly at first, to select cuttings and stick them in the ground, pushing in both ends, then setting another



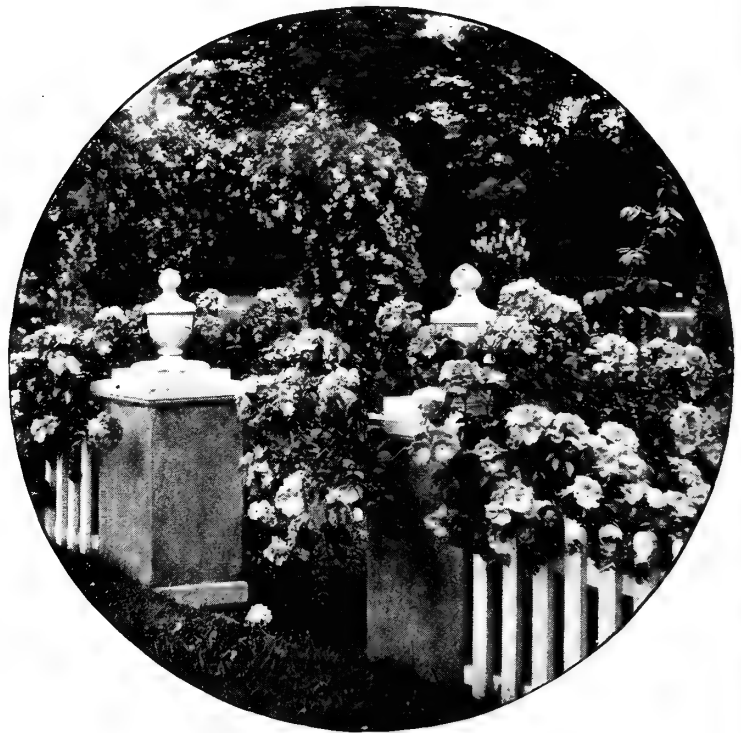
WHEN AFTERNOONS GROW LONG

Every garden should have its flanking veranda where the gardener may look out at leisure upon the matured results of his spring plans and plantings when midsummer days incline him to indolence



AFTERNOON TEA IN THE GARDEN

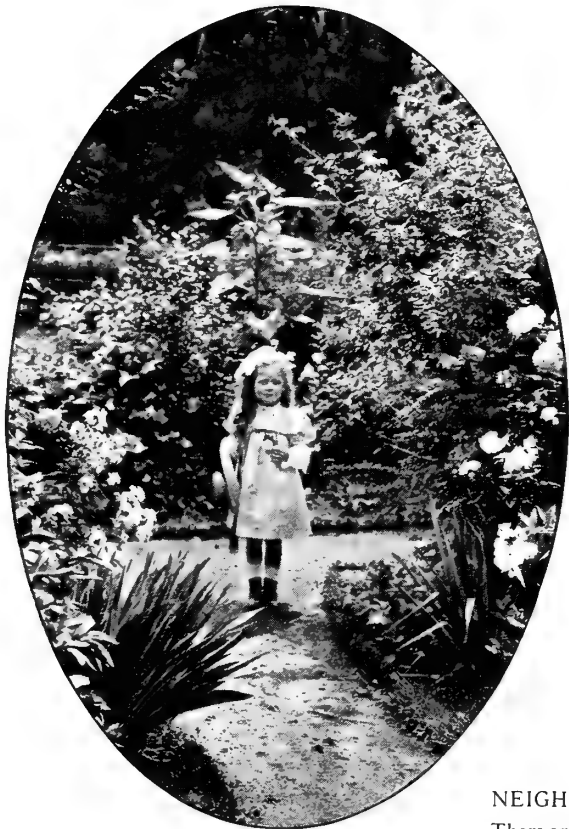
Every device that makes for more outdoor living is to be welcomed and the teahouse may serve as a pivot about which to build the garden



INVITING MY NEIGHBOR TO ENTER

The friendly entrance is always a desirable feature and one to keep in mind when planning the garden; the American Pillar Rose may be used with great effect

# COME INTO MY GARDEN



## NEIGHBORLINESS IN THE GARDEN

There are many ways of achieving the friendly intimacy of aspect that we all like our gardens to wear—here pergola and pool offer refreshing shelter when July suns stand overhead; Japanese Iris flourish in the foreground



## SUPPER ON THE TERRACE

The paved terrace is a useful link between indoors and out and supper by sunset in the open may be made a very pleasurable and restful affair





the same way but overlapping the first a little. Liking the effect, she took the pruning knife and cut a quantity of the cuttings to the right length and encircled the bed with what looked, when finished, like the edge of a rustic wicker basket. After a number of rains it was observed that the beautiful, tender, pink and green early leaves of the Grape were unfolding at every bud of the unearthed cuttings. They had rooted and were growing so naturally that in time small bunches of fruit appeared here and there. When leaves grew too large for the best effect they were pinched off and small leaves started in their place, and by the time the Petunias bloomed the bed looked like a large, shallow, vine-wreathed wicker basket of brilliant flowers—a novel and beautiful effect.—MRS. M. EVANS, *Leavenworth, Kansas.*

### But a "Mess" Was Meant

To the Editors of THE GARDEN MAGAZINE:

COULD you not persuade your correspondents to give up the use of that horrible word "mess" as applied to food. Surely "a dish of beans" sounds and looks infinitely better than "a mess of beans" which conjures up visions of "beans writhing with maggots." No doubt there was a "mess of pottage" but language has changed during the last two or three centuries.—H. I., *Canada.*

—Many people rebel from the use of certain perfectly good words for personal reasons, but the dictionaries authorize "mess" as signifying "a quantity of one kind of food sufficient for one meal," which is something more precise than a "dish" which conceivably may be too much for one meal. We fancy that mess was deliberately employed on page 327 of the February issue, for instance, in referring to the harvest of beans.—ED.

### Flourishing Flowers in Indiana

The Editors of THE GARDEN MAGAZINE:

THE behavior of the Greek Mullein (*Verbascum olympicum*) has been discussed in these columns as now biennial, now triennial. I planted seed June 23, 1920. Late in August the seedlings were transplanted. Most of them began to bloom the first week of June, 1921, a few only waiting over. They were from four to eight feet tall, and were very beautiful for more than a month. The stalks were cut back as they began to go to seed, and the bloom continued for the rest of the summer, from lateral stalks.

I should like to add a word to the praise of the Platycodon, or Chinese Bellflower, expressed some months ago. It is remarkably permanent. I know plants still living and thriving in the grass in an old garden, where no attention has been paid them for fifteen or twenty years. No one knows when they were first planted. I have raised my own from seed. They improve from year to year, and the pure white variety is particularly beautiful.

Why is not the graceful *Gaura* more generally grown? It comes easily from seed, and though listed as an annual has been perennial with us even without mulching, coming through trying winters when supposedly hardy things vanished. The plants are larger and bloom more abundantly each year, and late this last summer the masses of delicate bloom were a fresh delight every morning.

Our common wild Rose (*Rosa setigera*) is excellent grown as a climber. The shoots run high if given any support, and the bloom comes when most of the climbing Roses are over.—M. JOHNSTON, *Bloomington, Indiana.*

### Making Colors "Come True" in Concrete

To the Editors of THE GARDEN MAGAZINE:

EXPERIENCES given in THE GARDEN MAGAZINE at various times by experimenters in concrete garden furniture have interested me so greatly that I was finally lured to try my hand at it with more or less success. My last effort being a garden vase which I wanted to color, I added some Venetian red (dry color), to the mixture and had a good terra-cotta color when it left the mould, but alas! as it dried out, it began to exude a chalky, whitish substance which covers most of the surface and spoils the appearance of the jar. I have concluded that this came from the cement. Is there anything that could be added to the mixture to counteract this tendency and cause the color to dry out true, or anything that could be applied to the finished product that would neutralize such an effect? I have tried the latter method to some extent without results, and I will very much appreciate any light on the subject.—A. M. RINAMAN, *Mountain View, Cal.*

—Possibly the trouble experienced was caused by the use of a coloring pigment which was not of mineral composition. For use with Portland cement it is necessary that a coloring pigment be of such nature

that it is not acted upon by the alkalies in the cement, so that it is essential that it be of mineral composition. Oxide of iron is usually employed for securing the red shades. In purchasing coloring pigments it is well always to mention to the manufacturer that they are to be used in concrete as sometimes manufacturers have different grades for various uses.

The chalky, whitish substance which appeared on the surface of the jar also may be due to efflorescence which is a soluble salt brought to the surface by moisture and deposited there when the mixture evaporates. This can be removed by a wash of muriatic acid and water mixed one part of acid and five parts of water and probably it will not recur. Sometimes the soluble salt is contained in the sand.

An application of sodium silicate (waterglass) or magnesium fluosilicate applied to the surface probably would help matters. These fluids are on the market under various names as hardeners for concrete.—THE ATLAS PORTLAND CEMENT COMPANY.

### Where Christmas Roses May Be Had

To the Editor of THE GARDEN MAGAZINE:

IN The Open Column of the March issue I note Mr. V. E. Harrison's inquiry for Christmas Roses. Last fall I procured the Christmas Rose (*Helleborus niger*) from the Chautauqua Flowerfield Company at Bemus Point, N. Y.—ROBERT R. LEWIS, *Coudersport, Pa.*

—Having noticed inquiries about *Helleborus niger* I am writing to say that I obtained healthy looking plants from Wayside Gardens, Mentor, Ohio, shortly before Christmas.—MRS. WM. S. WERTS, *Albany, N. Y.*

### Ice Damage in Illinois

To the Editors of THE GARDEN MAGAZINE:

MR. T. D. HATFIELD'S account (in your February, 1922, issue, page 293) of the ice storm which swept the coast of New England in November was read with interest, for a similar storm swept Bunker Hill, Ill., this winter. From December 23d to December 27th the town was ice-bound, to the sorrow of its inhabitants, as nearly all their



CHRISTMAS MORNING, 1921

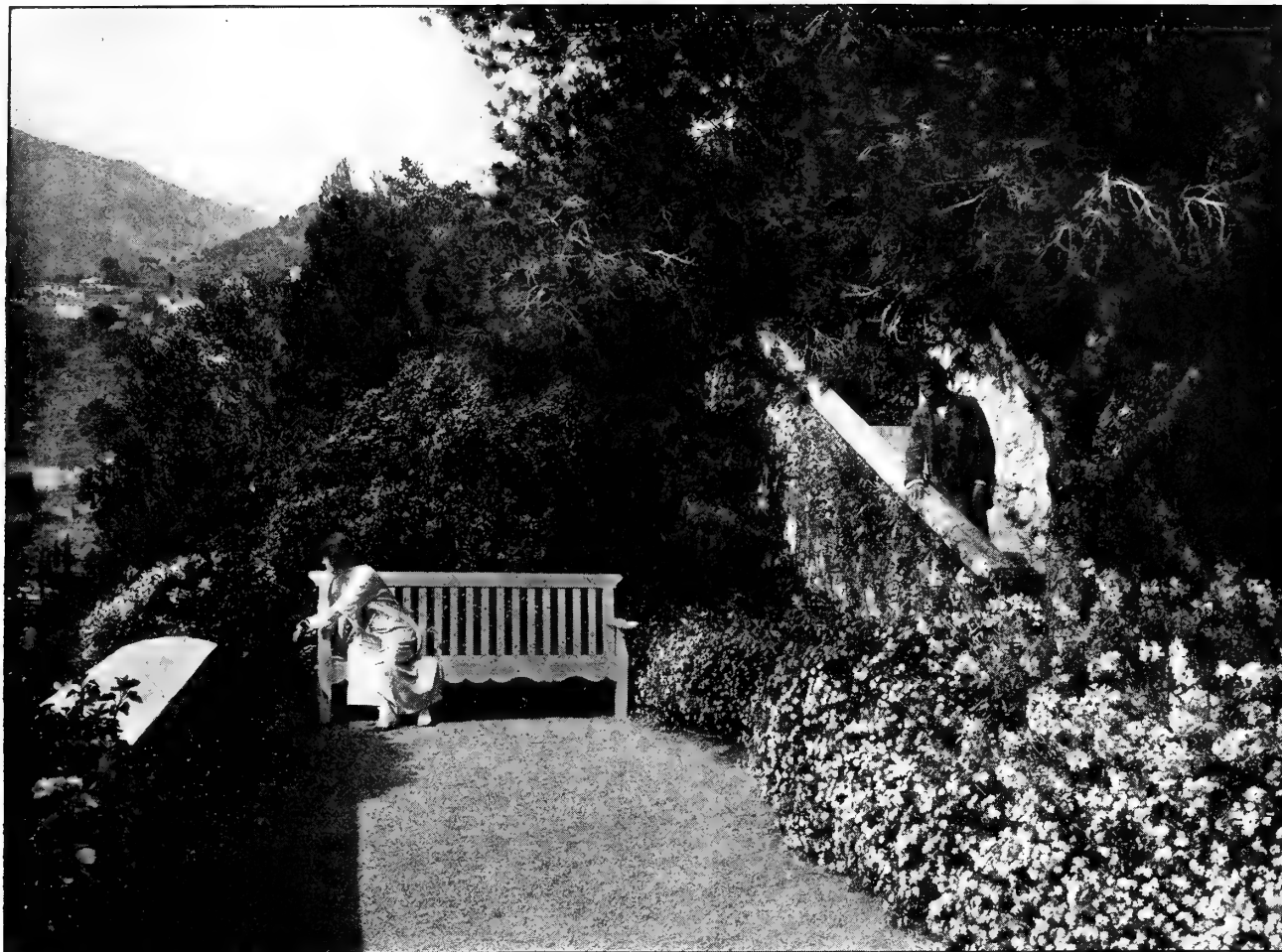
The ice storm which hit Bunker Hill, Ill., so hard (see accompanying text,) did not stop there; the Cedar here shown bowed over in a complete arch by the ice was at St. Louis, Mo.

beautiful trees were ruined; branches 6 inches in diameter being broken as easily as twigs, while trees close to houses menaced life and property, and one person was actually killed by a falling branch. How often in the past have I admired those interlocking trees arching over the streets! —G. DREYER, *St. Louis, Mo.*

### Our First Gladiolus Garden

To the Editors of THE GARDEN MAGAZINE:

WE LIVE in a typical New York eyrie, high up in the air. My husband and I are both away all day working. One spring we felt justified in renting a little frame cottage for the summer within commuting distance of New York. It was a simple, old-fashioned affair on the banks of a wooded stream. We went out in early May to look at it and suddenly the possibility of a real flower garden leaped to mind—white Phlox against a blue sea, Lilies in the woods, Lilacs at the garden gate, and Roses in the dusk. For awhile we revelled in our dreams.



Courtesy of the Robertson-Cole Co.

#### PLANTING SUGGESTIONS FOR THE NEIGHBOR WHOSE GARDEN LIES ON A HILLSIDE

Great masses of bloom like this can actually transform the utilitarian retaining wall into a feature of distinct interest and charm, and such sweeping vistas fully compensate for the initial difficulty of establishing a hillside garden. The gardens of Lord Northcliffe at Cannes, France

Then John said, "Of course, nothing will come of it. Neither of us has any time to spare. The cottage isn't ours till July and then it will be too late to plant for this summer."

His skepticism was the final incentive to action. I spent my spare time reading garden magazines and seedsmen's advertisements. Then one Saturday, I took a day off. I invested in bulbs, having decided that once in the earth, they needed less care than seedlings—my plan was very simple; to buy the bulbs and a hoe, go out and plant them, and leave the rest to Nature.

I had 200 of the newest *Gladiolus* bulbs, both early and late blooming varieties and two or three each of *Liliums auratum*, *tigrinum*, and *speciosum*; some *Hemerocallis*. I wanted Iris, too, but decided they would bloom too early for a July cottage.

Toward the end of May on a day to make your heart glad we put in the *Gladiolus* along the bank of the stream, beginning at the right with the blue Baron Hulot; then yellow Schwaben, Niagara, and Dawn; through whites, Peace and Rochester; pinks, Panama, Desdemona, Mrs. Frank Pendleton; to end with a blaze of red, War. The Lily bulbs were put in separate clumps, *tigrinum* at the front doorsteps; *Hemerocallis* at the edge of the woods, opposite the dining-room window and the rest near the porch facing the stream.

Then we went away and left them. The *Gladiolus* became a regular part of my nightly prayers, which were answered. A line of exquisite color ran along our river bank from the very first day of our arrival, when a Pink Beauty blossomed to greet us, through August when Baron Hulot burst into rich indigo bloom. The last week of July the Lilies broke into flower. Though I have great plans for the future I doubt if anything will ever be lovelier than our first *Gladiolus* Garden!  
—G. E. ALSOP, *New York*.

#### Why Do Tulips "Break"?

To the Editors of THE GARDEN MAGAZINE:

IN NOVEMBER, 1919, Mr. Sherman R. Duffy had something to say on various beliefs of his regarding Tulips that provokes me to reply, even at this late date.

"Why do Tulips break?" "Why it breaks and when it will do so none can tell." Very reckless statements. He has not read the government bulletin on bulb-growing which says the cause is the mosaic disease. I would use a less high-sounding name, and call it blue mould; possibly two diseases that look alike. However, not every diseased bulb "breaks" the colors of its blossom. It is my opinion that every bulb that "breaks," will show blue mould on the bulb and on the underground part of the stem if pulled up when the break appears. Still, it may be that anything which interferes with the normal functions of the plant may cause the break.

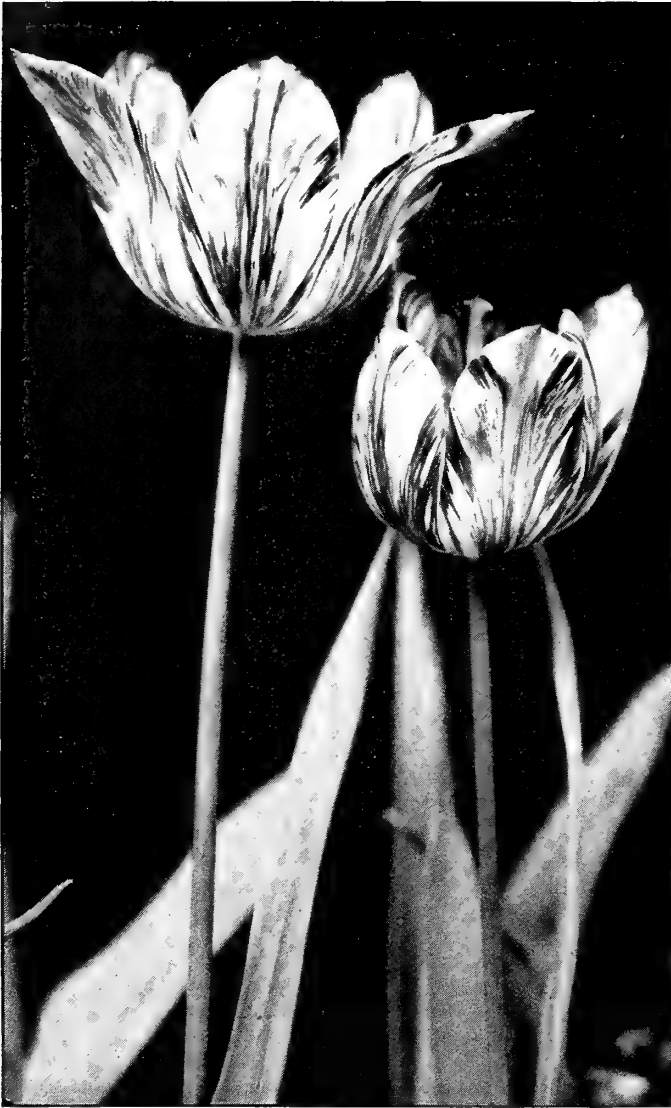
I believe the break becomes evident the spring following the planting of the bulb. If a bulb is left in the ground several years, and does not show a break the first year, it will not in any subsequent year until after the bulb is dug and reset. This is a fact of great practical value in keeping a commercial line true to type. "— the ultimate destiny of any self-colored Tulip." I do not believe it. I think there are many Tulips which harbor no tendency to break. I have never seen a broken Bouton d'Or, La Tulipe Noire, Gesneriana, and others, and do not expect to. On the other hand, there are varieties which break constantly and in heavy quantities.

"Why is a Parrot?" An utterly foolish question. Why is a turnip? Why is a Geranium? Why is John Smith? Why is a squash bug?

I do not believe that the Parrot Tulip is always a Bizarre, for the statement that a Parrot is always striped is not true, and the kind of striping that most of the striped Parrots have is not the kind of striping characteristic of the Bizarre type.

The habit of the Tulip to break is a nightmare to the commercial grower. However beautiful a break may be, he does not want to see it. A striped Tulip may be exquisitely beautiful as a single bloom, but a mass of it does not make a desirable bouquet, as the flower form and character are lost in a meaningless mass of little speckles. It is my opinion, too, that it is the tendency of broad handsome stripes to deteriorate year by year into stripes smaller and smaller until even the individual bloom has lost all character.

I have seen the statement that a broken bulb never gives a reversion to the original color. As the stripes are constantly varying, I do not



#### "BROKEN" OR "RECTIFIED" TULIPS

These are really the matured forms of hybrids of which the self-colored breeders are merely juvenile forms; after having "broken" or matured, these adults will not change in later years

think the statement necessarily true. At any rate, it is one not safe to make. Also I have seen it stated that broken forms are permanently weak in comparison with the unbroken bulbs from which they originated. This I know is not true. Occasionally one may be, but I have a plenty that are not.

"There is a lot of nonsense about the impossibility of moving the bulbs until they are thoroughly ripened—. A Tulip bulb may be dug even when in full bloom—and moved with safety, providing it is lifted carefully with a full quota of roots and soil adhering and is given attention after being planted, in the way of watering, until it has ripened its bulb." To be sure; but that is not moving it, any more than carrying a potted Geranium from one window to another is moving the Geranium.

I once read about "thief bulbs," with a statement that they are a great mystery, and a surmise that perhaps they are a reversion to type. There is no mystery about them, and no excuse for fanciful surmises. Any variety can be a thief bulb if a bulb of it gets thrown among the bulbs of a variety that has larger bulbs. Clara Butt would operate as a thief bulb in a planting of Farncombe Sanders, Bouton d'Or in any variety of Darwins, etc. The bulbs, on account of being smaller, constantly grade back into the planting stock. The only way to get rid of them is to dig them up and destroy them when their blossoms appear. Even then there will always be bulbs smaller than of blooming size which will remain to give further trouble. If a planting is left three years without digging, and the thieves are carefully removed each year, the stock may or may not be completely freed from them, but will be practically so for a few years. There is one special variety to which I suppose the name is commonly applied, a small, very inferior, slender flower of the color of Inglescombe Pink. It makes very small bulbs, and an enormous quantity of them.—BENJAMIN C. AUTEN, *Missouri*.

—Perhaps the following remarks will tend to clear the situation; there is nothing really mystifying. "Broken" or "rectified" Tulips are the matured forms, while the self-colored breeders are juvenile forms of hybrids. If Tulips are raised from hybrid seed, the flowers first produced are as a rule self-colored, a few may be "rectified" or adults from the first, and any such will not change in later years. The self-colored, or breeders tend to "break" into feathered forms, but the time required is not definite. And that worried the old-time fanciers of "Florists Tulips"—they wanted breaks—and set no value on the breeder, which is the favorite to-day. Thus does fashion change in floral fancies. Of course species, like *T. Gesneriana*, for example, do not break. A "bizarre" is a broken Tulip having the color, whatever it may be, on a yellow ground. A "Parrot" is a lacinated form. In the bulb growing districts of Holland a tendency to develop narrow petals is noted in some varieties normally broad petalled. The bulb bearing such a bloom is termed a "thief."—ED.

#### Where, Oh Where Are Our "Old-Fashioned Pinks?"

To the Editors of THE GARDEN MAGAZINE:

BEING one of the numerous amateur gardeners who have long sought in vain the "old-fashioned Clove Pink" I am hoping that perhaps someday someone will write a really clear article about Pinks and tell us exactly what they all look like and what they will do. I hope it will begin with *Dianthus plumarius*, stating clearly that while it is one of the integral parts of the old-fashioned garden, it is not the hardy Clove Pink we remember; but is the single, fringed Grass or Spice Pink, sometimes but not always fragrant, that it has a variant in a lovely smooth-edged flower like an Apple blossom—and another that is slightly double. There is much uncertainty to be cleared up about the various forms of annual Pinks which, as far as I have observed, have none of the graces of the hardy Pinks. Then maybe we shall learn something about the "old-fashioned double white fimbriatus" which the English catalogues describe as powerfully fragrant—and some of the others that are all as easily grown as annuals. And again we shall discover which varieties are hardy here in the North without special protection.—R. F. HOWARD, *South Lincoln, Mass.*



#### OUR REMUNERATIVE RHUBARB PATCH

In Apple blossom time we sell fifty dollars worth of Rhubarb from four rows one hundred and thirty feet long. Cora June Sheppard, Shiloh, N. J.

#### One of Nature's Bag of Tricks

To the Editors of THE GARDEN MAGAZINE:

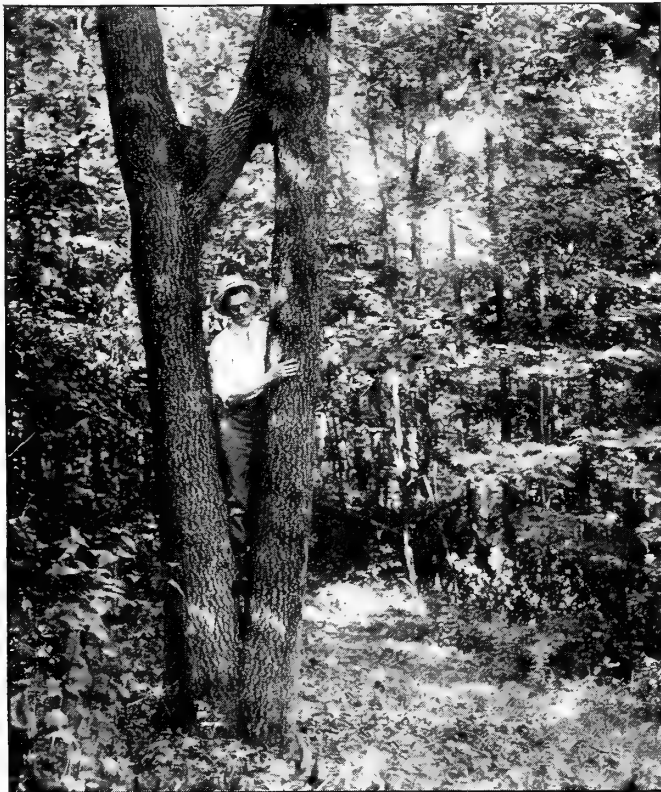
THE accompanying illustration shows a natural graft or a graft which has been accomplished without the assistance of man. As this now stands, two large trunks of the same species of Oak arise from rather close contact near the ground and at a height of about 8 feet a lateral branch from one trunk extends across on a slant to the other trunk and is completely united with it. Above the union the diameter is considerably greater than is the diameter of either of the parts below, but the graft is so complete that the part above is symmetrically



cylindrical and no trace can be seen on the surface of the two separate branches that united to make one. This particular graft must have occurred at a time when the tips of the two branches came into continued and close contact, and after the union the subsequent growth appears to have continued quite as for a single terminal bud.

It is very probable that man first obtained the idea of the possibility of making grafts and using them in horticulture from observing natural grafts similar to the one here illustrated. At any rate such grafts are occasionally to be found; and graftage along much the same methods as are now employed is an old art practised possibly before the time of written history.

It is to be noted that, in one particular at least, nature's method is somewhat more complete than man's. The method of artificial grafting most closely resembling the natural graft is that of inarching; but in this the graft is made below the growing tips. Two stems, each attached to its own root system, are bound together with cut surfaces of each in close contact, during which the two are in the position of the two sides of the letter K or the letter X. After the graft is accomplished the branch of one is cut below and that of the other above the union and thus the top of one plant is transferred to the root system of the other. But in the natural graft, the rule is that the two branches which are first separate become merged into one. While man



WHEN NATURE DOES HER OWN GRAFTING

Two Oaks in a natural grove on the estate of Mr. Henry Hunter near Pleasantville, Westchester County, N. Y., that have grown together in this extraordinary fashion which surpasses man's most ingenious methods of grafting

has developed many ingenious methods of grafting and budding which it is not possible for nature unaided to accomplish, he has not successfully duplicated nature's art of uniting two growing buds into one.—A. B. STOUT, *New York Botanical Garden*.

### The Heart of My Garden

To the Editors of THE GARDEN MAGAZINE:

IF THE heart of the home is the fireplace surely that of the garden is to be found in the fountain, pool, bird-bath, or wherever water trickles, falls, or lies in basins. It is to this magnet we are drawn when we run out for a breathless moment on fine spring mornings to see whether the Jonquils are up.

As may be seen in the photograph, a formal garden twenty feet deep and ninety feet long was laid out at the very boundary line of the grounds. This was enclosed with a brick wall back of which, on the alley side, Lombardy Poplars had been planted some years ago to shut out an offending "offscape." A long curving walk runs the length of the garden, broadening in the centre to a tiny "plaza" where the stone benches, harmonizing in tone and design with the fountain-head, are



ANNUALS FOR AN EMERGENCY

Though walls and walks were not finished until late spring yet borders and beds were soon a riot of Snapdragons, Zinnias, White Tobacco, Calendulas, Mignonette, Sweet Alyssum, etc., which bloomed steadfastly until time to make way for more permanent planting in the fall. Garden of Mrs. Walter King Sharpe, Chambersburg, Pa. (See accompanying text)

placed. Narrow walks bisect the beds on either side and make a balanced planting possible.

For an emergency planting last summer (the walks were not laid nor the beds staked out until May) special dependence was placed upon annuals, although shrubs and vines were planted against the wall, Box trees were disposed at strategic points for emphasis, and such permanent material as Hardy Phlox and Tea Roses went into their appointed nooks. Calendulas and Mignonette were used around the pool, and in the beds White Zinnias, White Tobacco, Snapdragons in pink and maroon, Larkspur, and on the edges Sweet Alyssum and Swan River Daisy.

A carefully planned placing of permanent stock was carried out last fall. This included planting among the shrubbery in the curved border along the walls single varieties of Peonies as Albiflora, the Moor, and Apple Blossom; Mullein raised from seed obtained from Newry, Ireland; Erigeron, Foxglove, Hemerocallis kwanso flore pleno and Veronica spicata; and on the margin Aubretias in lavender and purple to accompany the Daffodils which lie thickly below.

The two central beds on either side of the little "plaza", which must be tidy and presentable at all times, are to be filled with pink Baby Rambler Roses and edged with Nepeta Mussini. The two farthest beds are a well balanced composition (I almost said harmony) of Perry's Delphinium and Yellow Foxglove, white and claret-colored Columbine, rose and pink Phlox, Shasta Daisies, Michaelmas Daisies with Dianthus, Iberis, Alyssum saxatile, and Aubretias along the edges.—HELEN M. SHARPE, *Chambersburg, Pa.*

### Origin of Red Cross Dahlia

To the Editors of THE GARDEN MAGAZINE:

THROUGH an oversight, the Dahlia Red Cross was listed in our March announcement as a Holland introduction. We very much regret this error and would like to state that it was originated in New Jersey by Mr. John Anderson.—VAN BOURGONDEN BROS. L. I.

## When The Iron Fetters of Quarantine Are Felt

To the Editors of THE GARDEN MAGAZINE:

THE present quarantine prohibits the importation of practically all nursery stock and bulbs except Tulips, Hyacinths, Narcissus, Lilies, and certain Roses and fruit stocks for budding and grafting. In addition, it is permissible to bring in material urgently needed for propagation, if the Federal Horticultural Board can be convinced of that need. On most items, however, this amounts to practically prohibition, since the F. H. B. will make a survey of the number of plants of a given variety in the country, and decide whether or not the quantity is adequate. In many instances, the amount of stock is undoubtedly adequate, but it is not available, since the owners of the stock will not in the circumstances, dispose of it to their competitors. This year we requested a permit to bring over a considerable amount of nursery stock for propagation. The permit to import was refused on the grounds that there was plenty of stock in the country, and while this was undoubtedly true, so far as we were concerned the stock might well have been on the moon, since we could not secure possession of it. Another difficulty in connection with the operation of the present quarantine is the method of inspection by the Government, which, in most instances, subjects the stock to long and ruinous delay. We have brought over some small amounts of material imperatively necessary to us for propagating purposes, and in practically every instance the stock was ruined when we received it. As a landscape architect, in writing specifications I was formerly concerned entirely in deciding what was the best plant for a given position, since any plant specified could be secured. Since the quarantine I have to concern myself in selecting the best *available* plant even when this involved the elimination of other plants much better adapted to the purpose.

The reason put forward for the quarantine is that unrestricted importation opens the country to a grave danger from insect pests and plant diseases. Undoubtedly there is a very considerable amount of truth in this. However, we are of the opinion that proper inspection can control this, even better than the present quarantine.

When the Pennsylvania inspection service was a joke (we have real inspections now), we watched our stocks, destroyed suspicious material, and used all known preventions, not because of the fear of State or Federal authorities, but as a cold-blooded business proposition.

The present quarantine, while burdensome, is in many respects still tolerable, since the public, as might have been expected, is paying the cost. Were the quarantine extended to include Tulips, Hyacinths, Narcissus, Crocus, etc., the result would be disastrous. It is our frank opinion that this material cannot be grown commercially in the United States. We ourselves have carried on experiments covering a period of some thirty-five years, in order to discover if it was feasible to grow this material here. Several attempts have been made to do it on a commercial scale, but without exception, every one of these attempts has finally failed. We have secured and examined the bulbs of all the commercial experiments to which our attention has ever been called and, in each instance, the reason for the failure was obvious. The bulbs were so decidedly inferior that they could not even rate as second class. There seems to be, under cover, another reason for the quarantine, to wit, the establishment of the industry in America. The bulb houses have no objection to this, provided that this establishment of the industry is not made at their expense. All the bulb houses require is an adequate supply of strictly first class material which can be distributed at a commercial price. It is certain that no such supply exists at present, and it is doubtful whether it can ever be developed. The extension of the quarantine would simply mean that millions of persons would be deprived of having a few flowers in their gardens, for the simple reason that they could not afford to buy the bulbs etc.—RHEA F. ELLIOTT, *Pittsburg, Pa.*

—Another of your readers has bumped into that exasperating Quarantine 37, and writes to you for advice and sympathy. About six weeks ago I ordered Delphiniums to the value of fifteen dollars from Kelway & Sons, Langport, England. Upon receipt of the order they wrote that it would be necessary for me to obtain a permit for the shipment. After floundering, puzzled and indignant, through reams of literature from the bureau at Washington, this one sentence stands out from all the rest: "Permits will not be issued—for the importation of plants—for the mere adornment of private estates." Now that's just what I want the plants for, only mine is not an "estate," but merely a 60 by 100 foot flower garden. Does it mean that a "private citizen" really cannot import a few plants for his little garden, or is there still some-

thing that I can do to obtain these coveted Delphiniums?—EVA D. OHDE, *Manitowoc, Wis.*

—Will you have the kindness to let me know where I can procure bulbs or seeds of any variety of Fritillaria, and the seeds or roots of Eranthis hyemalis?—F. R. FURNESS, *Upper Bank Farm, Media, Pa.*

—In the March number of the GARDEN MAGAZINE (page 17) I notice that it is time to plant Achimenes. Could you tell me where bulbs of this flower can be procured? I have tried in vain for the last three years to get some.—W. A. TANNER, *Minneapolis, Minn.*

—The matter of getting Galanthus, Scilla, and Chionodoxa to renew my supply concerns me extremely, and I should be glad to know how they may be raised from seed (as mentioned by Mr. Bayne of Macon, Ga., in the Open Column of the March number) and where seed may be produced if the process is not too difficult for the ordinary amateur.

In accordance with Mr. Bayne's suggestion may I offer the following information: (1) Frederick H. Horsford, Charlotte, Vt., advertised Scilla in the fall of 1920. I ordered some—too late—therefore wrote again early last fall; he had only small bulbs at such a high price that I thought it not worth while. (2) I also ordered Muscari from Dreer last fall and found them unable to supply it.

Seeds of Chionodoxa and Scilla were offered by Thompson & Morgan, England, some time ago, but were not included in the 1921 catalogue. Seeds of Helleborus niger and modern hybrids are offered by the following firms: Thompson & Morgan (above mentioned); Carter-Thorburn, New York City; Joseph Breck & Sons, Boston, Mass. Seeds of Helleborus hybrids are offered by Thomas J. Grey Co., Boston. Carl Purdy, Ukiah, California, offers Helleborus orientalis abchasicus rubens, a "reddish flowered sort of much beauty, flowering in midwinter."—R. F. HOWARD, *South Lincoln, Mass.*

—I suppose all garden enthusiasts get some idea in their minds about some special plants that they want for their gardens, and leave no stone unturned to accomplish their ambitions. For about five years I have tried to get some Eranthis hyemalis or Winter Aconite in my garden. In November, 1918, I was very happy when I succeeded in securing fifty little dried up bulbs—all that were available—from Dreer. I planted them at once with some Snowdrops delivered at the same time. The following spring the Snowdrops all came up, but I never saw a sign of the Winter Aconite. Ever since I have been endeavoring to find a place where I could buy more bulbs, but of course Quarantine 37 has kept them from being imported. Perhaps some reader of THE GARDEN MAGAZINE can help me in my hunt for Winter Aconite. Another plant that I have tried, without success, to introduce into my garden is Aubretia. I have a package of seeds from England to be put in this spring in the hope of better success than had with plants, all of which thus far received having been so thoroughly dried out before reaching me that they never recovered.—MRS. WALTER E. TOBIE, *Portland, Me.*

—Would you please advise me who makes a specialty of raising Palms? I am establishing a small collection of these plants and would like to get Rhaps flabelliformis, but it is not listed in the latest catalogues of several of the larger dealers.—FRED C. ECKWORTH, *Lakewood, Ohio.*

—There are a number of valuable hardy and greenhouse plants which during the last few years seem to have disappeared entirely from nurserymen's catalogues. Perhaps some of your readers can help me find the shrubby red Fuchsia Riccartoni; the spreading dwarf evergreen rock-plant, Lithospermum prostratum, with its exquisite blue flowers; and the two old greenhouse favorites Justicia (originally from Peru, I believe) and Daphne odora. I have one plant of the latter, for which I am indebted to the kindness of a lady whom I have not the pleasure of knowing personally, and I would very much like some more, especially the pink variety. Last summer in Maine a flower-loving farmer's wife gave me some slips of what was known there as Star of Bethlehem—a very charming little plant. It is quite dwarf in growth, with roundish, glossy, bright green leaves and is extremely floriferous. The white flowers are single, five-pointed, about an inch across, and remind me of a miniature Platycodon. I believe the donor said there was also a pink flowering variety. Can any of your readers identify it?—A. DWIGHT, *New York City.*

# It's Never too Late to Mend

With Over 80%  
It's Never too Late to Plant

You can plant all summer the things we say you can. They are guaranteed to grow satisfactorily. The price is right.

In May you can come to the nursery and pick out the crab apple, azaleas, iris, and many, many others, and take them home with you. You do not need a technical education or to employ a technically educated gardener to have a beautiful garden. You can have a garden that is talked about.

You don't need to go to the expense of planning a big area, grading, a big gang of laborers, and a big bill. For the price you save on a picnic dinner you can satisfy yourself with a garden corner.

You and your neighbors are perfectly good friends, but you rather not look into each other's windows. There is room for a belt of evergreens between. We don't stop planting when the soft growth comes out, because the roots are prepared. In front of the evergreens you can put a border of flowers and your neighbor a bird bath or seat.

In May, shade will be welcome. Can you use a group of trees fifteen or twenty feet high at \$8.00-\$15.00? Three trees may just take away the new look and make a place for a swing. Do you want them bigger, twenty years old? They are ready, and we move them in full leaf and guarantee satisfactory growth.

Are you willing to work and grow your own food? Come to the nursery and load up your car with apples, pears, peaches, plums, blackberries, raspberries, strawberries, and asparagus. Your neighbor says it is too late. It is not, because your car takes them home so quickly that you can make them live, even after the leaves come out.

Bird feeding fruits and shelter from hawks can be planted in May.

Does the Garden Club and Civic Association want to beautify the town? Take some photographs, sketch on what you want to do and we will do it. If it is for the public good, we will add some free.

## Visit the Hicks Plantateria

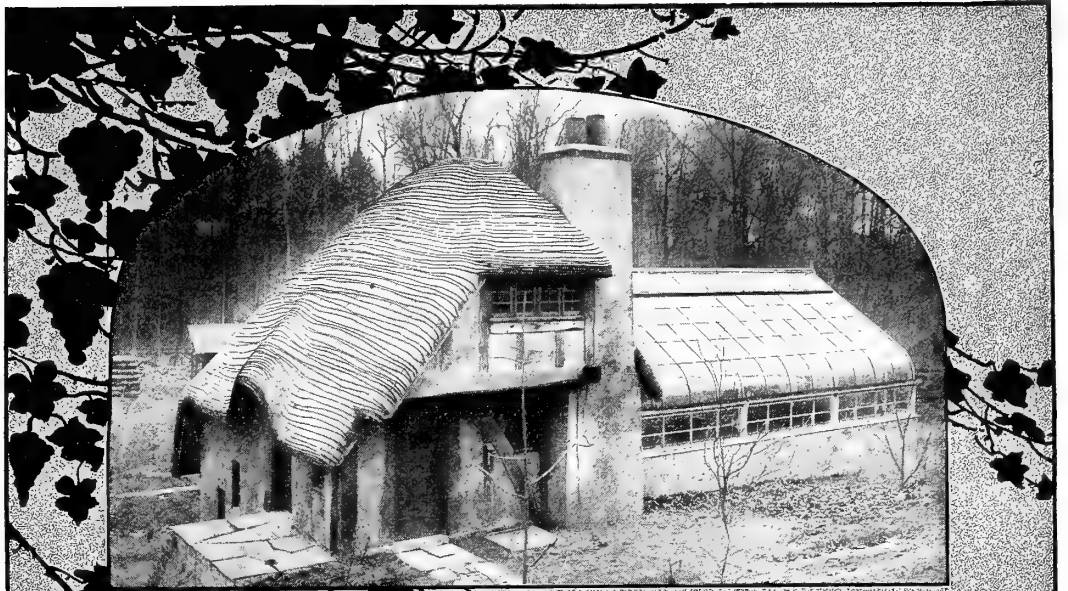
Assembled near the office are thousands of plants ready for you all summer. Some are heeled in in the ordinary way that can be taken up, pruned, and the roots kept moist and put in your car. Others are in pots, tubs and boxes. Pots and flats of annuals are ready as asters and tomatoes. Others are ready with a ball of earth in burlap. Larger trees you can pick out and have them dug.

(signed) HENRY HICKS

(Mention Garden Magazine)

## HICKS NURSERIES

Westbury Box M, Long Island, N. Y.



## Some First Hand Facts On Owing Your Own Greenhouse

We made our greenhouse catalogue with a determination to get away from the usual cut-and-dried treatments, and make it a *real help* to those who would know the genuine joys and advantages of greenhouse possession.

It tells interestingly of our every type of greenhouse and shows even more than it tells. It contains plenty of plans of practical layouts and is replete with vital information about greenhouses and conservatories. The text is told in a chatty kind of a way that makes pleasurable reading.

You are heartily welcome to a copy. The name is "Owning Your Own Greenhouse."

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Home Offices and Factory: Elizabeth, N. J.

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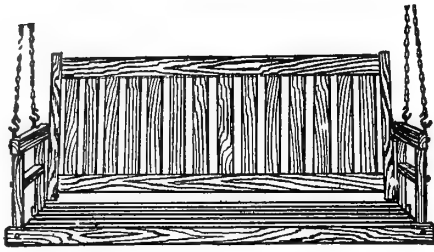
## Beautiful, Bountiful, Brittle Beans

"String beans without strings." Genuine Brittle Wax. Special mountain grown seed. Early. Plant up to July 20th, 1/2 lb. 20c; lb. 35c; 3 lbs. \$1.00, prepaid. (Bag weighed in.)

**Free!** Whether you buy or not, we will send a liberal demonstration packet absolutely free. Post card request sufficient.

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Porch Swing No. 35

## When America Moves Outdoors—

When May sunshine and warmth coax all humanity to revel in the return of fairer season, then the problem of outdoor comfort comes to the fore and we are ready to help you solve it!

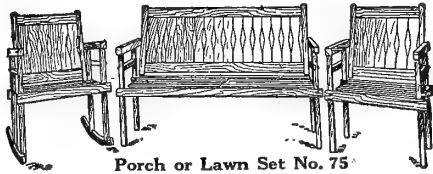
One profit only. One hundred cents worth of honor built merchandise for every dollar spent with Garden Craft.

### GARDEN CRAFT PORCH SWINGS

Our swings are made of oak, a beautiful golden color. They are framed together in such a manner that they will last many years. We do not hesitate to say that these swings are the best made regardless of price as regards material, design and workmanship. Money will be gladly refunded if they are not thoroughly satisfactory. Shipped wrapped in burlap.

#### No. 35 Porch Swing

Seat 18 in. wide. Back 24 in. high. Seat shaped to fit the form very comfortably. 4 ft., \$9.50; 5 ft., \$10.00; 6 ft., \$10.75.



Porch or Lawn Set No. 75

#### No. 75 Porch or Lawn Set

Keep bolts tight and this set will last a lifetime.

Settee, 4 ft., \$9.50; 5 ft., \$10.50; 6 ft., \$14.00. Rocker, \$9.00. Chair, \$8.50. All prices f.o.b. Crystal Lake, Ill.

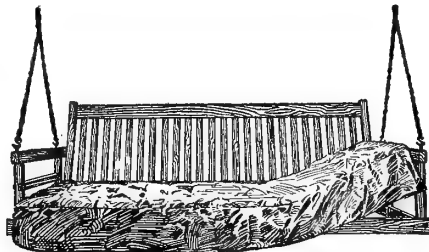
### No. 55 COUCH SWING with Cushion

Common Sense Comfort

Adjustable head rest. Can be made into an ordinary porch swing, or a couch hammock, giving you all the comforts of the canvas swing except the seat, being airy and comfortable.

Seat 22 in. wide. Back 24 in. high. 6 ft. long, including cushion, \$17.50.

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Lawn Swing No. 55 with Cushion

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FREE CATALOGUE



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Easy to grow. Will bloom, and give satisfaction. In our Dollar Dahlia Collection, Quantity, Quality and Economy meet. 15 choice different varieties of Dahlias. Including Cactus, Decorative, Fancy, Show, and Peony varieties. Labeled true to name, \$1.00 postpaid anywhere. Send for our up-to-date Dahlia Catalogue. It's free for the asking. Enterprise Dahlia Farm, Harry L. Pyle, Atco, New Jersey

## Modest Little Bird's Foot Violet

VIOLA PEDATA, with its pretty leaves and large pale blue single flower, craves the pleasure of adorning parts of your rock garden or hardy border. Among the almost dozen distinct forms of Violas which we offer, none surpass in free flowering qualities this little gem which seemingly thrives in all situations.

Bird's Foot Violet pot-grown plants, 20c each, \$2.00 per dozen

### Add This to Your Rockery or Hardy Garden

Here are a few hardy perennials equally suitable for rock garden walk or for the informal border:

Aster or Michaelmas Daisy, Climax—light lavender blue of finest form. A thrifty grower and profuse bloomer.

Papaver orientale—the most gorgeous Oriental Poppy, brilliant scarlet flowers during June.

Sedum kamtschaticum—one of the most ornamental of the stoloniferous Stone Crops.

Dicentra eximia, the dwarfest and daintiest form of Bleeding Heart, bearing rose-pink flowers in early spring. Fine for Rockery.

Physalis Franchetti—the quaint, yet pretty, Chinese Lantern Plant. Forms coral red fruits. Fine for Halloween decorations.

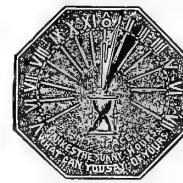
Salvia azurea grandiflora—a fine form of azure blue Salvia.

Prices:—Any of the above 20c each, \$2.00 per dozen

Special Offer:—We shall mail 2 fine plants of each of above six specialties, 12 plants in all, for \$2.00 postpaid

Please ask for catalogue of Palisades popular perennials. Our specialty is pot-grown plants in both choice, unusual and every-day old time favorites.

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Real Bronze Colonial Designs  
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A beautiful almost indestructible flower, with an attraction which keeps these tiny birds constantly about the border. Used with great success in gardens of many large estates. Colors red, blue and yellow. Price \$1.00.

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FROM JAPAN,  
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IN 79 A. D., Pompeii, summer resort for wealthy Romans, was blotted out by Vesuvius. For fifteen hundred years its secrets lay locked in their lava tomb. When the lost city was finally uncovered, it was found that bronze had melted, marble had crumbled, votive tablets and parchments had turned to dust, but the records of the past were preserved in all their freshness and beauty on the Stucco Walls. Details of costume, color, little expressions of everyday life are accurately reproduced from mural decorations done in the time of the Caesars. Earthquake, fire; the slow process of attrition which came when cinders and ashes settled into a solid mass, failed to impair the durability of stucco.

When you build today, you, too, can make your home permanent. Atlas White Portland Cement, properly applied as a finishing coat, is just as enduring as was the stucco of the First Century. Atlas White is made more carefully, more scientifically than was the cement of the Romans, and it offers the same sturdy resistance to fire and to the ravages of time and atmosphere. It is so dependable that it has won the reputation "The standard by which all other makes are measured." Used alone, it furnishes a fine permanent white surface, or it furnishes a base for any color desired; and an infinite variety of textures is offered in the manner in which it is handled.

If you think of building, go to the nearest Atlas Portland Cement dealer and ask him for Atlas literature on home building and on remodeling old homes. He'll be glad to advise you and to explain what Atlas service means.

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Philadelphia

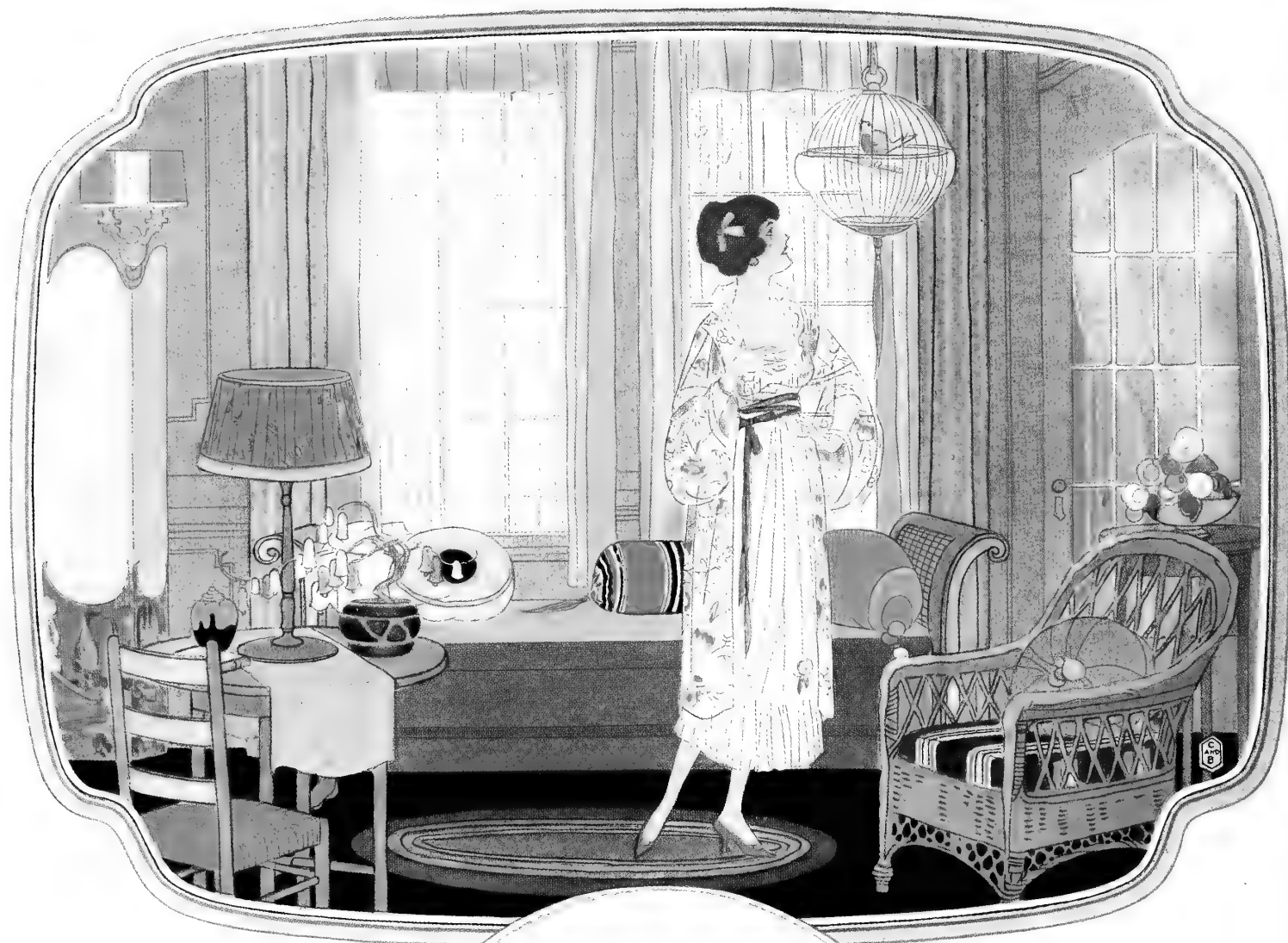
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*At* ANYTIME—time to redecorate winter-worn rooms, to add a fresh touch of beauty here and there about the house; to make the summer home ready for enjoyable occupancy.

And what could be more lovely than these colourful silks, for drapery, screens, table runners, lamp-shades, even negligées? A treasured Pillement design is shown in the dainty tea-gown, while a new "Sheik Stripe" is displayed by the chair and cushion.

All are Cheney Silks—Florentine, Shikii, Geisha, Sweetbriar, Mysore, Satin Princess and Corean. Obtainable in decorating and dress silk departments at prices surprisingly moderate.

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*New York*



# PEONIES

My preliminary price list of Peonies, in which I list the best varieties of the 850 kinds growing in my garden, now ready for distribution. May I send you a copy?

I will also send my Iris list, if you wish.

**LEE R. BONNEWITZ**  
Washington St. Van Wert, Ohio

# Daffodils for Naturalizing

## Imported to Your Order

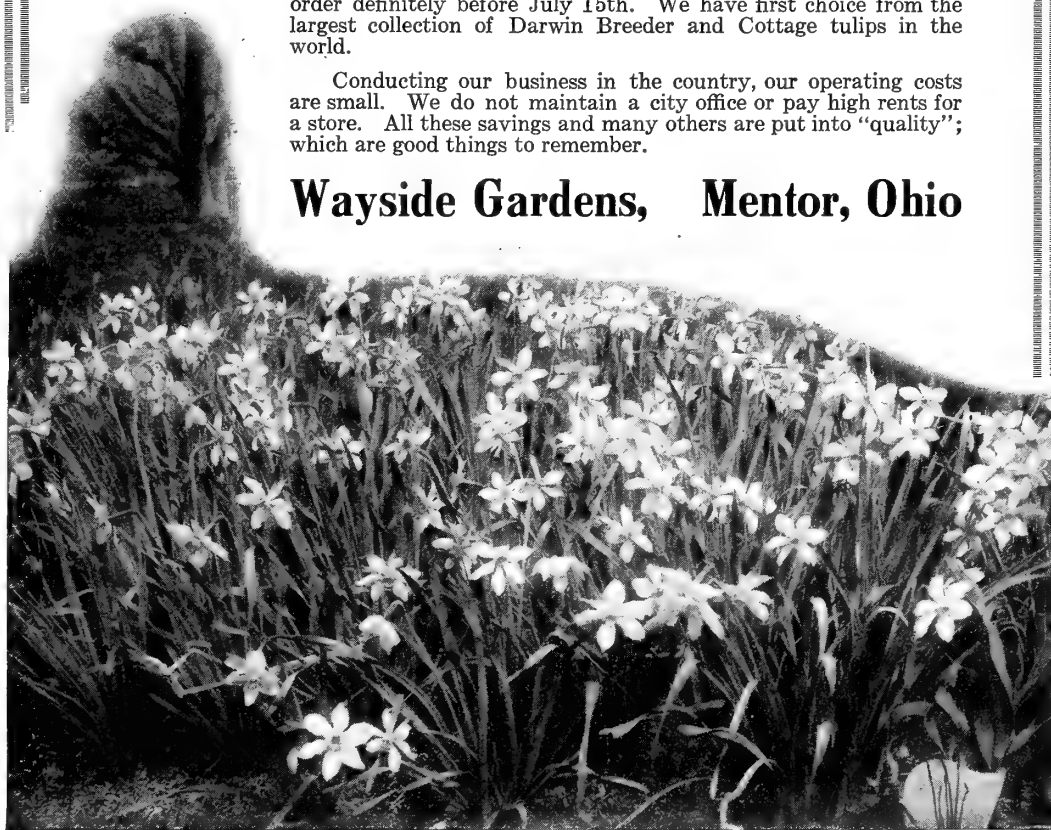
We import, each year, large quantities of Dutch Bulbs, Daffodils among them. To encourage liberal planting, we offer a special collection of 1,000 Bulbs, composed of the choicest named sorts in well-balanced mixture, in original crates, at \$30.00 each. One-half case containing 500 Bulbs \$20.00. But in order to benefit by this special low offer, your order must reach us not later than July 15th. Send no money—just order; we shall advise you when bulbs are ready for shipment.

### Darwin Tulips and Hyacinths, too— ask for our special import price list

We can save you money on your Bulb gardens. By knowing just how many bulbs to import we eliminate the element of chance in over stocking. You are the gainer if you act promptly and order definitely before July 15th. We have first choice from the largest collection of Darwin Breeder and Cottage tulips in the world.

Conducting our business in the country, our operating costs are small. We do not maintain a city office or pay high rents for a store. All these savings and many others are put into "quality"; which are good things to remember.

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SPECIALIZE IN RARE AND FINE VARIETIES OF BEARDED IRISES

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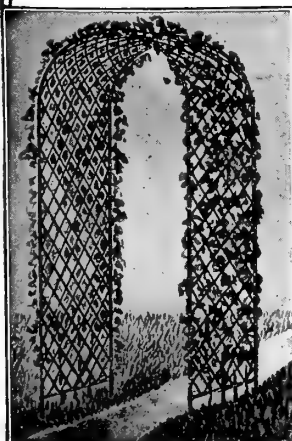
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**"PHILADELPHIA"**  
 LAWN MOWERS

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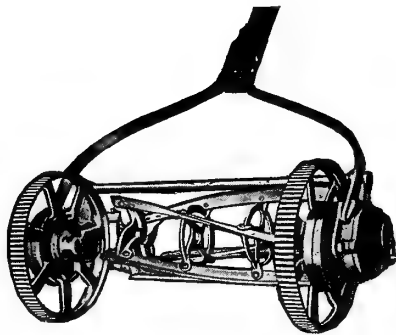
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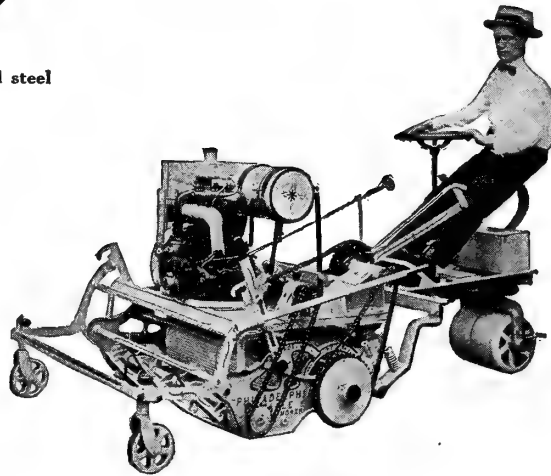
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Consider a Box-barberry hedge for the formal garden; shrubs for foundation massing and for border plantings; hardy Ibolium Privet for hedges. Be sure to have climbing roses for trellises and walls; roses and perennials for the garden, and don't forget the small fruits for the kitchen garden.

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Written by an American Grower for American amateurs and professionals, for American conditions of climate, soils, and markets. Beautifully illustrated.

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valuable Dahlias this year without the latest, complete, most exhaustive information obtainable. Bolles Booklets have exactly what you want, and all you need to know.

**Harvesting and Storage**, may save your crop of tubers. **Fertilizer and Large Blooms**, tells how to grow garden and exhibition blooms. Price, 35 cents each.

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**Cultivation (Double Number)**, price fifty cents a copy. These four are off the press, and ready.

There are three other booklets. Prospectus sent with my catalogue.

My 1922 Dahlia Catalogue now ready awaits your request

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R.F.D. 3, Box 81 Media, Penna.

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FOR almost ten years we have preached the gospel of better gardens through the use of Gilson Garden Tools. Yet, while addressing one of the liveliest garden clubs in the East the other day, the writer discovered that not one of about 75 members present had ever heard of the Gilson Weeder.

We wish to remedy this and make the following unprecedented, unconditional offer to every Secretary:—

Write us on your club's stationery, and send along the names of 10 or more active members and we will mail you, free of charge, a 5 inch Gilson Weeder, as shown alongside—minus handle, easily secured at any hardware store.

The only request is that you show the Gilson Weeder at the next meeting of your club. In turn we promise not to annoy your friends with aught but a little booklet described below.



### The Complete Gilson Line Embraces:

Gilson Weeder as shown above in three sizes and in both hand and wheelhoe shape.

Liberty Wheel-tooth Cultivator in three sizes, adaptable to varying widths, available both as a hand tool or as a wheelhoe as shown below.

Scratch Weeders and Dandelion Diggers, Lawn Edgers, and last not least,

The Gilson Triplex, a combination Wheelhoe for men. It brings the Gilson Weeder, the Liberty Cultivator and a handy furrow opener all joined to a pivot axle, quickly putting into position either implement wanted without the help of tools.

Ask Your Dealer or Write Us

## We Repeat Our Special "Get Acquainted" Offer

If your dealer does not carry Gilson Garden Tools, please write us and we shall be glad to see that you are supplied. Here is a combination of them that will help you to greater garden results, with least efforts.

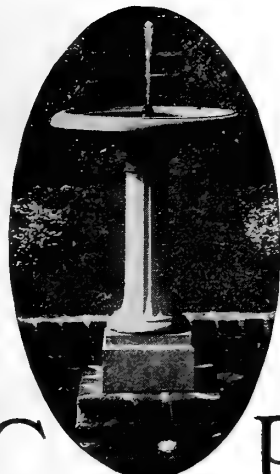
- The Liberty Wheel Cultivator, No. 1, as shown alongside..... \$3.70
- The 5 inch Gilson Weeder Blade, as shown to right above ..... 1.05
- The 8 inch Gilson Weeder Blade, which combined with wheel frame alongside will give you the Gilson Weeder Wheel Outfit 1.35
- The Liberty 7 tooth Hand Cultivator ..... 1.45
- 1 Scratch Weeder and 1 Dandelion Digger ..... 1.25
- Total..... \$8.80

**SPECIAL OFFER:** We will send prepaid, any of the Tools (items 2, 3, 4 and 5 complete at prices quoted, the Wheel Cultivator to be sent by express at your expense.) The entire assortment, however, we will deliver prepaid anywhere east of the Rockies for \$8.50.

### "Bigger Crops Through Cultivation"

is the title of our modest little booklet, giving valuable hints on how to grow vegetables and how to cultivate the different crops for best results. Besides, it will introduce to you the tools with which to do best work with least effort. Please write for it to-day.

**J. E. GILSON COMPANY**  
102 Valley Street, Port Washington, Wisconsin



- BIRD BATHS
- FOUNTAINS
- SUN DIALS
- VASES
- JARS
- GAZING GLOBES
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- BOXES, ETC.

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Gives the Essential Touch

In the Garden a Bird Bath is a delightful spot of interest; a Sun Dial lends quaint charm.

Many attractive designs are executed in our light stony gray, high fired, frost proof TERRA COTTA. Red, buff and other colors will be made.

Our catalogue illustrating 300 numbers will be sent upon receipt of 20c in stamps.

Galloway Terra Cotta Co. 3214 Walnut St. Philadelphia  
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You've seen Water-Lilies growing in large concrete pools—such pools are nice, but not essential.

Even a cliff-dweller could raise Water-Lilies if he owned a water-tight barrel or tub. A little dirt in the bottom and a little water on top—presto—you get a garden novelty unsurpassed.

### Three Lilies in Color

with many other helpful illustrations and descriptions will be found in our 1922 catalogue. It gives easy methods of growing Lilies; hints for water gardens. Put your name on a postcard and send for a copy.

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**RAIN WHEN YOU WANT IT**



**Have More Garden  
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Not only can you have *twice the amount* of vegetables or flowers from *the same space*; or *the same amount* from *half the space*; but what you have will be far superior, in every way if your garden is Skinner System watered.

Just *why* and exactly *how* it accomplishes these seemingly impossible things is fully told and freely illustrated in our catalogue called "Your Watering Problem—Its Solution." Send for it.

*\$9.75 buys a Portable Rain Maker—18 feet long  
It will water 900 square feet without moving*

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A border 25 feet long and 4 feet wide, including 70 strong plants of the best varieties and blending colors covering the blooming season. Regular price \$15.00.

**SPECIAL OFFER.**—We will supply this collection, as a unit at \$12.00, charges prepaid, providing cash accompanies the order. Order at once, shipment to be made immediately.

We specialize in Hardy Plants. We also offer Gladioli, Bedding Plants, Nut Trees, Roses, Small Fruits, etc. All grown in our own Nurseries. Only best varieties of Plants and Bulbs offered. Catalogue free on request.

**CLINTON NURSERIES** Hardy Plant Specialists Clinton, Conn.

**Visit a Garden where Dutch Bulbs are Blooming**

Take a copy of Farr's Bulb Book with you, check the varieties you like and want in your own garden. This is usually the most satisfactory way to select the colors that appeal to you, as it gives an intimate knowledge of the blooms.



**Price Reductions Have Come**

Dutch Bulbs are showing a slight reduction in price—not very much but a little. All my customers will receive the benefit of the reductions, but to those who order before June 1st I give a special discount of 2 per cent over and above my usual discount of 10 per cent for orders received before July 15th.

**Send Your Order in May and Get  
12 Per cent Discount**

From June 1st to July 15th the discount is only 10 per cent. After July 15th you must pay the prices printed in

**Farr's 1922 Bulb Catalogue**

Hyacinths, Tulips, Narcissi, Crocus, and fall plants are described and pictured. Write for a free copy *now*, and save money by ordering Dutch Bulbs in May.

**BERTRAND H. FARR, Wyomissing Nurseries Co.**  
104 Garfield Avenue Wyomissing, Penna.

**Make Your Garden  
a Wonder Garden**

It's easy. Market growers know the secret. Follow it and have the largest crops of fruits and vegetables, an abundance of the biggest and sweetest scented flowers of the most intense and vivid colors. Here is the secret!

The better grades of commercial fertilizers contain only 3 to 5 per cent. nitrogen; 6 to 10 per cent. phosphoric acid and 3 to 5 per cent. potash, combined in material that has no fertilizing value. Most fertilizers are far below this average.

Science has produced a tablet, rich in plant food, containing 11 per cent. nitrogen; 12 per cent. phosphoric acid and 15 per cent. potash—clean and odorless.

For crops in rows, set the tablets a foot apart along the row. Three tablets, one every ten days, in the hills make Cucumbers, Squash, Melons and vines fairly jump.

In Flower Beds and Borders, place tablets a foot apart. For Bush Fruits and Shrubbery, use three to five tablets, placed in the soil about each plant.

Fruit or Ornamental Trees, place tablets two feet apart, extending from the trunk as far as the longest branches.

Fine also for greenhouse benches and pot plants. Four tablets dissolved in a gallon of water, used in place of liquid manure, is less trouble and gives better results than objectionable manure water. Makes velvety lawns.

Each tablet contains highly concentrated, immediately available plant food. They increase production, heighten color and improve quality. *Their use is highly profitable.*

The name of the tablet is **Stim-U-planT**. No matter how fertile the soil, Stim-U-planT is effective in feeding and forwarding crops. Market Gardeners use them in large quantities. Order by name—there is no substitute.

Price delivered: 100 tablets, 75cts; 1,000 tablets, \$3.50. If your dealer hasn't it, order from the makers—

**EARP-THOMAS CULTURES CORPORATION**  
80 Lafayette Street, New York

**Kill Bugs—Prevent Blights**

You can easily keep your garden, shrubbery and roses healthy and free from diseases. Spray early and often. Use a No. 1.



It operates by compressed air—throws a continuous stream. Finger pressure instantly starts or stops the spray. Special nozzle strainer prevents clogging. Solid brass pump parts are non-corrosive. Write for catalogue and Spray Calendar prepared by Cornell University specialists—both *free*. Ask your dealer to show you an Auto-Spray.

**The E. C. BROWN COMPANY**  
850 Maple St., Rochester, N. Y.

**MUST BE SOLD**

America's finest collection of true to name Gladioli bulbs, Dahlia, Peony and Iris Roots. New, rare and standard varieties including a few thousand pure strain Gladioli grown from original imported Vilmorin and Kelway stock. Address

**E. H. PERSHING, Sales Manager**  
514 E. Broadway, Logansport, Ind.

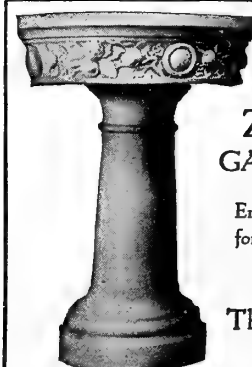
**GLADIOLI IRISES  
SPECIAL OFFERS**

12 Varieties choice Gladioli worth \$1.25 for \$1.00.  
10 Varieties choice Irises worth \$4.40 for \$3.50.  
A request will bring our instructive catalogue.

**FOREST HEIGHTS GARDENS**  
1815 26th Ave. No. Dept. G. Minneapolis, Minn.

**IRISES, PEONIES, GLADIOLI**

Importers and growers of choice varieties.  
600 varieties of Irises—Catalogue free.  
**RAINBOW GARDENS** 701-2 Commerce Bldg., ST. PAUL, MINN.



*Distinctive*

**ZANE-WARE  
GARDEN POTTERY**

Entirely new designs suitable for exterior decoration, made in a Gray Stone finish.

**The Zane Pottery Co.**  
South Zanesville, Ohio

### HILL'S SILVER JUNIPER

A wonderful gem of beauty. Endorsed by leading horticulturists. Grown and introduced by D. Hill, the Evergreen Specialist.

*Narrow, symmetrical, compact  
Exquisite blue in color  
Retains blue color in winter  
Attractive clear blue berries  
Hardy—North or South*

**D. HILL NURSERY CO.**

*Evergreen Specialists  
for over 60 years*

1063 Cedar Street  
DUNDEE, ILL.



Order direct or through your local Nurseryman, Florist or Landscape Architect. Send for complete catalog. Also folder "Cozy Bungalow Collections"

### LA BARS

*Collectors and Growers*

### RHODODENDRON

NATIVE AZALEA, MOUNTAIN LAUREL and RHODODENDRON

### NURSERY

Request opportunity to send catalogue

STROUDSBURG, PA.

### SURPLUS DAHLIA BULBS

- 12 Choice Peony Dahlias, my selection - - - - \$4.00
- 12 Semi-Peony Dahlias, my selection - - - - 2.50
- 12 Single Dahlias, my selection - - - - 1.00
- Collection of 3 dozen - - - - 6.00

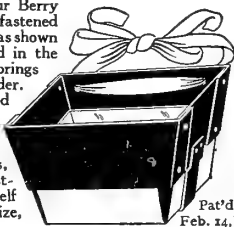
*All bulbs are labeled and are all colors.*

### DAHLIA GARDENS

MRS. P. W. MERCHANT, PROPRIETOR  
35 EAST MAIN ST., GLOUCESTER, MASS.

### Berry Picking Simplified

Here is a practical little device that will enable you to use both hands in gathering your Berry crop. The basket device is fastened around the waist by a web strap as shown in the illustration. Constructed in the simplest fashion, there are no springs or other parts to get out of order. One or more boxes may be dropped into the holder at one time and removed as filled. If not obtainable from your dealer, order direct from the originator. Prices, pint size, 50c.; quart size, 55c. post-paid. The device will pay for itself in a few hours. Weight: pint size, 2½ oz.; Quart size 3 oz.



Pat'd. Feb. 14, '22

Lafayette Elm Greenhouses, Kennebunk, Me.

### Pulverized Sheep Manure Best for Lawns and Gardens

NATURE'S OWN PLANT FOOD

Great for Lawns, Grass Plots, etc. It affords the fullest advantage of spring rains, insuring an early start and a luxuriant growth.

Sheep's Head Brand also is used extensively for Gardens, Small Fruits, Shrubby, etc. Rich in nitrogen, phosphoric acid and potash; also adds humus. Guaranteed absolutely clean—nothing but sheep manure—free from weed seeds which are killed by heat. Dried and pulverized for easy application. Circular and prices on request.



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## Summer Droughts Hold No Terrors



Plant Life needs water most. More than 90% of all vegetable substance is water. Without this life-giving element, most flowers are but stunted imitations of the real thing. No matter where you live or what your climate—your garden will thrive luxuriously if you have handy

### The Campbell Waterfan— Rain When and Where You Want It!

Simply attach your garden hose to any faucet with ordinary city pressure. Attach the other end to the Waterfan. Turn on faucet and watch an area up to 16x60 feet receive the gentlest, soaking rain—the kind that does most good. *Automatically oscillates*, as it waters.

No tools needed to make connection; easily moved about; directions of sprinkling, angle of sprinkling and evenness of water distribution under absolute control. Though the Waterfan weighs but 5 pounds, it is built so substantially that it will last for years. Nothing to get out of order. Always ready for thorough work.

#### WATERFAN—Model No. 5

Length, 21 inches. Weight, 5 pounds.  
Waters a rectangular area up to 16x60 feet. Price, \$15.00.

#### WATERFAN—Model No. 10

Length, 5 feet. Weight, 10 pounds.  
Waters a rectangular area up to 22x60 feet. Price, \$25.00.

All prices f.o.b. factory. Order direct or from distributor at address given below.

*Satisfaction guaranteed or money refunded. Please write for descriptive circular and name of dealer nearest you.*

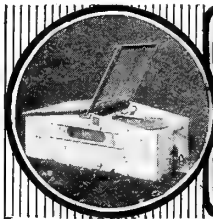
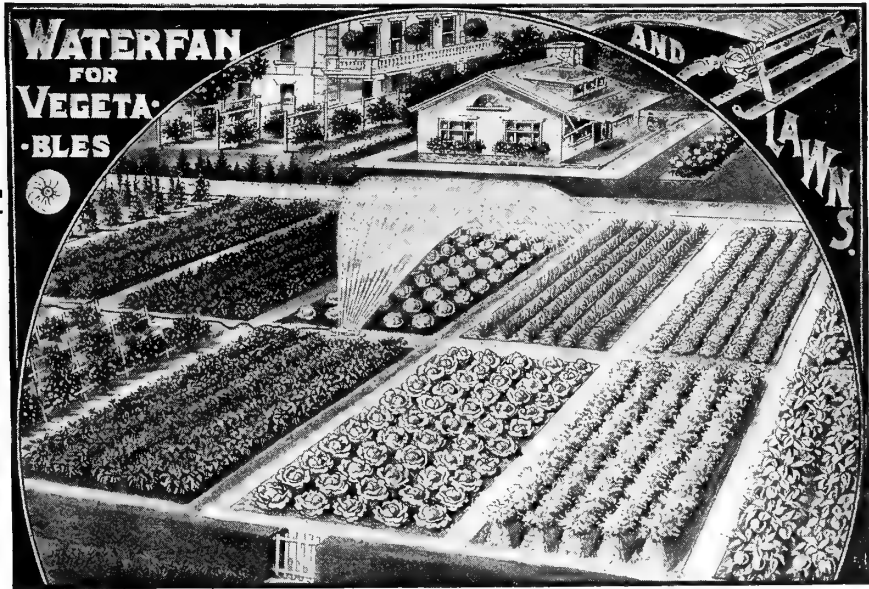
### CAMPBELL IRRIGATION COMPANY

Woodbury

New Jersey

GEORGE ALEXANDER, 90 West Broadway

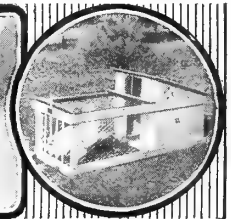
Distributor for New York City and suburbs, including Long Island



Brooder for 50 to 100 chicks



No. 3 Poultry House for 60 hens—2 units



Setting Coop

EVERY NEED OF THE POULTRY FANCIER is met by Hodgson Poultry Houses. They are sturdy, weather-proof, vermin-proof, properly ventilated, easy to clean and move. Shipped in sections and can be erected in less

than an hour without the aid of skilled labor. Your hens will thrive and lay their best if kept in Hodgson Poultry Houses. Send to-day for illustrated catalogue showing various kinds and sizes.

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Portable HOUSES

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# NATURE'S insufficient BOUNTY

If you depend on nature alone to supply moisture for the lawn, shrubs or flowers in which you've invested your money, you're likely to lose at least part of your investment. For nature's help, though bountiful, is often unreliable.

**Supplement** nature's rains with a Cornell Irrigation System, and you have the equivalent of an insurance policy which gives automatic protection against any damage or loss from dry weather.



W. G. Cornell  
Co.,  
45 E. 17th Street  
New York City

Send me to-day free of charge your illustrated booklet describing the Cornell Systems of Irrigation.

Name.....  
Address.....

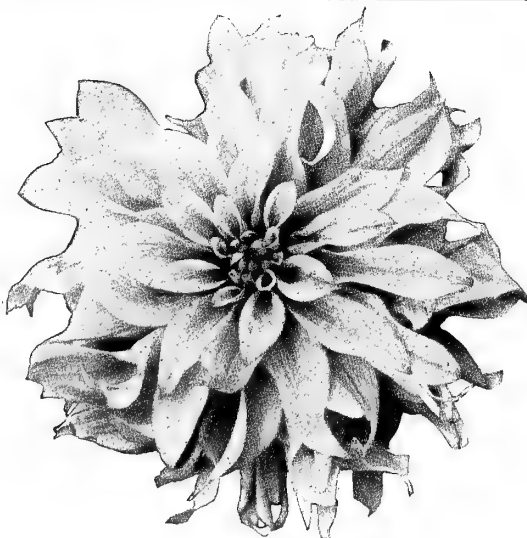
**Cornell**  
Systems of Irrigation

Economy, simplicity, and efficiency are combined in Cornell Overhead and Underground Irrigation Systems, with patented, adjustable "Rain Cloud" Nozzles. Installed any time for any area, without injury to lawn or garden.

**CORNELL FURNISHES "RAIN" WHEN, WHERE AND HOW YOU WANT IT.**

**W. G. CORNELL COMPANY**  
Plumbing — Heating — Lighting  
45 East 17th Street, New York City

CHICAGO	BALTIMORE	NORFOLK
CLEVELAND	NEWARK	PITTSBURGH
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KANSAS CITY	PHILADELPHIA	MONTREAL



Write to-day for free catalogue

So beautifully distinct from any other dahlia. The soft colors and tints blend so harmoniously. The most exquisitely formed flowers are carried so gracefully, erect to facing, on the long, cane stiff stems. Size, six to eight inches. Color at base of petal, citron yellow, outer half creamy white, both yellow and

white mottled and overspread rosolane pink. Many petals showing faint yellow along mid-vein. All dusted over with tiny glistening crystal-like particles, as of gold dust. An ideal dahlia for cutting, garden, and for exhibition. Roots, \$5.00 each.

That you may know our dahlias we make the following

**SPECIAL INTRODUCTORY OFFERS**

- 5 beautiful Cactus Dahlias ..... \$1.00
- 5 grand Decorative Dahlias ..... \$1.00
- 2 Giant Century, 2 unique Collarettes, 2 Ball, 6 in all ..... \$1.00
- 5 Peony Dahlias, \$1.00, 1 Pkt. new Decorative Dahlia Seed ..... \$1.00
- Above 5 offers, each Dahlia carefully labeled, true to name, and my book on The Dahlia, all postpaid for ..... \$5.00

OUR NEW CATALOGUE, THE WORLD'S BEST DAHLIAS, not only shows Mary Steffenson, Queen Elizabeth, Golden West Cactus, and 9 new Century Dahlias in natural colors, but tells the plain truth about the best new and standard varieties, including 12 wonderful new creations, now offered for the first time.

**THE LEADING DAHLIA CATALOGUE FREE**

Write to-day. A post card will bring you a copy by return mail.

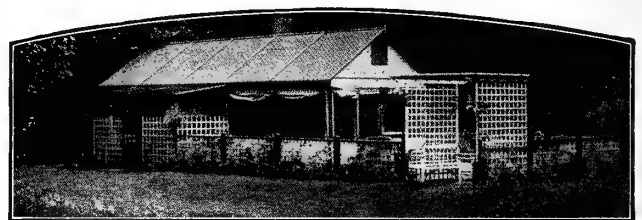
**PEACOCK DAHLIA FARMS**

Berlin

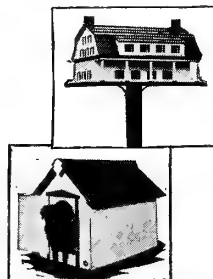
We are the largest in the world

New Jersey

# HODGSON *Portable* HOUSES



“Artistic in design—  
perfect in construction”



LONG use or occupancy serves to strengthen first impressions of Hodgson Portable Houses. The largest houses, suitable for family dwellings, are erected in two days—without skilled labor. The smaller ones—garages, pet-houses and playhouses—require but a few hours. They are all staunch, weather-tight and durable.

Hodgson Houses are beautiful in appearance and design—practical in construction. They are used on many of the finest estates in the country.

You will find our illustrated catalogue interesting, instructive, and a real help in solving your problem. May we send it to you at our expense?

HODGSON HOUSES are used for seaside and mountain cottages, bungalows, garages, playhouses, poultry and pet houses, offices, schools, gymnasiums and innumerable other purposes.

**E. F. HODGSON CO.**

Room 228, 71-73 Federal Street, Boston, Mass.

6 East 39th Street, New York City



# NEW ALLWOODII Perpetual Flowering Hardy Pinks



HARDY GARDEN PINKS

A **SPLENDID** new strain of perpetual flowering, deliciously clove scented, Hardy Pinks. They are perfectly hardy and flower continuously from early June until late in the autumn. The flowers are much more substantial and larger than in the old type of Hardy Pink and are borne on long stems suitable for cutting. The varieties offered below are beautifully illustrated in colors in Dreer's Garden Book for 1922.

**Harold**—A splendid large double pure white, of very symmetrical form and great substance.

**Jean**—Pure white with deep violet-crimson center. A distinct and handsome flower.

**Mary**—Pale rose-pink with light maroon center.

**Robert**—A delicate shade of old rose with light maroon center. Very free.

Good thrifty young plants of the above, 35 cts. each; \$3.50 per dozen; \$25.00 per 100. We will supply one each of the four varieties for \$1.25.

## Dreer's Hardy Perennial Plants

The old fashioned Hardy Garden Flowers which are now so popular on account of their varied changes throughout the entire season. We offer a large assortment and have prepared a special leaflet, with plans and list of varieties, for positions either in sun or shade. A copy of this leaflet will be mailed free to all applicants.

## Dreer's Roses for the Garden

Extra heavy two-year-old plants, specially prepared for the amateur, for out-door planting and immediate results. All worth-while new and standard varieties are offered.

## Dreer's Garden Book for 1922

Contains 224 pages, eight color plates and numerous photo-engravings. It offers the best Vegetable and Flower Seeds, Lawn Grass and Agricultural Seeds, Garden Requisites; Plants of all kinds, including Roses, Dahlias, Cannas, Hardy Perennials, etc. A copy will be mailed free to all applicants who mention this publication. **WRITE TO-DAY.**

**HENRY A. DREER,**

**714-716 Chestnut Street, Philadelphia, Pa.**

## A Real Bargain In Gladioli

50 Bulbs, \$2.00 postpaid.  
100 Bulbs, \$4.00 postpaid.  
Plant them Up to July 1st.

These bulbs contain all the most desirable colors in Gladioli. This offer enables you to have a real Gladiolus garden at a most reasonable figure. Grow them in quantity for cut flowers. Bloom 60 days after planting.

### Three Extra Good Ones

**Evelyn Kirtland**—Exquisite shade of light rose, darker at edges fading to shell pink at center. Brilliant scarlet blotches on lower petals. 50c each, \$5.00 doz.

**Alice Tiplady**—(Primulinus) A grand gladiolus of beautiful orange saffron. Large and strikingly handsome. 40c each, \$5.00 doz.

**Prince of Wales**—Pre-eminent among Gladioli. Color, light salmon shading to soft orange. 25c each, \$2.50 a doz.

2 bulbs of each of the 3 varieties, \$2.00 postpaid.  
6 bulbs of each of the 3 varieties, \$5.50 postpaid.

### Catalogue

Spring 1922 Garden Annual Free on Application.

*Bassi Frères*  
de Paris INC.

Seedsmen Main St., New Rochelle, N. Y.



## To Guide You in Your Spring Planting

our service department has drawn up a twelve-page booklet which we will gladly mail to you gratis, upon request.

This booklet is intended solely to guide you in the proper selection of stock for various planting purposes, and covers such subjects, as porch and foundation plantings with keyed plan of arrangement, climbing shrubs, border and hedge suggestions, etcetera.

A request for this booklet entails absolutely no obligation to buy from us. Simply write for our booklet No. 100, "To Guide You In Your Spring Planting."

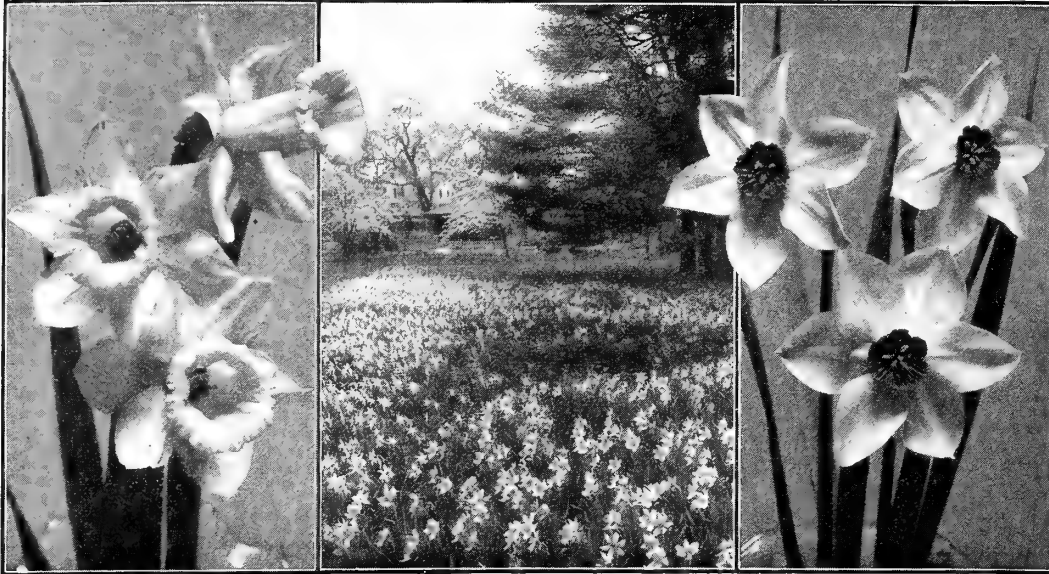
"Successful For Over a Century"

**AMERICAN NURSERIES**

H. E. Holden, *Manager*

**Singer Building**

New York



HERE is a bit of our Daffodil display at Mayfair. The flower at the right is our favorite Poeticus-like bloom of Mrs. Chester Jay Hunt, included in the De Luxe collection offered below. These collections have been so chosen that some one of them is suited to your garden. Your order in our hands before June 26th, and the bulbs will be delivered to you in time for planting this fall.

**DE LUXE SET**

10 bulbs of each (30 bulbs in all) for \$24.25

- Mrs. Chester Jay Hunt—the picture shows you all but the red margin of the cup.
- Edrin—a gem for cutting.
- Lord Roberts—a big flower, but perfect form.
- Weardale Perfection—the finest of all pale bicolors.
- Masterpiece—the one all-red cup for our climate.
- Whitewell—a wonderful flower that lasts longest of all.
- Rosella—unlike any other in color of petals.
- Orangeman—a striking contrast in color of cup and petals.

**NEWER VARIETIES**

10 bulbs of each (30 bulbs in all) for \$12.95

- Bullfinch—a dainty flower of attractive form.
- King Alfred—unsurpassed for its glorious golden yellow.
- Epic—our favorite among the true Poeticus types.
- Gloria Mundi—the best orange colored cup among the yellow Incomps.
- Lady Audrey—the most permanent of all white trumpets.
- Spring Glory—big, tall, good grower, fine color.
- White Queen—Low-growing, but exquisitely beautiful in small clumps.
- Homespun—the sunniest of yellows, and most perfect in form.

**STANDARD VARIETIES 10 bulbs of each (30 bulbs in all) for \$6.75**

- Albatross—the largest of the least costly red-edged Barrii kinds.
- Artemis—the one yellow and white Incomp. to be always admired in our gardens.
- Beauty—a gem for the garden or for cutting.
- Glory of Lisse—our favorite for growing in masses.
- Fairy—the best yellow trumpet for permanent plantings.
- Madame Plemp—the bicolor companion for Fairy in permanent plantings.
- Lucifer—a telling variety for the orange cup with white petals.
- White Lady—tall, large, perfect in form and a splendid grower.

Full descriptions of all these will be found in our Blue Book, a copy of which will be mailed on receipt of your order for any of these collections. If you prefer to select for yourself from our complete list of varieties, a copy will be sent you on receipt of 25 cents, which will be credited on all orders amounting to \$2.50 or over.

**Chester Jay Hunt, Inc.—Mayfair Gardens**  
 Department A Little Falls, New Jersey



**Pergolas and Arbors**

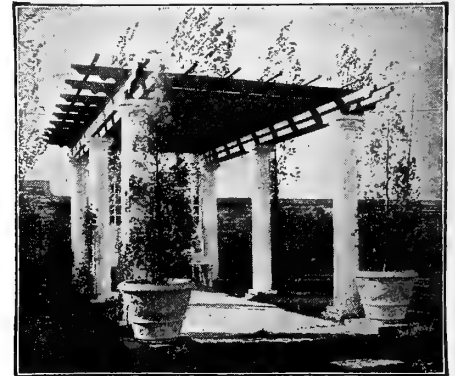
This advertisement shows only a few of suggestive features from our catalogue containing several hundred distinctive garden decorations.

When writing for copy, enclose 2c and ask for catalogue H-34"

GARDEN HOUSES, LATTICE FENCES  
 GARDEN FURNITURE, PLANT-TUBS and FERNERIES  
 SUN-DIALS and GAZING GLOBES

**HARTMANN SANDERS CO.**

Main Office and Factory: 2155-87 Elston Ave. Chicago, Ill.  
 Eastern Office and Showroom: 6 East 39th St. New York City



**FOR LAWN & GARDEN**

"F & I" is a product with a tobacco base. A fertilizer and an insecticide combined.

"F & I" contains no weed seeds, insect pests, and has no objectionable odor.

Feeds your plants and kills or drives away many insects from your lawn and garden.

Price: 100 lbs., \$3.00; 2000 lbs., \$50.00

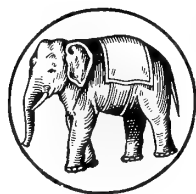
Special booklet sent on request

THE F. & I. TOBACCO PRODUCTS CO.  
 SUCCESSORS TO

LANCASTER TOBACCO PRODUCTS CO.

Dept. G Lancaster, Pa.

ELEPHANT



BRAND

**UNIVERSAL FERTILIZER**

Stimulates growth and builds the body of plants and vegetables.  
 Specially suitable for Dahlias, Cannas, Gladioli, Flower and Vegetable Gardens.

Introductory Offer: Send \$1.00 for Five 25-cent packages

INDEPENDENT CHEMICAL COMPANY Dept. F 87 Dey Street, New York

**PENNSYLVANIA QUALITY LAWN MOWERS**

A lawn mower is known by the service which it gives. That's why Pennsylvania Quality is known as the standard of satisfaction and economy.

At Hardware Dealers and Seedsmen



# The Enduring Charm of The Flowering Crab Apples

(Malus)

TREES may come and trees may go, but the Crab Apples will go on forever. Of a constitution that has enabled it to survive untold ages, Crab Apples stand as a monument to enduring qualities put into plant life. Nor does age ever make Crab Apples ungainly.

FLOWERING CRAB APPLES, the most gorgeous of all flowering trees, greatly enhance the inviting charm and beauty of the grounds. Being relatively low of growth they are excellently suited for individual as well as group planting. No group of plants has greater value than the Maluses for enlivening open forest parks and country road-sides; they present striking effects when planted on parking strips of boulevards or wide city streets.

Even when young they blossom early in May, with flowers ranging in color from the deepest rose to the most delicate pinks and pure white. Some varieties bear tiny red and yellow fruits in the fall.

Boxford-Highlands Nursery, East Boxford, Massachusetts, offers many of the finest varieties, including rare ones from the famous Arnold Arboretum. Flowering Crabs are quite scarce and orders should be placed early.

New Illustrated Catalogue on request. Address

**HARLAN P. KELSEY, Owner**

*Hardy American Plants*

Salem

Massachusetts



## An Endless Story

THE longer you own a garden the more you will love your perennials—and the newer you are at gardening, the more desirable it is for you to plant them! For they give the biggest return for the least care, hardly ever go back on you, grow tall and profusely and handsomely, and offer an endless variety of form, color, fragrance, and storied charm. It is easy enough to plan a perennial border or garden that will give you never-failing bloom throughout two-thirds of the year—a brilliant procession from the early Columbine of April, through the Irises, the Peonies, and the Phlox to the Anemones and the Chrysanthemums of late November—the “swan-song” of the floral pageant.

Imagine the constant supply of cut flowers of the most fascinating variety that such a perennial garden would give you for indoor adornment—and for your friends! And the fragrant story will repeat itself year after year with hardly a thought or a care on your part! Write us to-day for our price list of perennials and our planting suggestions.

## Moons' Nurseries

THE WM. H. MOON CO.

MORRISVILLE which is 1 mile from Trenton, N.J. PENNSYLVANIA

## Macultivator vs. Man Power

**Let the boy do the work of 4 men. No back-breaking hoeing when you have this power plant on wheels.**

**Makes Work Easy Saves 4 Men in the Garden or on Farm or the Lawn.**

## Garden and Farm Work Made Easy

ECONOMY in farm and garden operations means more profit and greater satisfaction. The Macultivator eliminates the drudgery of hand hoeing or that back breaking method of pushing the cultivator irregularly and jerkily through your vegetable rows. The man with the hoe is not needed. Cabbage, tomatoes, young onions, lettuce, beets, radishes, carrots, celery, small fruits, seedling trees in

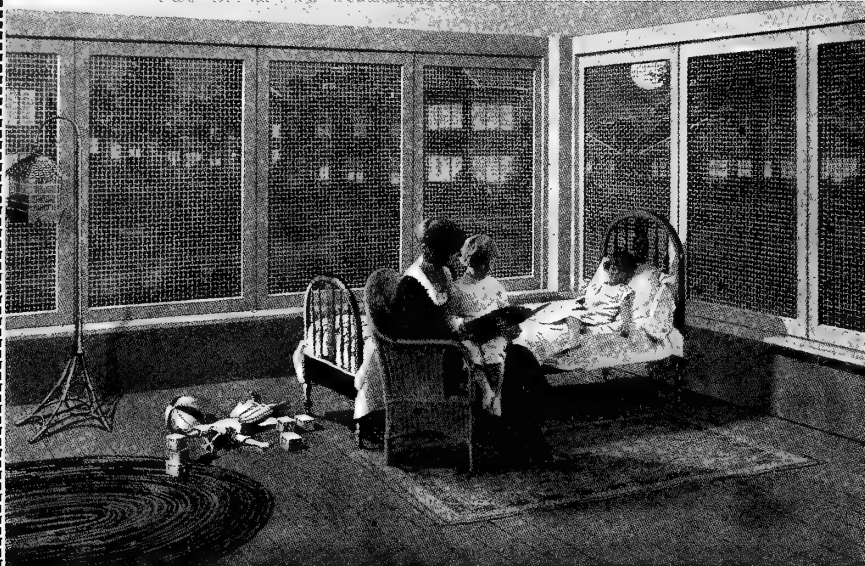
the nursery, flowers, mint, tobacco, etc., all cultivated much better, more quickly, easily and economically by motive power. Your lawns may be cut and man power saved by the Macultivator.

Lessens labor costs in many ways. Prevents help troubles. Does the work of five men. Sold on an absolute make-good, tryout guarantee. Write for interesting proposition.

**THE MOTOR MACULTIVATOR COMPANY**  
1319 Dorr Street, - Toledo, Ohio







## The "Vision" of Pearl Wire Cloth

WHEN you screen your porch you add an out-of-door living room, or a sleeping porch, protected against disease carrying insects.

Specify PEARL WIRE CLOTH for porch screening.

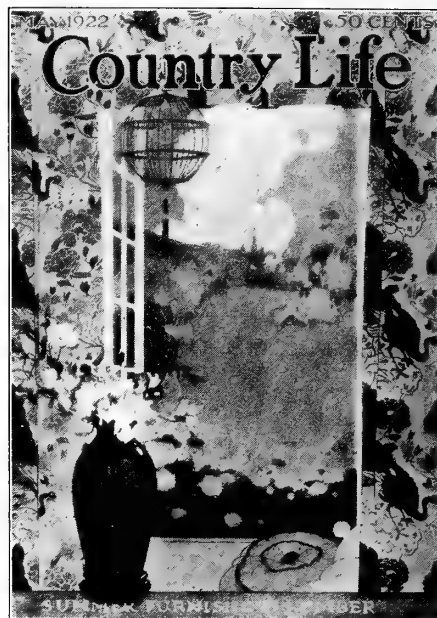
Due to its metallic coating, Pearl Gray Color and even mesh, PEARL is the most beautiful wire. It offers little or no obstruction to the vision and you enjoy the advantages of out-door living with in-door comforts.

PEARL is also, because of this special process coating, the most durable—therefore the most economical.

*Insist upon the Genuine. It has two copper wires in the selvage and our red tag on every roll. Made in two weights—regular and extra heavy.*

**The Gilbert & Bennett Mfg. Co.,**  
New York, Georgetown, Conn., Chicago, Kansas City

*Write our nearest office for Samples and Booklets. Address Dept. "G"  
The best hardware dealers in your city sell "PEARL"*



## The Perfect Home

In the luxurious May number of COUNTRY LIFE has been brought together all the beauties of the perfect home with every room well-planned, in mellow tones of old maple, or oak paneling in the period of Louis Seize—furniture of Sheraton or the Brothers Adam—paintings over the mantelpiece—

All these are richly illustrated, much in full color, in the May COUNTRY LIFE.

The perfect rooms are photographs of rooms in the homes of Mr. Howard Whitney, Mr. J. F. Feder, Mr. Howard Maxwell, and others.

And the beautiful harmonies of summer—in furnishings, intimate gardens, wall fountains, dipping pools—making the perfect summer setting.

You get all this in the May COUNTRY LIFE—now on sale at the Newsstands for only 50c. Or, send \$2.00 for a seven months' subscription. (Regular price \$5.00 a year.)

## Country Life

GARDEN CITY, NEW YORK

Published by Doubleday, Page & Company, Garden City, New York, along with The WORLD'S WORK, GARDEN MAGAZINE, EDUCATIONAL REVIEW, RADIO BROADCAST and SHORT STORIES.



### Gladiolus Dorothy McKibbin

The best early ruffled pink variety yet produced. (See cut for form and vigor.) Dorothy McKibbin has been tested by florists and pronounced first class for forcing purposes, has long, straight, wiry stems, the flowers growing well out of the foliage; extremely early, elegantly ruffled and of a most beautiful shade of pink; has a pure apple blossom tinted throat, blending to bright pink around the outer edges of the petals. It has a wide open flower with many open at a time. Each 35c., doz, \$3.50, per 100 \$24.50, prepaid. 6 at doz. rates and with every half doz. 1 Gold Pheasant free.

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**BETTER LATE THAN NEVER—YOU MAY STILL PLANT IRIS DURING THE EARLY PART OF MAY**

While you can not expect any blooms from them, they will make a fine growth during June and by next Spring you will have a well established clump that will be the pride and joy of your heart next June. All my rare and higher priced varieties I cannot disturb now, but keep in mind the coming three best planting months of the year

**July, August & September**

It might be well and will save you disappointment if you will make your selections NOW and let me book your orders for late Summer delivery. 25% cash with order will do; bear in mind that the newest varieties are still very scarce. If interested in Iris you will enjoy my 40-page catalogue; many one published in this country.

people say it is the best one published in this country.  
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*"The World's Best"*

May is the one best month to plant Fenton's Hybridized Dahlia Seed. Fifty to one hundred beautiful Dahlias, no two alike, will result, at a cost of but \$5.00.

**SPECIAL OFFER:** 100 Seeds hybridized with Famous Black Pearl, \$3.00. 50 Seeds, same ancestry, \$1.50.

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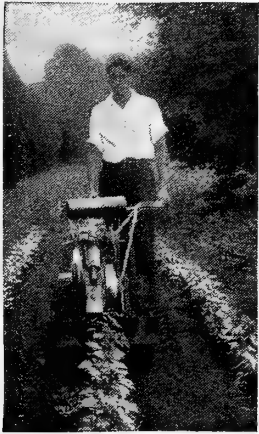
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**\$180.00**



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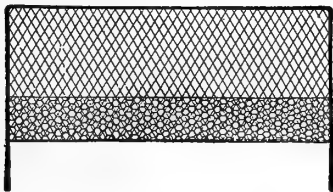
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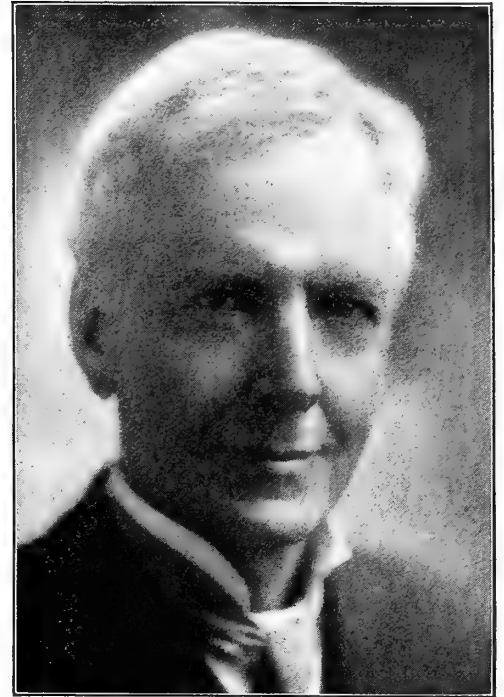
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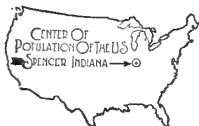
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- 242—Mammoth scarlet (dec.) - - - - - .50

\$2.10

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- 245—Massive golden yellow (dec.) - - - - \$ .50
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Plant Gladiolus any time the ground will do from early spring to July first for succession of bloom.

Full directions for growing Dahlias, Gladiolus or Asters mailed with each order

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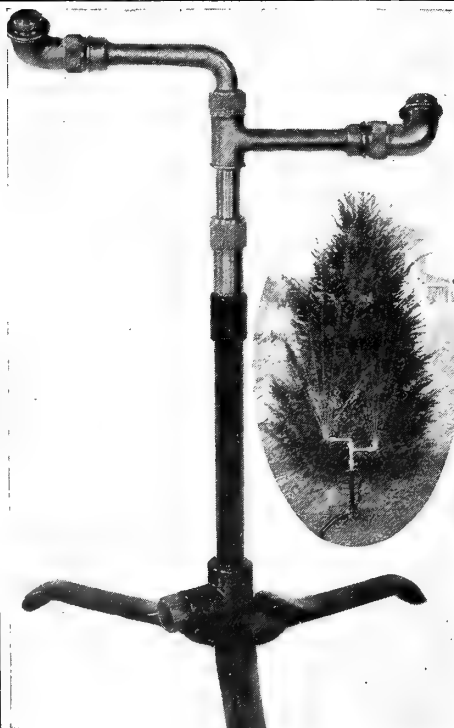
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—For those who would keep abreast of the times



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RADIO BROADCAST is a monthly. The first number, May, was quickly sold out to an enthusiastic public. The June number is now ready. It is edited with the same authoritative and broad-minded policy that produces THE WORLD'S WORK. It is in the interest of neither dealer, manufacturer, telephone companies, nor any other group—it represents the Public's interest, and will champion the Public's right in the ether

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When the Baby is a Grown-up and inherits the beautiful garden, the Cypress arbors and trellises and garden seats will be just about as perfect as they are today. She may, tho, have a few nails tightened up, and probably will want to add some new-style ideas in design—and, of course, the new things will be built of Cypress, "the Wood Eternal". Very likely she also will have the house remodeled or enlarged—with Cypress, "the Wood Eternal". But if it is of Cypress now, she will have practically no repairing to do then,—any more than you will between now and then. That's economy that really counts. Ask the lumberman to show you the Cypress trade-mark arrow (shown below) on every board or bundle.

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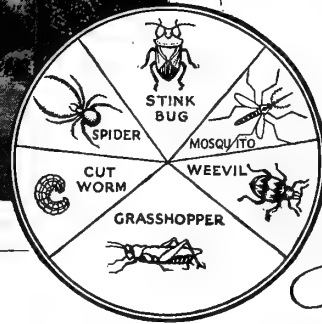
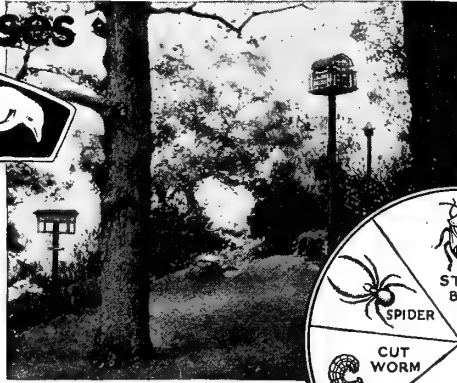


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Wrens live upon the grasshoppers, beetles, caterpillars, mosquitoes and spiders in your garden. One pair has been known to devour six hundred insects in a day.

Solid oak, cypress shingles, copper coping, with four compartments, 28 inches high. Price \$6.00

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The early birds often need a little help in finding food, because of the late frosts. These feeding tables will attract the early birds, to stay all summer.

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Dodson Sparrow Trap is guaranteed to rid your premises of this noisy, quarrelsome pest, \$8.00



FREE

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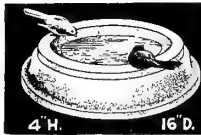
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We can likewise supply all standard varieties at reasonable prices; write for catalogue.

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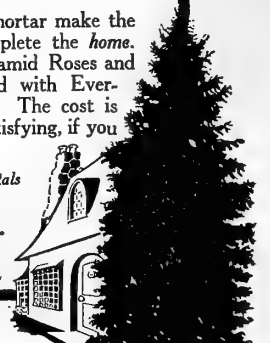
TIMBER, bricks and mortar make the house; you must complete the home. Let your house snuggle amid Roses and Flowering Shrubs, girded with Evergreens and Shade Trees. The cost is trifling; the results are satisfying, if you order direct from us.

Write for Price List of Ornamentals and Fruit Trees.

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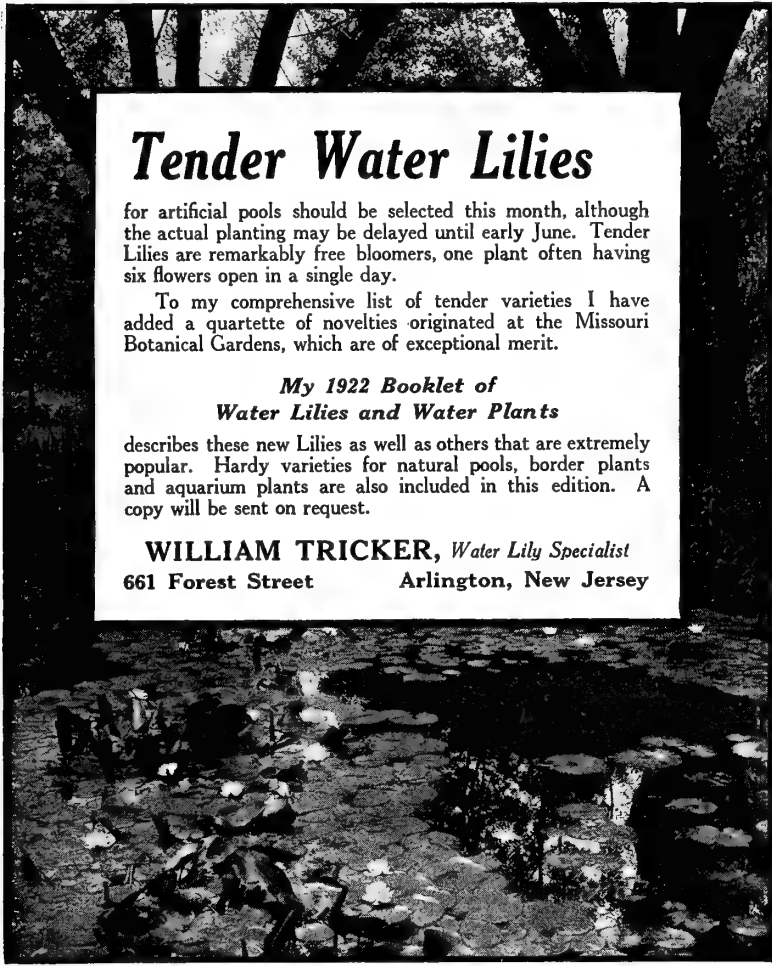
for artificial pools should be selected this month, although the actual planting may be delayed until early June. Tender Lilies are remarkably free bloomers, one plant often having six flowers open in a single day.

To my comprehensive list of tender varieties I have added a quartette of novelties originated at the Missouri Botanical Gardens, which are of exceptional merit.

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By **MRS. CHARLES H. STOUT**

## A Book That is Indispensable to the Dahlia Grower

**T**HE subjects treated—History; Early Dahlia Culture; Situation; Soil Composition and Preparation; Propagation; Cultivating, Watering, Disbranching, Disbudding—Dahlias in Tubs; Frosts—Lifting and Storing; Pests and Remedies; Cutting, Packing, Shipping; Dahlia Shows; Color Combinations in the Garden and as House Decorations; Varieties; Classification.

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**Deming Sprayer, Jr.**—the ideal outfit for protecting rose and berry bushes, vines, shrubbery, and vegetable garden from injurious insects and fungous diseases. Easily carried in one hand and operated by trigger control, it shoots a penetrating spray right where you want it, with no loss of spray mixture.

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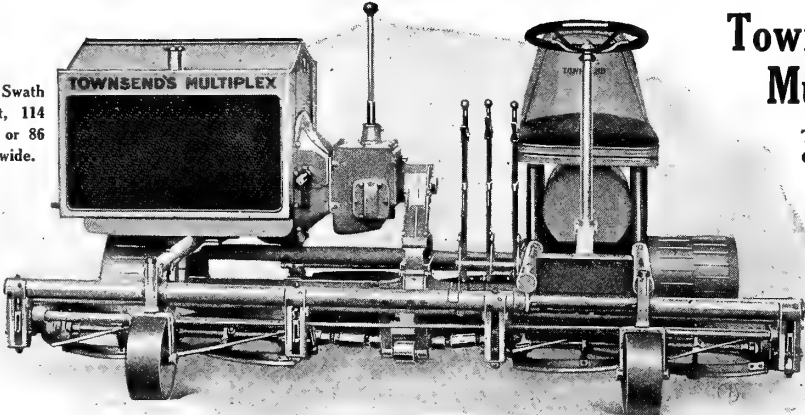
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One unit may be climbing a knoll, another skimming the level and another paring a hollow. Not an assembly of tractor and mowers, but a single, compact machine like an automobile, with 3, 4, or 5 cutting units. Driven by a 17 H. P. four-cylinder, water-cooled gasoline motor of great power and quality with Splittorf Dixie Aero Magneto, a wonderful radiator, sliding gear transmission, two speeds forward and reverse, etc.

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**Rustic Cedar Bird Houses do not Require Weathering**

Any three for \$5.00 and Parcel Post charges, weight of 3, 9 lbs. Crescent Pat. Sparrow Trap \$5.00 and Post charges weight, 8 lbs. Martin Houses \$5. \$6. \$10. and \$20. sent by freight or Express.

**CRESCENT CO. "Birdville" Toms River, P. O., N. J.**

**"Spraying the Home Garden"**

—a 28-page book based upon 35 years' experience—tells in simple way how to protect trees, shrubs, vines, flowers, vegetables, from insects and diseases. Teaches the keeping well and making well of plants. Sent prepaid for 4c in postage. Address:

**Dept. 24, B. G. Pratt Co., 50 Church Street, New York**

**WANTED**

Experienced gardener for propagation of hardy shrubs and perennials for nursery planting. References required.

**THE GREENING NURSERY CO.**  
Monroe Michigan

**BEEMAN \$240**

Reduced From \$340



It plows, harrows, cultivates, runs stationary machinery, etc., write for facts.

**Beeman Tractor Co.**  
Minneapolis, Minn.  
3802 5th St. N. E.

**"BUFFALO" Distinctive FIRE SCREENS**

"BUFFALO" FIRE FENDERS, SPARK GUARDS and FIRE PLACE SCREENS are unusually distinctive in appearance. Their good and correct designs, their well placed ornamentation, and their attractive finish lend charm to the most perfectly appointed residence. They insure perfect safety from flying sparks and absolute protection to children and older members of the household.



"BUFFALO" FIRE FENDERS, SPARK GUARDS and FIRE PLACE SCREENS cannot be compared with flimsy, cheap ones. They are strong and durable, and made by the most skillful workmen from the best "BUFFALO" quality of fine mesh wire cloth. We make them to fit any size fire place opening and in any desired ornamentation or finish.

We also make "BUFFALO" PORTABLE FENCING SYSTEM, VINE TRAINERS, TREE GUARDS, GARDEN FURNITURE and WINDOW GUARDS, etc. Information gladly furnished.

WRITE for complete catalogue No. 8-BF. Mailed on receipt of 10c postage



**BUFFALO WIRE WORKS CO., INC. (Formerly Scheeler's Sons) 467 TERRACE, BUFFALO, N. Y.**

**WANT TO START SOMETHING?**

Give your pet cat or kitten

**REYNOLDS' CATNIP MOUSE**

Makes them playful and healthful. Fun for the whole family. Stuffed with purest catnip leaves. Very life like.

At all drug stores or send \$1 for box of four

**H. B. REYNOLDS MFG. CO., Box 117, MT. VERNON, OHIO**

**AWAY WITH THE CESSPOOL**

Secure all the sanitary comforts of a city building by installing an

**Aten Sewage Disposal System**

Allows continuous use of washstands, bathtubs, toilets, sinks, showers, etc. The septic tanks of all Aten systems are made of concrete forms, not wooden forms. No expert engineering service or experienced supervision in the field required.



Simple to install, nothing to get out of order.

Our booklet No. 11 tells how and why. Sent free upon request.

**Aten Sewage Disposal Co.**  
286 Fifth Ave., New York City

# The Most Greenhouse For The Least Money



**BY THE** least money, we mean the least that is consistent with lastingness and the making of a happy healthy home for your plants.

It's just a clean cut, thoroughly practical greenhouse, in which the ornamental touches and extra refinements, so to speak, have been eliminated.

Still it is decidedly good looking, and will grow just as many and just as fine quality of flowers, as any house that costs more.

It is a house we have been building for years.

But the times have made so many folks want to strip things for the running, as it were, that they quickly buy this Practical Purpose house, when they would not our regular one with its curved eaves and other features.

Thinking you might feel something the same way, here it is. Glad to send you fullest of particulars, or one of us will come and talk it over with you.

Hollrock

## Lord & Burnham Co.

*Builders of Greenhouses and Conservatories*

IRVINGTON  
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# An Alluring Reward for Promptness!

## Our Special Border Collection of Gorgeous Darwin and Cottage Tulips (as pictured above in order from right to left)

	per 100	per 1000
Clara Butt—Exquisite Salmon pink Darwin . . . . .	\$4.00	\$35.00
Picotee—White cottage with lovely reflexed petals edged with pink . . . . .	4.50	40.00
Pride of Haarlem—Darwin, American Beauty color . . . . .	4.50	40.00
Dream—Charming, clear lavender Darwin . . . . .	5.00	45.00
Bronze Queen—Art tulip of buff tinged with golden bronze . . . . .	5.00	45.00
La Tulipe Noire—Enormous size Darwin of deep velvety purple . . . . .	5.00	45.00
Golden Beauty—Glorious golden yellow Cottage . . . . .	4.50	40.00

25 Bulbs at 100 rate; 250 Bulbs at 1000 rate

### Very Special

- 100 bulbs each of 7 varieties above (700 in all) \$30.00
- 1000 bulbs each of 7 varieties above (7000 in all) \$275.00
- Special 5% discount if you send cash with order

**YOU CAN** have just such an entrancing border as is pictured above, at a cost that is trifling, *if you order now!* We import your Bulbs especially for you, along with our own shipment, have them packed especially for you in Holland, thus saving you the handling charges here, reduce to a minimum the freight and import charges, and guarantee you the pick of the biggest and finest Bulbs grown in Holland!

An import order now means a big saving to you. Earn it—order now. To enable us to make this generous offer we must have your order before July 1st, no later!

## Bring the Glories of Tulip-time To Your Own Garden Next Spring!

Right now, while you are fascinated by the Tulips and Daffodils you see in the parks or in your friends' gardens, picture them on your own lawn,—and by a stroke of the pen, insure their charm and beauty for yourself next year!

Our collections include the choicest varieties it is possible to obtain. Of some varieties, single bulbs alone would cost 50 cents apiece. Included are the wonderful Cottage Garden Tulips that you see in the old Dutch, Flemish, and English gardens where they have flourished for years, treasured by their owners, hallowed by sentiment, beautiful in their own right and with the fragrance of sweet memories.

Plant them among the shrubbery and in borders, as well as in beds. They multiply rapidly, and will last and flower well for three years. Long-stemmed, graceful, enduring, they are wonderful not only in the garden but for indoor decoration in vases, etc. The colors are the most exquisite imaginable.

You need not pay for your order until bulbs arrive from Holland in September. But if you send cash with order, you may deduct a Cash Discount ("Preferred Dividend!") of 5%!

## These Are Our Prices—If You Order Now!

### MATCHLESS COLLECTIONS OF BULBS AT REMARKABLE SAVINGS TO EARLY BUYERS!

	per 100
100 Single Early Tulips in 10 named varieties. Bloom in April and early May . . . . .	\$4.00
100 Double Early Tulips in 10 named varieties. Bloom in April and early May . . . . .	4.00
100 Darwin Tulips in 10 named varieties. Immense flowers on stems 2½ ft. tall in May and June . . . . .	4.50
100 Cottage Tulips in 10 named varieties. The Tulips of grandmother's garden improved and more beautiful than ever. May and June . . . . .	4.50
100 Breeder or Art Tulips in 5 rare named varieties. In form like Darwins, wonderful shades of Bronze, Buff, Orange and Apricot. May and June . . . . .	5.00
100 Parrot or Orchid Tulips in 4 named varieties. Bloom in May and June . . . . .	5.00
100 Narcissi or Daffodils for naturalizing and lawn planting. Airy Trumpets, Medium Trumpets, shortcupped and the lovely Poet's varieties, doubles and singles on long stems, all top size mother bulbs . . . . .	4.00
100 Bedding Hyacinths in 4 colors . . . . .	5.50
100 Named Hyacinths, 2nd size, 4 varieties . . . . .	7.00
100 Named Hyacinths, exhibition or top size, in 10 named varieties for pots or glasses. Our selection of varieties, rarest and best . . . . .	14.00

5% discount if you send cash with order

### Use This Coupon

either for ordering—or just to send for Import list

**MAX SCHLING, Seedsmen, Inc.**  
24 West 59th Street, New York

- You may enter my order for the Bulbs checked on accompanying list, for which I agree to pay at these special import prices when order arrives in September.
- I am deducting 5% Cash Discount and enclosing full payment in advance.
- Send me your "Import List" of special offers on Bulb Collections.

NAME .....

ADDRESS .....

# Schling's Bulbs

24 West 59th St. New York



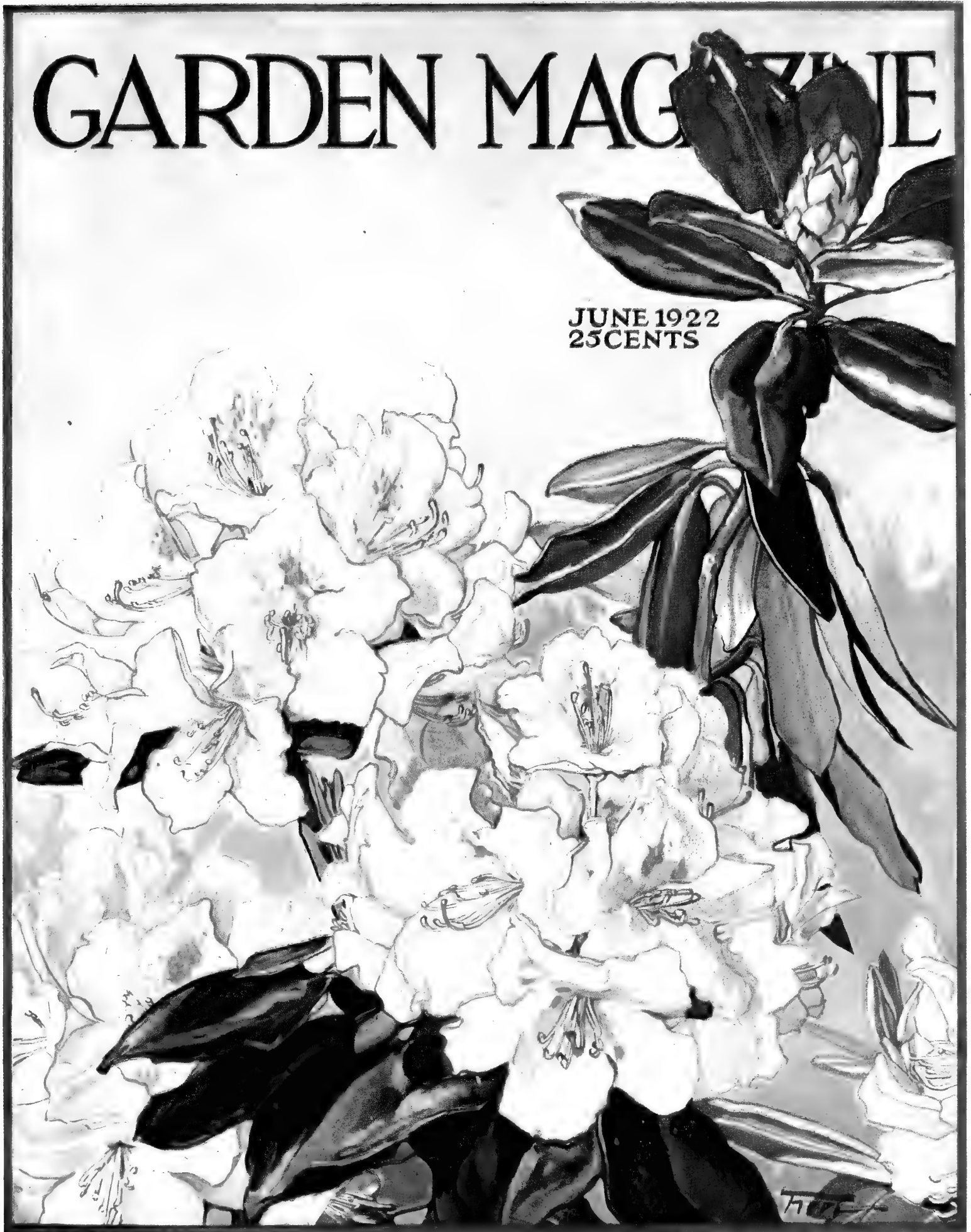
Grape Pruning  
Lily Pools

**IRISES**  
(Annual Feature)

Garden Clubs  
in Summer

# GARDEN MAGAZINE

JUNE 1922  
25CENTS



Vol. xxxv. No. 4

June, 1922

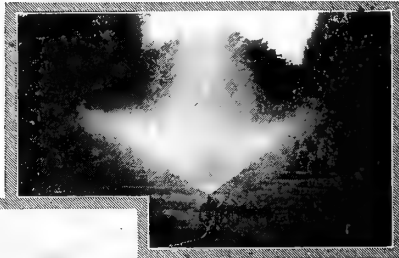
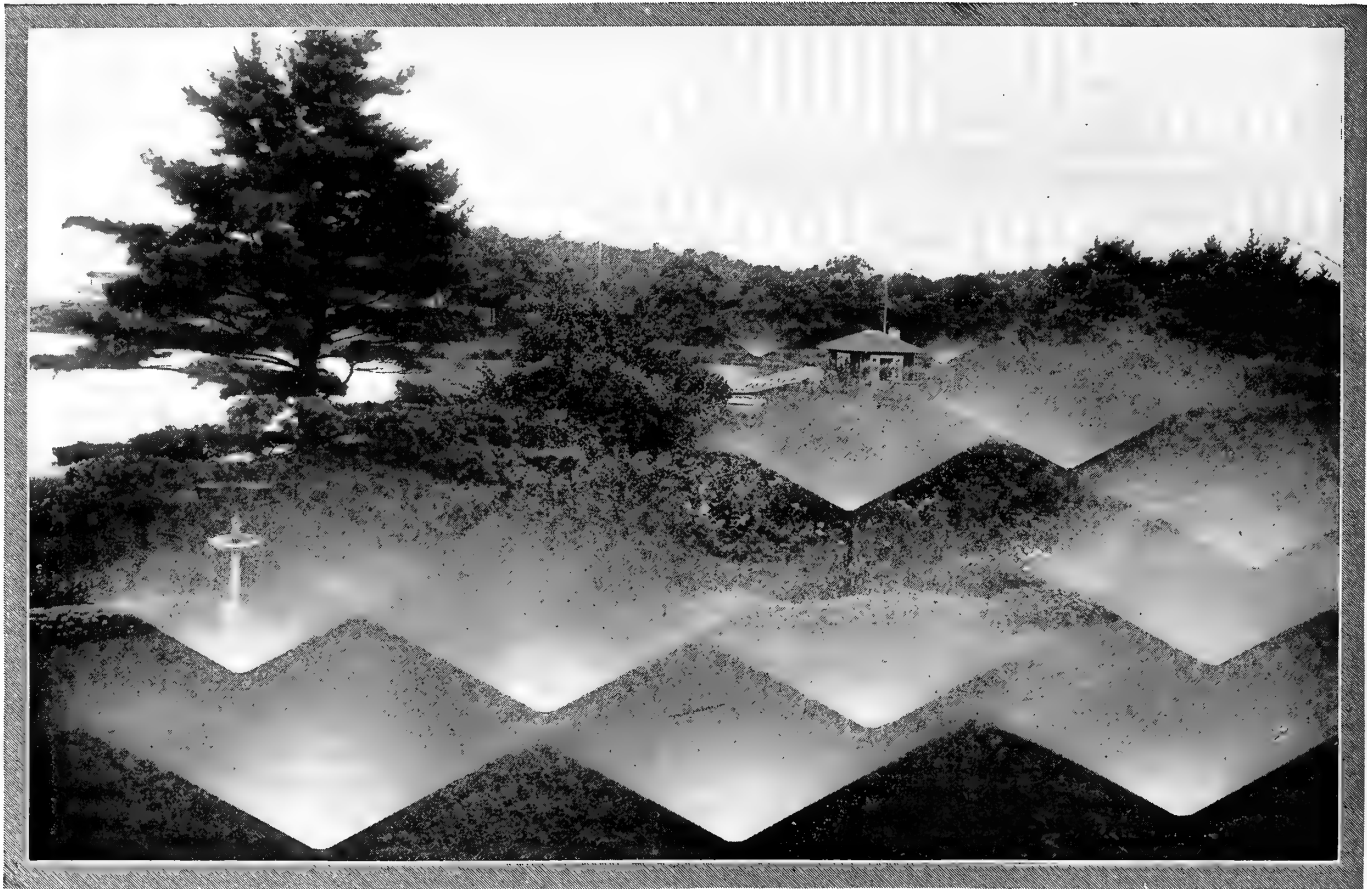
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*Boston*

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## IMPROVING NATURE

IT'S not enough nowadays to seed a lawn, set out shrubs and plants and then let nature "do the rest." Only in rare seasons does nature supply sufficient moisture to impart full vigor to a lawn or garden and make it lastingly beautiful.

The early gardeners soon learned the value of constant watering by hand, to supplement nature. And the modern gardener carries the improvement still further by the use of Cornell Irrigation systems. Like having rain when, where and how you want it.

A Cornell system is absolute insurance against dry weather, and quickly pays for itself in the losses it prevents.

Cornell Irrigation Systems are of *four* main types. These are, "Underground" for lawns, "Low Down" and "Overhead" for vegetable and flower gardens and orchards, "Portable Sprinklers" for tennis courts, golf greens and small lawns.

We are prepared to make complete surveys and submit plans and specifications covering the installation of piping systems and pumping units.

Use attached coupon. It will bring you a free illustrated booklet describing in detail the Cornell Irrigation and Water Supply Systems.

**W. G. CORNELL COMPANY**  
**Plumbing — Heating — Lighting**  
 45 East 17th Street, New York City

CHICAGO	BALTIMORE	NORFOLK
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**Cornell**  
**Systems of Irrigation**

Send

me free of charge,  
 your illustrated book-  
 let describing in detail  
 the Cornell Systems of Ir-  
 rigation.

Name .....

Address .....

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## Unbiased Opinions

The following press notices were given without solicitation. I introduced Iris Lord of June 1911. It is a strong grower, in my garden 49 inches tall.

### Horticulture, June 1919

"H. F. Chase, of Andover, Mass., exhibited a vase of Lord June Iris which aroused the greatest enthusiasm among Iris lovers present. Never, perhaps, have specimens as good as the vase shown at this exhibit been seen anywhere."

### Florists Exchange, June 1919

"H. F. Chase, of Andover, exhibited one of the finest things in the exhibition: Iris pallida Lord of June. The specimen indicated that this variety is among the finest of all bearded Irises. It is a giant I. pallida dalmatica of a most pleasing color."

### Florists Exchange, June 1921

"The vase of Lord June, shown by H. F. Chase, of Andover, was pronounced by competent judges the best ever seen. The color and size of the blooms and the length of stem, forty-nine inches, certainly gave many an admirer the first impression of what a well-grown Iris really does look like. This vase captured a silver medal."

### Flower Grower, Belvidere, Ill., June 1919

"The first Annual Show of the Belvidere Iris Society, in cooperation with The American Iris Society, was held in Belvidere on May 27 and 28.

Mr. Pattison won first prize for the best specimen stalk, with a beautiful stalk of Lord of June, which was one of the most admired blooms."

### Originator's Description:

## IRIS Lord of June (Yeld)

The beautiful new Iris, Lord of June, is admitted by those best competent to judge to be one of the finest varieties yet introduced. Borne on strong spikes, the exceedingly large flowers stand out boldly, the eye resting with pleasure on the light blue and purple shades relieved by an orange-coloured beard.

The plants I ship will be from division July 1921. You get a plant with one year's growth. Prepaid, parcel post, \$5.00. No wholesale prices. No catalogue. Would suggest your ordering early. Plants will be shipped in July or early August.

H. F. CHASE ANDOVER, MASS.

## Hardy Ferns and Orchids

*Wild Flowers and Bog Plants. Rock Garden Plants for dry or wet situations, all these in any reasonable quantity of only highest quality and, what's still better—*

## Real Service

A service that extends beyond the sending of a catalogue (a copy of which is yours free for the asking), a service that embraces the landscaping, planning, planting, and general detail work incidental to the making of naturalistic plantings. Please remember—we specialize in hardy wild plants and the creation of gardens in which they thrive naturally.

*Please afford our Catalogue a chance to acquaint you further with what we can do.*

**Edward Gillett** FERN AND FLOWER FARM  
Southwick, Mass.

286 Fifth Avenue 1524 Chestnut Street  
New York City Philadelphia, Pa.

## Sooner or Later- IRISES!

ONCE acquired, the Iris habit does not have to be cultivated—it grows just as the Iris grows, rampantly, joyously, nursed by ever-growing enthusiasm. Those of you who have Iris, *know!* This message is particularly for those who this year will surrender to the charms of the Iris.

## To Help You to Decide NOW

You may have made up your mind just which Iris you want—please feel that we have them if they are worth while sorts. For those in doubt just how to start we offer the following sorts of recognized merit, beautiful enough to win more friends for the Iris, covering a wide range of color and a long blooming season.

**Beauty**—white, tinted lavender, falls striped deep purple—25c. each.

**Dalmarius**—light blue, with rosy lavender falls—25c. each.

**Florentina**—fragrant, early, grayish white—25c. each.

**Blue Jay**—dark, yet bright blue—50c. each.

**Isoline**—a soft, yellow pink, deep rose falls—\$1 each.

**Madame Chereau**—white, frilled blue—25c. each.

**Tamerlane**—silvery blue, coppery purple falls—50c. each.

**Walhalla**—lavender, velvety purple falls—35c. each.

**Lohengrin**—shades of Cattleya mauve—50c. each.

**Loreley**—yellow, with purple falls—35c. each.

**Mrs. H. Darwin**—white, daintily tinted violet—25c. each.

**Nibelungen**—a fawn and bronze-purple symphony—50c. each.

**Quaker Lady**—lavender and gold, falls blue and yellow—75c. each.

**Rhein Nixe**—white with purple falls—50c. each.

**Plumeri**—rose mauve, deeper falls—25c. each.

**Murat**—pale orchid and gold, striped falls—25c. each.

**Dozen lots of each at ten times the single rate.** Shipment to be made during late June or early July, but to encourage prompt orders we make the following

### Very Special Offer

We will mail one root of each of above sixteen superb sorts (a total value of \$6.70 if bought separately) for \$5.00. Two roots of each for \$10.00. This offer holds good only during June and is made to *Garden Magazine Readers Only*, so please mention this advertisement when ordering.

*Learn to look to Totty's as headquarters for the unusual among plants for your ornamental garden.*

**Chas. H. Totty Co.**  
Madison New Jersey







# Burpee's \$1.00 Perennial Garden

One Packet each of Twelve Beautiful Perennials



Foxglove

Perennials are the chief standby of the old-fashioned garden. They require little attention and respond generously to increased and thorough cultivation. After once being established they will not only last many years but also increase in beauty with every season.

**Burpee's Dollar Perennial Garden** will give you a beautiful display of gorgeous flowers from early until late, season after season.

The Collection contains one packet each of: **Oriental Poppy, Delphinium, Foxglove, Sweet William, Shasta Daisy, Aquilegia Pyrethrum, Anchusa, Platycodon, Gaillardia, Lychnis and Coreopsis.** Mailed to your address, postpaid for **\$1.00.**

*For best results plant your perennial seeds in June.*

**W. Atlee Burpee Co.**  
Seed Growers Philadelphia.

## A Rare Offer of A Rarer Tulip—

The number of good Tulips runs into hundreds, but there is one considered "better than the rest" by connoisseurs! Of dark purple color, with bronze shadings, each petal margined dull golden orange. Louis XIV is regarded as the most wonderful Tulip extant.

### Louis XIV Tulips, at Cost, on this Basis:—

This Tulip costs us \$15.00 per 100 bulbs in Holland. We will supply it, at that rate with orders amounting to \$5.00 or more. Every reader selecting \$5.00 worth of bulbs from our free catalogue is entitled to 25 bulbs of Louis XIV, at cost (\$3.75). If you order \$25.00 worth of bulbs, you are welcome to 125 bulbs of Louis XIV and so forth.

This offer is made solely to distribute a great Tulip in broader fashion and to acquaint readers better with Wayside Gardens.

**THE WAYSIDE GARDENS CO. Mentor, Ohio**

*Largest Growers of Perennials in America*

## The Month of Peonies is nearly here

Don't YOU WANT TO SEE A WONDERFUL DISPLAY OF SOME OF THE MOST MAGNIFICENT PEONIES IN EXISTENCE?

Then COME TO CHERRY HILL where you will see THOUSANDS AND THOUSANDS OF RARE AND BEAUTIFUL BLOSSOMS IN ALL THEIR WONDROUS BEAUTY.

If you cannot come then, PLEASE FEEL FREE TO ASK FOR OUR CATALOGUE which we will gladly send you. You may have the benefit of OUR EXPERIENCE gained from GROWING PEONIES FOR NEARLY FIFTY YEARS.

We welcome visitors EVERY DAY EXCEPT SUNDAY when our grounds are closed.

Our shipping season commences the last week in August and continues until the ground freezes.

All orders will be filled with our CHERRY HILL STRAIN of plants which have always been so satisfactory.

**T. C. THURLOW'S SONS**  
INCORPORATED

*(Cherry Hill Nurseries)*

West Newbury Mass.

"Just Delightfully Different"

## My Garden Favorites

Summer, 1922

The Summer Issue with a complete Listing of Summer Vegetable and Perennial Flower Seeds together with a complete offer of *Holland Bulbs for Direct Import.*

**Now Ready**

Write for a copy, it is yours for the asking.

Be sure to  
see our special  
**GLADIOLI OFFER**

**Maurice Fuld, Inc.**  
Paul E. Atkinson, President  
Plantsmen - Seedsmen  
7 West 45<sup>th</sup> St. New York

## An Announcement and Invitation to Rose Lovers

During the first week of July (not June) our roses in the fields will, if the season continues normal, reach their height of bloom and this year we shall have the greatest showing of its kind ever seen in this country.

The blooms will appear on plants maturing for next Fall's and Spring's sales. (By the way, have you ever tried Fall planting of field-grown roses? Practically all large and experienced amateur planters now prefer the Fall season).

Come and enjoy this great treat with us whether you intend to plant or not—it will prove a revelation to you.

If you request to be specially notified just when the flowers are reaching their maximum of show, we shall take pleasure in complying with such request and at the same time send you detailed directions on how to get to Fair Lawn and the rose field.

(To see Peonies come about June 10th)

**George H. Peterson** Rose and Peony  
Specialist, Box 50, Fair Lawn, N. J.

## You Might Get Along Without Gilson Garden Tools, BUT—

### Gilson Weeders—



**The Gilson Rocker  
or Scuffle Hoe**

is redeeming all lost motion in cultivating. The double edged blade cuts just as much in travelling back as in advancing. Besides cutting weeds, it pulverizes soil. Made with 3½", 5", 6" and 8" blade for different soils and rows of different width. Prices \$1.05, \$1.15, \$1.25, \$1.35 respectively, with handle postpaid.

Why waste half the energy of every stroke; why loosen leaves to have them grow fast again; why lose a lot of time hunting up different tools when one specific set of tools will serve every purpose in 100 point fashion?

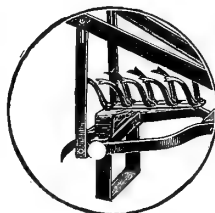
### Liberty Cultivators—



Made in 5, 7 and 9 tooth sizes, adjustable to different widths between rows. Scientifically shaped teeth sink into the soil naturally; sharp cutting edges cut the weeds, besides uprooting them. You need the Liberty as the ideal adjustable cultivator for all around gardening. Available as both hand tools and wheel outfit.

### The Triplex—

This combines the Gilson Weeder, the 9 tooth Cultivator and a Plowshare, arranged around a pivot axle. A hand lock nut easily locks or unlocks the axle without tools. Carried on substantial metal frame, it forms a powerful wheelhoe—distinctly a man's hoe. Gilson Triplex Wheel Outfit, Express prepaid, East of Rockies, \$8.75.



Write for instructive booklet giving valuable hints of cultivation. If your dealer does not handle the Gilson line, write us and let us get acquainted.

**J. E. GILSON COMPANY**

102 Valley Street

Port Washington, Wis.

## A Perfect Path of A Perfect Flower!

The Iris is *always* ornamental—after the glorious flower show this month, the ornamental foliage pleases during balance of season.

Among hundreds of kinds we grow, in acre lots, three stand out pre-eminently. You will find them illustrated in colors on inside back cover of our spring catalogue, a few copies of which are still available.

**Queen of May**—Soft rosy lilac shading to pink, 25c. each. \$2.50 per doz.  
**Pallida Dalmatica**—Clear deep lavender, falls shaded lighter. 25c. each. \$2.50 per doz.

**Loreley**—A glorious combination of blue and yellow. 35c. each. \$3.50 per doz.

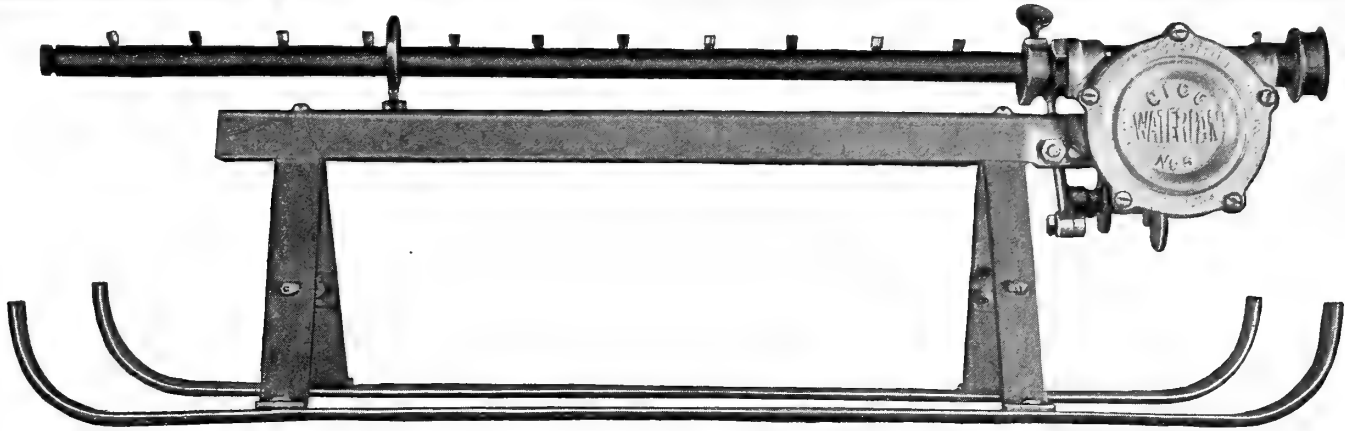
**Special Offer:** We will mail 2 roots each of above three splendid sorts for \$1.50 postpaid. Shipment in early August.

Ask for *Midsummer Catalogue of Bulbs, Perennials, etc.*

**JOHN LEWIS CHILDS, Inc.** Floral Park, New York







# Glad Tidings for Your Mid-Summer Gardens!

**G**ARDEN MAGAZINE READERS EVERYWHERE—Here is Great News:—Your Summer Garden's fiercest foe has been conquered. No longer need drouth be feared to reduce or destroy garden pleasures; no longer need you worry in anticipation of midsummer drouths! If you have a faucet to which to attach a garden hose with as little as fifteen pounds of water pressure back of it, your irrigation problem is solved for good!

## The Campbell Waterfan—Rain Anytime, Anywhere!

Simply attach one end of the garden hose to the faucet, the other end to the Waterfan, turn on the water and a beautiful, gentle shower will result. We say "beautiful" advisedly, for no other irrigation apparatus on the market attracts as much pleasant attention as the Waterfan. Its oscillating motion sways the fine streams of water back and forth, covering a space up to 16 feet wide by 60 feet long with a gentle, soaking rain.

Thoroughly made for many years of service, yet weighs but 5 pounds. Some of the first machines, made over 6 years ago, are still giving splendid service. Now made better than ever before, of brass and galvanized iron, attractively finished. Of simplest mechanical construction, easily attached, adjusted and operated without tools. Waterfan superiority now makes it the most favored sprinkler in thousands of Garden Homes.

And the work it does is *thorough!* No matter what type of garden you have—vegetable, fruit or flowers, lawn, shrubbery or greenhouse—the Waterfan will quickly and correctly supply the gentle showers vegetation loves most! The Waterfan will irrigate the corners as well as the open space—a great advantage over the circular sprinklers. It will cover every square foot *evenly.*

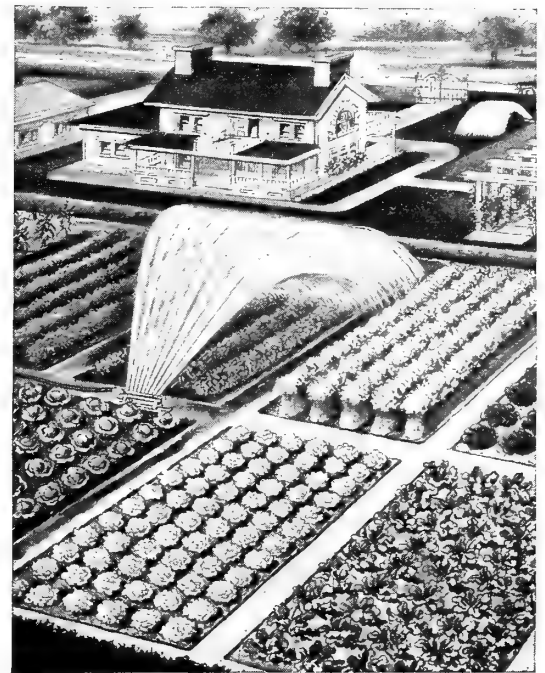
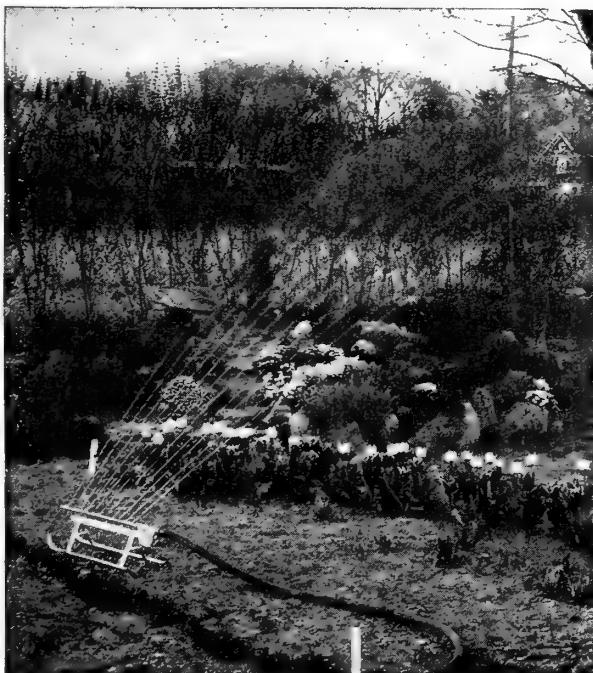
The Waterfan comes in two sizes, as follows:

- |  |
|--|
| <p><b>WATERFAN—Model No. 5</b><br/>                 Length, 21 inches. Weight, 5 pounds. Waters a rectangular area up to 16x60 feet. Price, \$15.00</p>  |
| <p><b>WATERFAN—Model No. 10</b><br/>                 Length, 5 feet. Weight, 10 pounds. Waters a rectangular area up to 22x60 feet. Price, \$25.00<br/>                 All prices f. o. b. factory.</p> |

*Satisfaction guaranteed or money refunded. Please write for descriptive circular and name of dealer nearest you*

## CAMPBELL IRRIGATION COMPANY

Woodbury New Jersey  
 Pacific Coast Agency:  
 Wilcox Building, Los Angeles, Cal.



## Really Most Remarkable Book Offer Ever Made!

Did you ever believe so strongly in a thing as to be willing to put up *thousands of Dollars* to carry your belief to others?

I believe in the future of Peonies as the premier hardy garden flower for America. I voiced that belief in "Tips and Pointers" last year and some of my friends reproached me for painting that book in all too rosy colors. Then I started to get busy!

*Unvarnished Facts* tells the truth and nothing but the whole truth, as I know it. And it cost me a lot to tell this truth, in every way. It required over three (\$3) thousand dollars alone, to put over, in 8 colors, some of the illustrations. But it was worth it!

Now then, this book is too expensive to give away. I am offering it to G. M. readers for 25 cents, with this understanding:

*If you do not consider the book worth \$1.00, I'll return money and you keep book anyway!*

Could anything be fairer? I'll absolutely depend on *your* judgment in this matter! And if, incidentally, you like the book well enough to take some of my advice on Peonies, you may deduct the book's price (25c) from your first \$3.00 order.

Thank you for calling!

*Kenny Scoops  
Kenosha, Wisconsin  
Provy Dan*

My book, *Tips and Pointers*, sent free—My book, *Unvarnished Facts*, .25c

## Hammond's <sup>Gold Medal</sup> Insecticides Continue to Help the Nation in Garden and Field



They are known from ocean to ocean as sure remedies, safely handled and easily applied.

**Slug Shot** kills Potato Bugs, and other pests that chew foliage. Sold in 1 lb. cartons, tin canisters and in bulk.

### Thrip Juice

bodily destroys all kinds of plant lice or Aphis. It is a powerful contact poison used against all sap-sucking insects.

### Copper Solution

is a proven preventative of blights and rose rust. It stops the spores that spread the trouble.

Write us for Booklet—

Ask your Dealer

Most large seed stores sell Hammond's Gold Medal Remedies. Let us mail you a free copy of "Insects and Blights" which, for thirty-six years has helped this nation save gardens.



### Grape Dust

is a fungicide preventing mildew and other plant diseases. Equally effective for greenhouse or outdoor use. An easily applied powder.

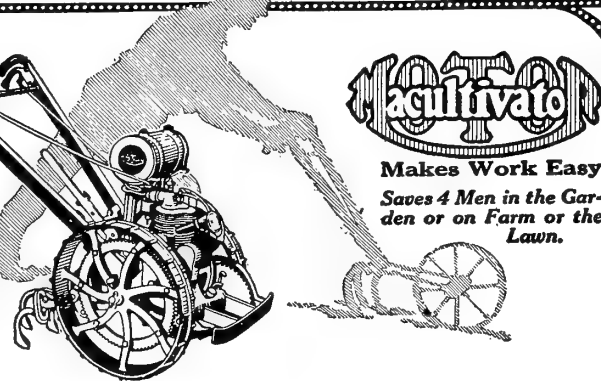


**HAMMOND'S PAINT AND SLUG SHOT WORKS  
BEACON NEW YORK**

## Macultivator vs. Man Power

Let the boy do the work of 4 men.

No back-breaking hoeing when you have this power plant on wheels.



**Macultivator**  
Makes Work Easy  
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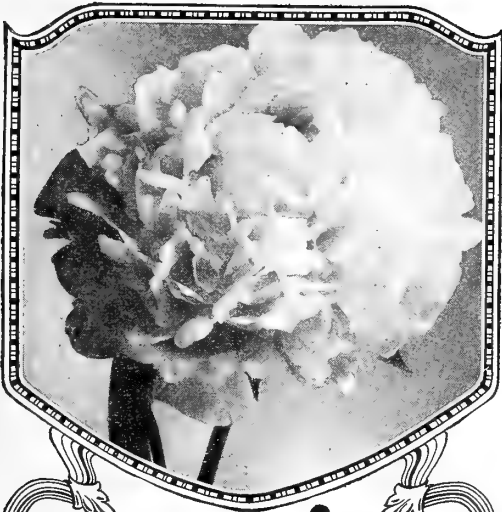
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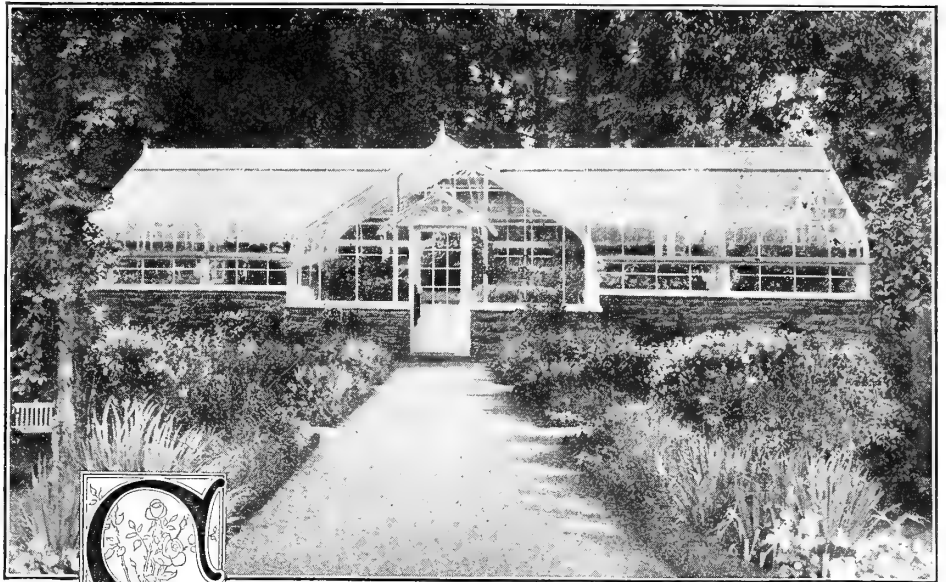
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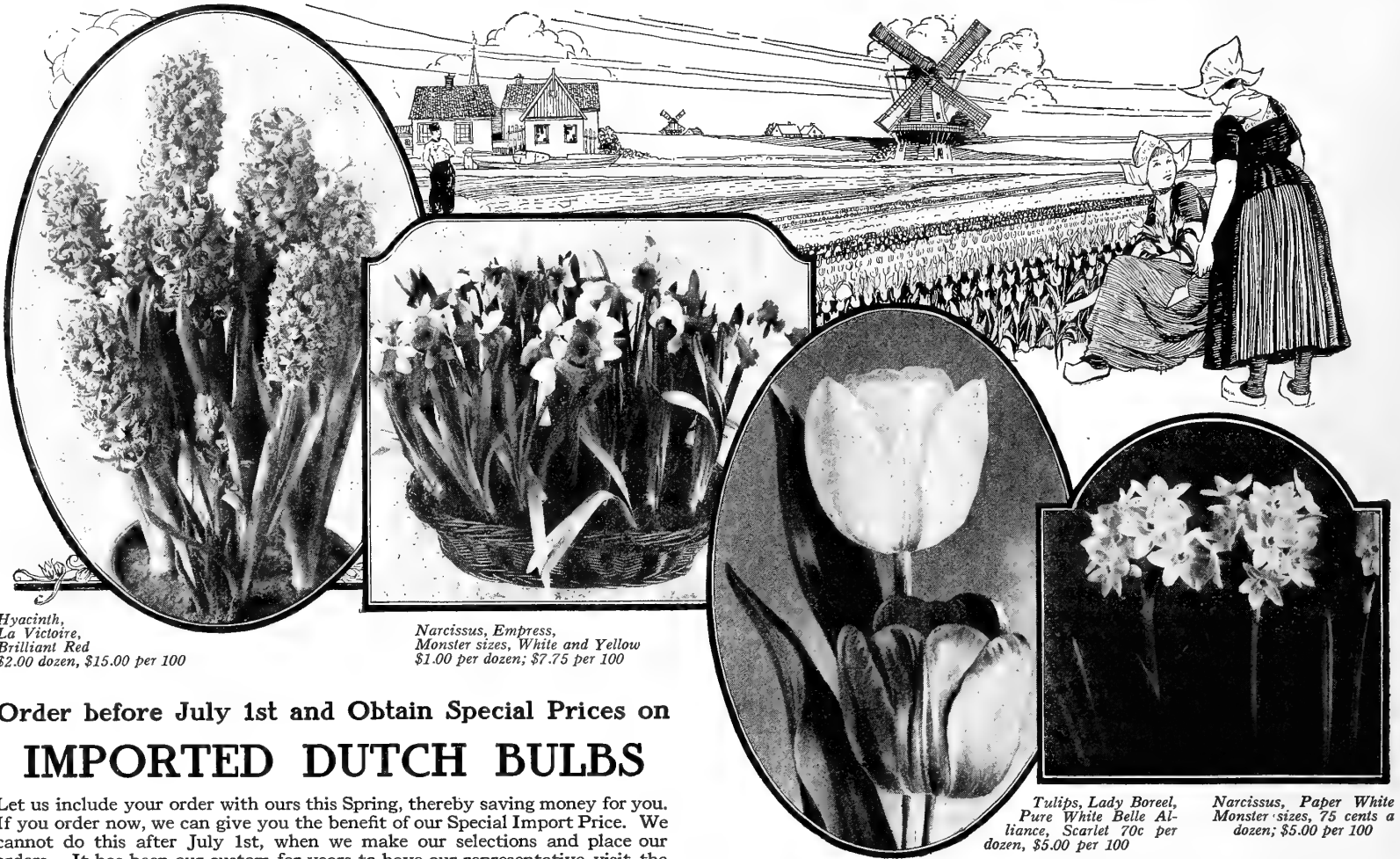
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# The Garden

Vol. XXXV, No. 4

MAGAZINE

June, 1922



"THE BEAUTY WHICH IS EVERYWHERE  
BENEATH THE SKIES OF JUNE";

*John Greenleaf Whittier*

Rhododendrons play a not inconsiderable part in the great pageant of June and are effectively used wherever masses of concentrated color are wanted—a marginal planting as here gives double brilliancy through the reflections in the water beneath



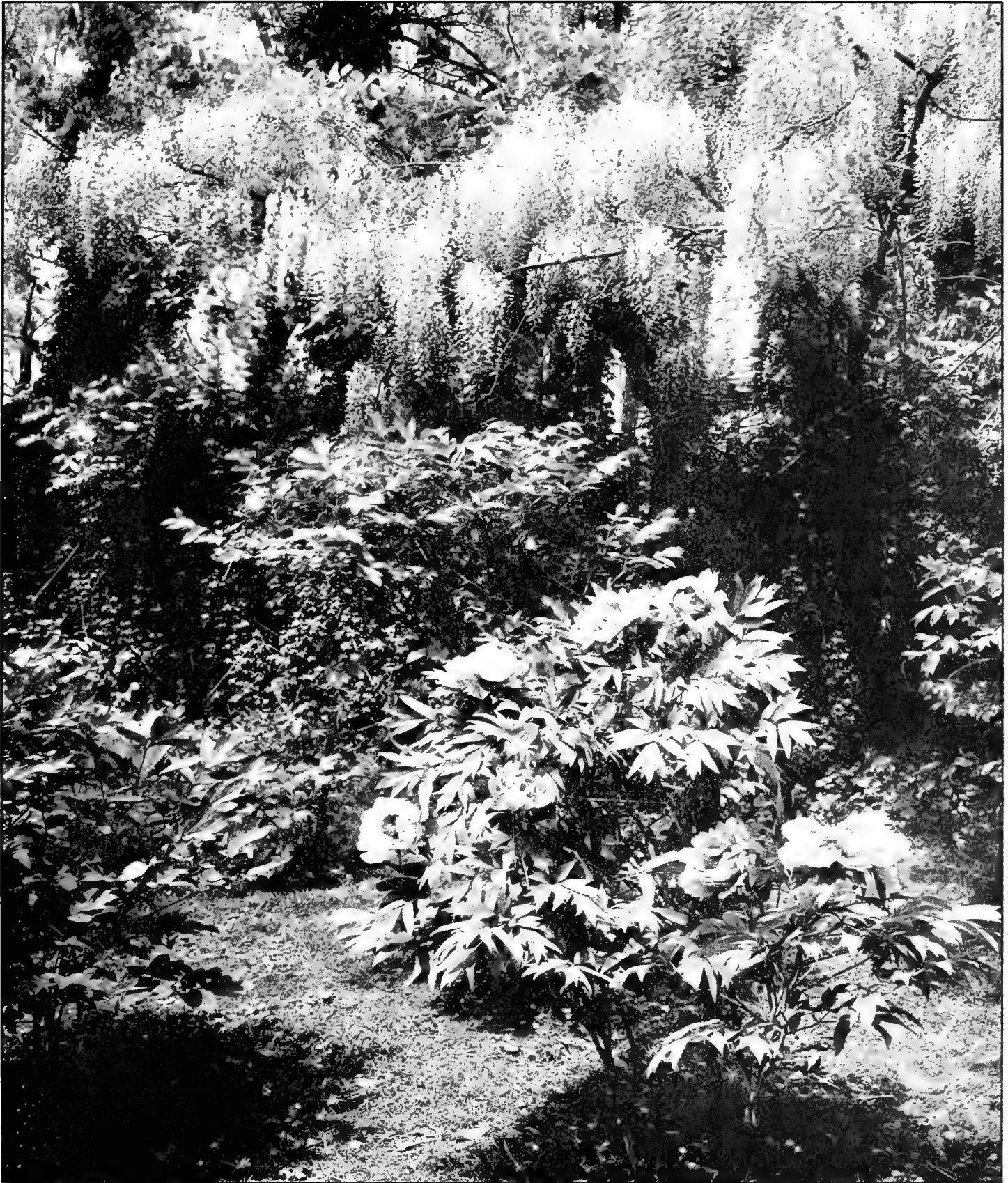
*Branson M. De Cou, Photo.*

"THE WHITE BIRCH IS A LADY, IN A GLITT'RING SILVER GOWN,  
A LADY WITH THE GRACES OF THE GAYEST BELLE IN TOWN.  
IN HER RAIMENT SOFT AND DAINTY SHE'S A DRESDEN SHEPHERDESS,  
WITH HER PETTICOATS AFLUTTER AS THE BREEZES BLOW HER DRESS."

*Adele Middleton Russell*

Well might this be a silver-white way leading into fairy-land, so fraught with magic suggestion is the Birch, particularly in early summer before its ethereal delicacy is dispelled by hot mid-summer suns. Such an approach as this near Bethlehem, New Hampshire, adds much charm to any place, pitching the imagination at once to pleasurable expectancy; and even a short path gains in beauty when similarly planted





Mattie Edwards Hewitt, Photo

"PURPLE WISTERIA IN CLOUDY DEW-FALL  
FREEING SILK BLOSSOMS SWEET,"  
*Elsie C. D. De Festetics*

" \* \* \* PEONIES A-BLOW  
SPREADING THEIR GAY PATTERNS  
CRIMSON, PIED AND CREAM,  
LIKE SOME GORGEOUS FRESCO  
OR AN EASTERN DREAM."  
*Bliss Carman*

These two natives of the Orient, long at home in American gardens, are truly lovely in combination; the Tree Peony (*Paeonia Moutan*) being less widely known because less easily grown than Wisteria. The flowers of the Tree Peony, like those of the Godetia and the Poppy, are characterized by a glistening, silky sheen, and unfold in fascinating manner from tight crinkly buds to smooth-petalled blooms of great size and beauty. It is best to get plants that have been grafted on the herbaceous Peony, as those propagated on moutan stock are apt to revert to the ugly color of the original wild plant. Garden of Mrs. Aaron Ward, Roslyn, L. I.

# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

JUNE—ENJOYING THE FRUITS OF INDUSTRY



Herein are listed the seasonal activities for the complete garden. Details of *how to do* each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for outdoor work of any sort New York City (latitude 40°) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow *four days* for each degree of latitude, for each five degrees of longitude, and for each four hundred feet of altitude.

(Copyright, 1922, Doubleday, Page & Co.)

**I**N EXACT proportion to the time and effort previously put into it, the garden is now beginning to yield returns in kind. Peas, Spinach, Green Onions, Radishes, salads, etc., are now to be had for the gathering, yet if a regular succession is to be maintained, the pace set during the last two months must be kept up. Not only must more plantings be made, but the crops now growing need protection and insurance from insect and disease often troublesome in the June garden.

### The Intruding Hosts

Plant lice, or aphids, on Cantaloupes, Cabbage, etc., may be checked by spraying with Black Leaf 40, or any approved nicotine extract. Do the spraying during the cool of the evenings and take care to wet the under side of the leaf.

Squash needs protection from the striped cucumber beetle and flea beetle while they are still small; use arsenate of lead powder, one ounce to three pounds of dry land plaster, or air-slaked lime, or very finely sifted ashes. To a certain extent the squash bug may also be thus attacked, but at times that pest appears to be impervious to poison, and hand picking has to be resorted to. If the leaves show signs of wilting, examine the stem near the root for the borer, and if it has not gone too far it may be cut out and the vine will recover. In any case it is a good plan to cover several of the vine joints with soil to encourage the formation of independent roots.

For rust and blight of Celery and dark brown spots on the Beans, spray with bordeaux, or better still with bordeaux-arsenate, and get some of the leaf-eating pests at the operation.

Irregular holes in the Cabbage leaves? Either arsenate of lead or paris green, one ounce to ten gallons of water; and use it on Cauliflower, Kale, Brussels-sprouts, Kohlrabi. Slug-shot is a handy material for general use in the vegetable garden against worms and caterpillars—it is not poisonous but is effective.

If cutworms nip off the newly set plants, feed a supper of bran moistened with sweetened water until it will crumble, and add paris green one ounce to three pounds of bran. Put it around the plants at night.

Potatoes require the arsenate-bordeaux spray against blight and potato bugs to "kill two birds with one stone"; and look out for the Egg-plants, too!

### Succession Plantings

Succession plantings to be made of all vegetables required for table supply throughout the summer provide for fall crops by replanting extra early varieties now on the decline—such as Beets, Radishes, Lettuce, Spinach, etc. Have mid-summer Lettuce (see GARDEN MAGAZINE for April, pages 116-118) or Endive follow Early Beets; Bush Beans after Radishes; Beets or Celery to follow Lettuce; Lettuce or Beans to follow Onions. Extra early varieties of the follow-up crops will oftentimes leave the ground available for still another crop in August.

Plant early varieties of Sweet Corn every week or ten days up to July 4th which should be the final planting on latitude 40°; midseason Lettuces, such as All-season, Iceberg, and Butterhead to be sown all through this month. Fine summer Radishes are Long White Vienna, Chartiers, and White Delicious.

Winter Celery to be sown at once. Any sown last month may be pricked off into a spent hotbed as soon as large enough to handle.

Crops grown for their leaves (Chard, Spinach, Endive, etc.) will be benefited by nitrogenous manures. Give top dressing of nitrate of soda either immediately following a rain or on ground thoroughly saturated the night previous. Liquid manure is best, however; to make: half fill a bag with manure and suspend in a barrel of water.

Cease cutting Asparagus as soon as other vegetables are plentiful. Transplant to permanent quarters: late Cauliflower, Cabbage, Kale, Broccoli, and Brussels-sprouts.

### About the Grounds

Get after the elm-leaf beetle early, as spraying is useless after the larvæ begin to come down. Use arsenate of lead applied with a good pressure pump.

Keep clipped all kinds of trained plants and hedges.

Recently transplanted large trees, shrubbery, and other ornamentals to be well watered throughout the summer.

Evergreens will be benefited by overhead spraying twice a day.

Young shoots of climbing Roses and other climbers to be kept tied up. Seed pods to be removed from Rhododendrons, Kalmias, Andromedas, etc., to reserve vigor for next year's bloom.

Prune early flowering shrubs as they pass out of bloom, removing the oldest wood that it may be replaced with young, vigorous shoots for next season's flowers.

Propagate now by cuttings of half-ripened wood shrubs and trees, to be rooted under glass; also layer as soon as shoots are long enough to permit it.

Pinch out side shoots of Evergreens to induce bushiness.

Grass edges to be neatly clipped; walks and drives to be raked and rolled frequently.

### The Flowers in the Garden

Sweet-pea flowers to be picked determinedly; if seed pods form, plants will stop producing. Keep well watered, for if the vines begin to turn yellow that is the end. Bedding-out to be finished promptly, setting aside a few surplus plants for replacements.

Iris needs lots of water after blooming. Use bonemeal as fertilizer; top dressing with manure is bad for Iris. The best time to divide, transplant, or make new plantings of Iris is immediately after the blooming period.

Stake plants as they need it and before they blow over.

Cut to the ground Achillea as soon as through flowering to provide for a second crop later in the season.

Coreopsis kept cut close will make a display all through the season.

Keep picked off all dead leaves and flowers as they fade.

### Flower Seeds to be Sown

Sow now seed from such early flowering plants as Columbines, Larkspurs, etc., to produce good plants before the fall.

Late-flowering Tulips may be lifted as they pass out of bloom and heeled in elsewhere to ripen, the vacancies being filled with annuals. Those known as "croppers" are best for this purpose.

Still time to get a supply of seeds of annuals and enjoy a perfect sea of bloom ere the fall frosts arrive. To be sown now: Snapdragons, Asters, annual Gaillardia, Clarkia, Larkspur, Lupin, Poppy, Alyssum, Arctotis, Balsam, Calendula, Calliopsis, Candytuft, Cornflower, Centaurea, Cleome, Globe-amaranth, annual Gypso-

phila, annual Sunflower, Marigold, Mignonette, Stock, Verbena, Zinnia, etc.

### Attention to the Roses

Feed freely with liquid manure; if large exhibition blooms are wanted, rub off all but the terminal bud. One sure way to get control of rose bugs is by hand picking into a can of kerosene. Spraying with arsenate of lead, 5 pounds to 50 gallons of water, repeatedly, is an old remedy, not very effectual. Melrosine is a new preparation recommended for its effectiveness.

Gladiolus for late fall cutting to be planted at 2-week intervals.

Dahlias to be planted during the month; put out stakes before setting out tubers or plants. When growth has started, reduce shoots to one, allowing side branches to develop one foot above the ground.

### Propagating for the Hardy Border

Many herbaceous and alpine plants may be propagated after flowering by cuttings or offsets. The Creeping Phloxes, Cerastiums, Sedums, Aubretias, Arenaria, and Iberis, are among those that may be increased at this time. Use a frame containing sandy soil and which can be shaded from hot sun. Stock may also be increased by sowing seeds at this time. Such subjects as Delphiniums, Lupins, Foxgloves, Canterbury-bells, Sweet Williams, Aquilegias, Oenotheras, Heucheras, and other perennials, will make plants of sufficient size to plant into permanent quarters in the fall if sown now. A seed bed in the open ground will meet the requirements of these plants at this time, but as the frames are emptied of other stock they may be utilized. Shade is essential until germination takes place.

### Fruit Garden

Thin the "set" of Apples, Pears, Peaches. Much finer fruit will result, with superior flavor, and the aggregate weight at least equal. True also of Grapes.

Crops of Gooseberries, Currants, Strawberries depend to a large extent upon the amount of moisture maintained about the roots. Use grass clippings and other mulching material.

Summer pruning (pinching out the tip of the young growth) will keep the young fruit trees in better shape and induce fruitfulness.

Retard the Currant crop and gather fresh fruit in August by covering bushes with muslin or burlap before fruit ripens. Watch Blackberries and Dewberries for orange rust, burning affected bushes as soon as discovered.

To feed fruit trees scatter stable manure over the ground as far as the spread of the branches; or use 4 to 5 pounds of phosphoric acid for each large tree, and, after raking it in, mulch the surface with the weeds and other refuse taken from the garden. Trees with rank, vigorous growth and little fruit do not need manure; those with small, undersized fruit and little or no annual growth will be benefited.

### The Greenhouse Plants for Next Winter

This is preparatory season for next winter's supply of cut flowers, pot plants, etc. A general clean-up is essential. Discard old plants, renew soil and generally overhaul. As many subjects as possible that are to be carried over should be accommodated in frames. Adiantums (Croweanum, cuneatum, and gracillimum); Pteris; Cyrtomiums; Polypodiums; Davallias, and Nephrolepis; Cyclamen; Primulas, and other flowering plants are amenable to frame culture at this time.

Antirrhinum seedlings intended for an early winter crop should now be large enough to prick off. Give a fairly rich soil and plenty of room.

Still time to root a batch of the exhibition Chrysanthemums. They will make fine dwarf plants in six-inch pots. Early rooted plants to be potted on as fast as they fill the pots with roots, until they are in their flowering pots. Plants for bench culture to be planted into flowering quarters now.

Sow seeds of *Primula malacoides* and its varieties, also *Cineraria*; give the latter every protection from heat and grow as cool as conditions will allow.

*Celosia* sown now will provide blooming plants by the end of August. Plants on hand to be repotted to larger pots.

*Gloxinias* to be well shaded and grown cool. Fumigate for thrips.

*Begonias* of the Lorraine type require shade and careful watering. Keep near the glass to secure stickiness.

*Gardenias* require frequent and thorough syringings to keep them free from mealy bug. Keep the atmosphere moist by frequent damping down of the paths and walls.

*Cyclamen* to be potted on as required, using a light but rich compost. Well-rotted cow manure and bonemeal are good sources of food for these subjects.

*Poinsettias* to be potted up for winter flowering. *Azaleas* are worth all the care that can be bestowed upon them now; plunge out of doors after they have flowered with others of their kind to ripen.

*Roses* to be planted with all possible speed; avoid overwatering; cultivate regularly to keep weeds down. Fumigate if green fly troubles.

*Carnations* in the benches may be discarded. Continue cultivating the young stock outdoors and keep the leading shoots topped as they begin to make headway. If your soil is such that you have to resort to watering the plants in the field this month, reduce the supply toward the middle of the period so that the plants will not be too soft for benching early next month.

Plunge *Amaryllis* up to the rims of the pots in frames and keep the sashes elevated all the time. They are making their growth now for next season's flowering and, in addition to an abundance of water, a top-dressing of commercial preparation of fertilizer or applications of liquid manure will be of benefit to them. Seedlings to be kept growing along, having no rest until they have flowered.

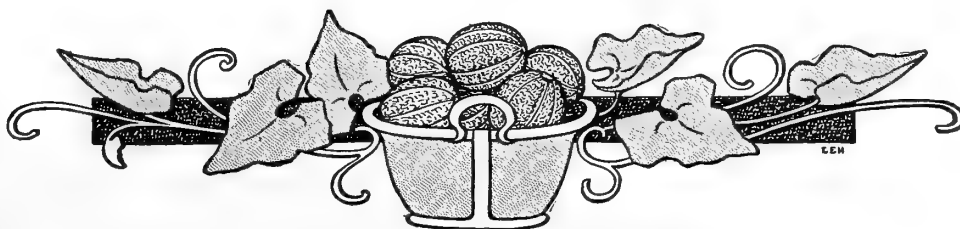
*Pelargoniums* for propagating to have the water supply reduced so the wood will ripen.

Decorative plants are now at the height of their growing season: see that growth does not become too soft. Shade only enough to break direct rays of the sun and give abundant ventilation on all favorable occasions. Old plants of advanced age and size should be repotted if necessary.

*Christmas Peppers* and *Bouvardias* planted outdoors to be pinched at frequent intervals to induce bushiness.

*Calanthes* now growing freely will take water liberally; do not feed until the pots have plenty of roots in them. Syringe overhead on favorable days, but do not leave the foliage wet overnight. *Calanthes* like a brisk, moist heat.

Pot fruit trees need room. Nets underneath will catch any fruits that may fall off. Young Peach trees trained on trellises, making first year's wood for the forming of the main branches of the trees for years to come, to have the young wood laid in right or they will never look as they should. As the last fruit is taken from the early peach house give a thorough syringing to dislodge any red spider. Give water if the border is on the dry side, and a little feeding will help the plants to build up flower buds for next season. Keep ventilators wide open.





# RAISING NEW IRISES FROM SEED

WILLIS E. FRYER

**A** FASCINATING gamble, this raising of new varieties from seed—one plays a gigantic game of “grab-bag” with Nature and sometimes pulls a prize worth having. Beardless and Bearded (both Dwarf and Tall), Japan, and Siberian Irises have grown up from seed in my garden. Of literally thousands of seedlings of the Siberian, but one has been given a name—True Blue. Though there is not much variation in the Dwarf Bearded, three have been named and others show promise of being worthy. The Beardless are similar to the Siberian in that they show very slight differences indeed; the seedlings, however, sometimes have foliage of erect habit four to five feet in height, a characteristic which renders them, I find, quite ornamental. Some wonderful varieties of the Japan Iris have developed from seed, but as these are less dependable in Minnesota than the others, I have never named one.

As there seems more chance for variation in the Tall Bearded than among other species, my efforts will be focussed in future upon them. In a plot containing more than two thousand seedlings scarcely any two come just alike. Only six have been named.

Tall Bearded Iris does not seed freely, however; and from many named varieties I have never been able to gather a single seed. For this reason I save seed as it forms on my own plants with miserly care, going over the beds every day as soon as seed begins to ripen. Much will be lost by the bursting of the seed-pod if allowed to get too ripe; also the seed will shrivel instead of being nice and plump as when gathered at just the right time. As soon as gathered, clean, and place in moist sand.

Plant seed in the late fall; it has not yet become dry and germinates well. I have planted it as gathered with good success, but prefer keeping it in moist sand until autumn. Some growers wait until spring; but it seems to me that by then the seed is inclined to harden and not germinate so well.

Do not disturb your seed-bed the second year! I often have a better stand than the first year, and have had seed germinate the third. If seedlings are left in the seed-bed until they bloom, plant them at least five or six inches apart in the rows. If all grow, even this will be too close and there will be difficulty in keeping varieties separate.

A feasible method is to draw a hoe through the soil making a slight depression (not over an inch deep), the width of the hoe. Sow seed thickly in this depression and cover from one-half to one inch deep. Firm the soil with the foot and rake over very lightly. Any good mellow soil will do for the seed bed, just the same as would be used for any good vegetable or flower garden; if lightened a little it will be a help.

The following July transplant seedlings one foot apart in rows about three feet apart; there is then no danger of getting plants mixed. A large percentage will bloom the first season after transplanting, and all the second season; the last can then be marked and moved to a new bed in July; the others destroyed!

Do not be in a hurry to name new Irises and select only a few of your very best. The naming of poor varieties is altogether too common, and a practice to be discouraged.

## SOME IRIS COMBINATIONS FOR COLOR EFFECT

B. Y. MORRISON

**S**UGGESTIONS for recurring clumps through a long bed. Varieties marked with an asterisk (\*) should be set toward the front of the bed.

### I. Red-purple through white to blue-purple:

ARCHEVEQUE*, red-purple bicolor	INNOCENZA or LA NEIGE, white
MARY, red-purple bicolor	CELESTE, whitish blue
EDOUARD MICHEL, deep red or wine	PALLIDA DALMATICA, gray lavender
ROSE UNIQUE*, lighter red-purple self	JUNIATA, blue lavender
CAPRICE*, lighter red-purple self	ORIFLAMME*, blue lavender bicolor
MRS. ALAN GRAY*, lavender pink	RHEIN NIXE, white and violet bicolor
HER MAJESTY, clearer pink	MONSIGNOR, blue purple bicolor
ANNE LESLIE*, white and dahlia-carmine bicolor	PERFECTION, deep purple bicolor
ELEANOR, pale mallow-pink	SYBIL*, clear pink bicolor

### II. From red-bronze through yellows into the “iridescent” colors:

PROSPER LAUGIER, deep rosy bronze	DAWN*, sulphur
DR. BERENICE, similar but less rosy	INNOCENZA*, white

IRIS KING, dull gold and mahogany  
FRO, gold and chestnut  
MRS. NEUBRUNNER\*, orange-yellow  
SHELFORD YELLOW, orange-yellow  
AUREA\*, clear yellow

AFTERGLOW, yellow to lavender-buff  
QUAKER LADY, yellow to blue  
ELDORADO\*, yellow to blue, deeper  
ALCAZAR, red-lavender flushed yellow

### Suggestions for planting in groups:

1. DAWN, pale sulphur  
PERFECTION, purple bicolor
2. FRO, gold and chestnut  
IRIS KING, dull gold and mahogany
3. ALCAZAR, red-lavender flushed yellow  
NIRVANA, slightly pinkish lavender
4. ELEANOR, mallow-pink  
MRS. H. DARWIN, white  
VICTORINE, white and pansy-purple
5. MARS (G AND K), pale yellow and pink  
PRINCESS VICTORIA LOUISE, ditto but deeper
6. MOTHER OF PEARL, pinkish pale lavender  
NINE WELLS, purple bicolor
7. ARCHEVEQUE, red-violet  
ANNE LESLIE, white and dahlia-carmine
8. QUAKER LADY, iridescent yellow to blue  
BARONET, blue  
CELESTE, pale whitish blue
9. CARTHUSIAN, deep lavender  
AFTERGLOW, yellow to lavender buff
10. MONSIGNOR, red-purple  
RHEIN NIXE, white and red-violet

**P**LANT more Gladiolus in June! Three plantings at intervals of two weeks will assure succession of bloom till fall comes. *Site:* in full sunshine. *Soil:* any will do, but preferably rich sandy loam. *Region:* anywhere, everywhere. *Feeding:* good potato or general fertilizer; ordinary organic manures, rotted; do not let fresh manure touch bulb; later

cultivate in pulverized sheep manure, etc., if necessary. *Depth etc.:* 4 to 6 inches deep according to soil, the lesser in heavy; bulbs 4 to 6 inches apart (right side up); if in rows 18 inches or more apart. Then *cultivate, cultivate, cultivate*, never letting crust form on soil. Watch for August GARDEN MAGAZINE for “All About Gladiolus.”



# IRISES FROM MARCH TO MID-JULY

LAWSON GAUL



## Planting Now for Next Season's Procession of Blooms

EDITORS' NOTE: In response to requests from many readers for copies of THE GARDEN MAGAZINE containing "Iris for Succession of Bloom," published several years ago and now out of print, we are presenting this article in revised and up-to-date form with the hope that it will prove as satisfyingly adequate as the original appears to have been.

**I**F I could have but one flower in my garden, that one would be an Iris! I have little by little learned to know many of this enchanting family, which can be coaxed to make a first appearance about Snowdrop time, and from then on continue to flaunt erect torches of varying height and color until struck down by the hot suns of mid-July.

As immediately after flowering is the best occasion for dividing, planting, or transplanting; and as we are planning for an unbroken succession of bloom through the weeks of spring and early summer, let us, for practical convenience, here consider the Irises in the order of their blooming rather than according to any more technical classification.

### The Earliest to Bloom

**T**HE very first to bloom is the dwarf and elusive *reticulata*. I have flowered it at Snowdrop time in well prepared soil, enriched with humus (never use organic manure), protected from the north winds, and covered to the depth of six inches with leaves through the winter. It is a tiny, dainty thing,

deep blue purple, in form somewhat like the Spanish Iris, but much smaller; and like most very early bloomers, short stemmed. If so desired, it may be moved when in flower, provided the plants are kept moist while out of the ground.

Next in the procession are the *pumila* varieties, which look quite like German Irises in miniature. First comes the deep purple, of which most gardens possess at least a few; then the much lovelier sky-blue *caerulea*, and the large flowered white variety, *Schneecuppe*. The *pumilas* are quite hardy, and prefer a sunny, dry portion of the garden for their home. Used as edging for the taller Irises, dwarf varieties look, to me, "out of drawing"; when they are planted alone in flat drifts near rocks or borders, the effect is so much happier.

The Alpine and Crimean hybrids follow the *pumilas* closely; their flowers are both larger and longer stemmed. *Stewart* is a delicate primrose; and *The Bride*, of course, pure white; *Fairy* combines pale and deep blue; and *Gracilis* is a sweet-scented beauty, silver gray and lavender.

The Intermediates, resulting from crosses between the tall bearded (German) Irises and the various Crimean hybrids,



R. S. Sturtevant, Photo.

### WHEN BEARDED IRISES LIFT THEIR MANY-COLORED STANDARDS

"Iris look happiest if planted in longish, natural appearing groups, with a delicate green or open background." Garden of Mr. R. S. Sturtevant at Wellesley Farms, Mass.

bloom between the early dwarfs, and the later Germans. They are large-flowered, sweet-scented mostly, of medium height, quite hardy, and thoroughly charming. Gerda, cream yellow; Halfdan, creamy white; and Queen Flavia, primrose yellow, are all lovely; Ingeborg, one of the introductions, is a beautiful, very large white flower. The Intermediates are vigorous, and like a sunny, well drained position.

#### Difficult, but Worth While for Early Bloom

THE Mourning Iris, *I. susiana*, though not easy to grow, is well worth the enthusiasm she demands and is the best known member of the *Oncocyclus* group. Irises of this family have very distinctive flowers, only one to the stalk, and are curiously veined in sombre colors. For the Mourning Iris choose a well protected spot, enrich the ground with bonemeal, and a liberal supply of lime—either in the form of old mortar pounded up, or lime which has been thoroughly air-slaked. Tamp the finished bed as firmly as possible, and have the surface raised for prompt and proper drainage.

Plant the bulbs in autumn, just covering them with earth; cover well with leaves and a board or two, and do not uncover in the spring until all possible danger of frost is over. After the all too short season of bloom, cover the bed with old glass-sash or boards, as the roots must be kept perfectly dry during the resting period. Some persons lift the bulbs immediately after flowering, dry well and pack away until fall. If planted to flower in front of the pale pink Darwin Tulip Margaret, or the deep mauve Breeder Chester Jay Hunt, the combination will be most satisfying, for *I. susiana* is of a shade known to users of dress materials as taupe, a brownish gray with a pink cast. The flower is very large, about twice that of the typical German Iris, and is borne on an eighteen-inch stem.

*Iris verna* (Apogon or Beardless), a tiny, violet colored, fragrant native of Ohio, is a too little known early bloomer; flowering freely, spreading rapidly, and requiring half shade—a unique quality among Irises.

Another dwarf beauty is *Iris cristata* (Evansia or Crested) a native of our Central States; usually found creeping quite rampantly on damp gravel beside streams. The dainty amethyst-blue flowers carried on three-inch stems (or more correctly on three-inch perianth tubes) are charming in the rock garden.

#### Divers Dependables of the Tall Bearded Group

NEXT to wave its many colored flags in this procession is the great group of Tall Bearded Iris, misnamed German, since very few Irises are native to Germany, and those few are not the parents of the great group commonly known by that name. Among these, the first to bloom is the old reliable Purple King which is none the less desirable because persistent and easy to please. The early grayish-white Florentina (formerly known as Silver King) makes an effective companion planting.

For convenience let us divide this group into its six sub-sections:

(1) The *pallida* is, in my humble estimation, the most beautiful of Bearded Irises; with handsome, long-stemmed, fragrant, gray-blue to lavender flowers; and wide, glaucous foliage. *Pallida dalmatica* is to be found in many gardens, but is often confused with the Florentine Flag (Orris-root Iris) which, however, is less sturdy, lacks dignity, and has not the same glaucous gray cast. The true *dalmatica* is fragrant and has beautiful, clear, pale blue-lavender standards with a distinct sparkle in full sunlight, and slightly darker falls. *Juniata* shows close relationship to *dalmatica*, but is somewhat darker in tone, and carries its flowers on longer stems. These two gray-blue lavenders planted with the pale primrose colored *I. flavescens*, delight the eye; particularly if some of the nameless hybrid *Aquilegias* combining these two shades be added. *I. pallida dalmatica* is also charming in combination with the pale pink Weigela. Of the pinkish lavenders, or mauves in the *pallidas*, there are four, making a graduated shading: first, the lovely

Queen of May; then Her Majesty, slightly deeper; Trautlieb, a white ground delicately veined with mauve; and Mme. Paquette, a deep rosy purple. Varieties mentioned here and in the subsequent sections are typical rather than selective; up-to-date introductions are, of course, to be found in the catalogues of the specialists.

(2) The *variegata* is for those who fancy brilliant yellows more than do I. Standards are invariably yellow, and falls veined with brownish red, giving at a distance a solid effect. *Aurea* is a vivid chrome of pure color without veinings. *Maori King* is considered by many the most effective of the *variegatas*, having velvety, brown-crimson falls, and bright yellow standards, which are most striking in appearance. *Iris King* is a glorified form of *Maori King*, and Mme. Neubert is perhaps the best all-yellow Iris we have.

(3) Flowers of the *amœna* type are characterized by white standards with falls of various colors. The falls of Mrs. H. Darwin have a network of fine lavender lines at the base, and I find it one of the most beautiful; *Donna Maria* is another lovely white, tinged with lavender.

(4) To the *squalens* belong all the Irises with ashen violet, almost transparent standards, and bronze or coppery falls. In the garden they look rather like some colored fabric which has been left too long in strong sunlight; but used indoors against neutral tinted walls, they are beautiful. The pale green of a newly leaved Japanese Maple offers a fitting background, as does *Philadelphus*.

(5) The *neglecta* ranges (through various shades of lavender and purple. *Black Prince*, a very dark velvety purple, has beauty, but seems difficult to establish; *Othello*, a tall and lovely flower, is marked by blue-lavender standards, and deep purple velvety falls. Indeed in this section pretty blooms are legion!

(6) In the *plicata* or *aphylla* sub-section the flowers have color applied to their white petals as if embroidered with the "long-and-short stitch." Mme. Chereau is perhaps the best known and best loved of this lot, with her beautiful, blue-lavender, stitched edges.

ALL these Tall Bearded Irises are hardy, almost to the point of being "fool proof," but they have a few distinct preferences. They all like a well drained, sunny home where the rhizomes can bake thoroughly after the blooming season. In planting, the rhizomes should be only just covered with earth. Unless very well-rotted manure can be had, bonemeal is the better fertilizer; in no case use fresh organic manure. Though Irises in general prefer to be left undisturbed, they increase so rapidly that if, after a year or two, you wish to use your increase for new beds, do not hesitate to separate; and the ideal time for this is just after flowering and on through August.

Do not permit edging or carpeting plants to crowd into the Iris clumps, or bloom will be poor the following year. The leaves should not be touched until after they have turned brown in autumn; then cut them away, for if left, they retain moisture which tends to rot the roots and make a congenial resting place for slugs.

Irises look happiest if planted in longish, natural appearing groups, with a delicate green or open background. I tried German Iris alone, in a stone-edged, stone-walled border; with the result that the poor dears looked like prisoners in a cell. Miss Jekyll, in one of her charming books, suggests a planting of Irises with Lupins, which arrangement should be pleasing enough.

I find that by planting English Irises between the earlier-blooming ones, I have a nice succession crop of flowers from the same space. *Gladiolus* also makes a good "filler." In one garden I know, Poet's *Narcissus* gives early bloom between German Irises, the leaves of which soon cover the ripening *Narcissus* foliage.

Before we pass on to the Apogons or Beardless Irises, I want to mention two other beautiful Pogoniris (Iris bearing a beard on





Clifford Norton, Photo.

#### JAPANESE IRIS PROLONGS THE PAGEANT

Flowering after the Bearded Group, these natives of the Far East with their flaring, floppy bloom and languid grace of growth invest the July garden with curious interest. Though naturally inclined to moist places, the Japanese Iris will grow elsewhere if thoroughly cultivated. Carpeted with Forget-me-nots and allowed to spring at random in a setting strictly in character, as it were, this Iris is perhaps at its best. The Japanese Garden of Mr. and Mrs. F. F. Prentiss at "Glenallen," Cleveland, Ohio

the falls): Amas, the exquisite, tall, purple flower, coming from the place of that name in Asia Minor, and the white albicans.

#### For Summer Bloom

**I**T IS upon the Beardless Irises (Apogons) we must rely to carry bloom on into the summer. They have more grass-like foliage, and a greater preference for moisture than the others. Our native blue Water Flag, *I. versicolor*, starts to bloom while the germanicas are at their height; it thrives in marshy places, and does not even object to wet feet over the winter—a rare quality among Irises. *I. pseudacorus* is another moisture lover, and has a white form which, to my mind, is much lovelier than the deep yellow type.

The Siberian Irises, natives of Europe as well as Siberia by the way, are a joy which no garden can afford to miss. The pale blue, George Wallace, is one of the most enchanting flowers I know; and *sibirica acuta*, a dwarfer one, blue, veined with white, is distinct and lovely. The *orientalis* forms, Blue King

and Snow Queen, are truly royal in their beauty. The *sibiricas* and *orientalis* have abundant and beautiful grass-like foliage; and when well established, are very generous with their flowers. Near a stream or pond they seem most at home, but care should be taken that the crowns are above the water-line. They may be grown as well in a sunny border, but then need to be watered in dry weather.

If someone could develop a Spanish Iris (*I. Xiphium*) which had good, abundant foliage, he would indeed do the gardening world a service. In early spring when the first green appears, the novice is sure that Onions were planted by mistake; but the flowers are so lovely and so useful for cutting that these orchid-like blossoms should not be condemned for their lack of foliage. They are of the easiest possible culture, and I grow them in rows in the picking garden. *La Tendresse* is a lovely deep cream; *Louise*, white with lilac shading; *Flora*, a beautiful white; and *Thunderbolt*, a most interesting bronzy-brown beauty.

Among English Irises (*I. xiphoides*) the pure white, Mont



THE SIBIRICAS IN FULL SWAY  
 "The Siberian Irises, natives of Europe as well as Siberia by the way, are a joy no garden can afford to miss"

Blanc, is my favorite; the other varieties I have tried look too splotchy. The foliage of the English Iris, though somewhat better than the Spanish, also has a decidedly oniony look. Another quality they have in common is their lack of increase, and their tendency to die out altogether after a few years. Iris monspur has similar, larger flowers, grows more strongly, and blooms about the same time.

The stately *I. ochroleuca* (*spuria*) grows some five feet high, has good foliage, and beautiful ivory-white flowers with an orange blotch at the base of the falls. It likes a moist but not wet situation as does the *I. longipetala superba* (*spuria*), with her exquisite porcelain blue flowers, the falls of which are exceptionally long and gold-touched at the base. These two Irises adapt themselves most beautifully to waterside planting, but, as with the Siberians, the crowns should be set above the water-line.

*I. foetidissima* or Gladwyn's Iris has to its credit purple, beardless flowers, bright scarlet seed-pods—most attractive in winter—and evergreen foliage; a by no means scant list of recommendations. For situation it requires a dry, sunny place; and it may well be planted near the house, since it is attractive in winter as well as summer.

The Japanese Iris (*I. Kaempferi*) is a whole subject in itself. If only the names of varieties could be definitely settled, and all growers compelled to use them! Under present conditions, it is best to buy a collection from some reliable grower, being sure that the plants are carefully labeled; or, better still, go to the gardens of some nursery and take your own notes of colors and combinations. My favorite is a large flowered, three petaled white one, delicately suffused with sky blue at the base of the petals. In my first garden, I had a beautiful group of this cloud-and-sky Iris. There is, too, a most lovely pure white variety, with just a touch of gold at the base of the petals; also one with mauve pencilings; in fact, very few of the Japanese Irises are anything but lovely. *Iris tectorum*, the Japanese Roof Iris, is delicate, hard to please, and does not seem to like us very well, but "if you don't at first succeed, try, try, try again" to coax her to yield her heavenly blue flowers! As a family they like considerable moisture at budding and flowering time, and will repay soakings with larger and finer textured flowers. In some

gardens in Japan, a small stream is changed in its course to flood the Iris fields at budding and flowering time. If, however, they are allowed to stand in water through the winter, the result is invariably fatal. The roots increase in an open circle, and when this circle is completely filled, they may be separated; to give additional plants; if not, leave them undisturbed. The last of August, or early September, is the best time for planting or separating, and if it cannot be attended to at this time, should be left until spring, as the winter heaving of newly set plants is often disastrous. It is possible to grow the Japanese Irises without much moisture, if the ground be kept thoroughly cultivated and never allowed to bake into a solid crust.

#### Where and How They Like to Grow

ALL the Bearded Irises (this includes the *pumila*, the intermediate, the *germanica*, etc.) like a sunny, well-drained situation. Prepare the ground by digging at least 18 inches—and as much deeper as you are willing—add some air-slaked lime and either bonemeal or very well-rotted manure; never fresh manure, which is death-dealing to the rhizomes. The Pogoniris like some moisture during the growing and flowering season, but after that the plants rest and ripen, by sun baking, for the following year's bloom. Water, other than what the heavens send, should be withheld during this time, unless there happens to be an unusually prolonged drought. Finely ground bonemeal stirred about the plants in the early spring means flowers of increased size. It is pleasant to feel that one's plants are properly cared for; but for those who can give little time, it is reassuring to remember that most of the Bearded Group will live through an astonishing amount of neglect, practically naturalizing themselves. The only thing really fatal to them is planting in a wet place.

The Apogon or Beardless Irises, to which belong the Siberian, *orientalis*, *versicolor*, *pseudacorus*, and Japanese, do not like lime in the preparation of the bed; well-rotted cow manure, or bonemeal with the addition of some leafmold are the best foods for this tribe. The Apogons require moisture, and unless planted near a stream or pond, need generous watering, especially at budding time; and the ground should be kept cultivated. As said before, unless the planting can be done during

the summer or early autumn, it had better be deferred until spring.

Plant the bulbous Irises in autumn. The Spanish likes a warm, rich soil, but unfortunately disappears after a few years. The English Iris can stand a somewhat colder, wetter soil than the Spanish and seems really happy almost anywhere.

The hosts of green worms which sometimes attack the Japanese Iris leaves can be successfully destroyed with one or two sprayings of arsenate of lead; and green aphid succumbs to an application of any good nicotine solution.

#### SOME TYPICAL SELECTIONS BY COLOR

[The varieties discussed in the foregoing text are here grouped according to color. They by no means exhaust the list nor do they even lay claim to being the most distinguished of their kind, but were chosen by Mrs. Gaul as representative examples of some popular Irises that have afforded a successful succession of bloom in her own garden.—Ed.]

##### I. BLUE TO LAVENDER

*pumila coerulea*, sky-blue (very early)  
*Fairy*, pale and deep blue (very early)  
*gracilis*, lavender and silver-gray (very early)  
*cristata*, amethyst-blue (early)  
*pallida*, gray-blue to lavender (mid-season)  
*pallida dalmatica*, blue-lavender (mid-season)  
*versicolor*, blue (late)  
*George Wallace*, pale blue (late)  
*sibirica acuta*, blue, veined with white (late)  
*Blue King*, blue (late)  
*longipetala superba*, porcelain blue, gold at base of falls (late)  
*tectorum*, heavenly blue (late)

##### II. LAVENDER TO PURPLE

*reticulata*, deep blue-purple (very early)  
*pumila*, deep purple (very early)  
*verna*, violet (early)  
*Purple King*, purple (mid-season)

*Queen of May*, pale mauve (mid-season)  
*Her Majesty*, mauve (mid-season)  
*Trantlieb*, mauve on white (mid-season)  
*Mme. Paquette*, deep rosy purple (mid-season)  
*squalens*, ashen violet (mid-season)  
*Black Prince*, dark velvety purple (mid-season)  
*Othello*, blue-lavender and deep purple (mid-season)  
*Amas*, purple (mid-season)  
*foetidissima*, purple (late)

##### III. YELLOWS

*Stewart*, delicate primrose yellow (very early)  
*Gerda*, cream yellow (early)  
*Queen Flavia*, primrose yellow (early)  
*flavescens*, pale primrose yellow (mid-season)  
*variegata*, yellow and brown-red (mid-season)  
*aurea*, deep chrome yellow (mid-season)  
*Maori King*, bright yellow and brown-crimson (mid-season)  
*Mme. Neubert*, all yellow (mid-season)  
*pseudacorus*, deep yellow (late)

##### IV. WHITES

*The Bride*, pure white (very early)  
*Halldan*, cream white (early)  
*Ingeborg*, white (early)  
*florentina*, gray-white (mid-season)  
*Mrs. H. Darwin*, white with lavender veining (mid-season)  
*Donna Maria*, white, tinged lavender (mid-season)  
*albicans*, pure white (mid-season)  
*pseudacorus alba*, white (late)  
*Snow Queen*, white (late)  
*La Tendresse*, deep cream (late)  
*Louise*, white, lilac shading (late)  
*Flora*, white (late)  
*Mont Blanc*, pure white (late)  
*ochroleuca*, ivory white, orange marking (late)  
*Kaempferi*, white, suffused with sky-blue (late)

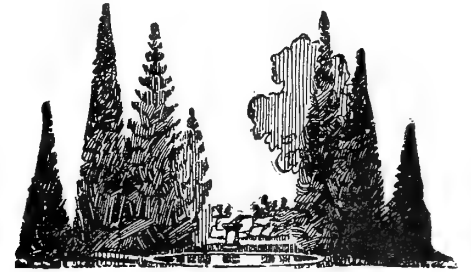
##### V. VARIOUS

*susiana*, brownish gray with pink cast (early)  
*Mme. Chereau*, white, "stitched" with blue-lavender (mid-season)  
*Thunderbolt*, bronze-brown (late)



## A LILY POOL IN A LITTLE GARDEN

J. B. SPENCER



MANY of the beautiful illustrations that have recently appeared in THE GARDEN MAGAZINE lead to the conclusion that the editor fully appreciates the value of the Water-lily pond in the home grounds. It would be unfortunate, however, if the conclusion were reached that it is necessary to have extensive grounds in order to have a water garden with all its attendant features. My observation leads me to believe that this mistaken opinion prevails among many amateur gardeners. I have proved in my own garden—containing many varieties of Rose, a perennial border, some good Peonies, an area devoted to vegetables, as well as some shrubs and a lawn—that a suitably sized Water-lily pool adds charm to even a small back yard.

Each year I try to add at least one new feature to my garden, which has won a number of trophies in city competition. These features have included a Rose arch, a brick walk, a collection of superior Peonies, two or three dozen fine Lilies, and a water garden. All of these have added charm and value to the home, but by far the most interesting has been the Lily pool, which consists of a cement tank 8 feet long and 5 feet wide. From the time this is filled until it is drained in the autumn and the goldfish and Lilies removed indoors, no feature attracts greater interest. The children on the street almost daily ask permission to come in and see the goldfish. Cultivated Water-lilies are new to many people and the varied beautiful tints of these when in bloom excite the utmost interest and admiration.

THE tank is 22 inches deep and has a drainage pipe  $2\frac{1}{2}$  inches in diameter. It is never necessary to change the water during the season because the Lilies and Bulrushes growing within it, together with the rays of the sun, keep the water pure. The goldfish control the animal life, including the larvae of the mosquito.

The method of constructing the pool is extremely simple. The dimensions decided upon seem to be about right for the garden, which is only 34 feet wide and 60 feet long. The excavation was made 8 inches longer and wider than the finished size, the extra space allowing for a 4-inch cement wall. Care was taken when excavating to keep the sides perpendicular. The soil being of a sandy character, no underdrainage system was necessary. An excavation was made, however, in the bottom, large enough to hold two wheelbarrow loads of stones beneath the floor of the tank. When this space had been filled, a piece of wire fabric used for reinforcing concrete was laid over the stones, and upon that fine wire netting was laid a 2-inch floor of cement concrete. An iron pipe 3 inches in diameter, for drainage, was set into the stones, with the upper end projecting 2 inches so as to be level with the floor of the tank.

The perpendicular walls of earth constituted the outside form for the cement. This was first lined with metal lath. Pegs were driven into the earthen walls and to this the lath was stapled. The inner form is shown on following page. This was





#### THE LITTLE POOL COMPLETE

Bedecked with Water-lilies and peopled by goldfish; rimmed with Pansies gaily abloom; Cannas, Funkia, Rushes, etc., lending the stateliness of height

made 4 inches smaller each way than the excavation and when put in place left a 4-inch space to be filled with the wet concrete. When the cement of the floor had become partly set the form was put in place and the concrete mixture filled in to the level of the ground. A shallow lip was constructed at one end for the birds to drink and bathe. The concrete was the usual sidewalk mixture of one part Portland cement, two parts clean, sharp sand, and four parts clean, broken stone or gravel. As the walls were being constructed a quantity of small stones were filled in, care being taken that these did not go completely through the wall or rest against the inner form. To give a finish to the upper rim of the tank small stones were embedded in the soft cement before setting commenced.

To construct the inside form it is necessary to make from inch boards two circles 5 feet in diameter. These are made in halves, one pair for the bottom and the other pair for the top surface of the form. Two of the half circles are laid on the ground 3 feet apart and united by wooden strips. When both surfaces have been thus prepared, they are laid parallel 22 inches apart, corresponding with the depth of the tank. Strips of wood are then nailed on the whole way around, making the form continuous on the outside. (See illustration below.)

If I were constructing another tank of this form, I would make the circle for the lower edge of the form 2 inches smaller, which would give the sides a slight slope, and that would facilitate removing the form as well as lessening the danger of the tank being damaged by freezing water.

To ensure slow hardening of the cement it is necessary to keep it protected from the weather for about one week. One of the accompanying pictures shows the cement work finished and the form still in place. By that time the cement becomes thoroughly hardened and the form can be taken out and the tank put into service. After removing the form, it is well to wash the inside of the tank with

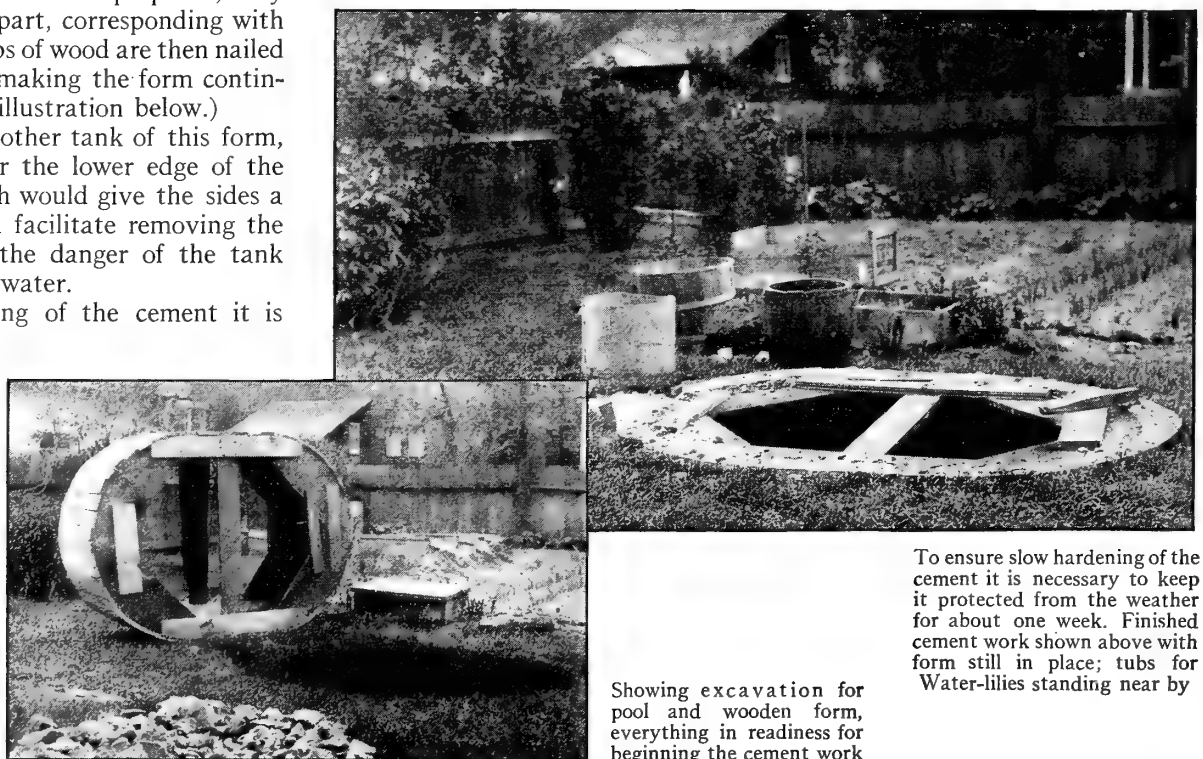
a thick wash made of pure cement and water. In a few hours put on a second coat; this renders the tank water-tight.

The Water-lilies are grown in tubs (see illustration), three corms to each tub. So luxuriant have these grown during the last two years that the whole of the surface was covered with Lily pads, making it necessary to remove one of the tubs by mid-summer. An additional water garden was created by dropping this tub into an ordinary barrel of water. It is important to have suitable plants bordering the pool. With us these have been changed from year to year, but consist in the main of Japanese Iris, low-growing Cannas, and Plantain Lily. A narrow moon-shaped area on one side is devoted one year to Pansies, another season to Portulaca, and still another to Mignonette. A pail of Bulrushes growing close to the wall next the Iris produces the effect of one plant, gives height in the

background and makes a pleasant diversity—any moisture-loving plant with sword-like leaves might be so used.

TO MY surprise the pond constitutes a fish hatchery, as the first year about eighty young goldfish were taken out in the autumn. Whether from cannibalism or some other cause, the increase since then has not exceeded a dozen young a season. These are readily wintered over to be distributed to boys and girls in the neighborhood who enjoy watching the development and change to the red color that occurs during the second season.

I often wonder why more gardeners do not include the pool. It is of comparatively simple construction and requires no weeding or cultivation, merely the trouble of turning in the hose for a few minutes about once a week to make up for evaporation and to replace water dipped out in cans for sprinkling individual plants about the garden.



To ensure slow hardening of the cement it is necessary to keep it protected from the weather for about one week. Finished cement work shown above with form still in place; tubs for Water-lilies standing near by

Showing excavation for pool and wooden form, everything in readiness for beginning the cement work



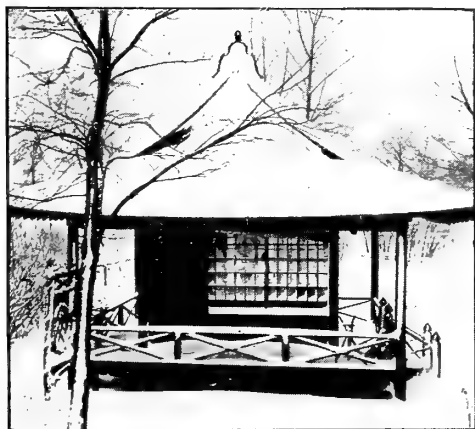
## A JAPANESE GARDEN Under a Chicago Sky

Robert H. Moulton

A NOTABLE example of what can be accomplished in the way of landscape art on a small plot of ground is found in this little garden of Mr. Frederick Bryan which measures only eighty feet square. So perfectly is everything proportioned and so artistically have the various features been laid out by the Japanese landscape architect that the garden seems in fact much larger. The high surrounding hedge gives it exclusiveness and, once inside, the visitor feels that he has stumbled into a corner of Japan itself.

Formerly a bit of unbroken green lawn, the garden of to-day is channeled by a winding stream and decked with all the variety characteristic of the perfectly Japanese. An ingeniously constructed little lake now teems with higo (golden carp of the Japanese variety); flowers, shrubs, plants, and trees are Japanese; and across the stream leading from the little lake is a Japanese bridge of quaint design.

The teahouse itself, measuring about sixteen feet square, was constructed by Japanese carpenters without nails. Lanterns are strung under the overhanging eaves, and many metal lanterns adorn different parts of the garden, while one of the most effective touches of all is a miniature of Fujiyama, the sacred mountain of Japan.





## I. DO THE GARDEN CLUBS PROGRESS?

ELLEN P. CUNNINGHAM

An Ex-president

Forecasting the Future With its Ever Widening Horizon and Increasing Coöperation Among Various Groups of Gardeners of Both Sexes

**I**F WE interpret "progress" to mean size and number, there must be a unanimous "Yes," and that is the end of the subject; for are not garden clubs springing up far and wide, appearing already in over twenty states and including perhaps six thousand members? But is it a question of something more than growth and multiplying? We will try to take a few measurements of the movement by viewing the clubs that stand in the foreground of to-day down the perspective of their past.

How can we tell whether the garden clubs are *really* progressing or not? Let us first examine what a garden club actually is, or may become. Is it mostly garden or mostly club? If horticulture be our chief concern, we think in terms of planting and cultivating; others, it is whispered, clothe the club in the regalia of fashion and parade it at afternoon teas. And, by the way, why are these garden groups called "clubs"? If, as sometimes, the garden club is often used as a means to a "social" end, why were they not named "societies"? Garden clubs seem to be of American origin, one of our best "native plants" of organization, appearing first in Philadelphia, in 1904.

Looking backward, as a former president of a large garden club, to a period only a few years ago, I wonder whether most of us then forming the organizations did not regard our gardens essentially as horticultural experiment stations, where we slaved in all kinds of weather, until too tired to drag one muddy shoe after another? It was very novel in those days to hear of diversified public activities just beginning in some of the clubs. We had seen little of the grafting on to plant material of "garden designs," "color schemes," "decorative treatment of garden ornaments," or of "flower arrangement," in the scientific form of to-day. So here we find one affirmative answer to our opening question, for the art of gardening has responded to the call of the clubs to an extent impossible had they not progressed in knowledge and culture.

### When Men Step In

**H**AVE the clubs, as organizations, progressed in proportion to the gardens they represent? Which is now of greater importance—the garden or the club? One president of a club frankly stated his belief that "the women with their frills and fancies have nearly ruined the garden clubs just as they did the Garden of Eden!"

This brings us to the fact that though women started the clubs, the men are serving as presidents of about a tenth of them, including some of the most intelligent organizations in the country such as the Garden Club of New Orleans, with its headquarters in Tulane University, and the St. Louis Club, which is on intimate terms with the Shaw Botanic Gardens. Further, though only two years ago the editor of a popular periodical

contended that men were not interested in much besides sports, it is discovered that this is the new day of garden clubs composed exclusively of men, notably those of Ridgewood, New Jersey, and of Ramsey County, Minnesota. In my presidential period I heard of only one, the Lenox Garden Club, of which the chief executive was not a woman, and rarely were men members, even as "associates." At present many of the clubs welcome them in one form of membership or another. One member-at-large of the Garden Club of America received a special award at the New York Flower Show in 1921 for his miniature winter garden arranged entirely of plants native to Connecticut; and at this year's Show, first honors went to another masculine member-at-large for his miniature model of an Italian garden. This rather proves the pertinence of the recent remark of a well-known representative of the Short Hills Garden Club that men are stimulated by the shows and meetings of the garden clubs.

What relation has all this to the progress of garden clubs? Naturally the business end of the men's clubs receives attention, especially in the matter of coöperative buying, which might be more generally adopted. Association with professional men of arts and letters, as in the Washington (Conn.) Club, gives a broadening outlook. It is too soon to decide very much in detail just what the ultimate effect of the entrance of men into the garden clubs will be, but it will make for general progressiveness if some of the seeds of influence prove true to name. Doesn't it look as if one of the directions in which the men will steer progress will be toward the development of a more democratic attitude? For instance in California, the Santa Clara County Flower Lovers' Club, organized only in 1916, has already grown to about a thousand members who are endeavoring, under the leadership of their president and founder, to broadcast inspiration to beautify every home garden in the county. Women are included in the membership, but the president is a man.

### Of Mechanics and Committees

**W**HAT about the mechanism of the garden clubs, do we find that it too has progressed? Certainly there are more Committees—necessary in some cases, especially in the larger groups—but is there not danger, if "a weed is only a flower out of place," of having the business of committees "naturalized" so successfully that they may crowd out some of the choice blooms? A president of a flourishing club is lamenting that their meetings have been deprived of much of the time formerly devoted to the enjoyment of the gardens since affiliation with a national organization has brought such multiplicity of affairs to their attention. Is it progress to lose the joyous spirit of the garden? After all, is the club for the garden, or the garden



for the club? A step on the right path is the custom of holding as many meetings as possible in the garden, as has been done by the Garden Club of Spring Lake, New Jersey, and occasionally by other groups. The term "Board of Gardeners," used by the Garden Club of Michigan, of which Mrs. Francis King was one of the founders, is a reminder in directive management, worth considering more frequently.

In the programmes, the interests of the various clubs may be seen reflected "in variety." Some groups are still plodding along throughout the year with perennials, or some other type of vegetation; but, more and more, other subjects related to gardening are being introduced, from the practical topic of clothing for working, to the last word in the poetry of landscape architecture. Are we becoming less self-conscious of the actual planting because we have in a degree perfected ourselves, so that we are awakening to the harmony of our subject as a whole—just as the musician forgets his fingers after his scales have prepared him for the playing of a masterpiece? If we are sure we have done enough practising of horticultural exercises, then the diversity of the programmes means progress.

### Is Coöperation Gain or Loss?

HOW is it with the flower shows? These conspicuous features of the garden clubs have definitely advanced in classifications for exhibits, and in the quality of material. Moreover, from having been usually private semi-social affairs, the shows have progressed (at least in some places) to the point of admitting the public free; or if an admission is charged, the receipts go to some philanthropy. Still further—the public may even be invited to enter exhibits, as at one of the finest club flower shows, that of Short Hills, New Jersey; or there may be a community competition, as has been arranged by another progressive club, The Bedford, New York.

Another signal of pronounced progress is in the increasing spirit of coöperation, which is said to require "the highest form of intelligence." Thus, in a few sections of the country—in northern New Jersey, and Westchester County, New York—several clubs unite in holding a flower show. In Virginia there

is a state federation of a number of clubs which is worthy of imitation elsewhere, in order that common problems of soil, climate, etc., may be more efficiently solved. A woman of national prominence in the affairs of garden clubs said very lately that things point toward greater coöperation with the horticultural societies. This is already begun, noticeably in Massachusetts, California, and New York, at flower shows. Is it a mark of progress, or a lack of interest, however, where, as occasionally occurs, a club has no show of its own? Is it not a mistake to lose the identity of the club in this way? Does coöperating with a horticultural society, valuable as it may be, take the place of the club's *own* show?

A many-years member of a well-known garden club, when asked what she regarded as the greatest advance made by the garden clubs, replied: "Conservation." This looking outside one's own garden and caring for the public good is indeed a long step forward, and the list of civic and other activities is lengthening continually, until the original purpose of a garden club blooms in a new form each year. A woman long in a position to understand the inner life of many of the most active of the clubs remarked that "the social side is passing." Would not the loss of a certain personal touch be a backward move? Is it not possible to preserve the broadening view and still maintain an intimate, friendly (not artificially social) element in the clubs? Each club has a distinct personality, and if the poet spoke truly when he said: "Show me your garden, provided it be your own, and I will tell you what you are like," may not the sentiment be equally applied to the clubs representing us and our gardens?

Does not a vision of the future for garden clubs include a desire to humanize the use of gardens by changing them, at least in part, from mere plantations—no matter how beautiful—to places of rest and inspiration? Surely the garden stimulates social-mindedness and friendly intercourse as nothing else does, and no progress of the gardens or their clubs can be of the highest type if they pass into over much technicality and too impersonal existence. Does not the chief charm of a club, like the garden where it grew, lie ever in the personal and broadly human?

## II. KEEPING STEP WITH SUMMER

FANNIE M. CHAPMAN

Of the Englewood (N. J.) Garden Club

### Some Suggestions for the New Club by an Active President

**W**HEN we organized in the spring of last year, the immediate question was not "*what* shall we do?" but "*which* shall we do?" for summer lay just ahead with its numberless, alluring, bewildering possibilities!

Our first move was more fundamentally wise than perhaps we, in our infancy as a garden club, altogether realized at the time. The happy inspiration came to invite a competent landscape architect to frankly criticize our gardens. A very interesting and helpful day it was—we put our lunch, and our pride, in our pockets and visited, if I remember aright, twenty-one gardens of members. When, where, and how to plant; how to plan a new or rearrange an old garden—concrete examples and comparisons fully and intelligently discussed by someone who knew, drove home in a vivid and unforgettable way some of the things at least that make the really "good" or "bad" in gardening. We learned (what we amateurs are perhaps too often inclined to overlook) that no amount of luxuriant bloom can ever rectify basically false design, though it may sometimes incline us to forgive it; and that the canons of taste are the same in a garden as elsewhere—beware of clutter and of meaningless planting!

### Summer Meetings at Home and Afield

**M**EET at least every second week during nine months of the year and in pleasant weather let it be always out-of-doors. Mid-morning (eleven o'clock) seems, for obvious reasons, the logical hour for summer meetings. Take a box luncheon and go to the garden of some member—there is always something delightfully informal in these open air gatherings.

Never hesitate to have the club come to your garden because you "have no flowers." We all go through the apologetic stage, but remember that true garden lovers are not inclined to be over critical, and take your turn! The hostess usually provides a hot or cold drink, but thermos bottles may easily be substituted.

After transacting the business of the day, some member presents a paper, or others tell of experiences connected with their garden work. These out-of-door luncheon meetings have proven so friendly that the shyest member comes impatiently to wait her opportunity to be heard.

Sometimes our meetings are held in the woods or fields, for every well regulated garden club has a wild-flower section

under the leadership of an able chairman; but of this more later.

Excursions to various gardens significant for one reason or another were made by motor. A member was appointed to take charge of all transportation for these trips, and to her others with cars reported the number of vacant seats available. It was her duty also to let everyone know the place and hour of meeting, and all were under bond to appear promptly. Again the luncheon box and indispensable thermos bottle were in evidence. Some lovely spot, preferably off the main travelled road, was selected, and an enjoyable and often exceedingly profitable hour was spent with always the chance of finding some new wild flower or shrub.

We were never refused an application to visit, in a body, any garden, but invariably were received with the utmost courtesy by the owner or his representative, and we found the professional gardener full of valuable knowledge and obligingly willing to share his findings with the amateur.

Do not limit your trips to the private garden or estate but by all means visit the nurseries in your neighborhood, where there is a surprising amount to be learned and to be enjoyed. Here again the busy professional seems never too busy to answer questions about Roses, Chrysanthemums, Tulips, Dahlias—whatever his hobby and yours may be!

If so fortunate as to be within motoring or easy train distance of a botanical garden such as the Arnold Arboretum near Boston, the New York Botanical Garden, or the Shaw Botanic Garden of St. Louis, do not neglect the opportunity to see what is being done there. A group of clubs might even join together in a pilgrimage to one of these big centres of plant life with much the zest of the crusaders of old. You will come back to your own garden with a fresh sense of what it means as a little link in the great chain of green and growing things that loop the round earth, making it habitable and attractive for man.

The Rose Test Gardens, too, that have been established in various cities through the efforts of the American Rose Society, hold much of interest for the lover of this historic flower. The National Rose Test Gardens not far from Washington, D. C., are possibly the best known, though similar municipal ones on a somewhat smaller scale flourish at Hartford (Conn.), Minneapolis (Minn.), and Portland (Oregon).

### Planning for Your Shows

**O**H, THE wonder and joy of your first flower show! When some brave member suggests the desirability of holding a show, the unanimous outcry will be: "We haven't a thing to exhibit!" Yes, you have; you will be surprised to find how really creditable a showing you can achieve with but little, for there may be entries of all classes from a single prize Rose to a French bouquet. One of the most interesting and surprising features is the variety and beauty that may be developed in flower arrangement for the dining room, the living room, or my lady's boudoir.

The necessary data for the methods of giving a flower show can be procured from the Garden Club of America—a national organization ever ready with information even though your club is not yet privileged to membership.

Do your spring and fall planting with a view to having something really worth while for these exhibitions. In an incredibly short time your club will be invited to join with others in giving an exhibit. Never refuse! Go in and do your best; through co-operation comes experience and knowledge. Shortly the time

will arrive when you bravely invite other clubs to take part in your home flower shows. Preserve all ribbons and prizes with care, for these should be among your most cherished possessions.

If your club be still in its infancy, you have before you a wide field to choose from, and the subject of specialization for the ensuing season should be given earnest thought and much discussion at club meetings. Encourage members to pursue their hobbies wholeheartedly and, if possible, have several members specialize in growing the same flower or flowers. Competition has its uses in the garden as elsewhere and such specialized, competitive cultivation means not only better shows but actual gain in knowledge for the individual gardener. Mrs. Stout's "The Amateur's Book of the Dahlia," for example, is a very illuminating record of what may be accomplished by patient and persistent pursuit along definite lines.

### Garden Clubs and Good Citizenship

**O**NE of the very delightful features of a garden club is the "exchange." Appoint a committee to promote and handle the exchanging of seeds, plants, and bulbs, and let each member be thoughtful enough to register with this committee everything of which she may have a surplus. From this surplus give not only to fellow clubmen but to fellow townfolk, gradually inspiring young and old with a civic pride that will act as a sort of automatic stop-clock on vandalism.

A practical way to further city planting is for each member to agree to contribute one tree yearly, consulting your Park Commissioner (if you have one, and if not, urge the appointment of a genuine plant lover for this office) as to varieties best suited to the particular climate and environment. Enlist the services and interest of the children from the start by allowing them to throw earth about the roots when planting the trees and by constituting them tree wardens. This will stimulate them to resent and prevent vandalism; and civic pride cannot be too early aroused. Make your garden club "Tree Planting Day" so attractive that young and old will consider it a privilege not only to donate trees, but to be present at the planting exercises.

A bird sanctuary may appropriately be made the focus of your civic planting, this giving the children of your town a double interest. The sanctuary established at Fairfield, Conn., by Mrs. Mabel Osgood Wright, familiar friend of birds and lover of all things out-of-doors, might well serve as a model.

Have a wild-flower day in your schools and offer a prize for the child who brings the greatest number of *identified* specimens. Also teach the children that the wild plant should no more be broken or uprooted than the Roses or Geraniums in their mother's garden. Explain the necessity for this precaution—the preservation of the species and the selfishness of needlessly destroying beauty. Inculcate in their young minds the desirability of not molesting roadside flowers and plants because of the pleasure these give to countless passers-by—some children of larger growth who run over the countryside in automobiles might be taught this lesson as well.

Whether one lives North, South, East, or West matters not—everywhere there are spirits with kindred tastes. Get together now, organize at once, and you will find summer activities come crowding about you. Upon the joy and spiritual elation that comes to one handling the soil, I do not venture to touch—this is the reward, intimate and exhilarating, of every gardener as she watches seed, bulb, or plant her hands have put into the earth, slowly rising heavenward.

**EDITORS' NOTE:** Frequent appeals for help in forming new Garden Clubs, or with a view to infusing fresh activities into extant organizations, has led us to seek experienced aid from those qualified to speak, and we feel that these two articles will be of service. One is written from the forward-looking point of view of the pioneer; the other reflects the wisdom and philosophy of experience.

The garden club movement has vindicated itself as a source of enrichment, not only in the individual lives of the active participants, but also as a force for good in the wider life of community and nation, and it seems imperative to ask of this great company of organized gardeners whither it is going. With so many possibilities at hand, little wonder that a diversity of aim is found among even the leaders of the movement—every group of people has its ancestor worshippers and its builders of history. The clubs in general are so very much alive, so continually adding to their numbers and their interests that one cannot doubt the forward-lookingness of the majority of the leaders.

Every day come pleas for help! Club Presidents and Club Members, gifted with a generous past, what can you tell others of your hopes and aspirations for the future? Will you stretch out the hand of fellowship and further point the way?



CORALLUMA, A NATIVE OF THE RED SEA REGION

This member of the Euphorbiaceæ resembles a Cactus and has been guided in its development by the action of similar physical conditions

## SUGARS—PLANTS OF THE DESERT—SPINES

D. T. MACDOUGAL

Director Department of Botanical Research, Carnegie Institution of Washington

### Interpreting Recent Discoveries Concerning the Whys and Wherefores of the Strange Habits of Some Cactus, Sedums and Other Succulents—The Modern Understanding of What Has Hitherto Been Regarded as Defensive Armature

EDITORS' NOTE: Formerly Assistant Director of the New York Botanical Garden, Dr. MacDougal came well equipped to his present work of directing botanical research, and the Desert Laboratory of the Carnegie Institution at Tucson, Arizona, affords ample opportunity for direct study of many forms of desert plant life. Some interesting conclusions are presented in this article, the second of a series in which Dr. MacDougal discusses the reactions of plants under varying conditions. "How Mountain Plants Behave When They Go to the Seaside," the first of the series, will be found on pages 305-307 of THE GARDEN MAGAZINE for February.

**S**UGAR as a substance potent in the evolution of plants is a novel idea, but it is one to which the converging researches of Professor Richards of Barnard College, Dr. Spoehr of the Desert Laboratory, and my own have brought us, and it may now be safely asserted that the differing action of two kinds of sugar is the most important factor concerned in the origin and evolutionary development of the Cactus, the Live-for-ers, Sedums, and other succulents, as well as the host of armed and spiny shrubs which live in the drier regions of the world.

This newly established conclusion may be best understood by repeating some simple experiments which will illustrate the fundamental qualities of sugars.

Drop a cube of common sugar in a glass of water and watch it dissolve slowly at first, then rapidly, especially if you raise the glass and set the water swirling. A lump of salt would behave in the same way. Now put a large lump of cherry gum or

gum arabic (acacia gum) in another glass, and you will see that it does not break down and crumble as it goes into solution. On the contrary it swells to many times its original size before going into solution which it does with such difficulty that generally a mucilaginous residue remains. These differences of behavior in the presence of water are characteristic of the two types of sugar, for these gums are sugars to the chemist.

Behead two carrots and scoop out a cavity as large as a thimble in each one. Fill one with granulated sugar, and the other with finely broken fragments of gum. A day later the white sugar will be seen to have pulled water from the carrot in which it has dissolved and may even overflow. The gum may have become sticky where it touches the moist surfaces, but it has pulled out almost no water from the intact cells. This is in illustration of the fact that white sugar is osmotically active and pulls water from other bodies with a force which is as great as several atmospheres of pressure, and it may also pass





PART OF A SAHUARO FOREST NEAR TUCSON,  
ARIZONA

Including several trees of *Carnegiea gigantea*, a massive succulent which stores up literally tons of water in its great club-like trunks

through the walls and membranes of cells. The gum is so weakly osmotic that its pull is difficult to measure and it does not pass the walls of a cell.

If the sugar we sprinkle on our strawberries were changed into gum, we would become quickly aware of the change. Such an alteration does take place in the plant which lives in places of extreme drought and this change is responsible for the direction in which many groups of plants have developed.

**N**OW turn to the cells of the green plant which are actively engaged in processes starting in the leaf and resulting in the formation of sweet sugars. These sugars slowly diffuse through stems and branches, undergoing conversion into starches in some organs or tissues, being acted upon by ferments in other places, but in no place exerting any discernible effect upon the general size or character of the cells or tissues.

If the cane sugar or glucose which found its way into a cell or a mass of growing cells should be abruptly changed into a gum with the implied alterations in physical action, it may be readily seen that the cells which are loaded with the mucilaginous material would act in a manner different from that which would be shown if they held only common sugar.

Such a change does occur when a mass of cells loses water beyond a certain proportion. The sweet hexose sugars which have 6 or multiples of 6 atoms of carbon, 12

atoms of hydrogen and 11 of oxygen may lose hydrogen and oxygen in the form of water when the cells are dried, and the molecule is rearranged as a pentose or 5 carbon sugar, which is further condensed to the pentosans or mucilage which is not at all sweet to the taste.

Some pentose and some of its condensation product, the pentosans, are always present in the cell. These substances play an important part in growth. The notable increase which follows desiccation converts so much common sugar to mucilage that the physical qualities of the latter determine the fate and character of the cells and tissues.

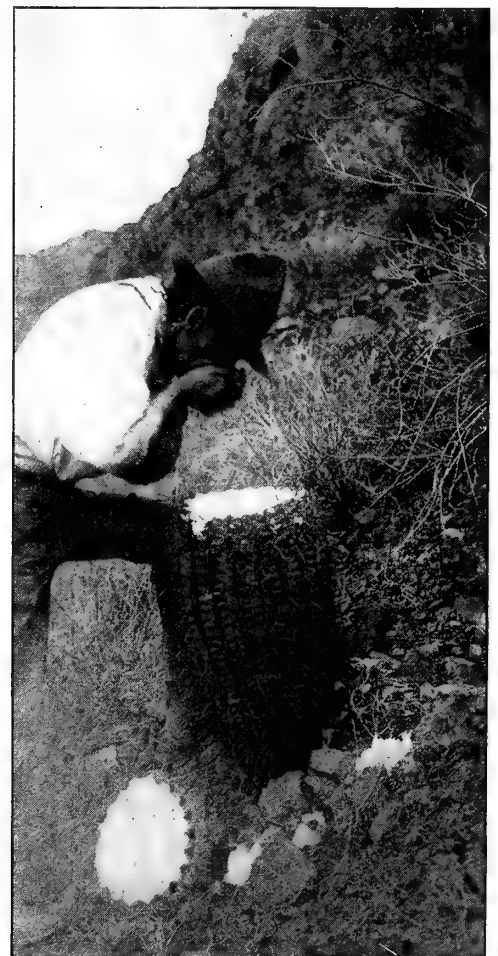
No matter how much of the ordinary type of sugar might be formed in the cell, it would readily diffuse out through the walls and to other organs of the plant. Not so with the mucilage. When it is formed from the more soluble sugar as a result of drought it must remain in the cell in which it is formed, and while it cannot pull water into this cell with any great force yet it imbibes and holds all of the water that does come into the cell by other causes when the drought is over expanding the cell by its swelling power. This result is the essential feature of a succulent such as the Cactus, enlarged thin-walled cells, distended with mucilage and the imbibed water. (See *Coralluma* pictured on preceding page.) Thus in studying the leaves of a *Castilleja* which had become succulent, the cells were seen to be three times as long as in other leaves which had not undergone this transformation.

The drying out of cells converts common sugars to mucilages, and these substances are traps which imbibe and hold water which may later come into the cells. This is the cause of the succulent, and such action may occur in the individual plant ordinarily thin-leaved. It has



SKELETON OF SAHUARO  
(CARNEGIA)

Despite the fact that the main stem is dead, the Sahuaro stores up such large reserves of food and water that the single living branch attached on right is able to prolong its solitary existence for the space of a year or two, even forming flowers and maturing fruit



THE BARREL CACTUS (ECHINOCACTUS)

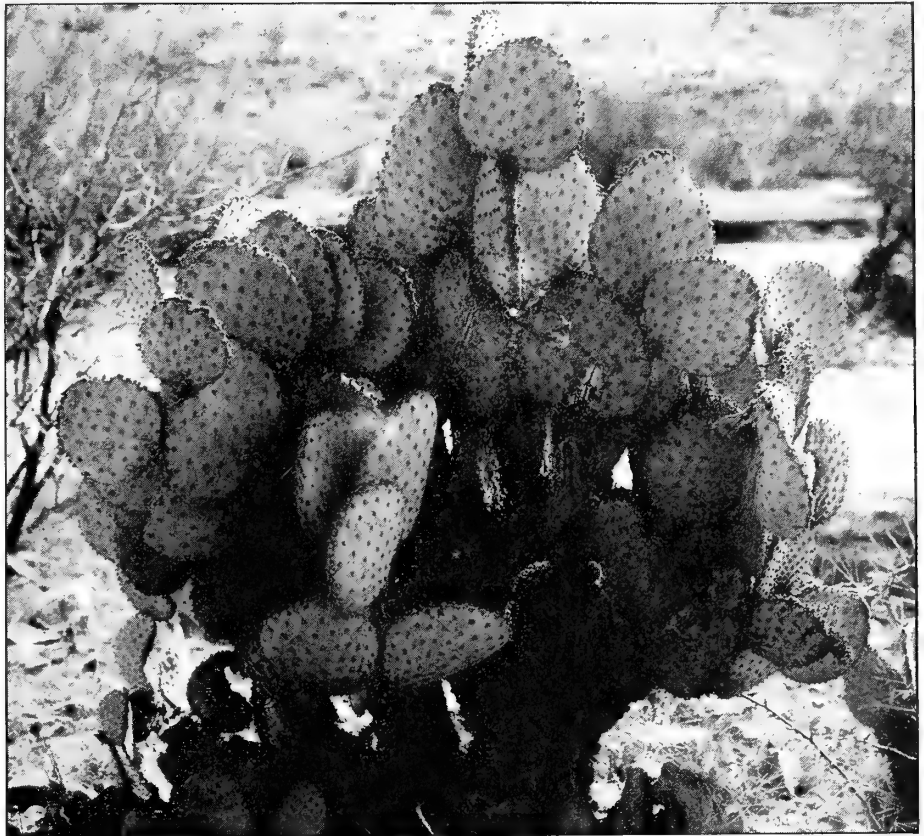
A canny prospector takes advantage of ready-made opportunity and, after beheading the plant, squeezes the juice from its white inner pulp to quench his thirst

become converted into a programme of existence for the Cactus and other plants which live in places with alternating periods of drought and rainfall, collecting water from the moist soil during the wet season and using it up during the dry seasons, and some of the more massive plants like the great Echinocactus of the Southwest and of Mexico store up a supply which would enable them to grow for two or three years and to survive several more if no additional supply were received. Animals and man have learned to make use of the watery liquid in the soft flesh of some of these plants, as may be seen in photograph on opposite page showing a prospector drinking the sap of the Barrel Cactus of Arizona. Some of the massive succulents like the great Sahuaro (*Carnegiea gigantea*) form massive trunks in which tons of water may be stored (shown on opposite page). A plant with such a large reserve of food and water as the Sahuaro may be expected to do some unusual things. Of these none is more interesting than that pictured opposite, in which the main stem of the plant being dead, the skin and pulp have rotted away and the dried skeleton supports a green turgid living branch which may survive for a year or two and form flowers and mature fruit.

**B**UT we are not through with the story of the sugars and the part they may play in the development of desert plants. So far attention has been paid only to plants which form swollen stems, roots or leaves. Most of these plants have greatly restricted leaf surfaces, and their branches are restricted or done away with entirely. This restriction of the development of the branches makes for the spinose type of shrubs and plants of the desert, and when we seek the means and methods by which restriction is brought about we again find some pertinent changes in the sugars, particularly in the mucilages or pentosans which result from the action of drought on 6-carbon sugars. Some of the hexose sugar is more or less constantly passing into mucilages which are an important component of the living matter, and at the same time a much larger proportion is being converted into cell-walls as cellulose or wood, a change which also consists chiefly in the abstraction of water from the molecules of sugar. The anhydride in this case has only a limited capacity for absorbing water and swells but little. Under the influence of aridity the plant makes fewer cells but builds additional material into the walls, making stubby and spiny branches, cylindrical leaves and other organs with restricted surfaces which are so characteristic of the desert. Some of this reaction may be seen when almost any plant is grown in a dry place with insufficient water. The spinose plants have adopted it as a racial or species programme long ago. The Cactus represent in many ways the extreme or highest stage of development of vegetation away from the ancient species which inhabited primeval swamps and water courses. They have the capacity for converting some of their 6-carbon sugars into mucilages which fill huge cells in their monstrous bodies, and at the same time another stream of sugar may be imagined as diverted to the formation of cellulose in walls of external cells and in the construction of their formidable spines.

The reader who has given some thought to the armature of plants may feel some disappointment that the view that spines have been developed as protective devices is not given more weight in this discussion. Spines and thorns can be increased, lessened, or inhibited by controlling the water supply and humidity in some plants, and they are formed by the conversion of sugars in the manner described.

That spines and thorns do form a partial protection to a plant is undeniable. It must be remembered, however, that while the plant is following its own evolution, dozens of animals are likewise developing effectiveness in getting past the offensive features and defenses of the plant so that no plant, no matter to what length it has gone, is altogether free from the ravages of animals. That the continuance of these ravages causes the plant to arm itself still more is not supported by an atom of proof. It is not even clear that the best armed Cactus



SPINELESS PRICKLY PEAR

Common on the cattle ranges of southern Arizona, the Spineless Prickly Pear (*Opuntia santa rita*) is being increasingly developed and has distinct possible value as an emergency supply for stock on the ranges during a season of restricted rainfall

survive, as there are a score of spineless *Opuntias* known in Mexico and three live in the vicinity of the Desert Laboratory (See photograph above).

**T**HE possibilities of additional food-supplies in plants which contained large proportions of mucilages or derivatives of the 5-carbon sugars attracted serious attention during the Great War. Although many species of seaweed which are high in such substances are consumed in great quantities, especially by the Japanese people, it has not been demonstrated that they are digested to any important extent. The value of all of these plants lies in other components. The slab-like joints of some prickly pears are peeled, sliced, and cooked in fat by the Indians of southern Mexico, but it is not known that any food values are realized beyond those of the minute quantities of the sweet sugars present. The mucilages or derivatives of these sugars are so far as known but little changed by the digestive ferments of man.

That much use is made of them by cattle and horses seems fairly well established, and the effort which has been made during recent years to develop *Opuntias*, some of which are spineless, has been well warranted by their possible value as a reserve or emergency supply for the stock on the ranges during a season of restricted rainfall. Much has been written as to processes by which wood could be converted into alcohol and food. The mucilages or gums, derivatives of the 5-carbon sugars, universally present in plants, very abundant in many species, constitute a much more promising subject for industrial research.

# JUNE IN A SEASHORE GARDEN

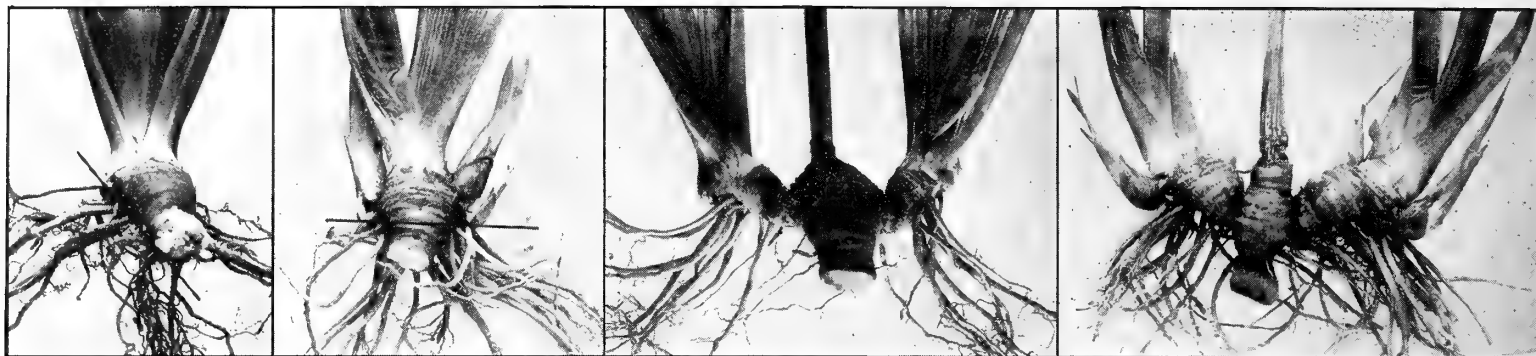
Photographs by Mary H. Northend



The fresh, bright color of the June garden rekindles new delight every season and is for many the high-water mark of the gardening year with the unstinted loveliness of Peony and Iris supplemented by the light grace of Lupins and a multitude of minor servitors who faithfully reappear summer after summer. Formal in concept, its prim beauty shielded from encroaching rock and woodland by high vineclad walls, the garden of Dr. J. H. Lancashire at Manchester, Mass., reflects nothing of the tumultuous disorder of the not far distant sea. Man is ever prone thus to build himself some sort of sheltered paradise and sit secure within defying fate, as it were







1. A standard division. The line shows depth to plant

2. After one year's growth of a properly planted division

3. Double standard division group with base of flower stalk showing in centre

4. A two-year group that has flowered. The withering old flower stalk is shown

## THE GROWING WAYS OF BEARDED IRIS

A. C. ARNY

University of Minnesota

Success and Satisfaction from Understanding Methods of Development—Why Deep Planting Prevents Flowering—Better Business Relationships Between Buyer and Seller

**A**SIDE from flowering time when, of course, the bloom on slender stalks focuses attention upon itself, the leaves of the Iris are conspicuously interesting as they grow in the garden. These leaves are attached at their bases to much thickened portions which vary somewhat in shape according to the variety, but are usually elongated.

This thickened portion growing partly above and partly below the ground is a modified stem correctly called a rootstock or rhizome. Besides being a means of spreading the plant in an ever widening circle, these rhizomes are food storehouses like the tuber of the common Potato though differing in that they bear true leaves while tubers bear only rudimentary leaves, called scales, with buds in their axils. Under ordinary circumstances, the Iris rhizome persists for more than a year while the corm or solid bulb of such plants as Cyclamen, Gladiolus, or Crocus is used up annually. From the portion below the surface of the ground (as indicated by the line in the accompanying photograph) true roots grow outward and downward branching as they go.

A true bulb, as in Lilies and Hyacinths, consists of a solid stem with the main parts made up of thickened leaves and has little resemblance to the rhizome of the Iris.

### The Natural Position of the Rhizome

**A**PPROXIMATELY the same position in the soil and on its surface as ducks take on the surface of the water, is the natural one for the Iris rhizome. In this position, exposed to the sun which toughens their outer portions, the rhizomes probably withstand disease better than when entirely covered with earth.

If, when setting out, the upper surface of the Iris rhizome is left about level with the surface of the compacted soil, it will be in about the right position when the soil has settled thoroughly. If set much deeper and anchored there by true roots, then the main efforts of the plant are perforce directed toward regaining its proper position and, while doing this, it cannot produce bloom and is said by its owner to be "sulking."

Rhizomes become anchored securely in the position in the soil where they are planted and cannot change that position except as they send out branches from the eyes which carry the new parts of the plants up to the surface. The food ma-

terial of the too deeply planted rhizome is spent in elongating the branches in order that the plant may grow up to a natural position.

Plants shown in Figs. 7 and 10 are the same age as those shown in Figs. 1 and 2 and their much smaller size and less vigorous growth is due entirely to the fact that the rhizomes from which they grew were planted too deeply. This is shown plainly at A in Fig. 5 where, from the rhizome underneath the soil, branches pushed upward, and at the surface of the soil the new true root systems have developed. At B can be seen, rather indistinctly, a young rhizome which is too far beneath the surface of the soil and must spend time and energy growing up through the soil to the position reached by the other two. After it has spent most of the growing season reaching the natural position, little time will be left for it to become established and make a vigorous growth. It also will be a weakling like the other two. Even where the rhizome is in fairly good position some branches may be too deep beneath the surface.

### Two Views of the Cycle of Development

**T**HE cycle of development in the Bearded Irises may be either (1) where the plants are not divided for several years after they are set in place resulting in the natural increase besides the production of flowers, or (2) all of the energies of the plants directed toward increase in number by vegetative growth and the production of flowers prevented. The first method may be called the natural cycle and the second the interrupted cycle.

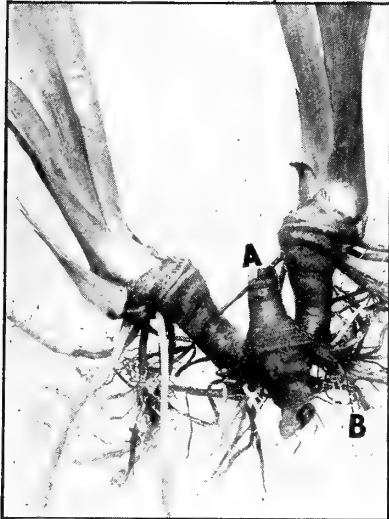
The rate of growth under either method depends upon the varieties and the tillage methods, as well as the productivity of the soil and the water supply. Under otherwise equal conditions such varieties as Monsignor (plants of which variety were the subjects for all the Figures shown in this article) Quaker Lady, Rhein Nixe, Prosper Laugier, Alcazar and many other vigorous growing varieties will make the growth indicated below. Edouard Michel, Black Prince, and a few other desirable varieties are much slower of increase.

**THE NATURAL CYCLE.** Starting with a division of full size for the variety in July or August, 1919, as shown in Fig. 1, under favorable growing conditions, this developed by the latter part of September of the same year into a one-year group shown

6. A three-year group (incomplete). To the right of A there is seen indistinctly a weak young branch suppressed by being too deep in the soil (Right)



7. Compare the plant below with Fig. 1. They are the same age; but this was planted too deep



HOW DEEP PLANTING INJURES

5. The parent rhizome A was deeply planted and the two branches had to struggle to get the daughter plants to the surface. Hence the elongated growth. There is another buried plant at B

in Fig. 2. This group is composed of the mother plant and four daughter plants of various sizes. Unless standard divisions such as are represented in Fig. 1 develop to the stage indicated by the plant shown in Fig. 2 during the summer and autumn months, no flowers can be expected the following May and June.

Under favorable conditions of growth, the one-year group of the autumn of 1919 and the spring of 1920 developed by June into the double standard division group shown in Fig. 3. It will be noted that the small daughter plants shown at the sides in Fig. 2 have, as shown in Fig. 3, developed into standard divisions of the same size as shown in Fig. 1. This development took place in just one year and resulted in two standard divisions from one. The leaves of the parent plant shown in the one-year group have given way to the flowering stem still attached to the parent rhizome.

Left undisturbed, this double standard division group of June, 1920, developed by late September into the sturdy two-year group shown in Fig. 4. The large, plump rhizome shown in Fig. 3 had by autumn become largely absorbed by the two daughter groups. The flowering stalk is withered and ready to fall away. This group, it will be noted, is made up of two one-year groups such as are shown in Fig. 2 held together by the parent rhizome.

By June of 1921, each of the two one-year groups, making up the two-year group, developed into a double standard division group (as shown in Fig. 3) still connected by the grandparent rhizome.

The group shown in Fig. 6 is not entirely complete, but from it can be secured an accurate conception of what a three-year group looked like in the autumn of 1921. One

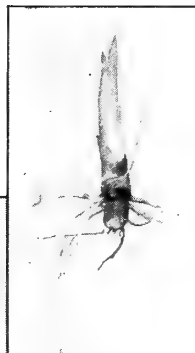
two-year group, in this instance made up of three one-year groups, is attached to the grandparent rhizome indicated at the letter A. If another two-year group had been attached to the grandparent rhizome at the right, this would have been a complete three-year group. The three-year group is double the size of a two-year group and four times the size of a one-year group.

From the appearance of the half of the three-year group as shown in Fig. 6, it is clear that the complete group would form a more or less complete circle around the grandparent rhizome. The grandparent rhizome is finally completely absorbed, or it decays, leaving a vacant space in the circle. As the parent rhizomes become grandparents and great grandparents they too disappear; and since the new growth is always outward there results a slowly but ever increasing circle, provided space is available to continue expansion in this way.

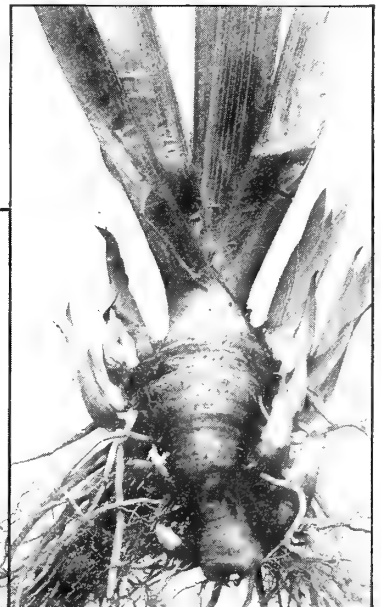
Only from the groups which have reached the stage of development in the autumn of 1921 as shown in Figs. 2, 4, and 6 can bloom be expected in 1922. The plant shown in Fig. 2 may be expected to produce one flowering stalk; that in Fig. 4, two flowering stalks; and that shown in Fig. 6, three flowering stalks.

**THE INTERRUPTED CYCLE.** The chief aim in following out this method is to secure as rapid increase in the number of plants as possible. Very productive soil and adequate water supply are necessary.

8. What the dealer calls a "small division" used in propagating a novelty or rare variety. A perfectly good one below. On the right (9) a weak small division



GOOD AND POOR DIVISIONS



11. Here is a strong one-year group that has had opportunity to develop daughter plants in profusion. It was not planted deeply. Remember that an Iris should sit in the soil like a duck on the water

10. This plant (above) is same age as one shown at Fig. 2, but shows delayed development from deep planting



Few flower buds are produced, due to the method of handling the stock; and the few which appear are removed as soon as seen.

The young plants growing in one-year groups, as shown in Fig. 2, were allowed to start a vigorous growth of leaves and roots in the spring of 1921. The two largest ones were then removed. A longer time might have been given so that the two smaller ones could have reached the desired size also. However, the sooner in spring the young plants which have reached sufficient size can be removed and set out where desired and cared for in proper manner, the better the growth made during the season.

To remove these plantlets, a sharp, thin knife is employed, using care that a sufficiently large portion of the parent rhizome having a good number of vigorous roots goes with each. One of these small divisions properly removed from the parent plant and ready for setting out is shown in Fig. 8. The freshly cut surface of both the young plant and the parent may be dusted with a mixture of hydrated lime and flowers of sulphur if rhizome rot is prevalent. One young plant is always left attached to the parent rhizome unless other still younger ones

can be seen coming on. If this is not done and no new branches start, the parent rhizome is useless since it has no new growing point.

Be careful in setting out these small divisions that the roots and the portions of the rhizomes are not planted deeper than one to one and one-half inches below the surface of the compacted soil. Set at this depth, the rhizomes as they develop to full size will be in about the natural position.

Small divisions of vigorous varieties removed during the latter part of April and the first part of May will usually reach the size of standard divisions (Fig. 1) by August; and by October, the one-year group size (as shown in Fig. 2). Set 5 to 6 inches apart in rows eighteen to twenty-four inches apart, under favorable conditions of soil and moisture, they often reach by October the development shown by the plant in Fig. 11, made up of one large rhizome and eight vigorous branches, which may the following spring be again divided. In addition there are a number of still smaller branches. This plant, which is by no means an exception, showed an elevenfold increase in a six-month growing period.



## FOLIAGE PLANTS THAT DO WELL IN SHADE

NAME	VARIETY	COLOR	PLANT IN	HEIGHT	SOIL
Geranium	Mme. Salleroi	Variegated, green and white	May and June	12-18 in.	Average garden
Alternanthera	brilliantissima	Variegated, green and brown	May to frost	8-10 in.	Rich
Alternanthera	versicolor	Variegated, pink, green and brown	May to frost	8-10 in.	Rich
Begonia	semperflorens	Pink	March inside, May out	12-15 in.	Moderately moist leaf mold
Caladium	esculentum	Brown	May and June	3-4 ft.	Warm, rich, moist
Achyranthes	Lindeni	Dark red	May to frost	18-24 in.	Moist and rich
Achyranthes	aureo-reticulata	Greenish yellow	May to frost	18-24 in.	Moist and rich
Coleus	Golden Bedder	Greenish yellow	March inside, May out	1-3 ft.	Rich
Coleus	Brilliancy	Variegated	March inside, May out	1-3 ft.	Rich



## CROP FACTS FOR READY REFERENCE

—Phosphoric acid sets blooms and makes seeds and seed-pods form abundantly.

—In a mixture, basic slag or any manure containing free lime must not be used with sulphate of ammonia.

—By mixing superphosphate or dissolved bones with basic slag or bone flour, the soluble phosphate will become partly insoluble.

—There is a call for potash in the soil when the Onions seem soggy, the Tomato vines lack sturdiness of stalk, or the trees are not thrifty.

—Vegetables that store up large amounts of sugar or starch, either in root or top, as for instance Potatoes, require plenty of potash.

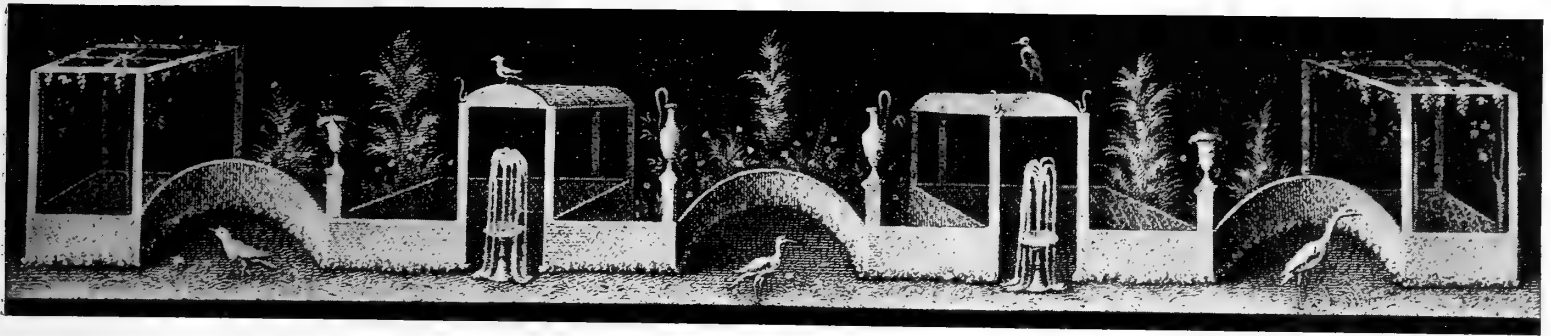
—There must be plenty of potash for Potatoes or Onions, and phosphoric acid for good crops of grain, or Melons, Peaches, Strawberries, and Tomatoes.

—Sweet Corn, and such vegetables that have considerable foliage, and produce much seed stored in starch and sugar, call for a complete high-grade fertilizer.

—For the production of large quantities of seed, and but little foliage, phosphorous must be largely used. The Tomato is an example in this class.

—The soil is rich in nitrogen when there is a profusion of wild growth on the farm, and when Tomato and Melon vines run to leaf.

—Large amounts of nitrogen are needed for such plants as Cabbages, Collards, Lettuce, Spinach, etc., grown for their foliage.



PART OF A FORMAL GARDEN FROM A WALL PAINTING AT HERCULANEUM

## A PICTORIAL HISTORY OF THE GARDEN—IV

H. H. MANCHESTER

Iris in the Gardens of Ancient Greece—Establishing Parks and Private Patios in the Heart of Athens Two Thousand Years Ago—Lilies White and Roses Red Aflower in the Early Days of the Eternal City

### IN ANCIENT GREECE AND ROME

**I**N spite of the Greek love for beauty, the ornamental garden was much less developed in ancient Greece than it was in Egypt or Babylonia. There are, however, a number of evidences that it was not entirely lacking among either the Asiatic or European Greeks.

The earliest Greek record of importance concerning the garden is the description in the *Odyssey* of the garden of Alcinous, king of Phaeacia, on the shore of which Odysseus was tossed up by the sea. This was essentially a fruit orchard, as may be seen from the lines: "Without the hall there was a large garden, near the gates, of four acres, around which a hedge was extended on both sides. And there tall flourishing trees grew, Pears, and Pomegranates, and Apple-trees producing beautiful fruit, and Sweet Figs, and flourishing Olives."

The most remarkable characteristic of the orchard was the unbroken succession of crops from the trees, for Homer declares: "Of these the fruit never fails, nor does it diminish in winter or summer, bearing throughout the whole year; but the west wind ever blowing makes some bud forth, and ripens others. Pear grows old after pear, apple after apple, grape also after grape, and fig after fig. There a fruitful vineyard was planted: one part of this, exposed to the sun in a wide place, is dried by the sun; some (grapes) they are gathering and others they are treading; while further on are unripe grapes, having thrown off the flower, and others slightly changing color."

Observe also that even at that archaic period, nearly three thousand years ago, the palace and garden had a watering system: "And there are all kinds of beds laid out in order to the furthest part of the ground, flourishing throughout the whole year: and in it are two fountains, one is distributed through the whole garden, but the other on the other side goes under the threshold of the hall to the lofty house, whence the citizens are wont to draw water."

The flowers most highly considered at that period are revealed in the Homeric "Ode to Demeter," where Proserpine tells her mother how she was seized by Pluto: "We were all at play . . . and were plucking the pleasant flowers with our hands—the beauteous Crocus, and the Iris, and Hyacinth, and the Rose-buds, and the Lilies, a marvel to behold, and the Narcissus, which, like the Crocus, the whole earth produces. I was plucking them with joy, when the earth yawned beneath and out leaped the strong king, the receiver of all, and went bearing me beneath the earth in his golden chariot."

The queen of flowers in ancient Greek times was no doubt thought to be the Rose. A hymn ascribed to Sappho, who wrote some 2500 years ago, declares:

"If on Creation's morn, the King of Heaven  
To shrubs and flowers a sovereign lord had given,  
O beauteous Rose, he had anointed thee  
Of shrubs and flowers the sovereign lord to be.  
The spotless emblem of unsullied truth,  
The smile of beauty and the glow of youth;  
The garden's pride, the grace of vernal bowers,  
The blush of meadows and the eyes of flowers."

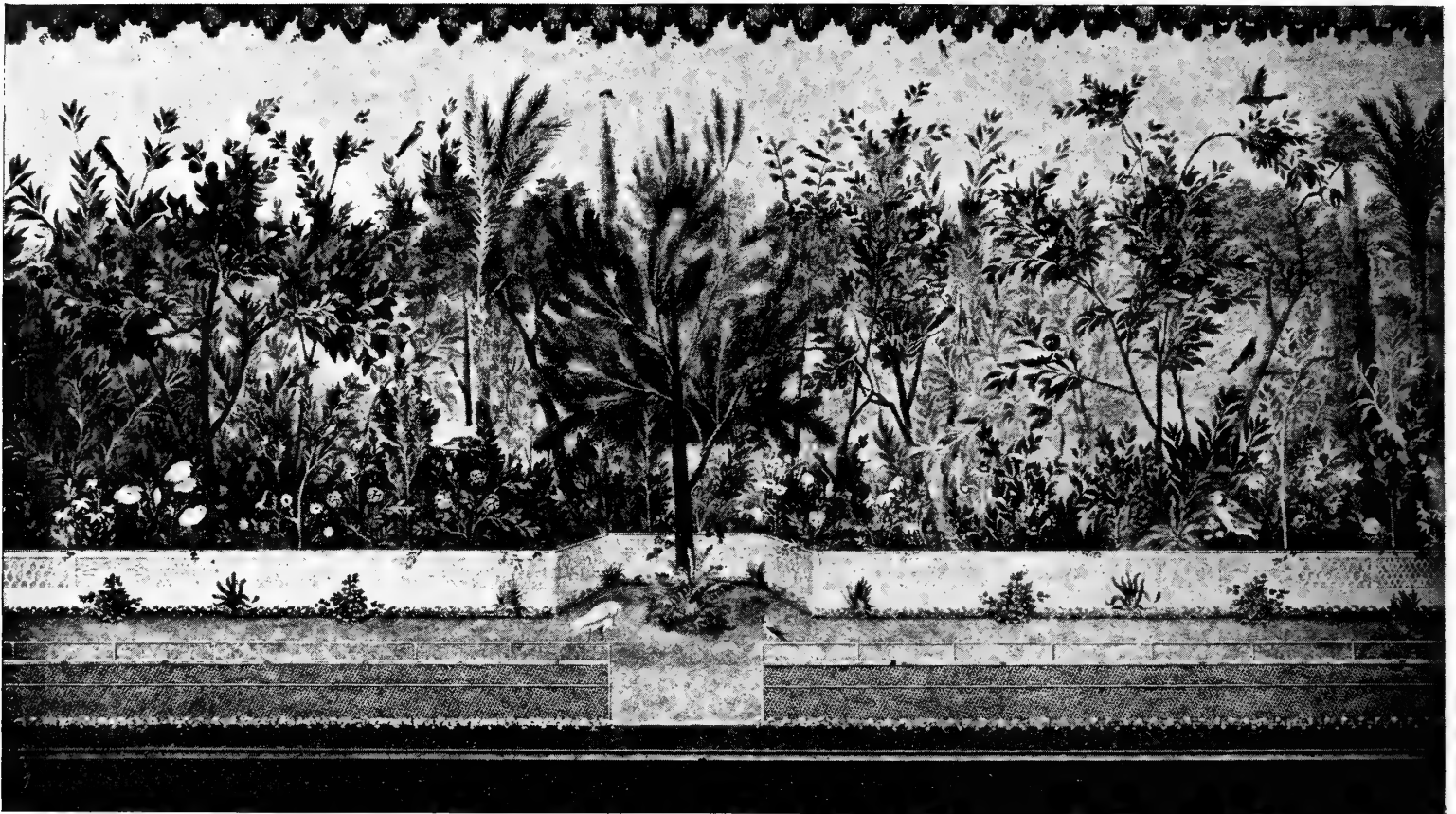
Anacreon (a Greek lyric poet of the fifth century B. C.) also proclaimed:

"Rose! thou art the sweetest flower  
That ever drank the amber shower.  
Rose! thou art the fondest child  
Of dimpled spring, the wood-nymph wild!  
Ev'n the gods, who walk the sky,  
Are amorous of thy scented sigh."

It was not until after the Persian invasion that there were any public gardens or parks in Athens, for Plutarch says that it was the celebrated Athenian commander Cimon (died 449 B. C.) who first "set the market place with Plane-trees; and the academy, which was previously a bare, dry, and dirty spot, he converted into a well watered grove, with shade alleys to walk in, and open courses for races." Cimon also pulled down all the enclosures of his own gardens and grounds, that strangers and his needy fellow citizens might gather the fruits.

Many of the groves of Greece and even single trees were consecrated to some god or goddess. In this case they were frequently hung with offerings by those who wished to propitiate the Deity. Plato has Socrates describe such a grove as follows: "By Juno, a beautiful retreat. For this Plane-tree is very wide-spreading and lofty, and the height and shadiness of this *Agnus-castus* are very beautiful, and as it is now at the perfection of its flowering, it makes the spot as fragrant as possible. Moreover, a most agreeable fountain flows under the Plane-tree, of very cold water, to judge from its effect on the foot. It appears from these images and statues to be sacred to certain nymphs and to Achelous. Observe again the freshness of the spot, how charming and very delightful it is, and how summer-like and shrill it sounds from the choir of grasshoppers. But the most delightful of all is the grass, which with its gentle slope is naturally adapted to give an easy support to the head as one reclines."

Since many of the Greek festivals and games required garlands and wreaths, they encouraged the cultivation of the foliage and flowers employed for the purpose. Thus we read of the gardens of Adonis, which were sometimes merely flower-



GARDEN FROM A WALL PAINTING IN THE VILLA OF LIVIA NEAR ROME

pots in which the flowers for his celebration were produced in the home. The Laurel was particularly used for crowns of victory, and was almost consecrated to this purpose.

Greek knowledge of both plants and animals was tremendously enlarged through the conquests of Alexander. He invited Aristotle, who had been his tutor, to go with him, and assigned the philosopher a force of men to aid in collecting specimens of the Asiatic fauna and flora unknown to the Greeks. These Aristotle described in works which marked a great step in botany, but are now lost. The pleasures of walking and talking in a grove or garden were highly appreciated by the later Greek philosophers, called, from this habit of walking about while discussing, the Peripatetic School.

Pliny the Elder went so far as to declare that Epicurus established the first pleasure garden in Athens: "Epicurus, that connoisseur in the enjoyment of a life of ease, was the first to lay out a garden in Athens; up to his time it had never been thought of to dwell in the country in the middle of the town."

Theophrastus (372-288 B. C.), who was a pupil of both Plato and Aristotle, and continued Aristotle's work in botany by writing nine books on "Researches About Plants" and six on the "Principles of Vegetable Life" which reveal him as a thorough and acute inquirer, had a philosophic garden where he was attended by many of his disciples. In his will he left this garden in perpetuity for this purpose: "As to my garden, the walk, and the house adjacent to the garden, I give them forever to those of my friends mentioned below, who desire to devote themselves in common to study and philosophy therein, for everyone cannot always travel: provided that they shall not be able to alienate this property; it shall not belong to any of them individually; but they shall own it in common as a sacred possession, and shall enjoy it peaceably and amicably as is just and fitting. . . ."

**A**MONG the ancient Romans the garden filled a much more important place than in Athens.

As early as the First Century B. C., Marcus Porcius Cato, the sternest of Roman censors, advised the establishment of ornamental gardens: "Near the city you will have gardens in

all styles—every kind of ornamental trees, bulbs from Megara, Myrtle on palisades, both white and black, a Delphic and Cyprian Laurel, the forest kind; hairless Nuts, and Filberts from Praeneste and Greece. A city garden, especially of one who has no other, ought to be planted and ornamented with all possible care."

The construction of the Roman house, with an inner court open to the sky, allowed the use of this space as a small ornamental garden in which were planted flowers and vines. This arrangement had great influence on the later development of the small garden, as it was adopted in the mediaeval churches and châteaux.

The first to construct elaborate park-like gardens in Italy was Lucullus (110-57 B. C.). In his campaigns in the East, he had become enamored with the splendor of the Asiatic hanging gardens and paradises, and after his return constructed his famous gardens at Naples, "lavishly bestowing all the wealth and treasure which he got in the war upon them," according to Plutarch, "insomuch that even now, with all the advance of luxury, the Lucullan gardens are counted the noblest the emperor has. Tubero the stoic, when he saw his buildings at Naples, where he suspended the hills upon vast tunnels, brought in the sea for moats and fish ponds around his house, and built pleasure-houses in the waters, called him Xerxes in a gown. . . ."

Among the spoil which Lucullus had brought from the East were wonderful statues which he used to embellish his gardens. The many architectural features of his garden had much influence on subsequent Roman parks, and in fact upon the Italian gardens of the Renaissance. He is also credited with having first brought the Cherry into Italy.

The pruning of Box into the form of animals and other highly artificial shapes seems to have been first introduced into Italy by a certain Marius, who was a friend of Caesar and a favorite of Augustus.

Pliny the Elder, the old Roman encyclopedist, briefly described the flowers which he considered most important. He recognized twelve varieties of Roses, of which the prevailing color was red. The common Lily at the time was white, but



the seeds or bulbs were sometimes stained by dark wine in the attempt to produce a purple flower. The purple Violet grew wild, while the yellow was mostly cultivated. Other flowers which he mentions are Narcissus, Phlox, Anemone, Gladiolus, Amaranth, Hyacinth, Iris, Lavender, Daisy, Crocus, and Bluebell. The principal fruit trees were the Olive, Quince, Peach, Plum, Pomegranate, Apple, Pear, Fig, and Mulberry.

The palace of Livia, near Rome, has four important wall paintings which are arranged around a hall in such a way as to imitate views into gardens. Here we see the use of a low balustrade, fountains, and even bird-cages. Among the trees represented are the Oak, Pomegranate, Quince, Cypress, and Laurel. The flowers included probably Violets, Roses, Camomiles, and Iris. The profusion of trees and flowers pictured proves that the Roman garden was in some parts at least highly luxuriant, and not at all confined to a strictly formal symmetry.

Other important illustrations of the Roman formal garden appear in the wall paintings of Pompeii and Herculaneum. In one case the walls of a small court garden are painted with landscapes as if to magnify the view.

A very essential Italian tree was the Plane, the magnificent shade of which was so greatly appreciated by Roman connoisseurs that they watered the tree with wine.

The most complete description of an ancient Roman garden is in a letter of Pliny the Younger, in the first part of the second century A. D., who writes about his garden as follows:

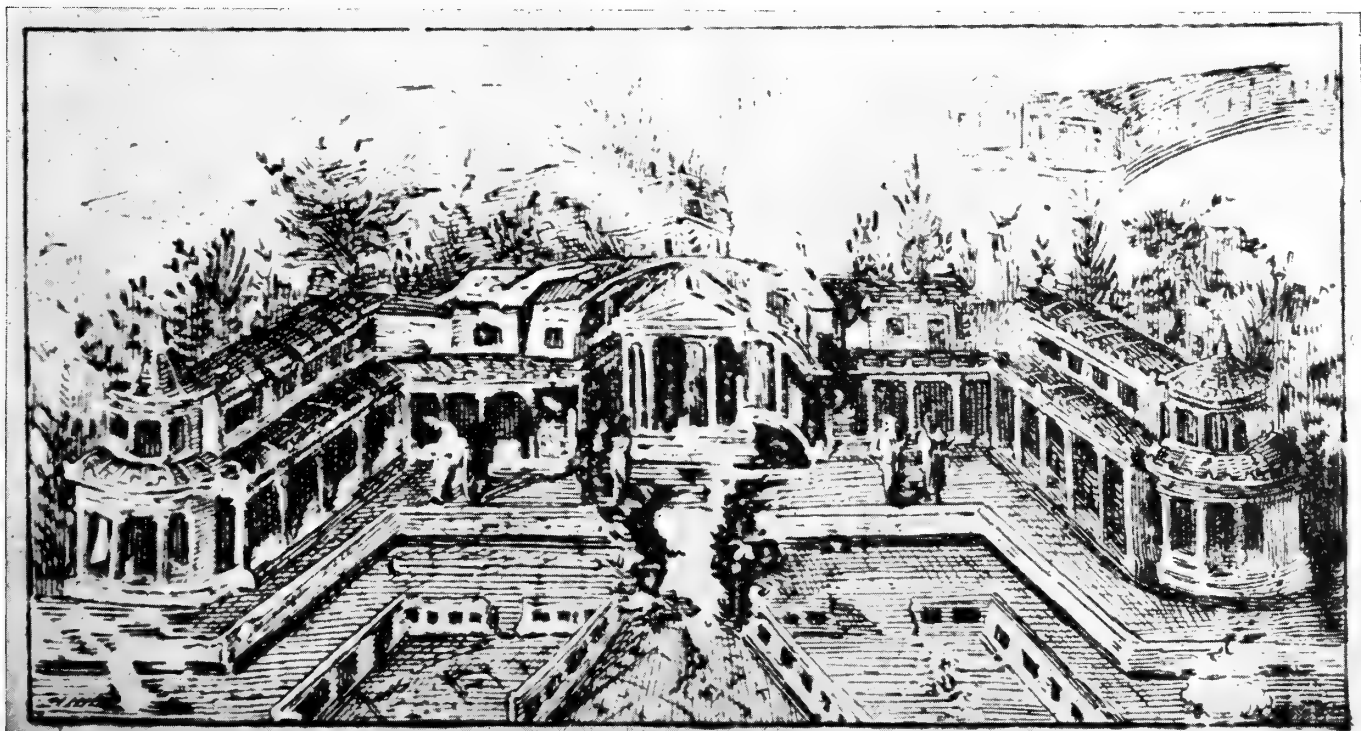
"It is set around with Plane-trees covered with Ivy, so that, while their tops flourish with their own green, toward the roots verdure is borrowed from the Ivy that twines around the trunk and branches, spreads from tree to tree, and connects them together. Between each two Plane-trees are planted Box-trees, and behind these stands a grove of Laurels which blend their shade with that of the Planes. This straight boundary to the hippodrome alters its shape at the farthest end, bending into a semi-circle, which is planted round, shut in with Cypresses, and casts a deeper and gloomier shade, while the inner circular

walks (for there are several) enjoying an open exposure, are filled with plenty of Roses, and correct, by a very pleasant contrast, the coolness of the shade with the warmth of the sun."

The artificial pruning of Box was here carried to the limit: "Having passed through these several winding alleys, you enter a straight walk, which breaks out into a variety of others, partitioned off by Box-row hedges. In one place you have a little meadow, in another the Box is cut in a thousand different forms, sometimes into letters, expressing the master's name, sometimes the artificer's, whilst here and there rise little obelisks with fruit trees alternately intermixed, and then on a sudden, in the midst of this elegant regularity, you are surprised with an imitation of the negligent beauties of rural nature. In the centre of this lies a spot adorned with a knot of dwarf Plane-trees. Beyond there stands an Acacia, smooth and bending in places, then again various other shapes and names."

The architectural features of the garden, which had great influence in the Renaissance, were described by Pliny as follows: "At the upper end is an alcove of white marble, shaded with vines, and supported by four small Carystian columns. From this semicircular couch, the water, gushing up through several little pipes, as though pressed out by the weight of the persons who recline themselves upon it, falls into a stone cistern underneath, whence it is received into a fine polished marble basin, so skilfully contrived that it is always full without ever overflowing. When I sup here, this basin serves as a table, the larger sort of dishes being placed around the margin, while the smaller ones swim about in the form of vessels and water-fowl. Opposite this is a fountain which is incessantly emptying and filling, for the water which it throws up to a great height, falling back again into it, is by means of consecutive apertures returned as fast as it is received. Facing the above (and reflecting upon it as great an ornament as it borrows from it) stands a summer-house of exquisite marble, the doors of which project and open into a green enclosure, while from its upper and lower windows the eye falls upon a variety of different greens."

*In the four articles which have comprised this Pictorial History of Gardening in Ancient Times Mr. Manchester has contributed a fascinating and instructive story, which has met the approval of bibliographers and other students. A similar survey of the Garden in Mediæval Times will follow shortly.*



VIEW OF A VILLA AND PLEASURE GARDEN FROM A WALL PAINTING AT POMPEII



## INVITATION

**C**OME in! A greeting waits you at my gate.  
Come in! My windows smile a welcome—come!  
Each framed in ivy, with geraniums' pink;  
My pathway's lined with ancient close-clipped box  
And at my doorway stand two sturdy firs.  
Within my house are spacious, pleasant halls,  
Rooms that are lived in, such as friends enjoy.  
Come in! This is the indoor of my home.

**C**OME out! My garden is my love, my ever dear delight;  
I long to share its charm and beauty with true friends,  
But hide it from the dust and turmoil of the town,  
And build a wall to keep the prying out.  
There do I go and take my ease,  
Listen enchanted to the droning bees,  
Or watch the flight of humming birds that go  
Excursing amid my garden joys.  
Here roses live, abandoning all form;  
And larkspur, hollyhocks and vines;  
A wondrous spreading elm beneath whose shady boughs  
My friends and I drink tea—  
Come out! This is the outdoor of my home.

**C**OME in! Come out!  
A welcome waits you—in or out!

S. MITCHELL NEILSON

# THE MEDITERRANEAN IRISES

S. STILLMAN BERRY

Suggesting a New Popular Name Descriptive of a Group of Winter-flowering Beardless Irises that Brighten the California Garden with Continuous Bloom During Two Thirds of the Year, but Present an Elusive Cultural Problem in the East



THE SHORT-STEMMED MEDITERRANEANS SEEM SPECIALLY MADE FOR INDOOR USE

Arrangement by Miss M. Louise Arnold;  
photograph by William N. Kline, Jr.

**W**HERE the climatic conditions are sufficiently benign (as with us on the Pacific Coast) one of the most delightful features of the midwinter garden is a clump or border of some of the Beardless Irises belonging to the group of *Iris unguicularis*, a North African species (frequently noticed in the trade literature, however, contrary to all weight of authority, under the name *I. stylosa*).

The group includes a considerable number of species or races, which, though reasonably diverse, still possess so much in common, including the peculiarity of being practically stemless except for the greatly elongated perianth tube, that even the casual observer rarely hesitates to class them with one another and apart from other Irises. As they appear to possess, nevertheless, neither a common name in English nor a name in common, I would suggest the term "Mediterranean Irises" as a convenient and not inappropriate one for the group. For it is chiefly in the countries neighboring upon the Mediterranean Sea that the various species are endemic, and it is of this general region that the group as a whole seems most characteristic. Since we are already afflicted with "German" Irises which are not in any sense German, and "English" Irises which are English only by adoption, it may be something of a relief to have a name proposed which is not entirely misleading in its geographical implications.

Perhaps the Iris of this group most commonly found in our gardens is the dainty, but somewhat variable, *unguicularis*, the type form of which is said to be a native of Algeria. This is recorded as a favorite garden Iris in Italy; and more especially in the south of France; or sometimes, in sheltered situations, as far north as England. In this country it is not so well known. Even here in California, despite the fact that it has received extensive publicity the last few years from Mrs. Dean—whose encomiums, I may add, are in no way exaggerated—it is still all too rarely seen. It does not seem too much to say that, all things considered, it fills such a niche of its own that no garden in any fairly mild region should be without it any more than it should be without the ubiquitous but always treasured Violets and Roses.

Severe temperature changes it probably could not stand, though far from tropical in its requirements. All through the exceptional snowfall experienced here in Redlands, California, on Thanksgiving Day, 1919, a long border of one of the marginata forms of *unguicularis* continued to push up its fresh, spring-suggestive blooms with scarcely perceptible slackening, while the sharpest frosts seem likewise to injure it little and ordinary ones not at all, though the leaves now and then are frozen to a crisp.

Nor have I found it particularly fussy as to soil. My soil is a naturally heavy red adobe which, if not kept constantly subdued, tends to bake hard in the summer heat. Nevertheless, little difference has been observable in the growth of this Iris, whether planted in the natural clay unalloyed, or in beds artificially lightened by the customary admixture of sand, lime, and humus. Even the application of animal manures, so frequently fatal to plants of this type, seems only to increase the luxuriance of its growth, as the planting this season of a richly fertilized Pansy bed in immediate proximity to the aforementioned border has well demonstrated. Of course, plenty of

water is desirable during the season of most active growth, but as in most parts of California it coincides with the rainy season anyway, usually little or no attention is required at this time.

It has sometimes been said that a thorough summer baking is a requisite in the culture of *Iris unguicularis*, but this I have not found to be necessarily the case. So far as my experience goes, reasonably good drainage rather than actual dryness seems to be the true desideratum. I have had clumps of this Iris in the same beds with plants which required watering all summer without any evident ill result to the former.

Another valuable feature of this Iris is the willing way in which it will take hold and make a brave showing in almost any exposure. Full sun is no doubt best, and will be rewarded by the most abundant display of bloom, but partial shade gives fair enough results. I have not experimented with it in complete shade, but would anticipate no great degree of success. As to lime, I have never bothered either to put it into the soil or to avoid soil which already contains it. My soil is not naturally, however, very limy.

**T**HE pristine flowering period of *unguicularis* in Algeria is said to be the months of January and February. If this be so, the period is appreciably extended by cultivation. Correvon and Masse give the flowering time as February and March only, but this is not in accord with the usual experience. In England bloom is said to extend from November, or sometimes from the end of September, to the first of April. In southern California the first shy blossoms appear on established plants in September (my first ones this past year arrived September 11th), gradually increasing in abundance and height, both of flower and foliage, till the winter rains bring out a fair burst of bloom when other species of the group are only just beginning to unfurl. This continues for several weeks, but along in March the foliage has so far outstripped the bloom that by April the latter has become wholly discouraged and with a last faltering flower or two the display finally ceases.

Since the period of active growth thus coincides more or less completely with the blooming time, two periods available to the gardener for dividing and transplanting his crowded clumps might logically follow—one in the spring at the end of the growing season, the other in early fall just before the renewal of



activity; in fact, we find this frequently asserted. Dykes\* has given reasons for preferring September to April for the process of transplantation, chiefly because fresh root fibers are then just beginning to push out and will take a new hold readily; while those plants divided in spring seem to suffer easily from drought and winds, and, when fall comes, fail to start growth with anything like the vigor of the ones freshly reset.

At once impressed by the apparent reasonableness of this argument, I determined to put the matter to experimental test. About the time of reading the article I was planning to set out the long edging of *marginata* already mentioned. So I chose the spring, May 14th to be exact, for the operation, trimming all the leaves back, as generally found advisable in transplanting bare-root Irises, and dividing to single or double rhizomes, with careful attention to watering after planting. The result was in every way as anticipated. It is true that only about three divisions out of some seventy died out entirely, but it was almost a full year and a half before the resultant growth attained a stage which could fairly be called luxuriant, while of bloom there was but the scantiest supply, and that greatly belated in appearance, until the second fall. Since then, however, the vigor of this border, with the possible exception of a couple of plants, has been all that could be desired. Colloquially speaking, it has "caught up with itself."

Last fall (September 22nd) came the opportunity for the converse test. For this I used divisions from two clumps of one of the white Mediterranean Irises, which, as the desired edging was a very long one, I was forced to reduce to the smallest possible fragments. Otherwise the treatment was as nearly that of the former instance as possible to make it, yet the results have been wholly different, and bear out in every particular the conclusions of Dykes. The new roots were just beginning to push out at the time of transplantation. This continued, so far as my occasional examination of the plants showed, without noticeable abatement, and visible leaf growth began almost at once. This was followed within a very few weeks (November 11th) by the flowers themselves. A few of the blossoms were rather small and poor, and most, perhaps, not quite up to standard; but still they were generally presentable flowers, continuing their display well through the winter and giving, while the plants were so small, much the effect of a row of Spanish Iris. Leaf growth has been very vigorous and at the date of writing not even the tiniest rhizome has been lost. Next season should bring a wonderful showing from that border.

To clinch the argument, I set out another long row of these Irises on December 29th. By this time root growth was well advanced, had progressed so far, indeed, that many of the long fleshy fibres were necessarily damaged or broken in taking up the plants. This did not seem encouraging. Nevertheless, while results were in no respect so favorable as with the Septem-

ber planting, and most of the flower buds seem to have blasted, the vegetative growth has been good, only a few divisions have been lost, and the little plants have settled down to business generally much better than spring-divided plants tend to do in a corresponding lapse of time. While it would seem, then, that September is beyond compare the best month for any fundamental disturbance of these Irises, they may be safely moved while well along in active growth if one be willing to forego a little bloom, whereas late spring seems really about the worst season of all. Undivided clumps, with the earth still adherent to the roots, would perhaps transplant readily at almost any time.

THE chief faults of these Irises, if truly serious enough to be called such, are two in number: a tendency to untidiness as the older leaves die, especially in late summer and early fall; and the habit the flowers have of hiding down among the leaves, much as Violets do, so that the plant is never as showy as it might be in the garden. However, during the largest part of the year most of the varieties of *unguicularis* are decidedly ornamental as foliage plants alone, even without the lurking touch of color which, despite its diffidence, is such an addition during the seven or eight months of the flowering season. Their landscape value then appears to depend principally upon the care shown in their use. As an edging to a long path winding among trees planted openly enough so that the sun can penetrate, any of the Mediterranean Irises is altogether charming. I have long wanted to try one of the *marginata* types at the back of a narrow border of California Violets, as the blooming periods, or at least their maxima, in the two plants correspond so well, and the mauve and lavender of the Iris blends so happily with the light purple of the Violet. The latter, it is true, is slightly redder in hue than the Iris, but it is quite surprising how nearly similar they are and how smoothly they tone together. Princess of Wales Violets are too deep to blend so well with *marginata* or any of the more typical *unguicularis*, but they match the allied *cretensis* somewhat better. There are, too, various white Violets available for use in connection with the *alba* types of these Irises.

I have dwelt so long upon *unguicularis* because it is the most common and typical species of the group, not because it is necessarily the most beautiful. There are a number of other races, most of which, such as the *marginata* and *alba*, are generally referred to only as varieties of the type, although a few will perhaps eventually come to be regarded as distinct species. Of the varieties, some of the forms of the *marginata* are among the finest and to my eye preferable both in flower and plan to the typical *unguicularis*. The lightly margined falls, richer and deeper color, larger flowers, longer blooming season, and slightly increased luxuriance are all points decidedly in their favor.

Other varieties, referred to as *lilacea*, *purpurea*, *speciosa*, and *elongata*, unfortunately I have been unable to discover in cultivation in this country. "Var. *alba*" is a blanket term used to cover several not necessarily related and even quite distinct white forms, at least one of which is so original in its characters that if it is a real wild form and not a garden sport, its claims to specific rank should certainly be considered. It is stiffer and primmer in appearance than its gaudier relatives, and with me its blooming season does not appear to be so long, but it is nevertheless worth growing. In color it is creamy, with golden signal patches. I have been unable to learn anything at all definite regarding its origin.

*Iris lazica* is a relatively broad-leaved race of the Mediterranean Iris from the southeastern shore of the Black Sea, whence its name. It is said by European growers to be worth while, but I have been struggling with a refractory plant for several years to very little avail. All that can be said of my specimen at present is that it still bears two green leaves. Perhaps it is fussier in soil requirements than some of the others.



IRISES UNDER SNOW AT REDLANDS, CALIFORNIA

Though natives of the mild Mediterranean countries, these Irises are far from tropical in their requirements, being in no wise disturbed by this November snowfall through which they continued to push up bloom with almost unslackened energy. Photograph taken by Mr. Berry, Nov. 27, 1919

\*Gardeners' Chronicle, vol. 59, p. 155.

Finally there is an exquisite little mauve and violet Iris from Greece known as *I. cretensis*, or again as the var. *angustifolia* of *unguicularis*. I have sometimes had it sent me as the var. *speciosa* of the latter species. There is some difference in the authorities as to whether *speciosa* is really the same as this, but most agree at least in considering *angustifolia* and *cretensis* identical. Those who refer to it as *angustifolia* always place it under *unguicularis* as a variety, those who grant it specific rank use the name *cretensis*. After growing it for some years, my own sympathies incline rather strongly toward the latter view.

Dykes\* has called attention to the fact that "those forms that flower earliest usually have foliage long enough to shelter the flowers, while the late-flowering varieties throw up the blooms above the foliage." This holds especially true in my experience as regards *cretensis*, for the narrow, grassy leaves of this species are not only shorter and less luxuriant than in any of the forms of *unguicularis*, but have a way of bending themselves out and downward, leaving the flowers to rise daintily above, even though their own stem-like tubes have something of the same oblique tendency and are considerably shorter than in *unguicularis*. The individual flowers of *cretensis* are perhaps the loveliest of any of the group on account of their unusual depth and richness of color. The standards are mauve, shading toward Pleroma violet (of Ridgway), the falls haematoxylin violet, deepening to hyacinth violet at the base, and with a bright signal patch of light cadmium. All the members of the group are delicately scented, but the fragrance of *cretensis*, with its distinct suggestion of Violets, is especially alluring.

While the weaker growth of this species, as compared with

\* "Iris" (Garden Flowers in Color Series), p 50.



W. N. Kline, Jr., Photo.

IRIS UNGUICULARIS BLOOMING IN MIDWINTER AT REDLANDS, CAL.

"In southern California the first shy blossoms appear on established plants in September, gradually increasing in abundance and height till the winter rains bring out a fair burst of bloom"

the *unguicularis* series, and its comparatively short blooming season diminish its garden value, it is an exquisite cut flower for bowls and certain types of low table decoration where a longer stem would be a disadvantage. It is perhaps in this way that all the Mediterranean Irises find their best use. It is a knack soon learned to pull them in the bud in such a way as to increase by a full inch or so the available length of "stem," and then let them open as they will in water in the house, where the dainty blooms seem a welcome, if at times anachronistic, harbinger of spring.

None of these Irises appear ever to have been used in hybridization, either among themselves or in connection with other Apogons, nor until last season (1921) have any of mine been detected in the act of setting any naturally fertilized seed. Very plausibly there is a field here for some interesting work.

## GETTING LATE TOMATO PLANTS FROM EARLY ONES

A. RUTLEDGE

**V**ERY often when the gardener comes to thinking in late June and early July, about plants for a late Tomato crop he does not find it easy to procure them; yet the shrewd gardener has at his hand all that he needs.

At every leaf-joint Tomatoes throw out a sucker; and this is usually stocky and strong. If left on the plant, this sucker may bear; but many gardeners, believing that these extraneous growths exhaust the strength of the parent, remove all suckers up to a certain height on the plant. In any event, it does the parent no harm to remove at least some of these lusty children.

These suckers root readily; in fact, a Tomato is fond of taking root wherever it can touch the ground. Pull off suckers that are well formed (say, from eight to ten inches long) and that are of heaviest growth. With a small round stick punch a hole in the ground six inches deep. Fill this with water, and then drop the sucker in, firming the earth about it. Growth will begin immediately, and will proceed normally.

From suckers thus planted about the end of June, the very finest late Tomatoes may be gathered from mid-September until hard frosts put an end to the season's growth.



# MAKING THE GRAPE VINE PRODUCTIVE

JOHN L. DOAN



The Different Methods and Systems of Pruning Simply Explained and Compared—General Adaptability of the Grape to Different Soil Conditions

EDITORS' NOTE: Herein is a truly masterful and concise account of Grape growing for the home garden. It is one of a series of articles on the growing of fruit for personal use that began in February with a general discussion of the home fruit garden and its scope. Individual fruits are taken up in succession, viz.: March, Strawberries; April, Currants and Gooseberries; and next month, Apples.

**T**HE development of the New World Grape is a remarkable triumph of American horticulture. The colonists brought the Old World varieties with them, which for nearly two hundred years our people tried in vain to grow. They then turned their attention to our native Grapes that abounded everywhere, and, in a century and a quarter, countless varieties of all sizes and colors, grown by the thousands of acres from the Rocky Mountains east, have been developed, chiefly from native ancestry, but with some admixture of Old World blood.

One fortunate quality of American Grapes is their ability to thrive and bear well in many soils, ranging from light sandy loam to heavy clay loam. More important than the kind of soil is its fertility, drainage, and organic content. Light soils usually produce larger crops; but, as a rule, the fruits from heavy soils are of higher quality and keep better. For a home supply use what soil you have, draining it if too wet and correcting its faults as far as you can; then plant adaptable varieties and your chances for success will be good.

As Grapes do not bloom until June in the latitude of Philadelphia, there is no great danger from late spring frost; but a site with good air drainage is desirable.

Stir the soil deeply and thoroughly, preferably in autumn, and use strong, healthy, one-year vines. Plant in the fall if you can from latitude 41° south, mounding the vines with a few inches of earth. Farther north spring planting is preferred. Set the vines amply deep, with good surface soil well packed about the roots.

Varieties vary in their size and appetites as much as men. Such strong growers as the Concord need much more room than the weak-growing Delaware. Soil, climate, and pruning also influence planting distances. For our standard varieties in the East 8 x 8 ft. and 8 x 9 or 10 ft. are common planting distances.

## Cover Crops to Keep Up Fertility

**C**ULTIVATE the vines every ten days until midsummer, and with the last cultivation sow a cover crop broadcast and work it in. For land in need of nitrogen, Rye and Winter Vetch, in equal parts, work finely together; in other soils Buckwheat and Rye form an equally good combination. In each case use one quart of the mixture per square rod and spade the crop under in early spring. Grow vegetables, if you wish, among the Grapes for two years; but, after that, the vines will need all the room.

Grapes bear best in a soil that is neither thin nor over rich. For many years our experiment stations have tried hard to determine how Grapes should be fed. But they now admit that the contrary vines do not take to balanced rations. They must be fed as the local impulse moves them, and this must be learned by repeated trials. One hundred to one hundred and twenty-five pounds of manure, two pounds of bonemeal and two pounds of high grade sulphate of potash per square rod will usually give good results. If the vines grow too rankly cut down the quantity of manure. You want fruit, not wood.

## Supporting the Vines

**T**HE support for the vines may be a trellis, arbor, or south wall. The common trellis is a row of posts 25 feet apart, well braced at the ends and carrying two or three galvanized wires. The wire that bears the greatest strain should be No. 10. The others may be No. 12. Have the top wire about 5½ feet above the ground and if two wires are used, the second should be about 24 to 30 inches lower. If three be used, space them 18 inches apart. Be sure to staple the wires on the sides of the posts toward the prevailing winds (the west side for rows running north and south) and train the vines upon the windward side of the wires. A grape arbor of wood or of iron pipes on the back lawn is equally welcome for its fruit, its shade, and its homelike beauty.

Vines on trellises or arbors are tied with strong twine that does not decay quickly. The loops of twine around the canes should allow for ample growth. The growing shoots usually hang free. If they are to be tied, raffia is good. For vines trained upon walls the best fastening is strips of leather about 4 inches long, loosely doubled about the branches and secured to the wall by large-headed nails through their ends.

## Pruning and Training

**W**HEN our Grapes grew wild, they had to produce several times as much growth as would otherwise be needed, to make sure that some of it would get the sunshine. This habit is so fixed that in cultivation we must cut away most of the new growth every year, to adjust the crop properly to the root system. The fruit is borne near the bases of the new shoots. These have, on an average, two bunches each, and they nearly all grow from the last year's wood. A vigorous Concord in full bearing may produce sixty clusters; so last year's wood should be pruned to about thirty buds. Weaker growers should be pruned to fewer buds.

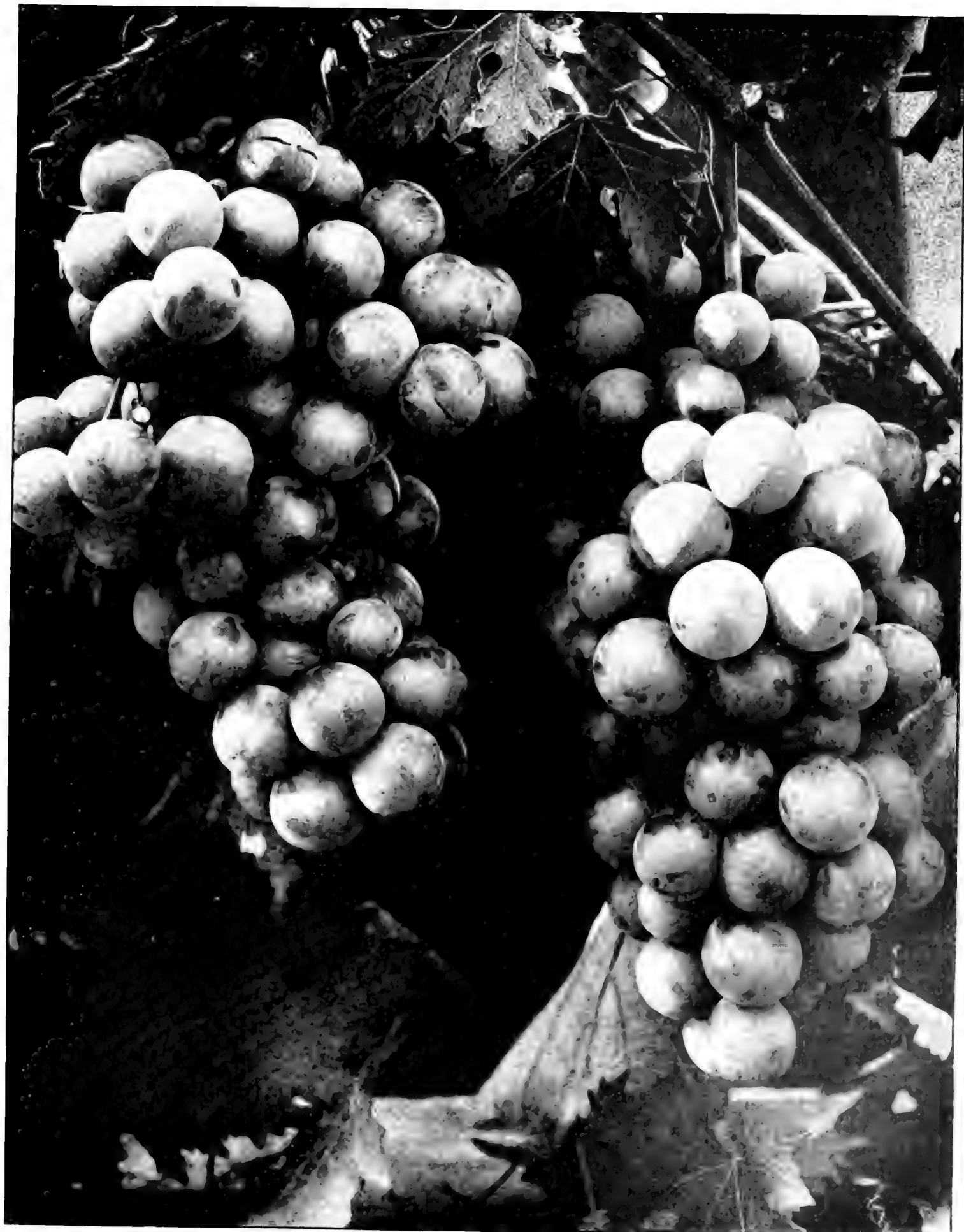
Except in severe climates pruning may be done whenever the vine is dormant. Vines pruned after the buds begin to swell bleed badly. The ideal time to prune is soon after all very cold weather is over, say about St. Patrick's day at New York City.

The training of Grape vines is a large subject and is admirably handled in the "Pruning Manual" by L. H. Bailey. Here we can only summarize the chief points at issue. Prune newly planted vines to two buds early in the spring. Keep the stronger of the two shoots that will start and remove the other. A year later prune to two buds again, and keep the stronger shoot. If the cane should become half an inch or more thick the second year, carry it to the trellis the third spring. If not, repeat the second year's treatment.

In the SPUR method of pruning, old arms are kept for many years. The young canes that grow from them are cut back to one or a few buds each year, until thickets of decaying stubs are formed, harboring insects and diseases, therefore the best growers have discarded this system for the renewal method.

In the RENEWAL method but little old wood besides the trunk is kept. Each year a few strong canes are pruned to





*E. H. Lincoln, Photo.*

"THERE'S FRUITAGE IN MY GARDEN, THAT I WOULD HAVE THEE TASTE"

*William Johnson-Cory*

the needed number of buds and tied in the desired positions and the rest of the vine is cut away. This method saves work and maintains the strength and health of the vines. The following systems are grouped under it.

**KNIFFEN SYSTEM** for strong varieties that droop is one of the favorite methods of training. Two wires are used. If the two-year cane be  $\frac{5}{8}$  of an inch thick, tie it to the top wire the third spring; then bend it sharply along the wire for three buds, tie again, and cut off. Young shoots will spring out like magic. The following winter or spring save a sturdy cane growing in each direction for each wire and remove all others. Shorten the upper canes to ten buds each and the lower ones to five buds each and tie them to the wires. From these will grow shoots that will be loaded with fruit the fourth summer.

If the two-year cane should be but  $\frac{1}{2}$  inch thick, carry it to the bottom wire the third spring; then bend, tie, and prune as you would the  $\frac{5}{8}$ -inch cane at the top wire. The following winter or spring prune to three canes. Train two of these on the lower wire and carry the third to the top one to form the upper part of the trunk, pruning and tying them as in the previous case, and removing all other canes.

The winter after the four-branched framework has been established the vine will be a thicket of young canes; yet eight cuts may prune it. Sever each of the four arms beyond the strong cane nearest its base. Prune and tie these four canes as described in the second paragraph above, and give the vine the same treatment year after year. There are modified forms of this system.

**CHAUTAQUA SYSTEM.** Named for that famous Grape region. The trunk ends in two short horizontal arms at the bottom wire of a two- or three-wire trellis. Imagine from four to six canes trained upwards and outwards each year from these arms like the ribs of a fan, and you have an idea of the Chautauqua System.

**HIGH RENEWAL SYSTEM.** This involves much more labor than the others; but it is required by certain varieties of upright growth, to keep the young shoots from being broken by the wind. The trellis has three wires. The trunk ends at the bottom one in two long horizontal canes from which the young shoots rise. When these reach the middle wire they are tied to it and later to the top wire also. They are modified forms of this system. For an arbor six feet wide or more plant the vines about 8 feet apart on both sides. Carry their trunks to the top, train a few short lateral canes from each, for the sides and top of the arbor, and renew them each year.

With the renewal systems the young wood becomes a few inches further from the trunk of the vine each year. Whenever strong canes suitable for use as branches rise from the trunk, train them in the places of branches with old bases and cut out the latter.

### Minimizing Insect Enemies and Diseases

**T**HE long list of insects and diseases that *may* attack the Grape is indeed appalling. But, in fact, most of them seldom do much damage, and not many of the more serious ones are likely to be very troublesome the same year. They may nearly always be controlled readily by following the suggestions given:

Destroy all trash near the vines in which insects might hibernate and all wild vines and bushes from which insects or diseases might come. Prune away and burn all diseased branches. Cut away at once any branches that seem to be dying, well below where the disease shows, and burn them. If the case should seem to be very bad, remove and burn the entire vine.

### Yields, Endurance, and Variety

**H**OW much will a vine yield? There are workers and shirkers. A Concord or Worden vine may bear 15 or even 18 pounds. But it may take three or four vines of some of our choicest varieties to produce that much. Let the vine bear a little the third year, let it bear from a third of a crop to a full crop the fourth year, and full yields after that.

How long should a vine live? Under neglect it may die the first year. With all conditions favorable it may live for fifty years or even much longer.

The following varieties ripen approximately in the order given, cover the season well, and succeed over a large portion of the United States and their relative numbers are according to their use and cropping abilities:

Winchell (Green Mountain), white, 1 vine; Moore Early, black, 1 vine; Brighton, red, 1 vine; Worden, black, 2 vines; Delaware, red, 3 vines; Eclipse, black, 1 vine; Concord, black, 4 vines; Niagara, white, 2 vines; Caco, dark red, 1 vine; Pocklington, white, 1 vine; Salem, red, 1 vine; Catawba, red, 3 vines. In many places a considerably different list would be better. Neighbor growers and local nurserymen, state experiment stations, etc., may be consulted.

#### SPRAY CALENDAR FOR THE GRAPE ARBOR

- I. Spray the vines, wires, and posts thoroughly (with combined fungicide and insecticide) when the buds begin to swell. Purpose—to control black rot and grape flea-beetle.
- II. Spray just before the blossoms open. Purpose—To control black rot, berry moth, and flea-beetle (adult).  
If the leaf hoppers give trouble in your neighborhood, besides the above use one tablespoonful of a nicotine extract and 2 ounces of laundry soap (already dissolved and thoroughly mixed in a small amount of soft water) for every 2½ gallons of the spray material at its final dilution.  
If the rose beetle should be troublesome in your neighborhood add to spray II (and also spray III) one ounce of arsenate of lead paste or ½ ounce of the powder and ½ pint of syrup to each gallon of spray material at its final dilution.
- III. Immediately after the blossoms fall use the same materials as in spray II for the same enemies. This spray is also helpful in controlling the mildews.
- IV. Two weeks after the fruit sets spray again. Purpose—To control black rot, mildew, flea-beetle (larvæ), and grape-root worms.  
If the weather should be hot and damp an additional spray may be needed two weeks after IV. Usually the sprays already given will be sufficient.  
The downy mildew is more readily controlled by thorough dusting with sulphur than by sprays. If it should not have been kept well in check by these, apply flowers of sulphur with a dust gun three times, the first application being four weeks after blooming time and the others at intervals of two weeks.

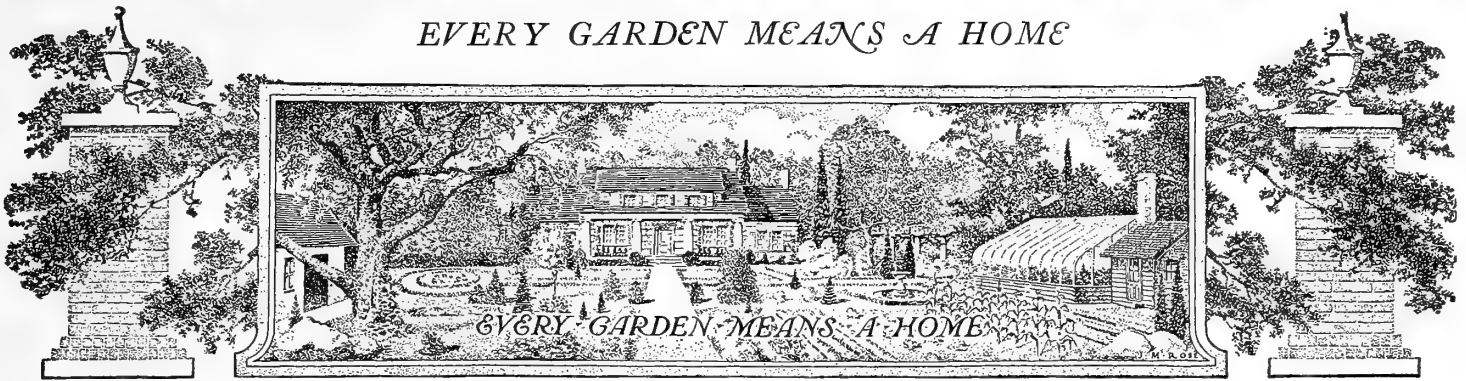
#### WHAT TO USE

**FUNGICIDE:** 1 oz. dry bordeaux to 2½ quarts water, or 13 oz. to 5 gallons.  
**INSECTICIDE:** 2½ oz. arsenate of lead powder, or 5 oz. arsenate of lead paste to 5 gal. water.  
**NICOTINE EXTRACT:** as advised above is understood to contain about 40% sulphate of nicotine.  
Proprietary manufactures are offered which answer all practical needs, if used as recommended by the makers.



# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



## DESTROYING OUR WILD FLOWERS

**S**LOWLY, but surely, the widespread appreciation of the natural beauties of the countryside and the pictures made by the blossoming of the various wild flowers are acting as a stimulus to many people who see something more than the mere utilities of the land. Although an organization for the protection and preservation of wild flowers has been at work for a good many years past, the present widened appreciation of its efforts is only just now beginning to filter through and influence other groups of people and particularly those whose chief interests have centred in the finer arts of gardening and cultivated flowers. Many Garden Clubs, for instance, direct special efforts toward the preservation of the wild flowers of their community.

In the past this well-intentioned interest has really worked destructively, in that the study of wild flowers or any fondness for them usually took the form of making excursions into the countryside when the specimens were in their perfection, gathering whole armfuls to be discarded as soon as wilted, which is similar to expressing one's affection for song birds by going out with a gun to slaughter them. This persistent gathering of the blooms and roots inevitably worked as a limiting factor in the natural seed production and, worse still, it was too frequently the case that the persons responsible for this devastation were really of a type from which better things might reasonably be expected. They were more or less of comfortable circumstances, could afford their pleasure excursions, and had, in fact, a certain responsibility to the community. It was the short-sighted selfishness of thoughtlessness, and as soon as the light was turned on a reaction followed.

Nor is it sufficient justification that whole plants were dug up and transported to the garden; although the specimen might be saved for the individual, the wide-spread beauty of the countryside was just as thoroughly destroyed for the multitude, and beauty begets beauty. Gardeners may sometimes be forgiven for reasonable gathering of material and their efforts in establishing the more desirable plants, but, even so, anything of the kind should be undertaken with a careful, studied attention to the facts and all the conditions. The end must be sufficient to justify the means. Many of the native plants have appealing qualities to the gardener, and we appreciate their desirability for the purposes of the most exacting planter. It is unfortunate that to a large degree the growers have not considered it practical to grow stock to meet such a demand. Of course, there can be no arbitrary decision; what may be devastation in a built-up section of the Atlantic Seaboard is trivial and utterly negligible in the open plains and prairies of the middle states.

Fortunately there are dealers who specialize in providing wild flowers in nursery grown stock. Many of these are considered difficult to grow—"miffy," as the gardener would call it. Usually this is but another way of saying that these plants have

certain soil preferences and it has taken the gardener a long time to realize their fondness for acid conditions; that requisite being provided, the majority of these considered difficult plants can usually be handled.

**Q**UITE a novelty in the way of horticultural exhibitions was that heldearly in May by the Massachusetts Horticultural Society when Boston's Horticultural Hall was turned into a fairyland of early springtime bedecked with native flowers. It was an effort to bring home to the membership of the Society the actual possibilities of the country glade and wood and, by poking the concrete specimen right under his eyes, to give the individual member an object lesson that he might remember during the unfolding months of the year. The credit for this effort goes directly to the President, Mr. Albert C. Burrage, who conceived the idea and—delegating the details to his superintendent, Mr. Eccleston—saw the scheme carried through.

**T**HE impossible was accomplished! The flowers seen in early spring were shown right alongside those that ordinarily blossom only in midsummer and autumn, and all in full bloom the first week of May! Trilliums, White Violets, and Mayflowers there were; and close beside them Lady-slippers, Pitcher-plants, and Yellow Lilies mingled with New England Asters, Gentians, and Cardinal Flowers; while everywhere were Ferns and Ferns and more Ferns—nearly fifty varieties—in all the dainty drapery of their midsummer glory. To the herbaceous plants were added several flowering shrubs—Mountain Laurel, Dogwood, Rhodora, etc. Over eighty species simultaneously in blossom were set in such surroundings and with such artistic skill that the artifice was not apparent—they had the united appearance of a natural group growing happily in their native woodland.

"The setting deserves more than a mere passing word of praise," says one visitor. "When I entered the main hall of the Horticultural Building I found myself transported to a beautiful glade in the wild woods. The illusion was perfect—looking up this pretty little valley, the end of the vista seemed quite a distance beyond me. On the left rose a steep hill, covered with evergreens and seemingly quite high; a stream followed the centre of the valley, on the far side rose a second hill covered with trees and dotted with bits of rocky boulder. At the end of the valley was a rocky bank, and from out of the woods behind it came the little stream, splashing over the rocks and purling along to their edge over which it plunged to the pool below. Here it rested a moment and then sauntered on under a rustic bridge and on again to a large pool at my feet. Along the margin of the stream grew the plants that revel in moist places."

Mr. Burrage unites in his person just the combination that is required to insure the success of such an enterprise. He has a real love for flowers and a real pride in the wild beauty of the New England woodland; and besides these he has a generous



desire to help other people to foster this love and this pride; and then he is able to carry his desires to fulfilment.

Active work upon the project began almost a year ago. The plants were taken from their homes in the woodland and placed in several glass houses on Mr. Burrage's estate where each one received the special treatment required to bring it to perfection during the first week in May.

**I**N THE movement for wild-flower preservation, as in many other things, Massachusetts stands well in the lead and is taking the matter so seriously that legislation for the protection of native plants is projected. A specific bill to protect the May-flower or Trailing Arbutus, however, recently failed of enactment.

It is a somewhat sad sidelight on our boasted intelligence that the greater offenders in this insatiate vandalism career across the country in comfortably equipped motor-cars which—if externals mean anything—should certainly indicate a higher type of civic development. Moreover, such people frequently so far forget themselves as to trespass not only on the highways and byways but even on private grounds, parks, and public gardens, robbing them of their floral embellishments and tearing down flower-laden limbs of trees like the Dogwood.

The main traveled roads of the country bear testimony every summer day to this deplorable lack of social conscience and absence of reverence of irreplaceable beauty which ultimately comes back like a boomerang to smite unworthiness—for if some of us continue to uproot and destroy, some day there will be nothing left for any of us to enjoy!

## THE OPEN COLUMN

*Readers' Interchange of Experience and Comment*

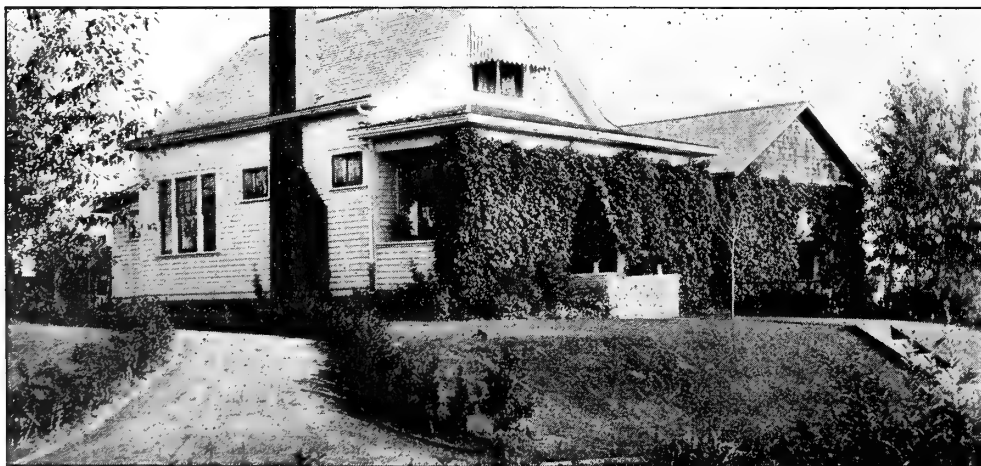
### Plants that Endure Sixty Below

*To the Editors of THE GARDEN MAGAZINE:*

**S**O MANY people find it difficult to grow vines and shrubbery in northern climates that perhaps a little account of plants which we have had success with here in the Canadian Northwest may interest other gardeners similarly situated. Across the veranda (see accompanying photograph) are Hop vines of two years' standing. We bought the roots. They grow rapidly, in fact about twenty feet in six weeks, climbing up heavy string which we place where we want them to grow. As the summer goes on they get very bushy and are not only absolutely sun proof, but also serve as a protection from wind and rain.

They last until the late frosts of fall when the beautiful green foliage dries; we then cut them down at the roots. New shoots appear early in the spring, as soon as the ground thaws and the sun begins to get high and warm.

Along the base of the porch are mostly pink Columbines from seed,



IN THE CANADIAN NORTHWEST

Hop vines shield the porch and along its base grow wild Columbines and Roses; wild Gooseberry bushes border the driveway. In a climate where the thermometer sometimes drops to 60 below zero these plants can be depended upon from season to season. Home of Mrs. F. A. Nye at Edmonton, Alberta

blossoming after three seasons of growth into beautiful, delicate pink blooms. There are also a few especially pretty, young wild Rose bushes. Wild Gooseberry bushes, brought in from their marshy native haunts, border the driveway. After transplanting the bushes, we trimmed both young and old to uniform size, and find they make a very hardy and pleasing decoration.

No matter how severe the winter—the thermometer at times hovering at fifty and sixty below zero, and cold weather extending over eight months of the year—the plants here pictured are trustworthy citizens of the chilly North and can always be counted on to reappear.—HARRIET L. NYE, *Edmonton, Alberta.*

### More Plants Wanted

*To the Editors of THE GARDEN MAGAZINE:*

**C**AN any one suggest where *Philadelphus microphyllus* and *Securigena ramiflora* can be had?—CLARA HERSEY, *Boston, Mass.*

—Will some lover of olden-time herbs be good enough to tell me where I can get *Costmary* (*Chrysanthemum Balsamita tanacetoides*)?—MRS. CLIFF STERRETT, *Garden City, N. Y.*

### After the Pestiferous Rose Beetle and Green-fly

*To the Editors of THE GARDEN MAGAZINE:*

**T**HOUGH I am not quite ready to make a final statement as to my opinion of the value of Melrosine—I want to try it this summer, on a variety of plants, in varying strength, to find out its effect on vegetation as well as on the insects—I can say this much at present: In addition to removing rose beetles effectively it will kill green-fly (aphids of all kinds) more readily than most preparations, and has not the odor and stain of the concentrated tobacco poisons. At a strength sufficient to clear all aphids from a plant there is no injury to foliage and the slight odor is not displeasing. I hope that this will prove the general summer insecticide for all uses except those where arsenate of lead, or other stomach poison, is more suitable. I hope that it will prove safe to use on fruits and vegetables approaching maturity. If all this works out, the bug problem in the garden will be in large measure solved.—STEPHEN F. HAMBLIN, *Cambridge, Mass.*

### Picking Sweet-peas from a Stepladder in Alaska

*To the Editors of THE GARDEN MAGAZINE:*

**I**N YOUR most enjoyable OPEN COLUMN for March I have noted the relation of a contributor from Seattle, Wash., in successfully accomplishing the transplanting of Sweet-peas. This, it appears, was done against the advice of numerous friends, the consensus of whose opinion was that "it can't be did!" The transplanting in this instance was done by lifting sections of the earth in which the Peas were growing, moving them with as little disturbance as possible, and carefully avoiding exposure of roots to the air.

Now, is the transplanting of Sweet-peas generally looked upon as a difficult task? In our garden in this North-land we have done this very thing for years, and possibly a brief account of the operations involved may interest some of your readers. Two boxes are prepared, each 12 x 18 inches and 5 inches deep, provided with suitable drainage, and filled to within an inch of the top with good soil. The seeds are then sown *very thickly* in the boxes, covered with soil, almost level with top of box, watered thoroughly, and placed in the greenhouse. This is done during the first week in April. Germination is rapid, and in ten days or so the plants are coming up; the boxes are then placed outdoors in coldframes or some other favorable location, in order to promote a hardy growth. By the first week in May they average from three to five inches in height and are ready for transplanting to their permanent home in the Sweet-pea trench. To move the plants easily, one side of the box is removed, and they are then ready to set out in double rows six inches apart, each plant about four inches apart in the row. They are handled absolutely without any coddling or special care other than to see that the roots are not injured; the roots have no soil on them whatsoever. After the setting-out process is completed the plants



IRIS IN A NEW ZEALAND GARDEN

Happy the gardener who finds himself in New Zealand where nature needs little coaxing and gardening conditions are very like those in California. An ideal situation for the moisture loving Iris is along a stream's edge as here in the garden of Mrs. David Fernie at Chesterhope

are thoroughly watered. They grow little, if any, for two weeks or more, but during this period they become firmly established and then commence vigorous growth—and practically *every plant lives*. This method gives us flowers earlier than would otherwise be possible in this latitude where frost lingers in Mother Earth until mid-April or later, and another advantage is that each plant occupies an allotted amount of space without crowding so that it can develop to its fullest possibilities. Last year our first Sweet-peas were picked on July 13th, and from then on until the end of September the vines bore magnificent long-stemmed flowers in the greatest profusion. At the end of the season the vines were ten feet high and it was necessary to use a stepladder to pick the top flowers.

The two boxes above described give us an ample supply of plants for a double row 45 feet in length, and there is usually a generous supply of "overs" for improvident neighbors who at the last minute decide to "plant a few Sweet-peas."—W. C. BLANCHARD, *Skagway, Alaska*.

—Transplanting Sweet-peas from pots is the successful method of growing for exhibition blooms, as has been told frequently in these pages.—Ed.

### Neighborly New Zealand

To the Editors of THE GARDEN MAGAZINE:

EACH month, as my copy comes to hand, I admire and also get occasional inspiration from the beautiful garden pictures it contains. I thought perhaps you might like to see a New Zealand garden and so enclose a napsot of mine (see above). I was particularly interested in your California edition as conditions there and here are very similar.—D. FERNIE, *Chesterhope, Napier, New Zealand*.

### Pursuing the Iris Borer

To the Editors of THE GARDEN MAGAZINE:

THIS is the time of year when the Iris enthusiast, gazing at the growing luxuriance of the garden, has visions of the glory that is to come. Until the past few years the Iris was remarkably free from disease, but stealthily in the night, as it were, the scourge of the borer is upon us. Many people do not realize its existence, hence have not fought the enemy, with the result that many beautiful Irises have been lost.

It is now understood that the egg is laid by a night-flying moth which

punctures the leaves in several places that in a few days look like iron-rust spots. When the egg hatches into a little white worm, this worm eats the edge of the centre leaves, keeping within the folded part, then down into the rhizome which it hollows out entirely, and about August 15th changes into a mahogany pupa and goes down deep in the ground. Here it apparently remains until the following spring. This moth attacks the Iris during the blooming season.

Some authorities recommend digging up the plants and removing the borers, probably the only thing to do when once they have entered the rhizome. But precaution seems the better course; watch the leaves and cut just below the small perforations, or wherever an eaten edge appears. If you open a leaf that has been eaten you will find the worm, and can crush it. These worms grow very rapidly and by August are more than an inch long, looking something like the giant peach borer, with a pale pink stripe down the back. Last year we cut Iris leaves by the bushel, thus destroying hordes of borers.

If, as is likely, some borers elude you, there is nothing for it but to dig up the plant, recover the borers, cut away all rotten parts, and replant.

It is to be hoped that before long some remedy less laborious than the present will be found.—RACHEL D. DAVIDSON, *Ambler, Pa.*

### Summer Salad Days in Wisconsin

To the Editors of THE GARDEN MAGAZINE:

MR. KRUEH'S admirable articles in THE GARDEN MAGAZINE should be very useful to any vegetable grower, but they are perhaps of greatest interest to the more experienced gardener who has experimented enough to appreciate the value of Mr. Kruhm's sound conclusions. "Solving the Season's Salad Supply" in the April issue is, I think, the best of its kind that I have ever seen.

In our community practically every home has a garden, but probably not one gardener in twenty-five raises Head Lettuce successfully. The reasons for failure are just those emphasized by Mr. Kruhm, the use of wrong varieties, and (more particularly) failure properly to thin the small plants. It seems quite impossible to persuade the average gardener to throw away the requisite number of plants. We begin thinning Head Lettuce when the leaves are perhaps an inch in length, and for the first spacing between plants that are to remain, I use a tiny three-cornered hoe shaped by the local blacksmith. This saves

one's back, which is inclined to resent the second thinning on hands and knees. This follows closely after the first, and leaves the individual plants intended for heading with space for development in accordance with the size of the head. This last thinning is done with the aid of a slender knife, and the soil is worked up lightly about each plant at the same time. We always save the strongest plants, discarding those which have grown spindling from crowding.

After fifteen years of experience both with and without water for irrigation, we find that where warm weather comes early and no facilities for watering are available, transplanted Lettuce plants do not head as well as those which have not been disturbed. The fact has become so well established for our climate that we never transplant Head Lettuce except to fill vacancies early in the season. It has also been our experience that certain varieties behave differently in different sections of the United States.

This year our list of varieties for a Wisconsin garden includes May King, Black Seeded Tennisball, Mignonette, Salamander, All Seasons, Hanson, Iceberg, Wonderful, and Paris White Cos. We try new varieties each year, but some of the older sorts, such as Mignonette, Salamander, and Hanson are so well adapted to our climate that they have never been quite supplanted.

After much experimentation with Chinese Cabbage we have decided to grow only a variety called the Vaughan Strain. This forms a tall, astonishingly solid head of excellent quality, and behaves properly in every way in our garden. We plant the seeds in the open ground the latter part of June; for July is usually very dry with us, and seed does not then germinate well. Our plants grow slowly until the latter part of August, when the rains bring them on with amazing rapidity, ready for use late in September. Wong Bok develops a disease in our garden. August plantings of Chinese Cabbage do not, in our region, produce heads before freezing weather.

We find that our Witloof Chicory does very well when the roots are laid horizontally in the bottom of the box in which they are to be forced. This enables one to use boxes of moderate size, and still cover the roots deeply with sand. The slender heads can be cut well below the surface and are nicely blanched. The same roots produce a number of crops, in fact boxes planted after Christmas have been growing rampantly in May.—HARRIET L. KUTCHIN, *Wisconsin*.

### The Praise of the Rake

To the Editors of THE GARDEN MAGAZINE:

THE man with the rake is just as useful as the much be-sung "Man with the Hoe." In fact, the rake may advantageously replace the hoe to a greater extent than generally realized.

The first use of the rake is, of course, to pulverize the soil after plowing or spading. Personally, I prefer one not less than fourteen or sixteen inches wide, with straight, flat teeth. By striking the lumps with the flat of the rake in a slanting manner, you can make them crumble easily into fine soil if the ground has dried on top, as it ought. Then the soil may be raked smooth, and cleared of any remaining hard lumps.

For fine seed, a shallow furrow may be made by drawing the end of the rake along the garden line. For larger seeds and for Potato sets a furrow may be started with the hoe or the hand-plow and cleaned out deeper with the rake, which does this work more rapidly than the hoe. When the seed has been scattered in the furrow, the rake again is the best tool for filling in the soil, which it can make finer, if necessary, at the same time.

Some years ago the *Rural New-Yorker* made a considerable stir by Potato experiments, some of which produced a crop on small plots at the rate of 1,000 bushels an acre. Deep furrows were made in which the sets were placed, the soil was then carefully raked back into the furrow, this being a principal point in the operation.

When sowing in spring the soil may be firmed over the seed by using the flat of the rake, which presses down the soil just enough, the ground being plenty moist at this season. As soon as the seedlings appear and are thinned out, the tiny weeds which come up in the row may be destroyed by drawing the rake across the rows. It will not uproot or break off the seedlings if done in the afternoon, when they are not so brittle as in the morning. This is especially useful with Potatoes, Peas, Beans, and Corn. Much hard labor at hoeing may also be saved if the rake be drawn between the rows as soon as a crust forms after each shower. The "stitch in time saves nine" here especially. The rake covers much more ground at a stroke than does the hoe, and leaves the ground more level and fine. With a small hand cultivator and rake there will be little need of the too well-known, back-breaking work of hand-hoeing. Cultivation should be given early and often, as much for the comfort of the gardener as for the good of the crops.

Notches may be made in the handle of the rake at one foot, two feet, etc., which will be useful in placing the garden line at the proper distances for the seed furrows. The smaller crops, Carrots, Parsnips, Onions, Lettuce, Spinach, etc., do well in rows a foot apart. Cabbages and Potatoes need a good two feet in garden culture, and Corn at least three.

Make a resolve to have the rake always handy and to use it more freely, and you will get much more satisfaction out of your gardening.—J. M. LONG, *Washington, D. C.*

### The Beneficent Ladybug

To the Editors of THE GARDEN MAGAZINE:

I WONDER if someone can tell me through the Open Column of THE GARDEN MAGAZINE how to destroy ladybugs—we have them by thousands and I find they injure my potted Ferns when put out-of-doors in summer. They also hide under the leaves and grass in my bulb beds, seeming especially fond of my large clumps of Funkia.—MRS. THOMAS J. FARRAR.

—We are inclined to believe that the injury to your plants is not done by the ladybug but by the plant lice which the ladybug larvæ come to feed on. The ladybug does not live on plants at all, but in its larval form, an active gray-black grub usually spotted with bright color and sometimes known as the "aphis lion," it devours hundreds of thousands of aphis. You can get rid of the ladybug by destroying the aphis.—ED.

### Driving Away Delphinium "Blacks"

To the Editors of THE GARDEN MAGAZINE:

ON page 48 of the March number "C. A. G., New York," inquires for the remedy for "blacks disease" of Delphiniums.

Permit me to submit the following which I found in an issue of THE GARDEN MAGAZINE some years ago, and have since been using with much satisfaction and success:

4 lbs. lump lime  
1 lb. powdered tobacco dust  
1 gal. water (to slake the lime)

Let the mixture boil as long as it will, and add more water if necessary to completely slake the lime. When the mixture has ceased to boil, add water enough to make 5 gals.

In applying, use 1 qt. of the solution to 11 qts. of water, pouring one or two cupfuls about the roots of each plant, repeating every ten days, if necessary.

If plants are badly infected, the tops and any dark leaves should be cut off and burned. If Delphiniums are sprayed with Pyrox from time to time, beginning in spring when a few inches high, there is less danger from "blacks." Since doing this I have seldom had to use the above mixture as it keeps them in a healthy condition and apparently more able to resist disease.—MRS. ALEXANDER DAVIDSON, *Ambler, Pa.*

The Editors of THE GARDEN MAGAZINE:

IN THE March issue of THE GARDEN MAGAZINE I notice an inquiry for the cure of Delphinium "blacks." Liquid lime solution, mixed with about 30 parts of water, and applied with a spray pump is a sure preventive of this disease. It will not cure plants that are already afflicted but it does keep the disease from spreading.

The black plants should be cut off to the ground, and the new growth kept clean by spraying.—JOHN W. EIERMAN, *Bellflower, Cal.*

### The Non-Orthodox Rose Grower

To the Editors of THE GARDEN MAGAZINE:

IN HIS article on "Learning What Roses Like" Mr. J. Horace McFarland touches a responsive chord. If there are any who have been scared from attempting Roses, let them pluck up heart and go to it—heedless of what the orthodox teachers may stipulate. After a lifetime's experience in amateur, professional, and trade circles, I have come to the conclusion that the average amateur may be divided into two classes: one lacking all knowledge and slamming into things on the hit or miss principle; the other being saturated with orthodox book teachings, either makes his life a misery trying to carry out these principles or concludes that this, that, or the other plant is not for him. There are exceptions to the rule, of course; some are born gardeners and can figure out things for themselves and work accordingly.

I fear that with all my professional instinct, I am far from being orthodox. Therefore when well meaning friends assured me I could not hope to grow Roses on my sandy, stony soil, which could not be



attacked until May, I just ignored them and went ahead. As the good lady had specified vegetables before flowers, I had to get the vegetable plot into shape first and it was well into May before I could settle on a Rose plot. The only available spot was a four-foot strip bordering on a bank—a horrible place for Roses, likely to be dry and wind swept, and no manure beyond a little from the chicken house.

I smile to think of it, for the eighteen experimental Rose bushes were not received until the end of May and after I had pruned them, were mere sticks. Suffice it to say they bloomed nevertheless before June was out and the last flower was not culled until late October, by which time Frau K. Druschki was 4 ft. tall and Mme. Butterfly, Columbia, and the rest were all more or less pleasing to my eyes. Some of the flowers gathered in August were equal to any produced under glass in winter. Several doses of superphosphate of lime and plenty of water with occasional spraying was all they received. Very few bugs worried them, and these met the fate that all insect pests merit.

And let me say, well done, Wm. Currie! If you had listened to the orthodox and the "scare offs," you would never have had those big "Mums."—T. A. W., *New Jersey*.

### Red Raspberries Need Protection in Colorado

To the Editors of THE GARDEN MAGAZINE:

THE article on Raspberries and Blackberries in April by Mr. John L. Doan surprises me—not by what he wrote (for all he did say was very good so far as I know) but by what he left out! If any Colorado

readers should be induced to plant Red Raspberries and follow his directions to the letter and no farther, they would never get a berry if they lived to be a hundred. I have been in Colorado twenty-five or thirty years and have been interested in gardens more or less all that time and have never yet seen a Red Raspberry bear that was not thoroughly covered every winter. You cannot even lay them down and cover with straw or brush, they must be covered with earth. Any quantity of them grow wild in the mountains and they never bear any higher than they are covered with snow during the winter. I am living right now in probably one of the best raspberry sections of the state, or in the West, and no one ever attempts to raise them without covering. In my own garden I have intentionally left a plant or two uncovered, and never got a berry. I have seen rows not fifty feet apart, the covered one literally red with berries, the other without a single berry. Of course, the article in question is all right for the East but as your circulation is for the whole country, your articles should be adapted to the whole country or they are misleading.—A. W. LAMM, *Loveland, Col.*

—I am well acquainted with the practice of covering the brambles with earth for winter protection in climates where the temperatures are severe or the air very dry. This method of protection is practised very extensively in some sections, notably about Sparta, Wis. Because of the limitations to the length of a magazine article, it was necessary to omit some of the phases of the subject treated and a certain amount of local interpretation is vital with any gardening writing. It would have been well to have mentioned the subject of winter protection, though space would have forbidden discussing it.—JOHN L. DOAN.

## GIRLS AND BOYS vs. WEEDS

THE great annual contest between six hundred boys and girls of the neighboring tenements and an unlimited number of potential weeds is now going on at the Avenue A Gardens in New York. The battleground has been cleared and cultivated, the young humans have planted the seeds, and now begins the world-old struggle between having the things wanted and the things not wanted. The youngsters are getting a graphic illustration of the parable of the Wheat and the Tares and learning a lot of other wholesome things they would never acquire in their tenement homes or in the course of the street play on which they would be spending their time and energy if they were not at work in the Avenue A Gardens. The interest is not confined to the lucky six hun-

dred kiddies, but extends to the members of their families and a wide circle of neighbors. Every one of the 5 x 10-ft. gardens is a potent argument for the outdoor life to a number of persons who otherwise would know nothing of its joys and benefits.

Thanks to the generous readers of THE GARDEN MAGAZINE and others who recognize that the improvement of the children of to-day is a vital thing for the America of to-morrow, the ten dollars required for the necessities of each garden, and the supervision and instruction of the children, has been provided for about half of them. The Plant, Flower and Fruit Guild which supervises the work has started the full number with faith that the undertaking will not be permitted to stop for lack of funds.

SINCE the May issue of THE GARDEN MAGAZINE the required amount of ten dollars to maintain each garden has been received from the following:

- MRS. HENRY A. GRIFFIN, New York City, for The William & Bruton Strange Garden
- DR. HENRY A. GRIFFIN, New York City, for The Helen De F. Cotton Garden
- MRS. HERBERT ERDMAN, New York City, for a garden not yet named.
- MR. JULIAN MYRICK, New York City, for The William Washburn Myrick Garden
- HORACE MANN ELEMENTARY SCHOOL, New York City, for The Horace Mann Elementary School Garden.
- NORRISTOWN GARDEN CLUB, Norristown, Pa., for The Norristown Garden Club Garden.
- MRS. HERBERT L. SATTERLEE, New York City, for The Eleanor Satterlee Garden (Large enough to be cultivated by a family)
- JUNIOR EMERGENCY RELIEF SOCIETY, New York City, for The Junior Emergency Relief Society Gardens (5 plots).
- MRS. P. B. LA ROCHE, New York City, for The Philip B. La Roche, Jr., Garden
- MRS. STEPHEN BONSAI, Washington, D. C., for The Hope Davis Garden.

- MRS. ELIZABETH PORTER, Evanston, Ill., for The Molly Garden.
- MRS. A. H. STORRS, Scranton, Pa., for A garden not yet named.

Checks for ten dollars, or multiples of that amount, may be sent payable to the order of Avenue A Gardens Fund, THE GARDEN MAGAZINE, Garden City, N. Y., and will be acknowledged in an early issue going to press after receipt.

Each contribution of ten dollars entitles the donor to name a garden.

The following names will be borne by gardens provided for by anonymous donors at the New York Flower Show:

- THE WOODROW WILSON
- THE LEAGUE OF NATIONS
- THE FLOWER SHOW
- THE VICTORY PLOT
- THE JUNIOR LEAGUE
- THE LUCKY
- THE LAURA S. STEWART
- THE JAMES S. METCALFE
- THE BURGESSER
- THE FARMINGTON SCHOOL

- THE SPENCE SCHOOL
- THE BENNETT SCHOOL
- THE BENJAMIN T. GAUNT
- THE MAXIE
- THE LOUISE
- THE CROWD
- THE JOAN HAMILTON
- THE JULIA HAMILTON
- THE JOAN BENNETT
- THE NANCY GWYN
- THE M. R. B.
- THE DUG-OUT
- THE F. R. NEWBOLD
- THE JOHN YOUNG
- THE JULIET DAWES
- THE GARDEN CLUB OF AMERICA
- THE ST. AGATHA SCHOOL
- THE NEW ROCHELLE
- THE MOTHER
- THE DADDY
- THE MISS NIGHTINGALE'S SCHOOL
- THE REBEKAH
- THE FREDERICK GADE
- THE MRS. W. R. PITT
- THE BROADVIEW
- THE BARBARA
- THE GILBERT
- THE ORSON LOWELL
- THE FAN-TOM
- THE HELEN MASSEY
- THE GO-TO-IT
- THE FRANK
- THE OLGA
- THE TOM, DICK AND HARRY
- THE ATTRACTIVE
- THE ELISE
- THE HELEN
- THE LYDIA
- THE SUNSHINE
- THE EDWARD
- THE ORIN
- THE BLANCHE ELISE
- THE BROWNIE
- THE BISHOP MANNING
- THE BLOW-ME-DOWN
- THE JOHN WALKER
- THE ELLINGWOOD
- THE SETH AND ALIDA
- THE G. W. P.
- THE UP-A-WAY
- THE ADELE
- THE BREARLEY SCHOOL
- THE THREE PALS
- THE ALICE MOONEY
- THE MADISON SQUARE
- THE FAN-ELISE
- THE YORKVILLE
- THE MRS. SETH M. MILLIKEN



## Mr. Farr Selects Ten Tulips For Garden Magazine Readers

Amateur gardeners, and those of long experience, fasten their faith to Farr's Selected Dutch Bulbs just as they do to Farr's hardy plants. Many gardeners have asked me to name ten Tulips for outdoor growing—here they are, in Single Earlys and Darwins—

### Special Group of Single Early Tulips

<b>Artus.</b> Bright scarlet.....	doz.	100
<b>Chrysolora.</b> Pure golden yellow.....	\$0.65	\$4.50
<b>Pink Beauty.</b> Rosy pink, shaded white.....	.65	4.50
<b>Keizerkroon.</b> Red, border yellow.....	1.00	7.00
<b>White Hawk.</b> Pure white.....	.65	4.50
	.90	6.50

### Special Group of Darwin Tulips

<b>Bartigan.</b> Fiery red, the earliest.....	doz.	100
<b>Clara Butt.</b> The best salmon-pink.....	\$1.00	\$7.00
<b>La Tulipe Noire.</b> The Black Tulip.....	.65	4.50
<b>Mr. Farncombe Sanders.</b> Brilliant scarlet, large and showy.....	.75	5.00
<b>William Copeland.</b> Light lilac.....	.90	6.50
	.85	6.00

A Special discount of 10% will be given on these varieties if your order is received before July 1, 1922, and you mention Garden Magazine. Cash should accompany your order.

"Better Bulbs By Farr" is the title of my 1922 catalogue of the most desirable Tulips, Hyacinths, Narcissi and Crocus for garden and house culture. I will gladly send you a copy on receipt of your name and address.

**Bertrand H. Farr**

Wyomissing Nurseries Co.

104 Garfield Avenue

Wyomissing, Penna.

Wyomissing is famous the world over for Peonies and Irises. Thousands of people visit us during the blooming season, not only to see the display, but to select for their own gardens the varieties that are most appealing in loveliness. Our Peonies are usually at their best from June 5 to 10th, according to the season. Therefore, visitors should write or wire for the best days on which to visit this wonderful display.



## Come and See the Peonies!

Get to know the choicest ones *personally* and *intimately* and I will guarantee that you, too, will fall in love with this most glorious of all hardy plants. To be able to recognize scores of them, to get to know their habits and individual behaviors—that, to my mind, is the height of garden joy, and I would help you to it if I may.

## And Iris, Too!

For 20 years I have chummed with both Peonies and Iris and my enthusiasm about them is as strong and young as ever. If you can not visit Rosedale personally, a descriptive catalogue is anxious to visit you. Please mail your request TO-DAY, to

**S. G. HARRIS, Peony Specialist**

Tarrytown

Box A

New York

## Surprise your Neighbors —just as F. A. Howard did

THE most deliciously flavored of all berries is the wild strawberry that grows in June meadows.

Eight years ago a New England scientist determined to increase the size of these fragrant miniature red drops of lusciousness.

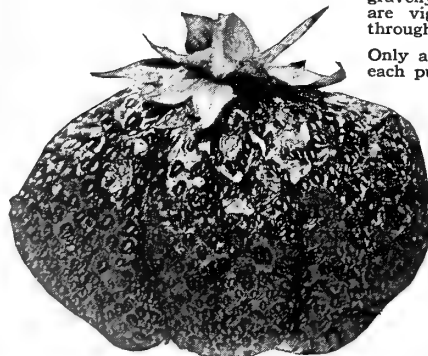
For three years he worked patiently, cross-fertilizing the wild plants and garden berries of the largest size—until finally, he produced what has been called the most surprising strawberry ever grown, F. A. Howard's "Wild Wonder."

Newspapers throughout the United States illustrated and described it. Plant breeders came to see it. With ordinary field cultivation one thousand baskets of glorious fruit were grown on one eighth of an acre. They sold, at sight, in the Boston market, for double the price of any other strawberry.

Like the wild strawberry, the fruit is borne on high spray-stems. Many of the berries are six inches in circumference. The plants seem to grow equally well on gravelly inclines or in muddy soil. They are vigorous, and yield enormously throughout a long season.

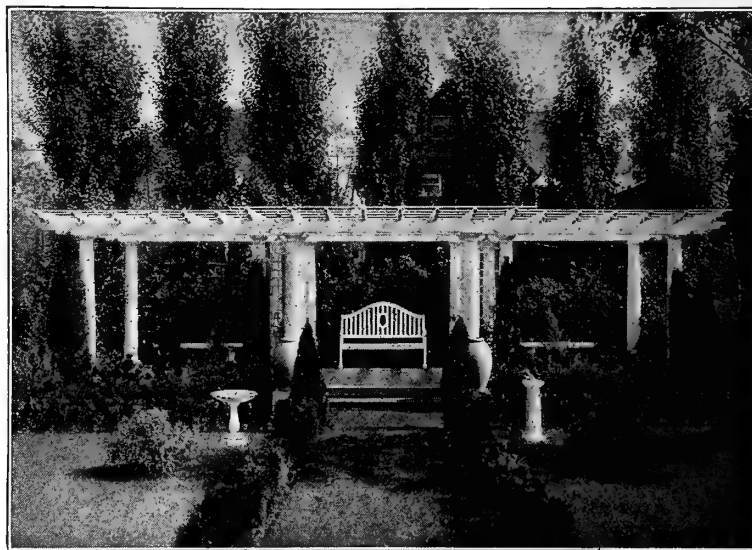
Only a dozen plants can be spared for each purchaser. They are strong and long-rooted. If planted now, this quantity will provide you enough fine young plants for a good-sized patch, this Fall. The price for the dozen is \$5.00.

Each berry is the delicious wild strawberry of your boyhood—marvelously flavored and fragrant. Grown to giant size. Send check or money order. Address:



Life size from photo

**F. A. HOWARD**  
South Easton, Mass.



## Pergolas—Arbors and Lattice Fences

Also: Artificial Stone Fountains, Flower Vases, and Bird Baths. Bronze Sun-Dials, and Gazing Globes

THIS advertisement shows only a few selections of suggestive features taken from our catalogue which contains several hundred practical illustrations of distinctive garden decorations for beautifying the surroundings of home. Here, too, you will find suggestions which are suitable for making your garden a reposing place for leisure hours.

When writing for copy enclose 20c and ask for Catalogue "H-33"

**HARTMANN-SANDERS COMPANY**

Factory and Showroom: 2155-87 Elston Avenue, Chicago  
Eastern Office and Showroom: 6 East 39th Street, New York City



No. 10 Rose Arbor  
for \$37.50  
F.O.B. Chicago

# EXCEPTIONAL TULIPS FOR YOUR GARDEN



**LOUIS XIV**  
Height 32 inches. \$3.00  
a dozen, \$24 a hundred

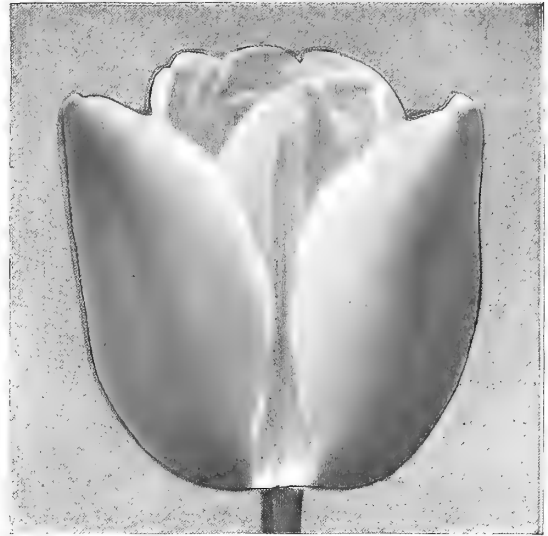
**S**CHEEPERS' bulbs have always stood for highest quality. To extend their enviable reputation, we offer this collection of beautiful tulips at a special price.

The collection consists of twelve bulbs each of the eight varieties pictured (96 bulbs), catalogue price \$14.40, sent prepaid for **TEN DOLLARS** if ordered now.

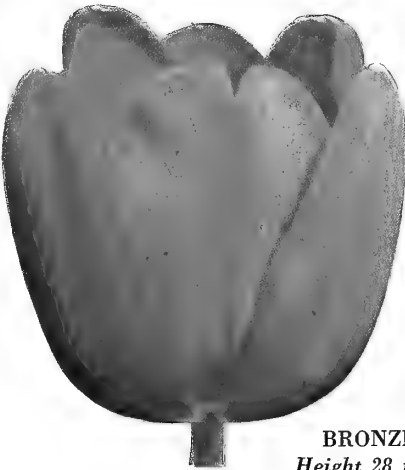
Each variety labeled and packed individually with planting instructions. Delivered in time for Fall planting.

**Our Guarantee:**

*As bulb specialists of twenty-five years' experience, we supply only bulbs of the finest quality. We guarantee to replace gratis any bulb which does not produce a perfect flower under ordinary care.*



**PRINCESS ELIZABETH**  
Height 28 inches. \$1.15  
a dozen, \$7.50 a hundred



**BRONZE QUEEN**  
Height 28 inches. \$1.10  
a dozen, \$7.00 a hundred

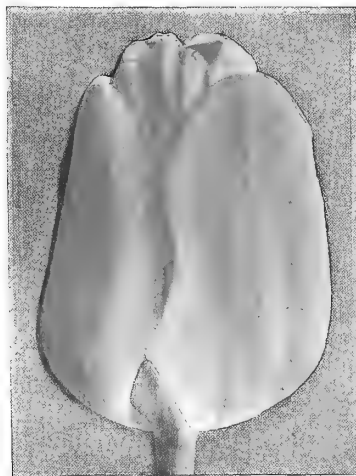


**GESNERIANA IXIOIDES**  
Height 24 inches. \$1.00 a dozen, \$6.50 a hundred



**BACCHUS**  
Height 33 inches. \$3.25  
a dozen, \$26 a hundred

**VELVET KING**  
Height 31 inches. \$1.90  
a dozen, \$15.00 a hundred



**FLAMINGO**  
Height 28 inches. \$1.10  
a dozen, \$7.00 a hundred

**LUCIFER**  
Height 30 inches. \$1.90  
a dozen, \$15.00 a hundred



Four Gold Medals have been awarded us by the Horticultural Society of New York and two Gold Medals by the Holland Bulb Growers' Association for bulbs of the same quality as those offered on this page.

Catalogue on request

**John Scheepers**  
INC.  
522 Fifth Avenue  
New York







# FOR IRISES

Send to

## Rainbow Gardens

701-2 Commerce Building

St. Paul, Minnesota

*Free Illustrated 34 Page Catalogue on Request of*

### Choice IRISES, PEONIES AND GLADIOLI

Our catalogue offers numerous special collections of each of our specialties at very special prices, with 25 pages of Iris lore and valuable cultural hints. We grow over 600 varieties of the finer sorts of Irises including the choice imported varieties.

Our rich black soil enables us to grow the finest of roots and bulbs. Our stock is grown under Minnesota climatic conditions where the temperature ranges from 30° below to 100° above F. and are therefore acclimated to grow well in all parts of United States and Canada. We ship with the idea to please and that we succeed is shown by the numerous repeat orders received from our customers each season.

Send to-day for our free catalogue—Send your Order in early

### Dodson Bird Houses



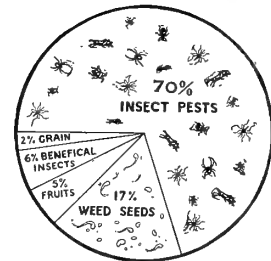
The birds are all my friends. Knowing them makes me happy. They are an inspiration to better living. They can make your life happier.

*Joseph H. Dodson*

President-American Audubon Association



See the flycatcher house hanging from the pear tree. Eight bushels of pears with not a worm was this one house's record! The birds will help you.



Facts found regarding the food of birds have originated nation-wide legislature. Note the composite diet of the birds attracted by Dodson Bird Houses. Season after season, these houses afford a protection that allows valuable birds to multiply more rapidly.



Cement Bird Bath

Birds must have water. If you supply it, you may be sure that fruit, berries and other garden delicacies will not be harmed. Here is a scientific bath which the birds have approved. Including basin and stand \$24.50 Other baths as low as \$6.00

## Quaint houses ready for you to put up

All the good folk in America are helping to house the birds. You have seen these picturesque little houses of green or white. Each is made under the patient eye of Mr. Dodson, beloved friend of the birds. His life-time study has perfected these houses. They attract the birds. They insure your trees and shrubs and gardens against insect pests. You will be fascinated by their staunch, quaint shapes, their intricate workmanship so necessary to success. **Write to Mr. Dodson!** Let his experience guide you.

- |          |           |            |         |           |            |
|----------|-----------|------------|---------|-----------|------------|
| Martin   | Robin     | Flycatcher | Swallow | Cat Bird  | Woodpecker |
| Bluebird | Chickadee | Cardinal   | Wren    | Nut Hatch | Thrasher   |

### JOSEPH H. DODSON

709 HARRISON AVENUE KANKAKEE, ILLINOIS

Dodson Sparrow Trap is guaranteed to rid your premises of this noisy, quarrelsome pest, \$8.00



**FREE**

You will find much of interest in Mr. Dodson's fascinating booklet, "Your Bird Friends and How to Win Them." There are many styles of bird houses. Mr. Dodson wins for you different birds with each. It is a booklet thru which to browse with pleasure.



*A* fascinating lampshade banded with black marabou, a dainty bed-cover strewn with orchids, a negligée of tinsed purple with trailing sleeves of nasturtium crêpe—here are a few lovely effects suggested by Cheney Printed Silks.

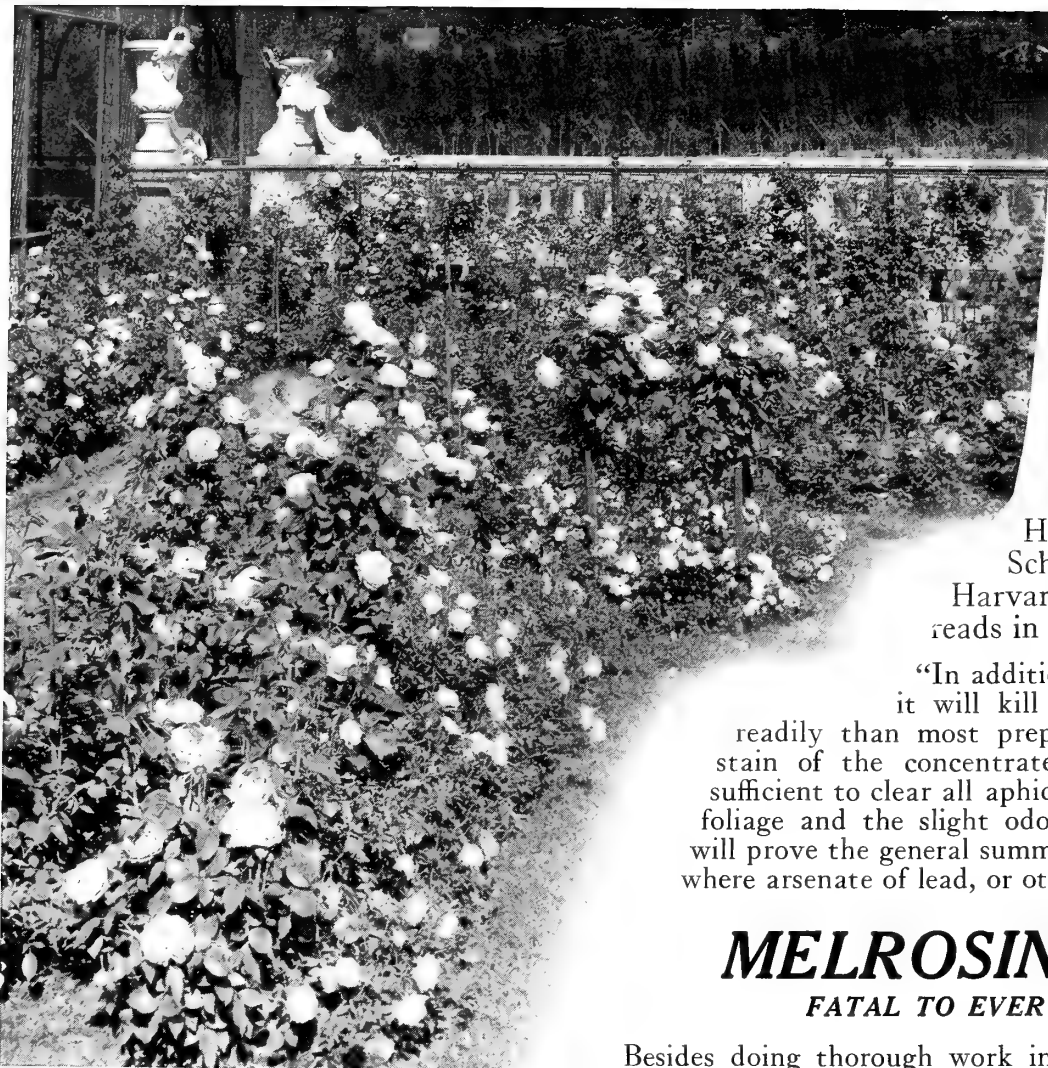
These silks—Florentine, Shikii, Mysore, Sweetbriar, Corean, and Satin Princess—owe their colourful design to a guild of artists from many lands; their exquisite texture is the work of master weavers.

Yet Cheney Printed Silks cost less than you would expect to pay, and they may be obtained in the dress-silk and decorating departments of many stores.

*If you cannot obtain Cheney Silks in your neighborhood, write us for name of nearest retail store.*

CHENEY BROTHERS  
4th Avenue at 18th Street, New York

CHENEY  
SILKS



# You Can Depend on its Thorough Effectiveness!

Garden Magazine Readers will be interested in an unsolicited expression of opinion from S. F. Hamblin, Esq., Instructor at the School of Landscape Architecture of Harvard University. Mr. Hamblin's letter reads in part as follows:—

“In addition to removing rose beetles effectively it will kill green-fly (aphids of all kinds) more readily than most preparations, and has not the odor and stain of the concentrated tobacco poisons. At a strength sufficient to clear all aphids from a plant there is no injury to foliage and the slight odor is not unpleasing. I hope that this will prove the general summer insecticide for all uses except those where arsenate of lead, or other stomach poison is more suitable.”

## **MELROSINE**— The All-round Contact Insecticide *FATAL TO EVERY BUG IT TOUCHES*

Besides doing thorough work in destroying all kinds of Plant Lice (white, green, black) it proves sure death to Striped and Spotted Beetles, Spiders, Thrips and Saw Bugs. MELROSINE takes the gamble out of gardening. Keep a can on hand constantly. Use it for vegetables as well as for flowers.

### **For the Best Results Use MELROSINE as Follows:—**

Six ounces of MELROSINE made up to one gallon with water gives enough solution for one spraying of at least 100 rosebushes. This gallon of spray solution costs less than 25c. You can insure your rosebushes for the season for about 5c. each, which makes less than  $\frac{1}{4}$ c. per bloom.

### **Your Dealer Should Be Able to Supply You, If Not, Send to Us Direct**

Most leading Seed and Nursery Establishments carry MELROSINE. Some offer it in their catalogues, while others sell it over the store counters. Ask for MELROSINE—if your dealer does not carry it, please give us his name and afford us the opportunity of supplying you, kindly sending cash with order, as we cannot open small accounts.



### **Special Trial Offer**

Whether you grow Roses, Rhododendrons, Phlox, Peonies, Chrysanthemums, or Spireas, for any plant whatever that is attacked by Bugs, you can insure your plant treasures by timely spraying with MELROSINE. So anxious are we to have you give this unique preparation a trial that we will mail postpaid a

### **Trial Can, Sufficient to Make One Gallon, on receipt of 60c.**

Special leaflet describing in detail what MELROSINE will do, gladly mailed on request.

*Please mention Garden Magazine.*

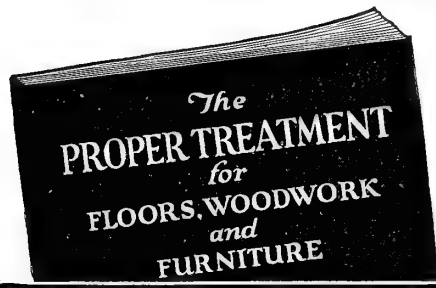


**MELROSINE is Obtainable in the Following Packages:—**  
Gallon, \$6.00; Half-Gallon, \$3.25; Quart, \$1.75; Pint, \$1.00. These prices for East of Rockies, with transportation collected upon delivery.

**THE GARDEN CHEMICAL COMPANY  
NEW YORK CITY, N.Y.**



## FREE - 25c Book On Home Beautifying



THIS book contains practical suggestions on how to make your home artistic, cheery and inviting. Explains how you can easily and economically refinish furniture, woodwork, floors and linoleum.

# JOHNSON'S Paste - Liquid - Powdered PREPARED WAX

Johnson's Prepared Wax comes in three convenient forms—**Paste Wax**, for polishing floors and linoleum—**Liquid Wax**, the dust-proof polish for furniture, woodwork, linoleum and automobiles—**Powered Wax**, makes perfect dancing floors.

## Building??

Doubtless you want the most house for the least money. Our book will help you realize that ambition without "cutting corners."

Explains how inexpensive woods can be finished as beautifully as more costly varieties. Tells *what* materials to use and *how* to use them. Includes color charts—gives covering capacities, etc. If, after receiving book, you wish further information, write our Individual Advice Department. Experts will gladly solve your problem *without charge*.

We'll gladly send the book **FREE** and postpaid for the name of a good painter in your town.

S. C. JOHNSON & SON, Dept. GM-6 Racine, Wis.  
(Canadian Factory—Brantford)  
"The Wood Finishing Authorities"

## Pools with Water Lilies

These lovely flowers—readily grown by anyone—show many distinct colors, although most people know only the common waxy white variety. There are crimson, purple, blue and yellow Water Lilies that

## Are a Source of Delight

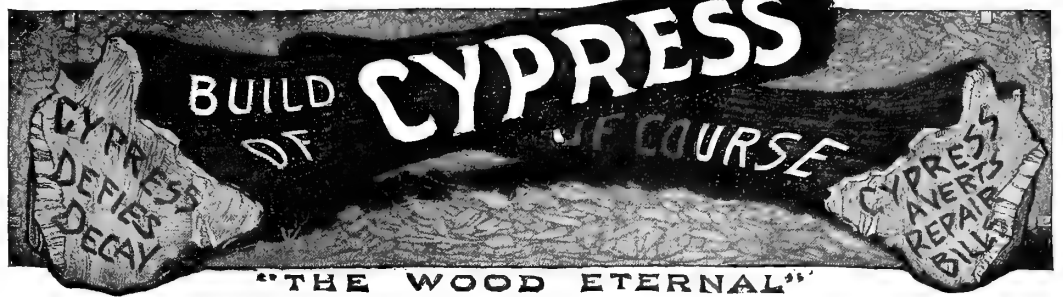
to every gardener who loves the unusual, and who is looking for plants that will lift his garden out of the ordinary.

My Water Lily Booklet for 1922 tells how to grow these flowers in pools or tubs; pictures and describes the best sorts for general culture, and lists other plants adapted to a water garden. Send today for a free copy.

WILLIAM TRICKER  
661 Forest Street, Arlington, New Jersey

"The money you *don't* have to put into repairs is **ALL PROFIT**—

—**USE CYPRESS.**"



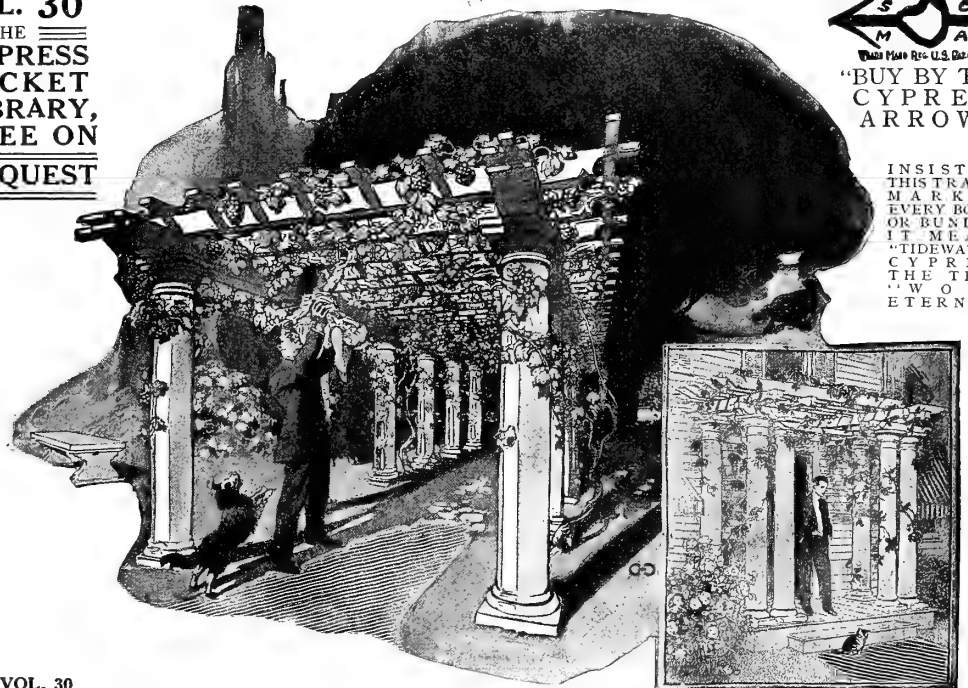
"THE WOOD ETERNAL"

"AN ARTISTIC PERGOLA EXTENDS THE 'HOMEY' FEELING TO ALL OUT-DOORS."

## PERGOLA DAYS ARE HERE

and **CYPRESS** is the pre-eminent pergola wood because "CYPRESS lasts forever"—DEFIES ROT-INFLUENCES which destroy other woods—does not warp, shrink or swell like most woods—takes paint and stain perfectly. A well-planned Pergola is the finishing touch to the architectural and landscape perfection of elaborate grounds—it is "the one thing needful" to confirm the artistic character of a typical modest homestead—and it may be fully relied upon to redeem and beautify even the smallest yard, or one that is lacking in natural advantages.

**VOL. 30**  
OF THE  
**CYPRESS**  
**POCKET**  
**LIBRARY,**  
**FREE ON**  
**REQUEST**



**VOL. 30**

contains ORIGINAL SKETCHES, DETAILED WORKING DRAWINGS (on sheet 24 x 36 inches) and FULL SPECIFICATIONS for erecting a VARIETY of PERGOLAS, GARDEN ENTRANCES, SEATS, etc., of many different artistic styles, and costing from a few dollars up to several hundreds. Not "stock patterns"—each was SPECIALLY DESIGNED for us. WRITE TO-DAY for Vol. 30.

When planning a Pergola, Mansion, Bungalow, pasture-fence or sleeping porch, remember—"With **CYPRESS** you **BUILD BUT ONCE.**" Be sure to specify "ALL-HEART" GRADE for non-rot purposes.

Let our "ALL-ROUND HELPS DEPARTMENT" help YOU. Our entire resources are at your service with Reliable Counsel. (For example, for uses especially inviting decay insist on "ALL-HEART" grade.)

## SOUTHERN CYPRESS MANUFACTURERS' ASSOCIATION

1209 POYDRAS BLDG., New Orleans, La., and 1209 GRAHAM BLDG., Jacksonville, Fla.

INSIST ON "TRADE-MARKED" CYPRESS AT YOUR LUMBER DEALER'S. IF HE HASN'T IT, LET US KNOW.

## Bobbink & Atkins

Ask for Catalogue



Visit Nursery

Our Nursery Products will create any artistic garden effect desired.

Rutherford

Nurserymen & Florists

New Jersey

## Peonies and Irises

**T**HE blooming season offers the one opportunity to choose favorites for addition to your collection from Nature's own description. These will most all be found in my lists containing over 900 different varieties of Peonies and 875 different varieties of Irises. Both lists mailed on request.

All varieties in my garden will be plainly marked during the blooming season and every Peony and Iris lover is invited to visit the display.

**LEE R. BONNEWITZ**

Washington St. Van Wert, Ohio

## HOLLAND BULBS

*Send for our Special List of Choicest*

**DARWIN, BREEDER and REMBRANDT  
TULIPS and RARE NARCISSI**

*To be ordered before July 10th*

And we will also send our fall catalogue containing a complete list of Bulbs, Peonies, Iris, Phlox and hardy Perennials—just what you want for fall planting.

Send your order for Holland Bulbs as soon as possible. By ordering early you have our special list of rare and newer varieties, also our fall catalogue to select from.

**FRANKEN BROS.**

BOX 152

DEERFIELD, ILL.

## INSURE YOUR ROSES

USE

**DY-SECT**

*(Die-Insects)*

**We Believe This to be the Best  
General Contact Insecticide!**

*Kills Leaf-Eating and Sap-Sucking Pests*

DY-SECT will be found an ideal material for your fight against the ravages of all types of rose-bugs, thrips, most flies, soft scales, leaf rollers, mealy bugs, aphids, etc.

**SPRAY NOW—DON'T WAIT**

ONE gallon of DY-SECT makes **THIRTY** gallons of spraying liquid.

Barrels \$5.50 per gal.

Gallon Cans	\$6.00	Quart Cans	\$1.75
Half Gallon Cans	3.25	Pint Can	1.00

*Ask your Dealer, or write directly to*

**A. C. HORN COMPANY**

Room 406, Horn Building, Long Island City, N. Y.

## THE AMATEUR'S BOOK

OF THE

# DAHLIA

**BY MRS. CHARLES H. STOUT**

**A Book that is Indispensable to the Dahlia  
Grower**

The subjects treated—History; Early Dahlia Culture; Situation; Soil Composition and Preparation; Propagation; Cultivating; Watering, Disbranching, Disbudding—Dahlias in Tubs; Frosts—Lifting and Storing; Pests and Remedies; Cutting, Packing, Shipping; Dahlia Shows; Color Combinations in the Garden and as House Decorations; Varieties; Classification.

Mrs. Stout's book is practical, authoritative, and charmingly written. Her knowledge of the Dahlia is based on twelve years of actual experience in growing and hybridizing. She is an ardent Dahlia lover. Many of her creations have won the highest praise when exhibited at the Shows of the American Dahlia Society and the Short Hills Garden Club. Some of her latest creations are Emily & Renwick (in full colors in Mrs. Stout's book), Sunshine, Gertrude Dahl, and J. Harrison Dick.

*At all Bookstores \$3.00*

**DOUBLEDAY, PAGE & CO.  GARDEN CITY, NEW YORK**



## IRIS SEEDLINGS

I have originated a number of Iris Seedlings which are in demand, namely, May Rose, Sunnybrook, Taffeta, etc., etc.

My garden contains over two hundred varieties including such rare kinds as Shelford Giant, Perry's Blue and Tectorum Alba.

This season's catalogue describes and prices these and many varieties that are exclusive; it is sent on request.

Visitors are always welcome.

MRS. FRANCES E. CLEVELAND  
Sunnybrook Farm Iris Garden  
Eatontown, New Jersey

## Rock Gardens

Let us help you with your rock gardens, little or big. We are experts.

**Julius Roehrs Co**  
At The Sign of The Tree  
Box 10 Rutherford N.J.

## HILL'S WAUKEGAN JUNIPER

You will be delighted with this interesting, new creeping juniper. The finest creeper in years. Developed and introduced by D. Hill, the Evergreen Specialist.

*A close compact grower  
Silvery blue in color  
Rich purple in winter  
Grows well anywhere  
Excellent ground cover*

Supplied direct—or through your local Nurseryman, Florist or Landscape Architect.

Illustrated catalog sent you on request. Also folder "Cozy Bungalow Collections."

**D. HILL NURSERY CO.**

*Evergreen Specialists  
for over 60 years  
1064 Cedar Street  
DUNDEE, ILL.*



## We Offer You Late Tulips— Matchless in Beauty

For color in the spring garden no flower equals the late Tulips. They are unsurpassed for delicacy of the pastel shades and the richness of the brilliant tones. They are ideal flowers for borders, for groups among shrubbery, and for more elaborate color effects in any garden design.

*To Introduce our "Cream of Holland" Bulbs to your Garden*

Garden lover everywhere recognize the quality of our offerings. To encourage you to procure a representative grouping for your garden, we have arranged the following assortments. Send your order to reach us before June 26th and the bulbs will be delivered in time for planting this fall.

### SELECTION A "De Luxe Set"

**Afterglow**—a showy combination of colors.  
**Aphrodite**—clear silvery pink of fine form.  
**Jubilee**—the finest blue-purple.  
**Louise De La Valliere**—a glowing cerise color.  
**Louis XIV**—the finest Tulip in existence.  
**Massanet**—apple-blossom pink with deep blue base.  
**Prince Albert**—the best golden brown.  
**Salomon**—the finest lavender Tulip.  
**St. James**—a fine example of the Breeder colors.  
**Walter T. Ware**—the deepest yellow of all.

100 Bulbs (10 of each) \$23.70

### SELECTION B "Newer Varieties"

**Galatea**—glowing cherry-rose; very large.  
**Godet Parfait**—glistening blue-purple.  
**Lord Cochrane**—a fine color in brown Breeders.  
**Melicette**—a charming lavender.  
**Plutarchus**—the best light bronze.  
**Roi D'Islande**—a rose tone unlike any other.  
**Sanchia**—our novelty in pale pink Darwins.  
**Sir Harry**—an exquisite rose Cottage Tulip.  
**Sophrosyne**—pink; very fine habit and shape.  
**Viking**—a huge, tall, dark violet.

100 bulbs (10 of each) \$10.65

### SELECTION C "Standard Varieties"

**Adriadne**—our favorite crimson.  
**Bronze Queen**—the best standard light bronze.  
**Clara Butt**—the most popular pink Darwin.  
**Dream**—a good lavender.  
**Edmee**—the best of the two-toned pinks.

100 Bulbs (10 of each) \$6.50

**Madras**—a good darker brown.  
**Marconi**—a big flower in the dark purples.  
**Nauticas**—clear American Beauty Rose.  
**Parisian Yellow**—a fine, rich yellow.  
**Suzon**—our favorite pale pink Darwin.

**Write for the "Blue Book"** Complete descriptions of all these Tulips are included in our 1922 "Blue Book," a copy of which will be mailed to all who order any of these collections. If you do not order from this advertisement and prefer to make your own selection from our complete list of varieties, send 25 cents for the "Blue Book." This amount will be credited on future orders amounting to \$2.50, or over.

**CHESTER JAY HUNT, Inc.**

*Mayfair Gardens*

Dept. A, Little Falls, New Jersey

## PENNSYLVANIA QUALITY LAWN MOWERS

There must be a reason for leadership, and there is. Pennsylvania Quality has proven in actual service to mean longest lived, most efficient and most economical of all lawn mowers.

At Hardware Dealers and Seedsmen

## DAHLIAS

### Bolles Dahlia Brochures (Illus.)

Harvesting and Storage, may save your crop of tubers. Fertilizer and Large Blooms, tells how to grow garden and exhibition blooms. Price, 50 cents each.

Propagation and Breeding New Varieties, explains Hybridizing, (Double Number), 50 cents.

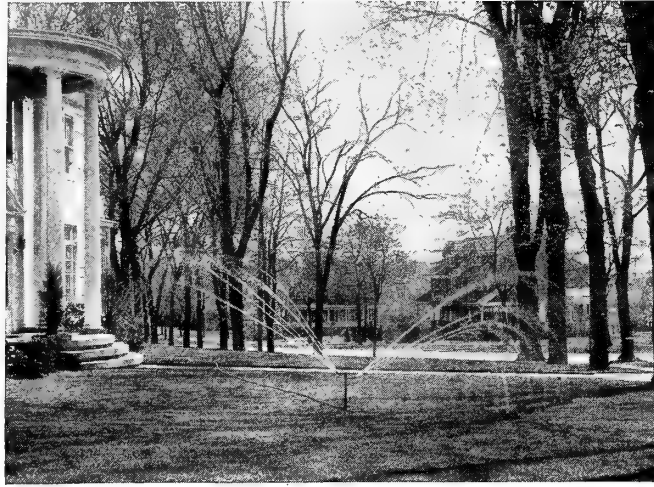
Cultivation (Double Number), price fifty cents a copy. These four are off the press, and ready.

All Bolles Brochures are now 50 cents each.

All numbers returnable, and money back

**Charlton Burgess Bolles**  
R.F.D. 3, Box 81 Media, Penna.





# BETTER Lawns and Gardens

Well-watered lawns and gardens give greater pleasure, bigger profits. And proper watering ceases to be a problem to those having

## Empire Sprinklers

There are three types, as described below. The Empire Rotary is shown in action. Every Empire Sprinkler is of most substantial construction, guaranteed to do thorough work for many years.

Send for booklet "The Gentle Art of Watering Your Garden."

**RAMAPO IRRIGATION CO.**  
88 West Broadway, New York

**Empire Midget**—portable and compact, solid brass nozzle, having forty-seven holes. Sprinkles 50-foot circle. Inside the nozzle a strainer prevents outlets from clogging. Weight, two pounds. Price \$2.50 F. O. B. New York City.

**Empire Adjustable**—This sprinkler embodies a new idea in irrigation: that of having two nozzles on adjustable arms to be set to throw at one time two fanshaped sprays in any direction. Each of the two nozzles will throw a spray to cover 40 feet. By turning the arms in opposite directions, the spray will cover 80 feet. Height two feet. Weight six pounds. Price, \$6.25 F. O. B. New York City.

**Empire Rotary**—This is universally adjustable—its arms, its nozzles, its direction, the height of its throw, can all be adjusted. Will cover evenly a 75-foot circle. By pointing the nozzle upward, you can restrict the area. Simple adjustment changes the spray from a rotary to a stationary. All essential parts are of the best brass. Rust proof, handsome finish, strainer in each nozzle, cannot get out of order. Height 22 inches, weight ten pounds. Price \$10.00 F. O. B. New York City.

Orders filled same day as received. Shipped by parcel post or express.

# Flower Seeds for Summer Sowing

Now is the time to sow the seeds for next year's hardy perennial borders and beds.

- Aquilegia**—long spurred hybrids..... Pkt. 25c
- English Daisy**—(Bellis Perennis) rose, white, mixed..... 25c
- Coreopsis Grandiflora**..... 10c
- Delphinium Belladonna**..... 25c
- Digitalis** (Gloxinoides)—Mixed Foxglove.... 10c
- Hollyhocks**—Chater's English strain, 5 colors. 15c
- Lupinus**—Blue, white, pink..... 10c
- Pyrethrum**—Hybridum, single, double..... 25c

Postage Free. Send for Catalogue.



Seedsman

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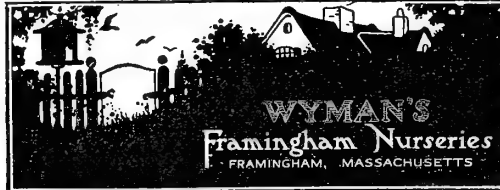


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Suited to all locations. Advice given as to ones best adapted to your conditions.

New price list ready in June

**THE DEAN IRIS GARDENS**  
Moneta California



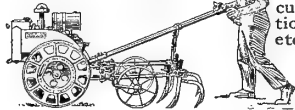
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It plows, harrows, cultivates, runs stationary machinery, etc., write for facts. Beeman Tractor Co. Minneapolis, Minn. 3802 5th St. N. E.

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## German Irises

Pallida Dalmatica and Koenig, 25c each, \$2.50 per dozen; Ciengialti, Amas, and Innocenza, 20c each, \$2.00 per dozen; Gertrude, Argus, Kochii, and Germanica Alba, 15c each, \$1.50 per dozen. One each of any five, \$1.00. One each of the nine, \$1.50; six each, \$8.00; twelve each, \$15.00. A few plants of the famous Black Knight, 50c per division.

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By Albert D. Taylor, M. S. A.

Country Life Press

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Landscape effects like this do not "just happen"; they must be carefully planned long in advance. Start this spring with a definite plan in mind—a group of evergreens here; there a stately beech or elm to intercept the afternoon sun.

Consider a Box-barberry hedge for the formal garden; shrubs for foundation massing and for border plantings; hardy Ixolium Privet for hedges. Be sure to have climbing roses for trellises and walls; roses and perennials for the garden, and don't forget the small fruits for the kitchen garden.

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*The Pioneer Landscape Nurseries of New England*



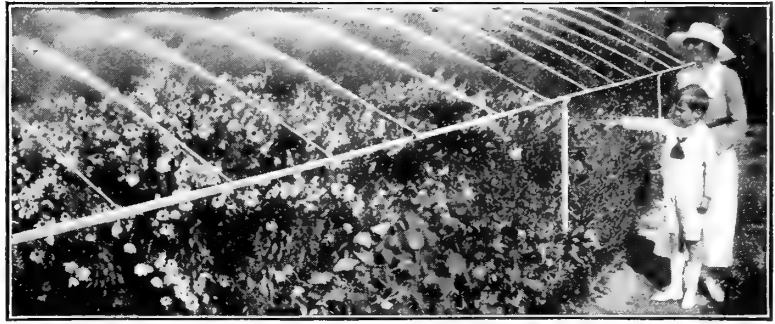
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Highest awards by American Peony Society.  
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Movilla plants are unsurpassed for vigor and freedom of bloom.

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## It Makes Your Garden Water Itself

A turn of a valve and at once comes a gentle rain-like watering, that thoroughly and uniformly waters every square inch of your garden. Not just wet on top, mind you; but wet way down below the roots, so they can draw on it for days. It neither puddles nor packs the soil. Increases your soil's fertility by uniformly converting into liquid form the soil foods,

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No watering system waters like the Skinner System. It waters equally well, a small garden or acres. Even so little as \$9.75 buys one of our 18 feet Portable Rain Makers.

Nothing to get out of order. Lasts a lifetime.

Catalogue if you wish.

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219 Water St.,

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## The Garry-nee-dule Strains of IRISES

famed for their sturdy growth, free-blooming qualities and vivid colors. I am not a faddist or a fancier, just grow Iris as a lover of flowers! You, too, will love the Iris if you get acquainted with these:—

- Lohengrin**, soft shade of cattleya rose.
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**Special offer** to Garden lovers more interested in beauty than in rarity. I will mail one each of above 6 superb sorts for \$1.00 postpaid.

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*Peonies Exclusively*

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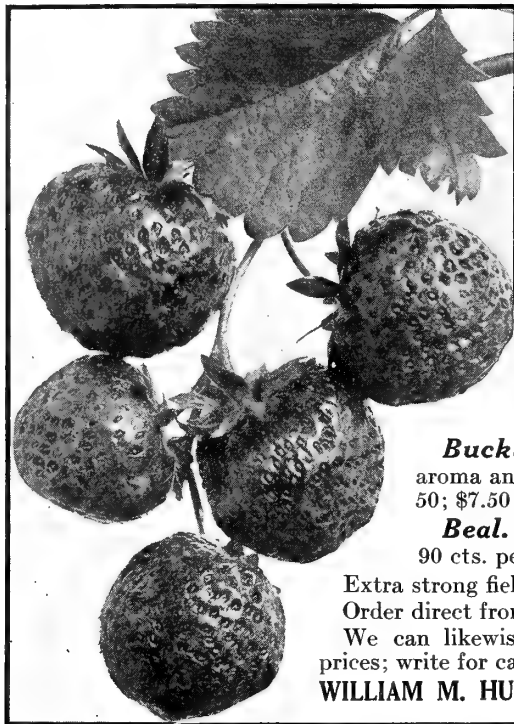
No need to worry about the long, hot, rainless days if you have a Dayton Rotary Oscillating Sprinkler ready. It makes rain when you want it.

It sprinkles every foot of ground in a circle, or half circle from 6 feet to 80 feet.

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The Dayton operates on any water pressure from 15 pounds up. If your local dealer cannot supply you, order from us direct. \$8, f. o. b. New York.

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cannot be purchased in stores or markets, but they can easily be raised on your own grounds. Their great size and remarkable flavor will quickly demonstrate their superiority over the standard sorts.

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Large, light crimson fruits; mid-season. Stock limited. \$5 per doz.; \$15 for 50; \$25 per 100.

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Extra strong field-grown plants for immediate delivery. Order direct from this advertisement.

We can likewise supply all standard varieties at reasonable prices; write for catalogue.

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# IRISES

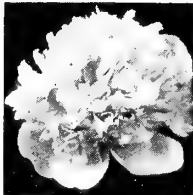
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are now in bloom—whole bouquets of beauty and fragrance in one flower! No better time than now to pick the varieties you will plant this Fall. Send for our catalogue and mark therein the favorites of your choice.

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Write to-day for description, etc.

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Our list is quite complete. Special offer. 12 Beautiful varieties including the rarer sorts for \$3.00; 25 for \$6.00, postpaid, separately labeled.

Mixed Iris \$1.00 per dozen, \$5.00 per 100. Good strong roots. Price list free.

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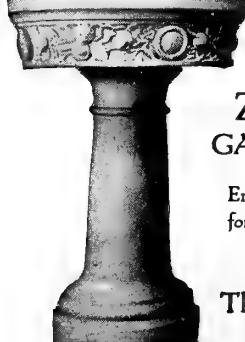
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(Pansy-Violet)  
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Has the combined perfume of the pansy and the violet. The color of both upper petals is dark purple—pansy-violet—a very beautiful color. The three lower petals are pure white, shading into creamy white toward the edges. Unlike the pansy, this will bloom all summer. *Pkt. 50 cts.*

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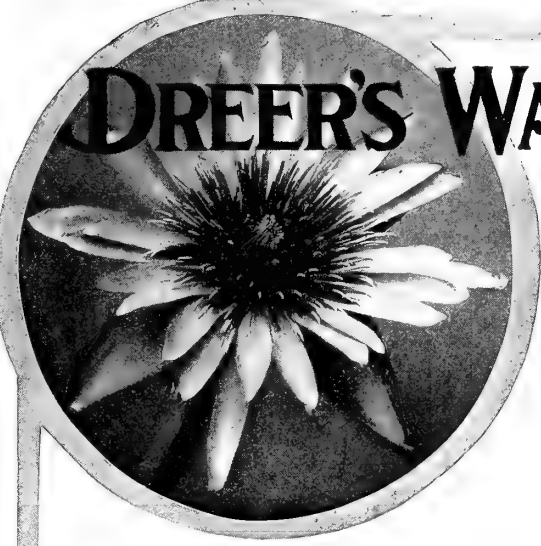
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THE MONTH of June is the ideal time to plant the gorgeous tender or tropical **Nymphaeas**. We offer strong, pot-grown plants of a grand assortment of both day and night blooming varieties in all colors, also **Victoria Trickeri**. Hardy Nymphaeas and Nelumbiums cannot be supplied at this season. All are described in Dreer's Garden Book which also gives full information on growing Flowers and Vegetables of all kinds.

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OUR plant resources, comprising over 800 cultivated acres, enable us to assure you that no matter what your planting plans call for in

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Perennials**

We can fill any requirements to your maximum satisfaction. Write for our catalogue.

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## Rose Arches

7 ft. high

4 ft. wide

Galvanized \$13.50  
Each

Any Size or Shape  
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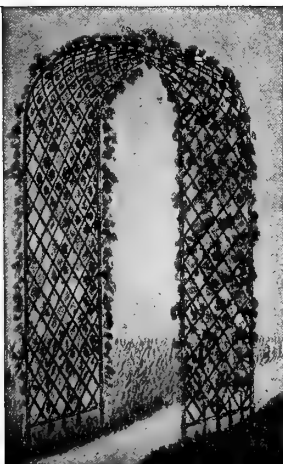
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If you arrive late in the season at your country home and find your garden unsuitable and vacant looking: don't wait another year,—it is never too late to plant **Palisades Popular Perennials** or **Rock Garden Plants**. Besides the large field clumps we send out, we have for **LATE COMERS** pot-grown perennials that can be planted as late as June 21st without experiencing any change or setback.

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Blooming from June to August in almost any kind of soil, in a range of colors embracing white, blues, lavenders, pinks, yellows, violet and reds, these flowers of early spring are almost the peer of the orchid in their dainty appeal.

Write and tell me your preferences in type and coloring and I will help plan your next Iris plot.



"The Dahlia King"

**J. K. ALEXANDER**  
27-29 Central St., E., Bridgewater, Mass.

## It's a GOOD Iris if it comes from Fryer's!

I grow hundreds of hardy plants in as many different classes, but the Iris remains *my hobby!* Only such Irises as meet every critical requirement, are shipped to Fryer customers.

**Thousands of New Seedlings—Order NOW**

Every year I have thousands of seedlings—good ones but not sufficiently distinctive to be given a name. To clear the ground, I dispose of them soon after blooming. Early orders we often filled with as many as 50 different kinds. Your chance to get some beautiful and unusual Iris at \$6.00 per 100, not prepaid. Shipment during July but "first come, first served."

Please ask for illustrated catalogue describing all of my hardy plant specialties. Prices on most varieties of named seedling Iris have been greatly reduced.

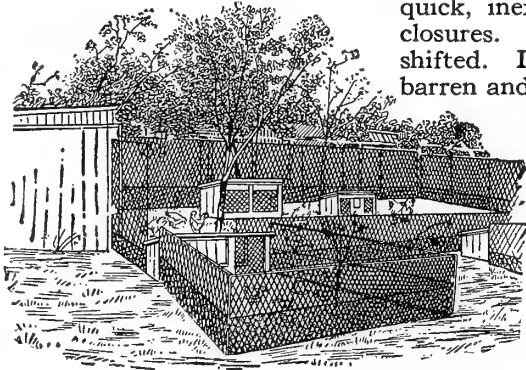
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- BIRD BATHS
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- BOXES, ETC.

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In the Garden a Bird Bath is a delightful spot of interest; a Sun Dial lends quaint charm.

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Established 1810



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"F & I" contains no weed seeds, insect pests, and has no objectionable odor.

Feeds your plants and kills or drives away many insects from your lawn and garden.

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Trims every kind and shape of hedge grown, in from one-fifth to one-tenth the time required by hand shears, and with more ease. In use all over U.S. on hundreds of estates. Ask for booklet and testimonials of pleased owners.

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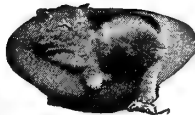
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Also other garden requisites Manufactured by

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### Aten Sewage Disposal System

Allows continuous use of washstands, bathtubs, toilets, sinks, showers, etc. The septic tanks of all Aten systems are made of concrete forms, not wooden forms. No expert engineering service or experienced supervision in the field required.

Simple to install, nothing to get out of order.

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Brooder for 50 to 100 chicks

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PHILADELPHIA  
Land Title Building

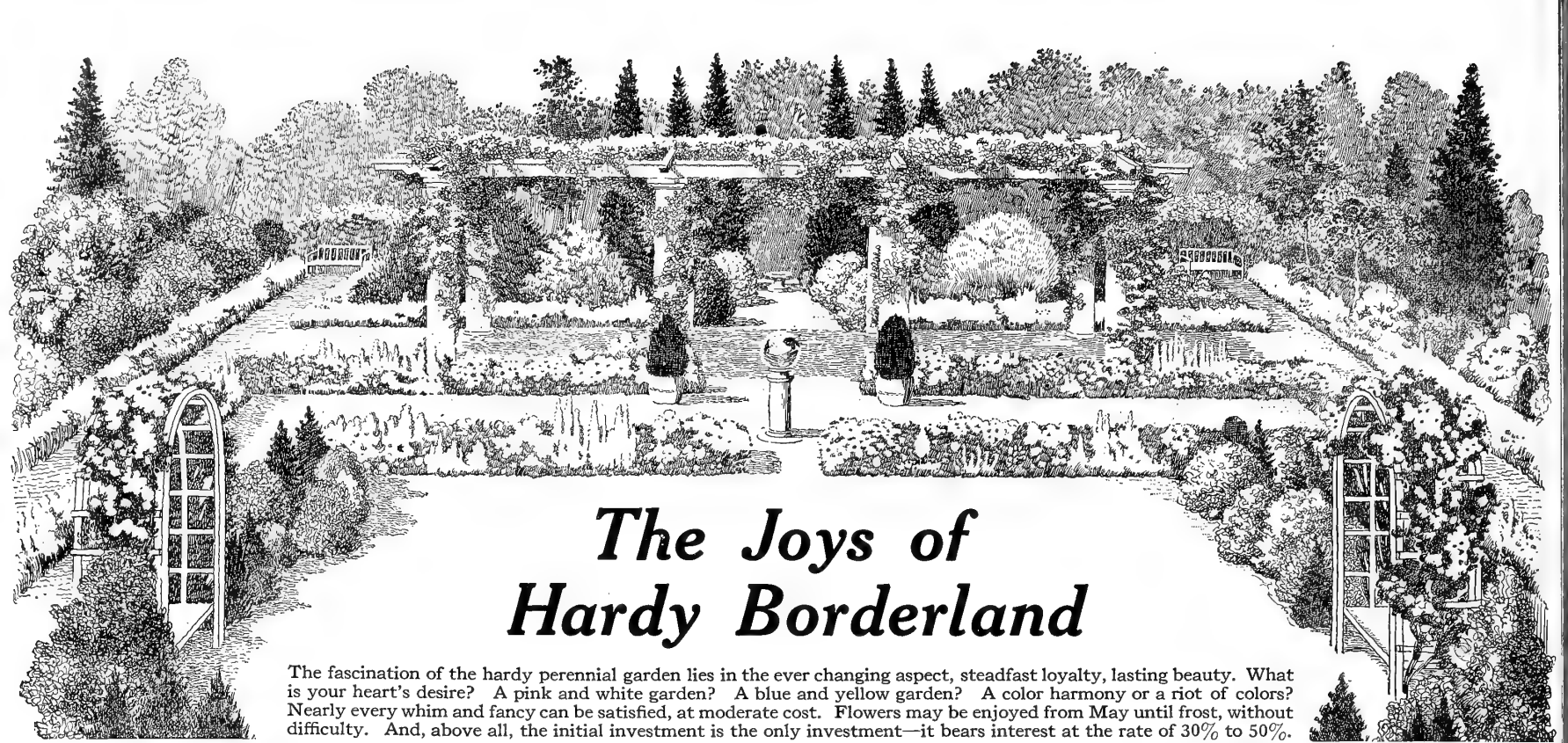
CHICAGO  
Continental Bank Building

CLEVELAND  
407 Ulmer Building  
Eastern Factory  
Irvington, N. Y.

ATLANTA  
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Western Factory  
Des Plaines, Ill.

TORONTO  
Harbor Commission Building  
Canadian Factory  
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# The Joys of Hardy Borderland

The fascination of the hardy perennial garden lies in the ever changing aspect, steadfast loyalty, lasting beauty. What is your heart's desire? A pink and white garden? A blue and yellow garden? A color harmony or a riot of colors? Nearly every whim and fancy can be satisfied, at moderate cost. Flowers may be enjoyed from May until frost, without difficulty. And, above all, the initial investment is the only investment—it bears interest at the rate of 30% to 50%.

## Come to Hicks' for Your Hardy Plants because we guarantee their behaviour

This nursery has always sold plants on the basis that they must live and bloom as promised or they will be replaced. Whether you are interested in Irises or Peonies or any particular hardy plant for border or rockery—if it has proved its worth to us, we can supply it at any time in Potted and Field Grown plants. Call and take the plants along or we'll be glad to have you mail your orders.

### A Ten Dollar Investment that Stands for Years of Ever-growing Pleasure

You may choose 30 plants from the following list and we will send them to you for \$10.00 f. o. b. You may choose from the entire list but you must not take more than 6 plants of any one variety

	Each	Per 10		Each	Per 10
Achillea ptarmica. The Pearl	.40	\$3.50	Liatrix pycnostachya.	.40	\$3.50
Alyssum saxatile compactum	.40	3.50	Lychnis chalcidonica.	.40	3.50
Anchusa Dropmore	.40	3.50	Lychnis viscaria	.40	3.50
Anchusa Opal	.40	3.50	Monarda didyma	.40	3.50
Aquilegia chrysantha	.40	3.50	Pentstemon barbatus Torreyi	.40	3.50
Aquilegia Heleneae	.40	3.50	Phlox Baron Van Dedem	.40	3.50
Aquilegia Long-spurred Hybrids	.40	3.50	Phlox Elizabeth Campbell	.40	3.50
Aquilegia nivea grandiflora	.40	3.50	Phlox General Van Heutz	.40	3.50
Artemisia lactiflora	.40	3.50	Phlox Independence	.40	3.50
Campanula carpatica	.40	3.50	Phlox Josephine Gerbeaux	.40	3.50
Campanula persicifolia. Blue	.40	3.50	Phlox Jules Sandeau	.40	3.50
Campanula persicifolia. White	.40	3.50	Phlox Lumineaux	.40	3.50
Centaurea montana	.40	3.50	Phlox Mrs. Jenkins	.40	3.50
Cerastium tomentosum	.40	3.50	Physostegia virginica	.40	3.50
Coreopsis lanceolata	.40	3.50	Platycodon	.40	3.50
Delphinium Belladonna	.40	3.50	Pyrethrum Double French	.40	3.50
Delphinium formosum	.40	3.50	Pyrethrum	.40	3.50
Delphinium Gold Medal Hybrids	.40	3.50	Ranunculus. Double Buttercup	.40	3.50
Delphinium grandiflorum. Chinese	.40	3.50	Rudbeckia purpurea	.40	3.50
Dianthus, Mrs. Sinkins. Double White	.40	3.50	Salvia pratensis	.40	3.50
Echinops humilis	.40	3.50	Sedum spectabile	.40	3.50
Eryngium	.40	3.50	Spirea Arendsii	.40	3.50
Gaillardia grandiflorum	.40	3.50	Spirea japonica, Pink	.40	3.50
Gypsophila paniculata	.40	3.50	Stokesia cyanea	.40	3.50
Gypsophila repens	.40	3.50	Statice latifolia	.40	3.50
Hardy Ageratum	.40	3.50	Veronica amethystina	.40	3.50
Helenium autumnale	.40	3.50	Veronica longifolia	.40	3.50
Iberis sempervirens	.40	3.50			



Iris, Her Majesty



Campanula



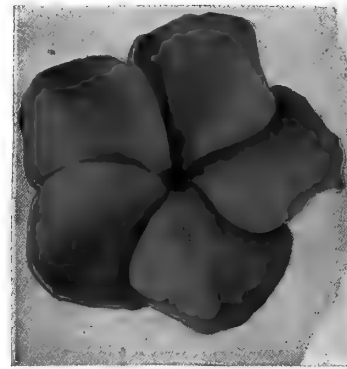
Aquilegia



Phlox, Rheinlander



Anchusa



Phlox, Baron Van Dedem



Dianthus plumarius



Veronica

#### IRISES

Excellent stocks of Japanese, German and Siberian. Write for prices and listed varieties.

#### Box M

**Hicks Nurseries Westbury, L. I., N. Y.**

William Robinson Writes on Color

DECORATIVE IRON WORK

GARDEN CLUBS' PROBLEMS

# GARDEN MAGAZINE



JULY, 1922

25 CENTS

Vol. XXXV. No. 5

July, 1922

*Doubleday, Page & Company*

-

*Garden City, New York*

*Boston*

*Los Angeles*

*Chicago*

# THE BRAND PEONIES

ORIGINATED BY O. F. BRAND & SON

## America's Foremost Hybridizers of the Peony



The largest Plant Breeding Establishment in the World that is devoted to the origination and bringing out of new varieties of the Peony. We carry over 1000 varieties. There are over 17,000 new seedlings in our seed beds this season.

The quality of our productions is attested to by the fact that of the World's 22 best varieties of this beautiful flower the following four or a little better than 18% were originated by us:

**E. B. BROWNING    FRANCES WILLARD  
MARTHA BULLOCH    LONGFELLOW**

We have in our fields this season for this fall's shipment the largest stock of first class peonies that we have ever carried, among which will be found such beautiful sorts as Alsace Lorraine, Asa Gray, Bayadere, Cherry Hill, Enchantress, Grace Loomis, Karl Rosenfield, Kelway's Glorious, Kelway's Queen, Lady Duff, La Fee, La Lorraine, La France, Laura Dessert, Le Cygne, Loveliness, Mme. Emile Lemoine, Mme. Jules Dessert, Marguerite Dessert, Mignon, Milton Hill, Mons. Martin Cahuzac, Phyllis Kelway, Jubilee, Primavera, Raoul Dessert, Reine Hortense, Rosa Bonheur, Sarah Bernhardt, Solange, Standard Bearer, Therese, Tourangelle, Walter Faxon, and many others of the World's very best American and European peonies.

We also offer for your consideration these wonderful Brand Peonies: Benjamin Franklin, Brand's Magnificent, Charles McKellip, David Harum, Desire, E. B. Browning, Faribault, Frances Willard, Henry Avery, Judge Berry, Longfellow, Lora Dexheimer, Martha Bulloch, Mary Brand, Mrs. A. G. Ruggles, Mrs. Jennie R. Gowdy, Phoebe Carey, Richard Carvel, and Winnifred Domme.

If you do not see listed here what you want write for our 1922 Price List now out, and our 1922 Catalogue which will be issued about July 1st.

**BRAND PEONY FARMS**  
Box 424                      Faribault, Minnesota

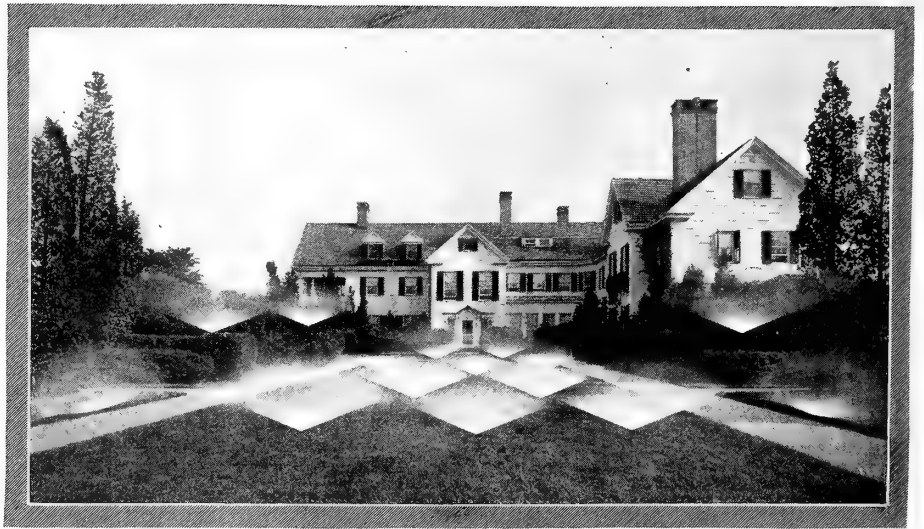
## Mark Twain Said—

“A great, great deal has been said about the weather, but very little has ever been done.”

If Mr. Clemens had known about the modern Cornell Irrigation Systems for gardens and lawns, his whimsical remark would have lost some of its pointedness.

Nowadays something *is* done about the weather and much of the disappointment attendant with trying to make a garden or lawn grow is a thing of the past. For Cornell systems actually *do* give you rain when and where you want it.

We are prepared to make complete surveys and submit plans and specifications covering the installation of piping systems and pumping units.



The coupon, or a postal or letter will bring a complete descriptive booklet describing the Cornell plan of garden or lawn care, without obligation.

**Cornell**  
Systems of Irrigation

### W. G. CORNELL COMPANY

Plumbing — Heating — Lighting

45 East 17th Street, New York City

CHICAGO    BALTIMORE    me to-day  
NORFOLK    CLEVELAND    free of  
NEWARK    ST. LOUIS    charge, your  
BOSTON    MONTREAL    illustrated book-  
PHILADELPHIA    let describing in  
KANSAS CITY    detail the Cornell  
WASHINGTON    Systems of Irrigation.  
PITTSBURGH

Name .....

Address .....



# I am still growing IRIS, PEONIES and PHLOX for a harvest of joy and friends

YES, I can truthfully say that every order I send out wins me a friend. They say that sentiment and business do not mix, but I have found sentiment backed by *Service* to be a winning combination.

It has always been my sincere desire to merit the confidence and good will of my fellow beings, and to accomplish it I have adopted the following business policy.

To give every patron prompt, cheerful, and careful attention.

To not disappoint them in any way, but render service that will add to the large number of enthusiastic customers who kindly recommend my goods to their friends (I hereby thank them each and all).

To produce stock of highest quality and sell it at a fair price. I will not sacrifice quality for profit; what are a few dollars compared with the satisfaction of feeling that one is giving pleasure to a constantly increasing number of people who love beauty and love to work hand in hand with good old Mother Nature.

**To Induce a Trial** I will send 12 Iris worth \$4.30 for \$3.00, Ingeborg, Loreley, Monsignor, Mrs. Darwin, Nibelungen, Pallida Speciosa, Perfection, Rose Unique, Sherwin Wright, Dr. Bernice, Rhein Nixe, Helge.

Mixed (not labeled) \$5.00 per 100 \$45.00 per 1000

## And I Specialize in PEONIES too

Iris and Peonies go together. Before one leaves, the other arrives.

Between the two you'll have a continuous succession of joys and delights. My Peonies range in price from 50c. to \$40.00 each.

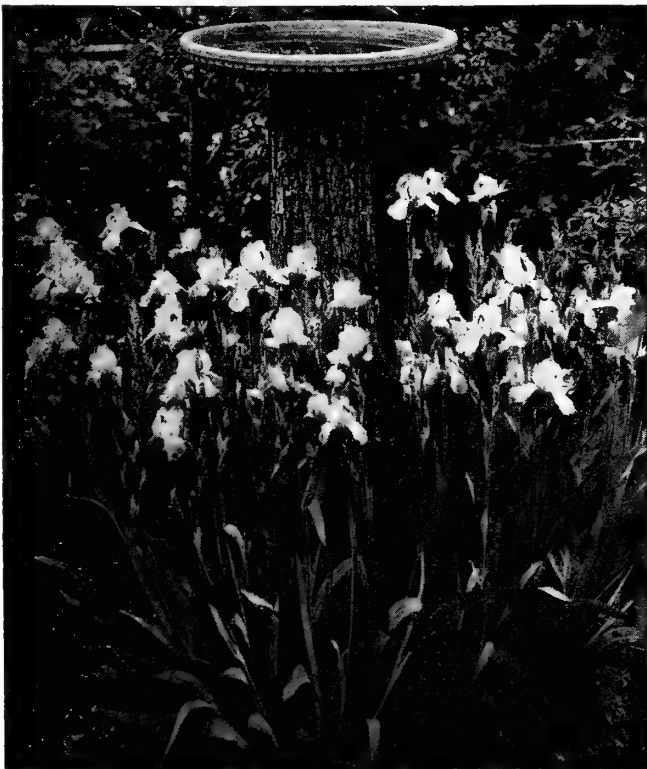
My Iris range in price from 15c. to \$20.00 each.

## Will You Let My Little Catalogue Tell You More?

It's a very modest booklet and yet it serves the purpose of acquainting you with my business.

Now let us all work individually and collectively for a more beautiful *America*.

**GEO. N. SMITH, Wellesley Hills, Massachusetts**



## Swelter? Or Enjoy Cool Shade?

What You Can Do in July. A Personal Message from Henry Hicks

Wish your place was beautiful? Why not have it so?

TO have big trees you thought it was necessary to have your father plant them. Also it was necessary to plant in spring or fall. We have planted thousands of trees in the summer and they have grown better than those planted in spring and fall. Why? Because we have invented methods and trained men to do it right. Back in 1888 we started to grow them to save you time. They have been grown wide apart, root pruned and transplanted to be in the best possible condition for you. We have developed and perfected the art of summer transplanting. Will you be the first in your neighborhood to take advantage of it?

	High	Spread	Yrs. old	Each
Ptn Oak	20 ft.	12 ft.	18	\$85.00
Chestnut Oak	20 ft.	8 ft.	18	45.00

The species for dry gravelly soil as Rockaway and gravelly slopes of Cold Spring Harbor, N. Y., where it is native.

	High	Spread	Yrs. old	Each
Scarlet Oak	14 ft.	5 ft.	18	\$ 8.00
Beech	12 ft.	8 ft.	15	25.00

Beech will make a beautiful hedge to shut out the street or separate the garden from the entrance court. Beech hedges grace the finest estates in Europe.

	High	Spread	Yrs. old	Each
Maple	18 ft.	5 ft.	12	\$ 8.00

A group of 4 will shade the baby's playground. They are big enough for a swing or hammock.

	High	Spread	Yrs. old	Each
Maple	22 ft.	10 ft.	15	\$ 40.00
Maple	26 ft.	20 ft.	25	100.00
Tulip Tree	16 ft.	6 ft.	9	50.00
Linden	14 ft.	5 ft.	10	5.00
Linden	25 ft.	12 ft.	18	75.00

### PLANT EVERGREENS

You enjoy the beauties of the evergreens, the fragrance of the firs, the wide horizontal lights and shadows of the Pine, the feathery Hemlock and the contrast of the White Fir or Blue Spruce. You wish you had a little nook sheltered from the sea. Do you want a bird haven where they will nest in the summer and feel protected from wind and hawks in the winter? July is the time to make it. Do you want the fun of carrying out your own ideas? The Hicks system of transplanting and root pruning and the invention of machinery for handling the roots results in the least possible surgical shock in transplanting. Measured in beauty and time saving they are your cheapest investment. You can have a truckload delivered every day, every other day, or every week, while you are on your country place. They are guaranteed to grow satisfactorily or replaced free. Do you need a carload? You will enjoy selecting them in the nursery. A prominent manufacturer of Pittsburgh said this morning, "I have spent several pleasant mornings here."

Are you a fan on little evergreens, rock plants, alpine plants, cover plants, ferns and wild flowers? This is the place to come, prowl around, load up your car and redecorate the foundation of your house, and make a naturalistic garden with stumps and stones or along a woodland path.

Have you tried the Hicks Plantateria? Here are thousands of plants in pots or suitable to take up with clumps of dirt, Phlox, Iris, Asters and a good collection of the flowers you see in the best gardens.

If you love a plant you can make it live anytime.

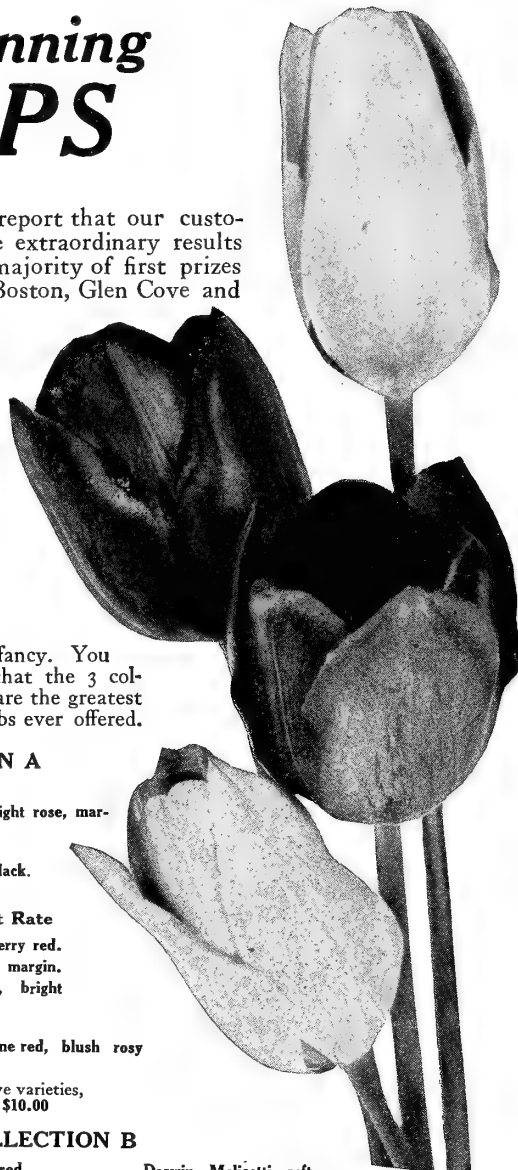
(Signed) HENRY HICKS.

**HICKS NURSERIES, Box H, Westbury, L. I., N. Y.**

# Prize-Winning TULIPS

We are delighted to report that our customers continue to score extraordinary results with our bulbs. The majority of first prizes offered at New York, Boston, Glen Cove and other shows were captured by Zandbergen patrons. Our bulbs are *not especially selected*, but constitute uniformly regular stock supplied all our customers, on all orders, large or small.

To be a Prize Winning tulip, a variety need neither be new nor expensive. Among our 450 May flowering kinds are sorts for every purse and fancy. You can take our word for it that the 3 collections offered herewith are the greatest value in highest class Bulbs ever offered.



## COLLECTION A

- Darwin Clara Butt, Salmon Pink.
- " Baron de la Tonnaye, bright rose, margined bluish.
- Darwin La Candeur, pale rose.
- " La Tulipe Noir, maroon black.
- " Dream, mauve.
- Popular Sorts at a Modest Rate**
- Darwin Professor Rauwenhof, cherry red.
- " Suzon, buff rose, black at margin.
- Cottage Gesneriana Spatulata, bright scarlet.
- Cottage, Moonlight, light yellow.
- Breeder, Cardinal Manning, wine red, bluish rosy bronze.

25 bulbs of each of above varieties,  
250 bulbs in all, for \$10.00

## COLLECTION B

- Darwin Farncombe Sanders, rosy red.
- Darwin Prince of the Netherlands, cerise-scarlet, edged rose.
- Darwin Mdm. Krelage, lilac-rose, margined pale rose.
- Darwin Princess Elizabeth, deep pink.
- Darwin L'Ingenue, bluish.
- Superior Sorts at a Modest Rate**
- Darwin Faust, satiny purple.
- Darwin, Melicetti, soft lavender.
- Darwin Blue Amable, pale lavender, shaded steel blue.
- Breeder Bronze Queen, soft buff, inside tinged golden bronze.
- Cottage, Mrs. Moon, deep yellow.

25 bulbs of each of above varieties,  
250 bulbs in all, for \$15.00

## COLLECTION C

- Breeder Panorama, deep orange, shaded mahogany.
- Breeder Louis XIV, dark purple, flushed bronze.
- " Gadet Parfait, purple.
- Cottage Avis Kennico, golden yellow.
- " Sir Harry, soft lavender pink.
- A Great Value in Really Superb Creation**
- Cottage Idyl, beautiful vivid rose.
- Darwin Duchess of Hoenberg, lilac-mauve.
- " Centenaire, violet-rose.
- " Valentine, heliotrope.
- " Louis de Valliere, bright cherry rose.

25 bulbs of each of above varieties, 250 bulbs in all, for \$25.00

### Please ask for Catalogue

Pronounced by connoisseurs the most accurate catalogue of Dutch Bulbs. Brief, but absolutely truthful descriptions and the use of different type for sorts of varying merit make it a most valuable guide to Tulipdom. If you do not find a variety listed in our catalogue (novelties excepted), we assure you that it isn't worth growing.

In order to effect above worth-while saving on your bulbs, all orders must reach us not later than August 1st. Delivery of first class bulbs, in first class condition during September. All orders filled and packed in our own bulb farm at Valkenburg, Holland.

**Come to see our Show Garden,  
"Tulipdom," where, during May  
you'll find about 450 rare kinds of  
Tulips and hundreds of unusual  
Daffodils.**

## ZANDBERGEN BROS.

OYSTER BAY, LONG ISLAND, N. Y.  
Bulb Farms: Valkenburg (near Leiden) Holland

JULY, 1922

# THE GARDEN MAGAZINE

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*J. Paul Verrees*

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LEONARD BARRON, Editor

VOLUME XXXV, No. 5

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## DOUBLEDAY, PAGE & COMPANY GARDEN CITY, N. Y.

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under the Act of Congress, March 3, 1879

# Burpee's Fordhook Finest Lawn Grass

*July is the ideal time to start a lawn*

Lawns play an important part in beautifying the home grounds, and once being established last almost indefinitely if properly cared for.

Burpee's Fordhook Finest Lawn Grass has been awarded many prizes and the beautiful lawns on our Fordhook Farms in Bucks County have all been grown from the same blend of various American and foreign fine-bladed grasses which have proven to produce the best lawns under the varied conditions as to soils and climate met with in America.

This special mixture will give a smooth velvety sod of a rich green color. It will make a thick turf and is free from common grasses which produce clumps and so frequently spoil the desired smooth effect.

One pound of Fordhook Finest Lawn Grass seed will sow a plot of 20 x 20 or 400 square feet, 80 pounds per acre are sufficient for careful seeding, but it is much better to use 100 pounds where it is desired to have a good close turf from the start.

With every order we enclose the Burpee Leaflet "How to Establish A Lawn" giving complete directions for preparing the ground and sowing the seed together with the subsequent care and proper treatment of the lawn.

Order Burpee's Fordhook Finest Lawn Grass seed now. **Pound packages at 60 cents each; 3 pounds for \$1.65, postpaid.** By express or freight, at purchaser's expense of forwarding, **10 pounds for \$4.20; 100 pounds for \$38.00.**



**W. Atlee Burpee Co.**  
Seed Growers  
Philadelphia

## A Rare Offer of A Rarer Tulip—

The number of good Tulips runs into hundreds, but there is one considered "better than the rest" by connoisseurs! Of dark purple color, with bronze shadings, each petal margined dull golden orange. Louis XIV is regarded as the most wonderful Tulip extant.

**Louis XIV Tulips, at  
Cost, on this Basis:—**

This Tulip costs us \$15.00 per 100 bulbs in Holland. We will supply it, at that rate with orders amounting to \$5.00 or more. Every reader selecting \$5.00 worth of bulbs from our free catalogue is entitled to 25 bulbs of Louis XIV, at cost (\$3.75). If you order \$25.00 worth of bulbs, you are welcome to 125 bulbs of Louis XIV and so forth.

This offer is made solely to distribute a great Tulip in broader fashion and to acquaint readers better with Wayside Gardens.

**THE WAYSIDE GARDENS CO. Mentor, Ohio**

*Largest Growers of Perennials in America*

# JUNE is Peony Month at Cherry Hill

Where ONE WILL FIND in bloom  
HUNDREDS OF THOUSANDS  
OF THE MOST BEAUTIFUL  
PEONIES IN EXISTENCE

Among these are the BEST VARIETIES ORIGINATED BY CALOT, CROUSSE, DESSERT, HOLLIS, KELWAY, LEMOINE, MILLET, RIVIERE, RICHARDSON, SHAYLOR, AND OTHER NOTABLE AMERICAN and EUROPEAN INTRODUCERS

Then WE ARE the ORIGINALATORS of the FAMOUS THURLOW SEEDLINGS WHICH ARE WITHOUT PEER

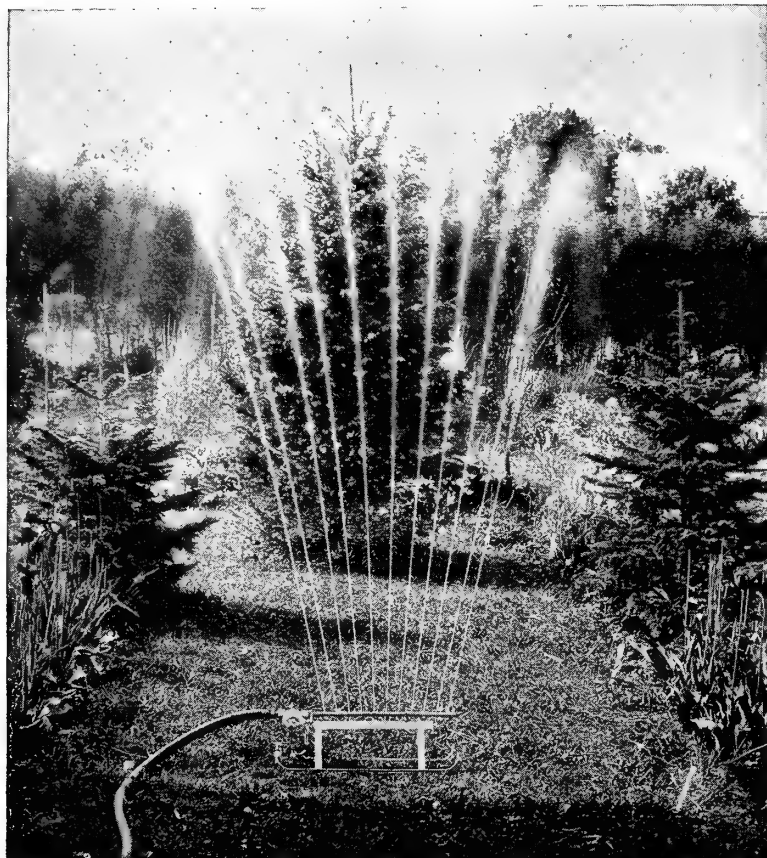
Remember WE HAVE BEEN OVER FIFTY YEARS IN DEVELOPING THE CHERRY HILL STRAIN of Peonies KNOWN THE WORLD over FOR HARDINESS, VIGOR and FREE BLOOMING QUALITIES

*Catalogue Not Open Sundays*

**T. C. THURLOW'S SONS**  
*(Cherry Hill Nurseries)*

West Newbury Mass.





## Gentle Showers!

If there is any one thing plant life resents, it is the drenching baths given to it via the nozzle of a garden hose. Plant life needs water, above all else, but that water should be supplied as nearly in nature's own way as possible in order to prove most beneficial. If you have Evergreens (and which reader of G. M. has not!) then you can not give them a greater treat any time during July and August than to turn on a gentle shower through the Campbell Waterfan.

## You, too, Will Fall in Love With the Campbell Waterfan

Its easy, graceful action never fails to arouse the keenest interest on the part of the passerby. It is a pleasure to sit and watch it, so systematic, graceful, thorough. So convinced are we of the Waterfan's ability to win new friends, that we are offering it under the unqualified guarantee given below.

Waterfan Comes in Two Sizes, as Follows:

### WATERFAN—Model No. 5

Length, 21 inches. Weight, 5 pounds. Waters a rectangular area up to 16x60 feet. Price, \$15.00

### WATERFAN—Model No. 10

Length, 5 feet. Weight, 10 pounds. Waters a rectangular area up to 22x60 feet. Price, \$25.00. All prices f. o. b. factory.

## An Unqualified Guarantee

We guarantee the Waterfan to operate perfectly with as little as 15 pounds of pressure. Attached quickly to any garden hose, it will thoroughly water your garden and its construction is such that it will give many years of satisfactory service. If, after testing, you are not thoroughly satisfied with the Waterfan, return it, and your money will be refunded.

### CAMPBELL IRRIGATION COMPANY

Woodbury New Jersey

Pacific Coast Agency:  
Wilcox Building, Los Angeles, Cal.

GEORGE ALEXANDER, 90 West Broadway

Distributor for New York City and suburbs, including Long Island

NOT until you have been charmed by the dainty tints that distinguish some of the Darwin Tulips, or seen the dazzling brilliancy of the Breeder and Single Early varieties, can you know the value of

# Hunt's Perfection Bulbs

One of our customers on Long Island says, "The bulbs purchased from you exceeded my highest expectations. . . . the flowers were admired by everyone."

Our booklet of **Hunt's Perfection Bulbs** features only those varieties of Tulips, Daffodils, Hyacinths, and Crocus that our customers and friends have found desirable. A few choice Peonies, some popular Roses, with a short list of seeds for fall sowing in open ground and greenhouse complete this new booklet. It will be a pleasure to send you a copy on receipt of your name and address.

**WILLIAM M. HUNT & CO., Inc.**

148 Chambers Street

New York City

## What Can Really be Planted During July and August?

Among vegetables, Childs' Sixty-Day Make Good Corn will yield abundantly sown up to middle of August. (Pkt. 10c; 45c. per pint). Sow additional rows of Byer Bush Beans (Pkt. 10c; 40c. a pint). Flower Seeds of perennials should be sown, while Peonies, Iris, Phlox and other perennial *plants* should be planted as soon as obtainable.

### Childs' Midsummer Catalogue— A Guide to Paying Gardens

Let our catalogue help you to get the most out of your midseason endeavors. Offers the choicest seasonable flower and vegetable seeds, besides pot-grown strawberry plants. The flower lover will be pleased to find the earliest Paper White Narcissus for pot culture while those fond of Hardy Gardens will appreciate our special hardy Lilies, Iris, Peonies, etc. For those particularly fond of Iris, we repeat last month's

### Special Offer of Better Iris

**Queen of May**—Soft rosy lilac shading to pink, 25c. each, \$2.50 per doz.

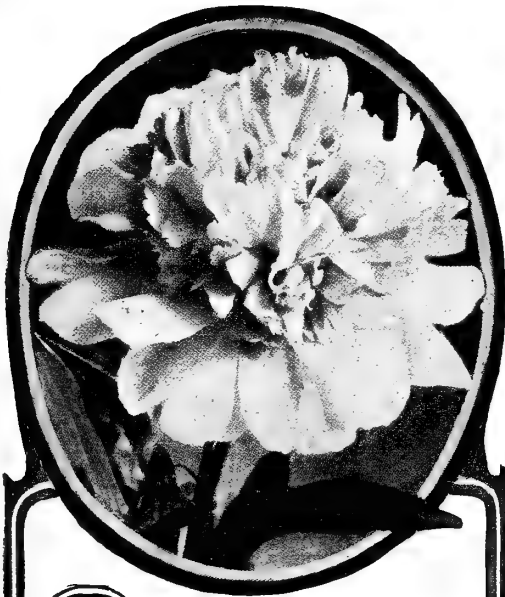
**Pallida Dalmatica**—Clear deep lavender, falls shaded lighter. 25c. each. \$2.50 per doz.

**Loreley**—A glorious combination of royal purple and yellow. 35c. each. \$3.50 per doz.

**Special Offer:** We will mail 2 roots each of above three splendid sorts for \$1.50 postpaid. Shipment in early August.

Ask for *Midsummer Catalogue of Bulbs, Perennials, etc.*

**JOHN LEWIS CHILDS, Inc., Floral Park, L. I., New York**



# Peonies and Iris

OUR aristocrats of spring flowers—the PEONY and the IRIS—have been for a third of a century under the unceasing, loving and specialized care of the Peterson's, father and son. Peterson's Peonies and Iris are in a class by themselves—strong, hardy and vigorous. Noted for their brilliant hue, coloring and fragrance. Where intelligent selections are made a gorgeous, artistic effect is produced by either Iris or Peonies.

## Peterson's Master List of Peonies

We have concentrated our efforts on a select number of standardized varieties best known to and in demand by the peony fancier—quality varieties recognized as the sure-to-bloom, large flowering kind, with well developed root and eye system. Peonies are easy to grow when properly planted at the right time and in the right soil. Success with the Peterson peony in every variety listed is assured if planting directions are followed. Our judgment as to the most desirable varieties has been recently confirmed by the rating ballot of the Peony Society, all of which are explained in thorough and comprehensive detail in the Peterson book. It is handsomely illustrated, contains a fund of valuable information and every peony lover should have it. It's free for the asking. Several valuable specimens not yet rated are also included. You see we keep in advance, constantly presenting something new, when we find the merited article in the form of a new peony.

## Peterson's Master List of Iris

Will assist you in a selection of these remarkable flowers, classifying, as they do, colors, seasonal blooming period and fully describing each kind and variety. We offer in addition to the varieties yielding the highest ballot in Iris some as yet not generally known.

This is true of both our Peony and Iris Master List Selections. Peterson's Unique Guarantee as applied to both Peonies and Iris states emphatically "We will replace with three any plant blooming not true to description."

Iris shipped after July 1st; Peonies after September 1st. Orders for one-eye peony divisions must be received before October 1st. Peterson's Master Lists of both Peonies and Iris are a part of the Peterson book in broad-side form, making it easy to select intelligently. Write for this book. It contains helpful information to flower lovers—it's different.

**PETERSON NURSERY**  
30 N. La Salle St.  
Chicago, Ill.



# Hardy Border Thoughts that Stand for Permanent Beauty

Have you a hardy border? Then add, to reap greater joy during years to come. Do you think of making a perennial flower garden? Then consider what we offer below as being worthy in every way! Of one thing feel sure:—We would not risk our hard earned reputation by offering ought but the choicest!

## A Totty Idea of a Well Balanced Hardy Border

Supposing you would want to leave it *all* to us, trusting to our experience in selection, of classes and varieties. For a border, 5 feet wide, 50 feet long, we will supply 100 distinct Perennials of tall, medium height and dwarf habit, together with planting suggestions for..... **\$20.00**

### Special Fall Guide on Request

A special fall edition of our catalogue sent free on request. Iris hobbyists are welcome to our special list of Iris. Please remember—if it's worth while among perennials, you'll find it here.

This collection will contain, among other plants, Special Totty Hybrid Delphiniums, named varieties of Iris, etc., plants which ordinarily sell for 50c each. This is by far the greatest value in hardy plants we have ever offered.

*Delivery in September, but order NOW lest you forget*

**CHARLES H. TOTTY COMPANY**

Madison

New Jersey

*Headquarters for  
Hardy Plants*



## Iris, Iris and Still More Iris!

They call me "Iris mad" and the only thing I am "mad" about is that I can't grow more than I do. The most fascinating part of it all is the creation of new sorts, with nature's aid. And to enable you to get acquainted with Iris as I know them, I herewith repeat my June offer.

### Thousands of New Seedlings—Order NOW

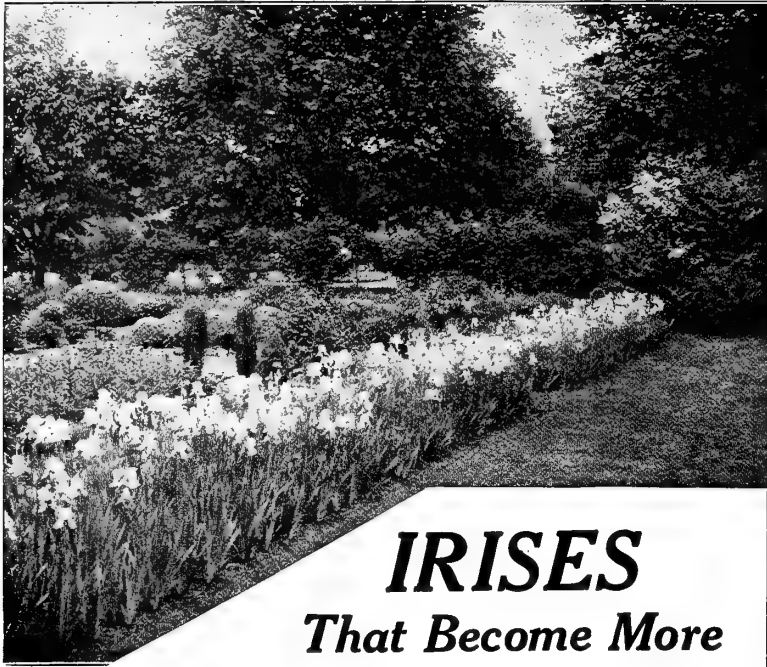
Every year I have thousands of seedlings—good ones, but not sufficiently distinctive to be given a name. To clear the ground, I dispose of them soon after blooming. Early orders we often filled with as many as 50 different kinds. Your chance to get some beautiful and unusual Iris at \$6.00 per 100 not prepaid. Shipment during July, but "first come, first served."

Please ask for illustrated catalogue describing all of my hardy plant specialties. Prices on most varieties of named seedling Iris have been greatly reduced.

**WILLIS E. FRYER**

Mantorville, Minn.





# IRISES

## That Become More Lovely Year by Year

Wouldn't you like to adopt Irises as a hobby, just as I did many years ago, and have them reveal their delicate loveliness and lead on into a wonderland of delight?

This year I present four splendid new Wyomissing seedlings, which are fully equal to my former introductions.

### Farr's 1922 Introductions

- Cecil Minturn*. Soft cattleya rose; large dome-shaped flowers \$5.00
- The Inca*. Standards saffron-yellow; falls plum, edged yellow 5.00
- Seagull*. Standards white; falls pale blue and white..... 3.00
- Japanesque*. Standards lavender; falls violet and lilac..... 3.00

**One plant of each of these  
four 1922 introductions . . \$15**

Some of my older introductions are unusually fine. From these I have made a special group of

#### 12 Wyomissing Irises for \$7

You may order this collection now and pay for it after the plants are received.

- Blue Jay*, light and dark blue..... \$ .35
- Chester Hunt*, light and dark blue..... .75
- Glory of Reading*, blue and purple..... 1.00
- Hiawatha*, lavender and royal purple..... .75
- Juniata*, clear blue; tall..... .50
- Mary Garden*, pale yellow and white..... .50
- Mt. Penn*, lavender-rose and crimson-maroon..... 1.00
- Navajo*, yellow and maroon..... 1.00
- Nokomis*, light lavender and violet..... .50
- Pauline*, pale violet..... .50
- Paxatawney*, violet and yellow..... .75
- Quaker Lady*, lavender, blue and gold..... .50

Farr's wonderful Irises, Peonies, Chrysanthemums and many other perennials are listed and illustrated in "Farr's Hardy Plant Specialties." Over 100 pages of text and many illustrations. A copy will be sent for \$1, which sum may be deducted from your first order amounting to \$10.

## BERTRAND H. FARR

Wyomissing Nurseries Co.

104 Garfield Ave. Wyomissing, Penna.

## A Gorgeous Garden of Dazzling Tulips for \$5.00

ONE that'll make your spring days brighter and make you feel prouder of your garden. Plant Tulips and especially

#### DARWIN TULIPS

Darwin Tulips are the spring flowers supreme. They bloom in May after the very early spring blooming plants are through flowering, and before the early summer plants commence to bloom. The varieties listed below are unsurpassed for brilliant effect, and quality the very best.

- Barron de la Tonnaye**, Bright pink..... per doz. \$ .55
- Clara Butt**, Apple blossom pink..... .50
- Europe**, Salmon scarlet, per doz. .65
- Farncombe Sanders**, Bright scarlet..... per doz. .70
- Gretchen**, Delicate shell pink..... per doz. .60
- Inglescombe Yellow**, (May flowering) yellow..... per doz. .50
- La Candeur**, Pure white, per doz. .65
- La Tulipe Noire**, Velvety black violet..... per doz. .60
- Madame Krelage**, Bright pink with lighter edge..... per doz. .65
- Pride of Haarlem**, Carmine pink..... per doz. .60
- Reverend Ewbank**, Lilac with lighter edge..... per doz. .60
- William Copland**, Light lilac..... per doz. .70

120 Bulbs	<i>Extra Special Offer</i>	60 Bulbs
<b>\$5.00</b>	<b>For Immediate Acceptance</b>	<b>\$3.00</b>

We will mail ten of each of above 12 magnificent sorts, 120 bulbs in all, for \$5.00. Half that quantity (5 bulbs of each sort) for \$3.00. Orders should reach us not later than August 1st. Our New Fall Bulb Catalogue sent free on request.

**AMERICAN SEED & SEEDTAPE CO.**  
*Pakro Quality Bulbs, Seeds, Plants, Supplies*  
MADISON NEW JERSEY



## Surprise your Neighbors —just as F. A. Howard did

THE most deliciously flavored of all berries is the wild strawberry that grows in June meadows.

Eight years ago a New England scientist determined to increase the size of these fragrant miniature red drops of lusciousness.

For three years he worked patiently, cross-fertilizing the wild plants and garden berries of the largest size—until finally, he produced what has been called the most surprising strawberry ever grown, F. A. Howard's "Wild Wonder."

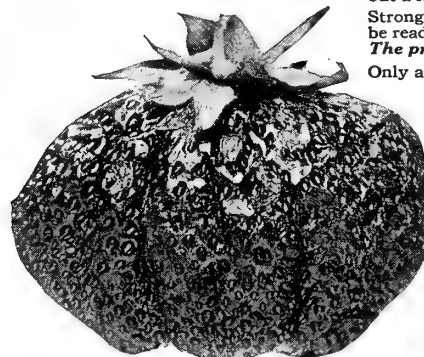
Newspapers throughout the United States illustrated and described it. Plant breeders came to see it. With ordinary field cultivation one thousand baskets of glorious fruit were grown on one eighth of an acre. They sold, at sight, in the Boston market, for double the price of any other strawberry.

Like the wild strawberry, the fruit is borne on high spray-stems. Many of the berries are six inches in circumference. The plants seem to grow equally well on gravelly inclines or in muddy soil. They are vigorous, and yield enormously throughout a long season.

Strong and vigorous *potted* plants will be ready to ship during July and August. **The price per dozen is \$6.**

Only a small quantity can be spared for each purchaser, but each plant will develop many healthy young ones, so you can have a large and productive patch next spring. Orders should be sent promptly, to arrive before the supply runs short.

Each berry is the delicious wild strawberry of your boyhood—marvelously flavored and fragrant. Grown to giant size. Send check or money order. Address:



Life size from photo

**F. A. HOWARD**  
South Easton, Mass.



# The Garden

Vol. XXXV, No. 5

MAGAZINE

July, 1922



"HERE IS THE PLACE WHERE LOVELINESS KEEPS HOUSE"  
*Madison Cawein*

*Mattie Edwards Hewitt, Photo.*

The well-placed seat is an apt feature of any garden; here may the mistress-of-the-mansion pleasurably linger with knitting or novel while the loveliness of long midsummer afternoons seeps slowly in. Larkspur, Hollyhocks, Geraniums, and Bell-flowers make gay the garden of Mrs. Dudley L. Pickman at Beverly, Mass.



“THERE THOUGH THE LONG, LONG SUMMER HOURS,  
THE GOLDEN LIGHT SHOULD LIE,  
AND THICK YOUNG HERBS AND GROUPS OF FLOWERS  
STAND IN THEIR BEAUTY BY.”

*William Cullen Bryant*

What could be more refreshing in suggestion than such snowy masses of Phlox and the cool grey-blue of late Iris! Wise indeed the gardener who lays dependence on these dependables of the July garden





*Mattie Edwards Hewitt, Photo.*

"A QUEEN IN WONDERLANDS OF SONG  
WHERE EVERY BLOSSOM SINGS"  
*Marguerite Wilkinson*

Among biennials the Hollyhock yields second place to none and is loved for its long association with the gardens of our forebears, bestowing stateliness upon farmhouse and mansion alike. Garden of Mrs. George W. Curtis, Southampton, L. I.



# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

JULY—PLENTEOUSNESS OF GROWTH AND GLORY



Herein are listed the seasonal activities for the complete garden. Details of *how to do* each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for outdoor work of any sort New York City (latitude 40) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow *four days* for each degree of *latitude*, for each five degrees of *longitude*, and for each four hundred feet of *altitude*.

(Copyright, 1922, Doubleday, Page & Co.)

**H**ERE is an allurements about midsummer that tempts one to ease up on the care of the garden; whether the thought of approaching vacation-time or the reflex effect of the heat brings this about is of little moment, but there is no doubt that now more than at any other season the gardener needs inspiration and urging to further effort. It would not be out of place to spend a few hours of the "glorious Fourth" in taking stock of what the garden actually offers and ascertaining whether the returns have been worth the effort expended. "The laborer is worthy of his hire." Have you been paid for yours?

### Growing Crops as they Stand

If a poor return is inevitable from any crop now occupying space, pull or hoe it out and replant. Don't waste time and space, but start a supply of winter vegetables. It is not too late to sow others for fall use. Don't be misled into supposing that late varieties are indispensable because they are for late use. Early varieties are an advantage in many localities as they mature before frost. Late Cabbage, Cauliflower, Kale, Brussels Sprouts and Celery to be set into permanent quarters this month. The earlier the better. Tomatoes on stakes to be tied, and side shoots pinched out frequently. The foliage to be thinned if it is shading the fruit. Melon and Squash vines to be kept off the ground by laying brush for them to climb over. Small boards or pots placed under Melons will cause them to ripen more evenly than they do when left on the ground and will prevent the flat, bleached-out side often seen. Potatoes to be sprayed twice this month or oftener if the weather be wet. Plant Turnips where early Potatoes have been dug. Rhubarb, Sea-kale, and Asparagus to be well fed by top-dressing of well rotted manure, or fertilizer, preferably both if available. Cultivate thoroughly and keep clear of all weeds. Next year's yield is proportionate to the feeding taken in now. Spray regularly with bordeaux: Muskmelons, Cucumbers, Pumpkins, and Squashes. Onions and Leeks to be fed with liquid manure or nitrate of soda.

### Vegetable Seeds for Succession

Beans to be planted for succession. Get the average date for the first killing frost in your locality and figure the last sowing according to that. Red Valentine will mature in 55 days, if the frost does not kill it before the last week in September. Sowings made up to last week in July will yield the bulk of the crop before being nipped. Last chance to sow long season Beets, such as Long Smooth Blood for winter use, is the first week of this month. After that (up to the 20th of the month) early maturing varieties such as Detroit Dark Red, Crosby Egyptian, Crimson Globe. Carrots for the winter crop to be sown by the 15th of the month. Last call for Corn planting July 4th, using such early varieties as Peep o'Day, Mayflower, Golden Bantam. Early white Endive sown the first week of the month will be ready to blanch in early September. Kohlrabi to be sown for succession; matures in sixty days. Heat resisting sorts of Lettuce, as All Seasons Butterhead, Iceberg, to be sown up to the middle of the month. During the last of the month use Tender Heart, Black-Seeded Tennis Ball, and Big Boston types. Radishes for succession to be sown. Sow White Strasburg, and Black Spanish for winter use up to the 15th.

Peas for a fall crop will not give a spring crop return, so use heavy bearing, quick maturing sorts; i. e. Sutton's Excelsior, Little Marvel, Alaska, and Thomas Laxton. Rutabagas for winter use to be sown as early as possible, and succession crops of Turnips up to 20th. Purple-Top, Strap-Leaf, Amber-Leaf, and White Globe to be sown for late fall use. Late Cucumbers for pickling are possibilities if sown at once and given good care. Liquid manure will help.

### Where the Fruit Is Promising

Summer pruning is the month's big job which really assists the trees in setting up fruit buds. Go over all trees of fruiting size, and nip off all thin, weak interior growth, also take off the ends of any heavy shoots with a tendency to get ahead of others. Cane fruits to be pruned thoroughly after fruiting; cut away old wood that has borne fruit; leaving new growths to fill the rows without crowding. Currants and Gooseberries neglected during the fall or spring pruning, to have some of the old wood cut out now to give room for new growth. Rub off surplus growths that may have started on Grape vines where not wanted. When the Strawberry crop is gathered, remove weeds, litter, and superfluous runners and lightly fork over the surface of the soil. Re-plant part of the patch each year to maintain succession. Thin crop of heavy-bearing fruits, especially Apples and Pears. Reduce clusters to a single fruit, and in the case of Apple let fruit hang 10-12 inches apart all over the tree. Cover crops in the orchard to be plowed under. A cutaway disk harrow, or a chain on the plow are worth considering in this connection.

### Where the Flowers Are Growing

Do not stir the soil deeply when cultivating; many plants are shallow rooted. Cut off flower heads when bloom fades, unless saving seed. Note down the names and quantities of any plants needed to fill gaps and order potted plants to fill now or in fall. The biennial Campanula, Foxglove, and other plants of this nature to be torn out and thrown away after flowering. Foxglove seedlings will spring up and may be kept for next year's flowering. Annuals to give late summer bloom by sowing now include Mignonette, Candytuft, Phlox Drummondii, Coreopsis, Gypsophila, and Cornflower. Continuously flowering plants (Coreopsis, Gypsophila, and Perennial Peas) to have the flowers picked clean in order to have them flower right along. Mulching is preferable to watering (especially on the "little and often" plan) for these and fall-flowering perennials. When watering, give water until the soil is saturated through and through, and then give still more. Mulch to go on after that. If Phloxes show signs of red spider or mildew, use a strong force of water from the hose for red spider, and sulphide of potassium (1 oz. to a gallon of water) for mildew. Move Tall Bearded (German) and Japanese Iris, even Peonies etc., after flowering and make any desired changes of arrangement. Nasturtiums, and other soft succulent plants soon suffer from the attacks of aphid and are to be sprayed frequently with tobacco or suitable preparations.

Geraniums to be pinched back to get bushy plants. Remove terminal growths with fore-finger and thumb.

Clip *Althernanthera* and *Coleus* to keep them within bounds. On large areas a scythe is a useful implement for this purpose.

Rambler Roses to have the old wood cut away soon after flowering. Tie the new canes and give them plenty of room, selecting only the most desirable of the new growths, cutting out weak and crowded shoots. Ramblers trained against buildings are generally infested with both fungus and insect. Spray in time to control. Keep up vitality by regular watering.

Bush Roses to have growths shortened when through blooming, to encourage vigorous new wood for fall flowering. A dressing of tankage, blood, manure, and liquid cow manure will help considerably. If drouth prevails, soak the beds with plenty of water.

Perennial seeds to be sown at once for flowering next season.

### Irrigation the Most Urgent Need

One good *soaking*, once a week is more beneficial than a slight sprinkling every evening. Also, be sure to put the water where it belongs.

"Leafy" vegetables as well as root crops appreciate having their tops as well as their roots watered. On the other hand, plants that bear fruits (such as Peppers, Eggplants, Tomatoes, Cucumbers, and other vining plants) should not have the tops and blossoms soaked and the pollen washed away.

Modern methods and appliances have done a great deal to make watering comparatively easy. Systems of pipe lines overhead or underground, portable sprinklers, rotary and oscillating water-fans are now perfected to such a degree as to do their work thoroughly and efficiently. Press these aids into service to get the most out of your July Garden.

### About the Grounds

For aphid on any of the trees use Black Leaf 40, or Thrip Juice. Finish pruning early flowering shrubs, cutting out old wood that has produced.

Caterpillars to be disposed of as soon as seen or they will quickly defoliate any plants they attack. Borers are active. A steel wire run along the opening a borer is working in will dispose of him.

Attend to any tree having bark disease or bad scars. Where decay has started, cut out the soft, punky wood to real hard, solid wood, making the shape of the cavity such as will allow water to run out. If the cavity is small and does not materially affect the stability of the tree a treatment with pine tar or creosote will be all that is needed. This work calls for real skill and any extensive operation had best be given the specialists.

New plantations to be protected from drouth by heavy mulching; it saves constant watering.

Green fly or white scale to be looked for on the Bay-trees.

### Plants in the Greenhouse

Present neglect of winter-flowering plants in frames will be tenfold more evident during the winter months.

Plant Carnations into the benches.

Snapdragons for winter flowering to be planted in benches where they are to bloom. Keep them cool and maintain a moist atmosphere.

Freesias to be potted up or boxed; they will flower by Christmas. Water sparingly until growth starts.

*Lilium giganteum*, *speciosum*, and *auratum* from cold storage to be potted up. The first will flower in October. After potting, place bulbs in a coldframe where they can be shaded until rooted.

Bench-grown Chrysanthemums to be kept well watered; also specimen plants in pots, and the large-flowered exhibition types. Bush plants may still be pinched. Syringe and spray frequently to keep them free from thrips, aphid, and red spider. Maintain a cool buoyant atmosphere.

Violets in small pots, planted on a bench with a northern aspect in a cool house, will make fine flowering plants by winter.

Crotons not to be shaded heavily for brilliant coloring. Frequent syringings keep mealy bugs, scale, and red spider in check.

Hydrangeas for forcing next winter, now planted outdoors, not to be pinched after the first of the month.

Place order now for Roman Hyacinths, and for Paper White, Trumpet, and Golden Spur Narcissus.

Left over plants of Marguerites apparently of little use will, if planted

outdoors, make fine growth by September, when they may be lifted and potted for early winter flower. Shade in the pots.

Calla Lilies to be started into growth; purchase new plants now. Fibrous loam, cow manure, and bonemeal make a good compost.

Gardenias planted early last month need air on all favorable occasions, but avoid draughts. Dampen the walks frequently and maintain warm, moist atmosphere.

Geraniums for winter flowering now being grown in pots to have leading growths pinched whenever they show a tendency to run away. Pick off flower spikes. Give a sunny, well ventilated house; freedom from weeds and dead leaves; and an occasional spraying overhead. Avoid the use of liquid manures which promote soft growth at the expense of the flowers; use fine bonemeal.

Asparagus Sprengeri for winter greens to be purchased in small pots and planted now, if stock is not on hand from seeds sown in heat in the spring.

### Seeds for Indoor Sowings

Mignonette for winter flowering to be sown early. A rich compost is essential. Cover seed lightly and keep moist until germination takes place.

Sweet-peas and Calendulas (to follow Chrysanthemums in November) to be sown toward the end of the month.

Chinese Primroses to be sown now for Christmas flowering; and *Cineraria stellata* for cut flowers in early spring. Baby Primroses to be sown; large plants to be divided and potted into 2½ inch pots. All cool-house subjects (like *Cinerarias*, *Calceolarias*, and Baby Primroses) need the coolest possible conditions at this time.

Seed of English Wallflowers sown now outdoors—later transplanted 6 inches apart and, in October, lifted and potted, wintered in a coldframe with a little protection and brought into the greenhouse in January—will make fine flowering plants in the spring.

New Zealand Spinach for winter use to be sown in a cool-house. Parsley also to be sown for next winter's use.

Watercress is easy to grow in a coldframe or cool greenhouse (not more than 45°); if the temperature gets high aphid is troublesome. Sow now, using a rich soil, and cover the bed with an inch of clean, sharp sand.

Tomatoes for fall crop to be sown now and planted into permanent quarters September 1st. Fall crop of Cucumbers to be had by sowing English forcing types now; plant to permanent quarters late in August.

### Cuttings Under Glass

Lorraine Begonias (and other of the winter flowering types) grown from early rooted leaf-cuttings to have flowers picked off. If in need of larger pots move them; but if in doubt leave for some time longer. Overpotting of these plants often spells failure, especially when watering is done carelessly. Shade to avoid burning.

Poinsettias may yet be rooted. Purchase small stock of winter flowering Begonias to grow on.

Cuttings of Double Sweet Alyssum put into propagating bench now, and later planted at intervals along side of the Carnation benches, will flower all winter.

### Forcing Fruits

Toward the end of the month start ripening up the pot vines for early forcing next winter. Place in full sun, water thoroughly, and syringe twice daily.

Fruit houses that have ripened crops and are staying wide open right along dry out rapidly. Continual syringing of trees or vines will often keep the surface looking half dry. Water thoroughly.

Apples and Pears that have fruited in pots to be fed and watered for another season. Sublaterals may be pinched back to two eyes.

### Care of Orchids

Calanthes to be looked over twice a day to prevent drying out; these terrestrial Orchids do not like as much spraying as other kinds. Have the foliage dry overnight or spot will develop. Look out for cool nights during the ensuing weeks, 70° at night is required. Cypripediums now in active growth; as the roots fill the pots and pans liquid manure once a week will help. See that the plants do not suffer for want of water. Ventilate freely, but avoid draughts. Shade to prevent actual burning.

# TWO HISTORIC CENTURY-OLD CYCADS

SAMUEL NEWMAN BAXTER  
Arboriculturist to the Commissioners of Fairmount Park

## Sago Palms of Revolutionary Times that Adorn the City Collections of Philadelphia

**A**RICH and unique collection of old-time stove and greenhouse plants recalling memories of bygone years when such plants formed the features of all gardens of any pretense, to-day finds shelter in the mammoth Horticultural Hall of Fairmount Park, Philadelphia. Here may be seen Bananas ripening their fruit under tropical temperatures, the lofty Cohune Oil Palm (*Attalea cohune*) from Honduras, and the Canary Island Date Palm (*Phoenix canariensis*) touching the glass roof seventy feet above.

Two noteworthy Sago Palms (*Cycas revoluta*) whose history goes back to revolutionary times have become almost shrines to many visitors. One of these (now six feet ten inches high, exclusive of foliage), was once the property of George Washington and is said to have been saved from the fire which destroyed his conservatory at Mt. Vernon. Four years ago it was presented to the Fairmount Park Commission by Mrs. George B. Wilson. This plant is estimated to be one hundred and fifty years old.

The other historical Sago Palm was presented by Jacob Hoffner of Cincinnati in 1876 when Horticultural Hall was built for the Centennial Exhibition. As recorded on a silver name plate, this Palm was "owned by Robert Morris of Philadelphia before and during the Revolutionary War." Some account of the Morris influence on horticulture was included in Dr. Harshberger's recent articles on "Old Gardens of Pennsylvania." The trunk of this plant is seven and one-half feet high, and twelve inches in diameter at base, tapering at top to six inches (as shown in photograph).

The age of plants of this type which grow in height by successive rings, left by fallen leaf-stalks and representing the growth or whorl of leaves which appear biennially, can be determined by the

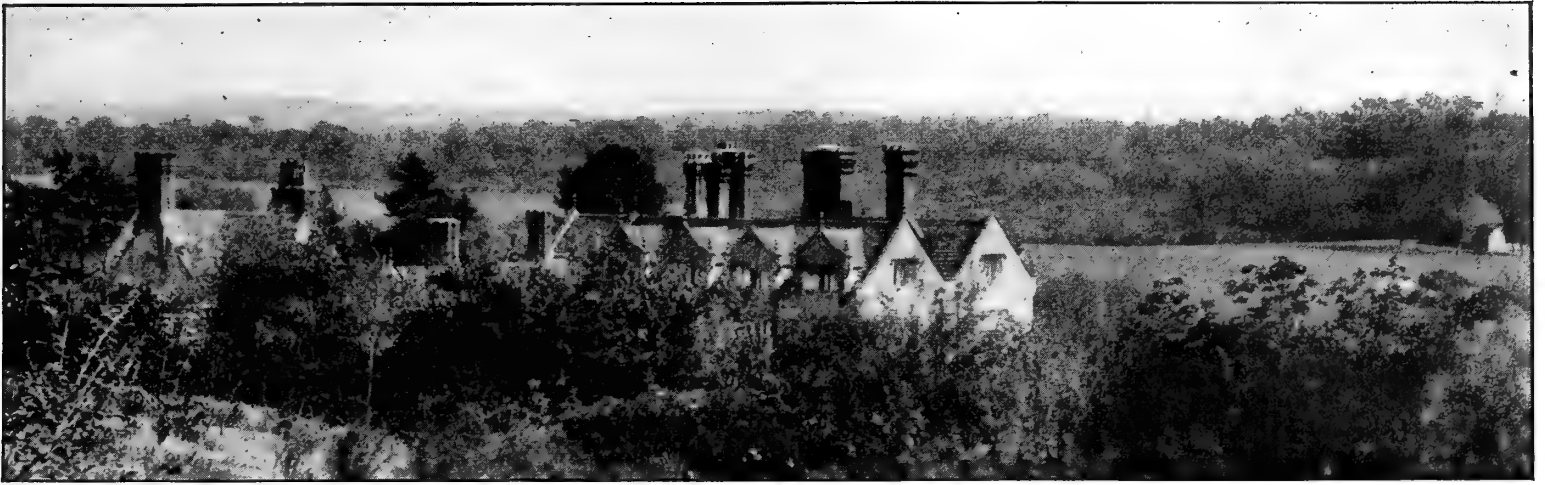


### VETERAN SURVIVORS OF REVOLUTIONARY DAYS

The Sago Palm (*Cycas revoluta*) shown above, once owned by George Washington and luckily saved from the fire which destroyed the Mt. Vernon conservatory, still flourishes under glass at Fairmount Park, Philadelphia. Its companion (at left) also has a distinguished past, having been in the possession of Robert Morris during the stirring days of 1776, and presented just a hundred years later (1876) to the people of Philadelphia by Mr. Jacob Hoffner of Cincinnati

simple expedient of counting the scars. The trunk does not have to be cut down like hardwood trees before the rings can be seen. Although originating in Java, the Sago Palm is grown as commonly outdoors in Florida as in the conservatories of the North.





"THIS HOUSE FACES AN AMPHITHEATRE OF OAKS"  
View of Gravetye Manor, Mr. Robinson's home in Sussex, England

# PLANTING FOR COLOR IN THE LANDSCAPE

WILLIAM ROBINSON

Of Gravetye Manor in Sussex [author of "The English Flower Garden," "The Wild Garden," "Home Landscapes," "Parks and Gardens of Paris" and other books; founder and long editor of *The Garden*, and *Gardening Illustrated*]

*AUTHOR'S NOTE: The flower garden of England and the parterre of France are in our day often so poor in color of the carpet gardening, mosaiculture, and various crude massing of showy flowers that I have had to seek good and true color among trees and shrubs—so far not set into geometrical or other patterns. And the trees being out of the way of the garden shears we see their natural forms as well as color. The following notes tell of the result of my own planting in wood, copse, or heath garden in a cool soil and not specially favored position; and all are hardy and enduring things.*

## EDITORIAL FOREWORD

WILLIAM ROBINSON needs no introduction to gardeners the world over, for his share in moulding present-day appreciation of the "natural" in garden effects is abundantly recognized. Writing from his observation and practice in his own magnificently gardened home in Sussex, England, some plants are dealt with which cannot always be equally used in every garden of the eastern United States; but at the same time, by that very same token, a responsive chord will be struck in California and the other Pacific coast regions; and withal, Mr. Robinson shows an uncanny appreciation of our own American material that has suggestions for us here. Hence these articles have a very wide appeal, and (as in all garden writings) the reader who intelligently interprets the principles in the light of his local limitations and opportunities is the one who derives the maximum benefit.

Tinctured by a crisp finality, these jottings on the behavior of nature by the dean of British gardeners, who has lived with her long and has an affectionate understanding of her ways, ring with extraordinary verity. The value of Mr. Robinson's succinct observations is suggestive rather than didactic—he does not theorize about nature, he sympathizes with and follows her. All his work is tinged with her single-hearted simplicity; he works with great sweeps and masses of color, true artist that he is, and yet has time and tenderness for all the little things that make a finished picture.

Nowadays there is much talk of color in the garden, and somewhat less of color in the landscape; nearly all of it inclined to didacticism and hampered by personal prejudice. We are over-prone to go to nature with our minds made up, as it were, and attempt to foist our preconceived theories upon her. Mr. Robinson goes into the open air with open mind.

**L**ONG a witness of much unpleasant color in gardens public and private, on coming into possession of some farm land of my own, my thoughts went to the gifts of the earth mother in the forests of the northern world.

The bedding plants giving poor color are often the produce of costly glass-houses and must not be exposed to outdoor air until near the longest summer months; while others coming from the plains and hills of the frosty north, there can be no doubt of their fitness to face our clime at all seasons; and so I made a big trial of many trees, not in the mellow loam of Devon, or in the sea air of Cornwall, but in the often shaly clay of the forest ridge of Sussex, high and storm-tossed.

The beauty of the Eastern American wood in autumn is splendid, and an idea which is common to many is that the pictures to be seen there are due to the climate mainly. On coming here I thought I would try the American trees in any case to see how they might look in wholly changed conditions. We must go to the forest for fine color, free it should be from the disfiguring of the shears. I propose to take the planting not in any book order but rather in regard to the pleasure they give as to effects in the open air.

**THE OAKS.** This house faces an amphitheatre of Oaks clothing the hills around. At first, the fields in the foreground were beset by lines of ironbound clumps, and only by getting rid of these trees out of place, did we arrive at the full value of these

miles of Oakwoods. In May, one can see nearly a dozen different states of our Oak differing in color, and in the fall these differences are still seen when the Oak groves are lighted by the November sun. Some North American Oaks thrive and give fine color in the fall. Best so far are the Red Oak, the Marsh Oak, and the Scarlet Oak. Most precious of all for our storm-tossed coast line is the Holm or Evergreen Oak—lovely in color in storms.

**LIQUIDAMBAR** (Sweet Gum). One of the most beautiful trees of the northern world for color. It grows best in the rich bottom lands of the Middle States of America but I, having no such land, planted it in a bold group in an ordinary coppice; where, beginning very slowly, it has got up its head and gives fine effects every year. It is as hardy as a Thorn bush. In its own country it is a good timber tree; as it is easily raised in abundance from seed, there should be little trouble in getting a stock. Disliking the usual methods of dotting trees about, I planted it in a bold group and the effect was all I sought. It is essential to encourage a natural tall growth and for that reason not to let the usual underwood starve it, but plant some low shrub beneath, such as the evergreen Barberry which will in no way harm the tree.

**BEECH** (Fagus). The queen of our native woods in autumn need not be named here except that the Purple Beech has long been popular and is very often grafted. But in Holland one

can get the tree from seed and it seems quite as free as the natural form; it is therefore worth having by those who care for color, and the Purple Beech is not a garden form but is found wild.

**TULIP TREE** (*Liriodendron*). One of the noblest trees of the American silva. Its color is soft and fine, and in autumn mostly so in the case of old trees. My own plantations, however, are young, but there are many Tulip trees in the home counties, best in warm valley soil.

**TUPELO** (*Nyssa*). This is about the most brilliant of hardy trees that come to us from America. It is quite hardy and happy in our country, rising to over one hundred feet in moist ground in its own country. It is long known to us, but is rare in nurseries, and in fact is neglected in them. My trees are poor and small but they give fine color and I regret that I cannot get vigorous saplings. The one most likely to succeed in marshy places is *sylvatica*, and it thrives in ordinary cool soil.

**MAPLE** (*Acer*). In this great family of northern trees there are many with some beauty of color, but best of all is the Norway Maple, in woodland and copse splendid for its autumnal color. After the Norway Maple, for beauty, comes the Silver Maple of America, a tall and graceful tree. The wild tree is far better as to endurance than any of its varieties. Our native Sycamore is varied in color, and a good brown form comes true from seed, which is the best way for the wood. Our native Field Maple in many districts shows a pleasant color in the autumn, and so does the Red Maple. The Japan Maple in its varieties often gives fine color, but it has not the tree form essential in woodland.

**CHESTNUT** (*Castanea*). This is the best tree of Europe in view of the value of its wood, its fruit, and the beauty of foliage with which it carpets the ground a lovely color in autumn. The terms Italian and Spanish and Sweet Chestnut applied to these are best dropped—this King tree is best with its simple name. The few other species known are of less value from our present point of view, though all have pleasant color in the fall.

**WILLOW** (*Salix*). The most beautiful tree of our islands is the White Willow, grown in marshy ground or on riverside, and grouped. It is good in color all the year round and fine in summer storms. The hybrids of this, the Huntingdon and the Bedford Willows, are like in effect. One is said to be the true bat Willow [used in making cricket bats], but the men who seek bat wood are quite happy to get trees of the true White Willow. The facility of increase of the Willows from cuttings is such that many people never think of any other way, but it is wiser to look to the seed for the best grown trees. Willows from seed are not to be had in nurseries, so that one who cares for them must raise seedlings for himself. Next in value in the landscape comes our native Golden Willow, sometimes grown in nurseries under the name of Cardinal Willow; it is fine, too, all the year round. Merely planted as a "specimen," it has only a slight effect; but grouped, it is a fine winter tree to see growing in moist ground, but best on riverside soils. A gray bush Willow (*Salix rosmarinifolia*) gives a welcome color as undergrowth near water. Beautiful trees in riverside soil are the Babylonian and other Weeping Willows, but those in some upland soils with a rocky bottom are short lived and quite poor in effect. The finest effect of all is from our native Golden Willow in the winter sun.

**POPLAR** (*Populus*). Near the Willows come the Poplars, which give character to the rivers of France and the woods of North America. The Canadian and the common Poplars pass into good color in autumn, the most distinct among them being the White Poplar, superb in rich hollows. Of recent years another fine tree, the Black Poplar (*Populus trichocarpa*), has come from Oregon and the region near, where it grows two hundred feet high. It is fragrant, a rapid grower, and striking for its silvery effects in woodlands. Our native Aspen, which here passes off into modest color, in certain calcareous soils assumes a fine claret color.

**BIRCH** (*Betula*). Coming of itself in all directions in woods, our Native Birch needs no more said about it except that some American Birches are as free and a little more decisive in color, such as the Yellow Birch of which the seed is so abundant that it may be thrown out of hand in the woods. The finest Birch so far is Maximowiczii, which grows very well here but is not yet in quantity enough for us to judge fairly—the few grown die off into good color—a very handsome tree!

**DOGWOOD** (*Cornus*). The Siberian is the best and a vigorous grower in almost any soil, but it loves marshy ground and helps as a weed-killer! Close set, as it should be for effect, its shade of leaf is so dense that weeds which defy the hoe give up the ghost after a few years in the embraces of the Siberian Dogwood. The handsome American Flowering Dogwood does not thrive so well here as we should like but it gives us fine color of leaf in the fall.

**THORN** (*Crataegus*). The world gets richer in Thorns every day. Whatever their distinction, many of them are fine low trees and we may look to them to give us some day good live fence plants. All are well armed with thorns and beautiful both in flower and fruit. There is nothing we want so much as a live fence that will take care of itself. Our native Thorn is so often in need of attention that it tempts many to neglect it for the iron fence. We have used the Cockspur Thorn, and a fine wood fence it makes, taking a brown-red color in autumn.

**IRON TREE** (*Parrotia*). This distinct hardy tree gives a good display of color in the autumn with its large leaves. It is a native of the highlands of northern India and Persia. As yet we do not know enough about it to judge of its character as a tree, but there is no doubt about its hardiness and fitness for our climate. We grow it among trees partially shaded, but it might be better in full sun.

**MAIDENHAIR TREE** (*Ginkgo*). This beautiful tree, which is so happy in our country in some old gardens, also gives us a rich yellow in the autumn. It is handsome in fruit, and the male form is the one mostly seen in our gardens. It is readily grown from seed so grouping should be an easy matter; and old trees are fine in color in the fall.

**FOR WIND EFFECTS.** Some of the most interesting are those of trees that in their form show the half-hidden charm of the leaves, as Oleasters wind-tossed in silvery or bronzy hues. Finest is the large silvery leaved one introduced in our own day by the bold collector, Maries, and most of the other kinds are worth growing if only for their effect in storm. These are best grouped in the sun, and not in manured earth. What is said here is true also of many trees from the Japanese Bamboo (*Bambusa metake*) to our hardiest tree, the Yew—a noble old tree when not in the distortion of the topiarian.

**FOR FINE COLOR OF STEM.** By our British way of letting the trees of the Pine order feather to the earth, much of their beauty of stem is lost. The old Yews of our isles, trying in vain to get rid of their worn-out branches, would afford us the loveliest color, if free of them for twenty feet high. An old Yew that does not show its stem is like a church without a steeple. Coming here, a group of Yews, probably as old as the Manor near it, were laden to the earth instead of pointing to the sky, the effect as poor as poor could be. By taking off all these half-faded branches to a height of twenty feet or more, we get a group that men notice for color as well as form.

Look at our native Fir—what a splendid stem in color! The lamp-post way of planting the Pine as a specimen is against the tree showing its beauty. The great spreading Oaks at Powys and Shrubland are wonders of our British woods, but the same Oak with a bole straight up eighty feet in the forest of Marly of Bercy, has more dignity and more good timber, too. Nearly all our native and other great forest trees have a beauty of stem, making clear the folly of hiding it. No need for labor in pruning to get the stem color and fine form; if planted in natural groups and masses, nature will do the rest.



*Reproduced from "Home Landscapes"*

VIEW FROM THE WEST GARDEN AT GRAVETYE MANOR

"What is often forgotten in discussing garden design is the importance of studying the ground when we get beyond the often stiff line of the garden, and therefore the moment we are free of the garden, as in this case, we have to consider the landscape itself from the point of view of breadth, simplicity, or any other attractions we can reveal in it. Hard lines, ugly fences, needless roads and everything of the kind should be done away with." ("Home Landscapes," page 2.)



**ROCKSPRAY** (*Cotoneaster*). These brilliant-hued Chinese shrubs are becoming more valuable for us every year. The one that stands out best in the landscape or woodland is the tall Indian Mountain Rockspray (*C. alpina*). It gives brilliant color of the fruit in the fall; but for ground effect the best is the Horizontal Rockspray (*C. horizontalis*), and in this large group there are others of prime value too numerous to identify here.

**SPINDLE-TREE** (*Evonymus*). Though we are mainly concerned with tree color we cannot forget the beauty of the common *Evonymus* or Spindle-tree which is seen at its best in calcareous soils. Almost as valuable as our native wild variety is *latifolia*, a very handsome broad-leafed, low-growing tree; this seems to thrive as well as the native. The Winged Spindle-tree (*E. alata*) is fine in color; its rich rosy red in autumn is seen to advantage in the sun.

**SUMACH** (*Rhus*). The Sumachs, a poisonous family if brilliant in color, are often best avoided—especially a common American variety. The Sumach one sees most frequently is the Venetian which is effective in all ways, thriving in the Thames and other valleys. In planting these and like shrubs, manure may well be left out as it induces too vigorous growth; whereas we seek brilliant autumn effects. *R. crotonoides* is one of the finest in color with its various shades of scarlet and orange before the leaves fall, but it is not easy to get a stock in nurseries. The smooth Sumach (*Rhus glabra*) of the eastern United States is a very good color in autumn and there is a handsome cut-leafed form. Other kinds of Sumach little known are coming from parts of the northern world, and the common Staghorn is also very effective in the fall.

**GUELDER ROSE** (*Viburnum*). Among these beautiful shrubs coming to us from the northern world there is no better than our native kind, called in Surrey, where it loves the waterside, the "Water Elder." It is in flower and fruit beautiful, but is seldom grown in gardens. It is best for the waterside or marshy woodland.

**PENNSYLVANIAN BLUEBERRY** (*Vaccinium pennsylvanicum*). In the fall, a bold group of this comes to outshine the Heath and all else on the banks. No words can tell what a fine effect these groups make. It is quite hardy and of easy division and growth in ordinary soil. Of the many shrubs from North America, none are more attractive.

**SOLOMON'S-SEAL** (*Convallaria*). Though this article tells of trees and shrubs it is but fair to this plant to say that it turns a fine color in the fall, and is easy to naturalize in the wild garden, copse, or ditch. It is very graceful in form as well as in flower.

**WILD ROSE** (*Rosa*). The wild Roses of our land tell their own story in fence, hedgerow, and coppice; and beautiful they are in flower and fruit. The American and Japanese kinds are a gain inasmuch as they flower later and give us fine color in the autumn. Of these the best are the Japanese *rugosa*, the Carolina Rose, and the Virginian Marsh Rose, a free and handsome plant for wet places in ordinary soil.

**YEZZO VINE** (*Vitis Coignetiae*). Vines form a great natural family of climbers which garland much of the wood of the northern world, and among them botanists of recent years have included the plants called Virginia Creepers. For thousands of years the wine-giving vines have been known, but few of the wild kinds; and it is only recently that some Chinese and Japanese vines have come into garden use. The king of all for effect is the Yezzo Vine, which climbs the forest trees of the woods of Yezzo and is the finest hardy vine for effective color. It has long been known in one nursery here under another name. The plants were the joint gift to me of two friends—the late Lord Currie and the late Sir Henry York—and seedlings from it I put in all sorts of positions (over Apple trees, pergolas, and hedgerows, on Hollies) and they have never failed to give a superb effect.

*To be followed in an early issue by further notes by Mr. Robinson on Evergreens for Winter Effect; The Spring Garden and False Color, etc.*

## PLANTING STRAWBERRIES NEXT MONTH?

A. RUTLEDGE

**F**OR a good many years I have been potting Strawberries for summer planting of new beds to yield the first season as full a crop as is ordinarily had the second season. Those who, like me, are fond of raising fine fruits in their own gardens may be glad to know the exact process. The "pot-grown" idea for all plants that have to be transplanted is now so generally understood that I shall lay emphasis only on those points wherein I believe my method differs from the ordinary one.

In the first place, I always use 4- or 5-inch pots. The advantage of this size is twofold; drying-out is not so likely, and the root-systems have ample room for growth. At the bottom of each pot I put a little manure; then the pot is almost filled with a carefully composed soil. Sand and light loam are avoided. I sift together rich loam and medium clay, doing the work when both are comparatively dry. This makes a sufficiently strong soil which will hold moisture for a long time. As fast as the pots are filled they are set in shallow water (in old pans and like receptacles) until thoroughly saturated. Then—at the end of June or in early July—I begin the potting.

Taking the pots to the Strawberry bed, I use a trowel to scoop out holes sufficiently deep to accommodate them so that their tops are as nearly flush with the surface of the ground as possible, the purpose in sinking the pot being, of course, to conserve moisture. The most stalwart runners are selected (I am rather fastidious about this choice) and each one is pressed gently down

into the soil of its pot, a small stone being put on the end of the runner next the plant itself in order to hold it in place. A little earth is carefully packed about the roots; sometimes a runner can be lifted with a small ball of roots; its growth will continue rapidly in the pot. It is astonishing how many runners can thus be caught on a small bed.

After potting, the runners must occasionally be watered, especially if drought sets in. Let them grow attached to the parent plants for about a month; then clip off and remove to a situation partly shaded and near water. I use a fence edge near a garden spigot. Here I bury the pots close to one another, packing soft soil against them—being all together they are watered readily. I use a sprinkling can from this time forward, and find that a good sprinkling every third or fourth day in midsummer is sufficient. At this time I may feed each plant a pinch of nitrate of soda to stimulate growth.

The setting in the open garden is done before the middle of August; and, of course, no special directions need be given for that. However, this method works well: dig a narrow trench the length of each proposed row and slightly deeper than the height of the pot, almost fill with water. As soon as this subsides, turn out the plants and set, carefully firming the dry soil, not the wet, about the roots of the young plant and letting the crowns stand above the surface of the ground. Keep the pot soil on a level with the garden soil and you will be safe.

# DECORATIVE IRONWORK

ARTHUR W. COLTON  
AMY RICHARDS COLTON

EDITORS' NOTE: Because of the growing popularity of ironwork as an architectural feature of the modern garden and dwelling, where seemingly it has come to stay, some account of the origin of this ancient art and its application to the every day life of past centuries is not amiss. Most of us like to know the why of things, and even a commonplace object takes on a kind of beauty when invested

with meaning. How much more interesting the little iron cock aloft on the teahouse when we remember that his brethren twirled merrily in the gardens of our continental forebears through all sorts of wars and weathers!

There is a friendly reciprocity between the crafts, and ironwork owes many of its most interesting designs to the garden whose fluent greenery has taken on static form under the skilful fist of the metal-worker—a grille enriched by garlands, a lantern held in place by Laurel or interlacing vines—these things have double interest for the gardener; and, perhaps contrariwise, the gardener, becoming somewhat jealous, took to imitating the static ironwork in his "topiary."

Mr. Colton, with the far-seeing eyes of essayist and poet, and Mrs. Colton, possessing the taste and practical point of view of the trained decorator, have brought their joint gifts to this concise presentation of the history of ironwork, which will be followed in subsequent issues by articles on its present-day uses out-of-doors and in.

## I. THE ORIGINS OF IRONWORK

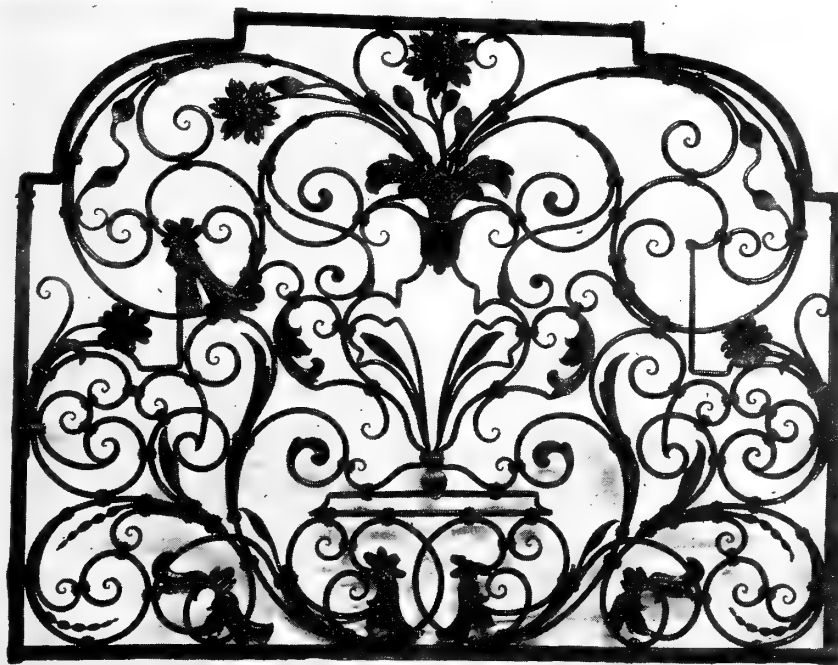
RUSKIN somewhere attempts to give reasons why iron architecture is necessarily bad, but the reasoning seemed flimsy when I read it years ago at a time when Ruskin was probably more authoritative than now. And yet, even now, it cannot be said that iron has won a place in the conscious arts in any way commensurate with its importance in our civilization, which is, commercially if not socially, almost based on iron. There is an increasing demand for decorative ironwork but, still, nearly all beautiful ironwork is old.

There is no definite era to be set for the beginnings of iron in art, nor indeed for the use of iron to any purpose. Its use in some regions is very ancient, although copper seems generally to have preceded it, but very little ancient ironwork has survived by reason of its unfortunate habit of rusting. It is strong but not enduring unless protected. The delicate gold enrichments of the old sword are found where the sword itself is a mere streak of rust. There is a meager amount of Roman ironwork preserved in museums—andirons, hinges, candelabra. Roman furniture was often made of iron, though still more often of bronze; Roman fire-dogs found in Britain are of the same general shape as those used to-day. For the purposes of this article it is best to begin by saying that the revival of artistic ironwork in western Europe—after the crash of the old civilization—seems to have come, in the north, from Scandinavia, which lay outside of the tumult and preserved some arts that had passed thither from Gaul; and, in the south, to have arisen in Spain under Moorish influence.

Spain was the greatest metaliferous country of antiquity. No one knows when the use of iron began there, or that the Catalan forges and anvils were ever dark and silent. Probably there was an unbroken continuity from Celtiberian sword to the Toledo blade. The best forge of antiquity was the Catalan forge.

The Scandinavian came in the unpleasant form of Viking invaders. They devastated the coasts of Europe, but they introduced some forgotten arts. The prevalence in subsequent Scandinavian and German ironwork of various conventionalized animals looks back to this old story. The classic draperies, laurels, vines, and inscriptions, being meaningless to the man of the north, became transfigured into snakes, birds, and other animals that meant something to his superstition; and gnomes and elves took the place of cupids. Teutonic ironwork still maintains this tradition in the relatively greater part played in its designing by animal figures.

W. S. Gardner, one of our chief authorities on the history of ironwork, calls the Middle Ages to the 14th century the "Age of the Blacksmith"; and then, after a period of transition, the 15th and 16th centuries he designates as the "Age of the Locksmith"—the difference between the two crafts being that the blacksmith works while the iron is hot. It is a facile metal then and yields to his swift hammer, but presently resumes its grim resistance; and whatever he does, he must do quickly. Moreover, to the medieval smith, his iron did not come ready rolled in various sections, sizes, and shapes. He had to beat it all out from the rough. Hence there is a kind of interest about a medieval piece of ironwork that modern examples can seldom equal. Every old piece has its own irregularity and peculiar surfaces.



Metropolitan Museum of Art  
OVER-DOOR SCREEN OF FLORAL MOTIF, SEVENTEENTH CENTURY, GERMAN

IN THE 15th century the file and saw began in part to take the place of hammer and anvil, and more elaborate designs became possible. It was the locksmiths, especially the Italian, who had already developed traditional skill in this sort of work. Hence the term "Age of Locksmiths" for the 15th and 16th centuries. The accuracy of the file and saw makes possible more intricate design and more minute detail, but there is a spontaneity and virility in "forged work, when



FLOWER AND VINE MOTIF ON FRENCH FIREBACK OF THE SIXTEENTH CENTURY

Metropolitan Museum of Art

there is no time for copying or measuring a design, save only by the eye, which we never find in the more ornate and more mathematically perfect work of the locksmith, who labored minutely upon his material when cold." (Ffoulkes "Decorative Ironwork.")

The reason why so much of the medieval ironwork that survives had something to do with doors—such as hinges, locks, knockers, defensive and strengthening bands and bosses—is perhaps that the doors were commonly church doors; also that the fixtures were hard to remove and, if removed, were good to use again for a similar purpose. Even so, few of the examples given by Gardner antedate the 12th century. One notices first the prevalent crescent-shaped hinges—the reason for which no one seems to know—and then the bands elaborated in scrolls and fleur-de-lis.

The use of stamps or dies seems to have been discovered in the 13th century. The hinges on the Porte Ste. Anne, Notre Dame, are thought by many to be the high mark of supreme smith-work, and it is difficult to see how they could have been forged with only the hammer and stamp, so intricate is the ornamentation. They mark the climax of ironwork in the 13th century.

There are ornamental lock covers and plates of the 13th century, but it was not until the end of the 14th century that the locksmith became recognized as past master of delicate work on cold iron with chisel, drill, saw, and file. He was called upon for all kinds of elaborate metal work. The Florentine locksmiths were especially famous, although the specimens of Italian locksmithing which have come down to us are in most respects inferior to the French. The "splayed" lock, peculiar to Germany and the Netherlands, is capable of especially graceful design. Locksmithing reached its zenith in the age of Francis I, and after that tended to over-elaboration, microscopic detail and incoherence. Amorini and mermaids, garlands, scrolls, and masks, were crowded in until they crowded out all distinct sense of design. Several French kings before Louis XVI were enthusiastic locksmiths.

Of the rest of the furniture of the door,

besides hinges and locks, there is a history in ironwork, partly similar, and partly peculiar. There was an extraordinary range of design and ornament of keys, knockers, and door handles. That the key was so often symbolic is perhaps one reason why it was so elaborately ornamented, and the design of the bow or handle is apt to be significant. Regarding door-handles "it is a curious fact that, while the hinge and the grille were developing along what may be called national and indigenous lines, the door-handle owed much of its intricacy of decoration to oriental influences; why, it is difficult to determine." (Ffoulkes). The earliest form of door-handle is a ring. Door-knockers were usually either hammer shaped, or a ring—sometimes the ring is bent to a shape like a lyre.

The Renaissance influence radiated from Italy in ironwork as in all other arts. "Italy stood for magnificence, for sunlight, and for the Roman past—so in the later years of the 15th century, and wellnigh for two centuries more, the Italian influence was dominant in Europe."

As in the other architectural and decorative arts, so in ironwork, the tendency from the 16th century on is toward more elaboration and eventually, incoherence. Design fades away before technical "stunts," and modern taste tends to find greater charm in the earlier work. The hinge was the least affected by this riot of decoration that passed over Europe in the 15th and 16th centuries. The tendency was rather to conceal it.

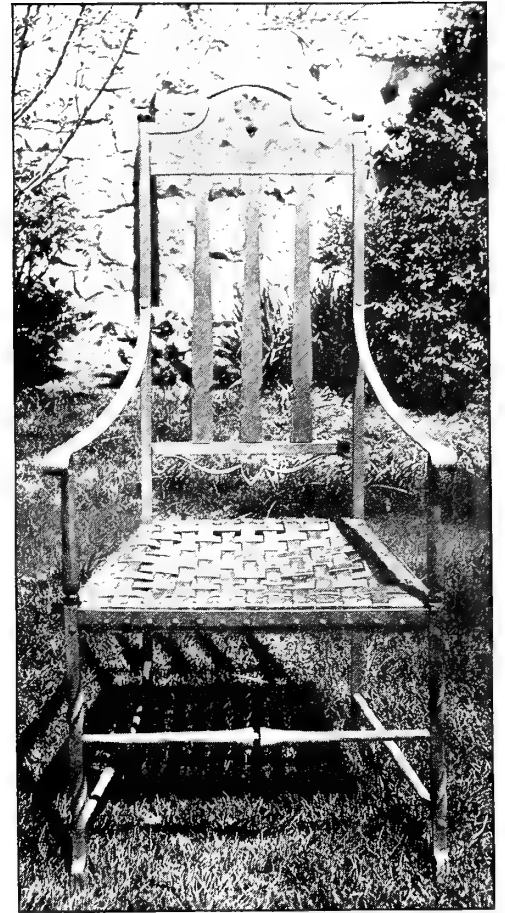
THERE are no examples of scrolled iron grilles before the 12th century. The earlier church screens were pierced marble or bronze. It was the Norman cathedral that developed the northern type of iron grille to enclose its choir and side chapels, and the introduction of French Gothic into Spain in the 13th century (Burgos, Toledo, and Leon) gave a new impetus to the Spanish ironworker through the greater demand, in this type of church, for iron accessories. But the Spanish grilles, or rejas, of the Romanesque churches (Barcelona) were structurally composed of upright bars, instead of the northern scroll work rolled from square or flat bars. The scroll screen is a



TULIPS ON A SIXTEENTH CENTURY DUTCH STRONG BOX

Metropolitan Museum of Art

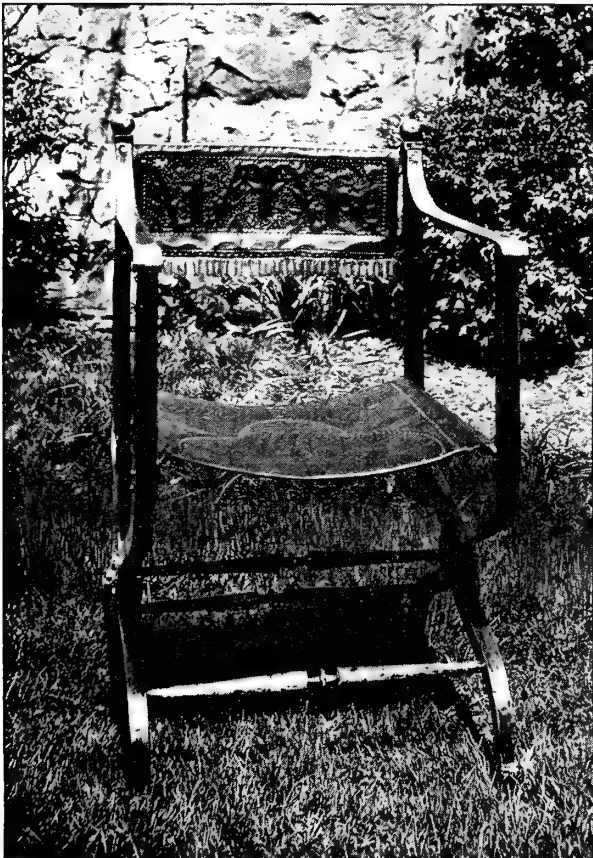




## Garden Furniture of Antique Spirit and Modern Craftsmanship

Designed and Decorated by  
Morgan Colt

Polished or painted steel and copper have gone into the making of these pieces, admirably staunch and yet with the delicate grace of line that best befits a garden

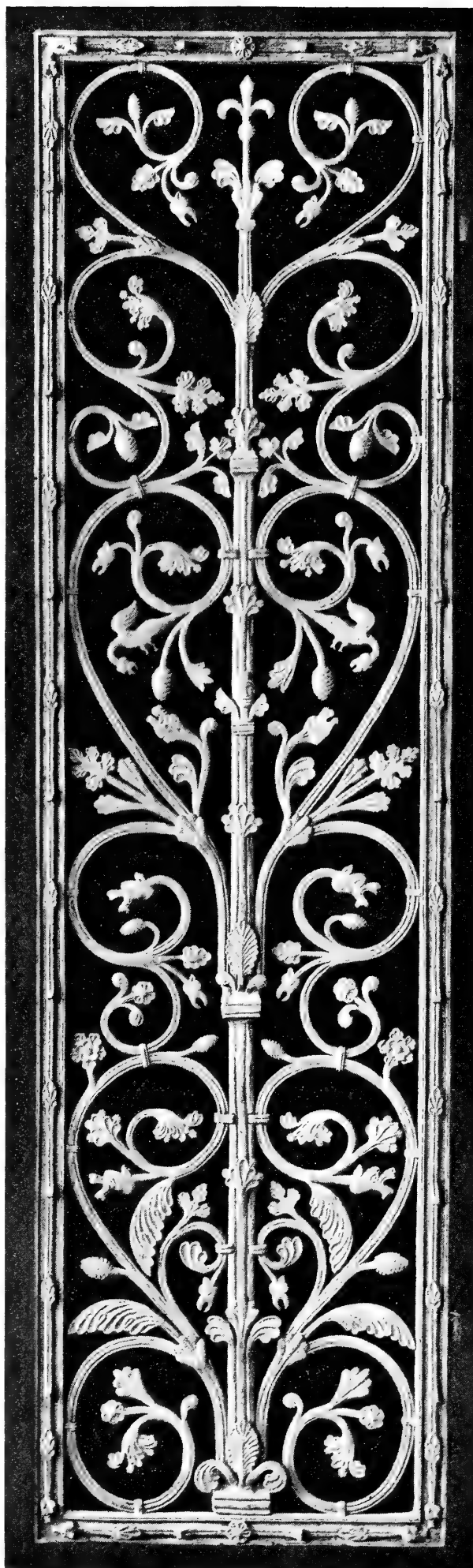


natural development. The easiest design possessing character and charm which a smith can make with a flat iron bar on his anvil, is a scroll. It is more difficult to hammer out the long bars of the Spanish vertical reja, though it looks simpler.

"Most ubiquitous, possibly, of all iron accessories in Spain is the window reja" (Byne's "Spanish Ironwork"). Grilles, railings and gates have the purpose of protecting something without preventing one from looking through. Church grilles and railings surrounded or shut off chapels, altars, and tombs. Hence the church grille prevails north as well as south. Domestic window grilles are not in such demand in northern Europe, where warmth in winter is a prime essential, as they are in Italy and Spain, where windows have to be left open at night. There window grilles are necessary. The finest examples and most varied designs seem to be Spanish.

Beautiful iron beds were made in the 16th century, which might well be copied now; and iron chairs also, and tables. The throne presented to the Emperor Rudolph by the city of Augsburg in 1574 was of iron. But the furniture of the hearth is a richer field—andirons, the earlier work plain and the later ornate—innumerable cooking utensils and devices. Before the age of furnaces and steam heat there was an age—a not very long one—of stoves, and before that a very long age of open fire-places. One almost forgets that all the cooking was done there, but the old andirons remember it. All the old hearth ironwork of the north remembers the old times when the life of the house centred at the hearth, and it is mainly blacksmith work. There are cast fire-irons of the 15th century, but cast iron did not come into general use until the 16th century. Candelabra were ecclesiastical as well as domestic. The hanging candelabra in Flemish and German churches were especially elaborate.

If the church was the earlier chief patron of ironwork in art, and next the kings and nobles, in the 15th and 16th centuries the burghers became powerful rivals. The streets of the free cities in Germany and Flanders were filled with ornamental ironwork, signs and sign arms, lanterns, lantern holders, and weather vanes. In Italian cities like Florence and Siena the cressets, horse rings, and banner holders are notable. But ironwork was not on the whole so



Metropolitan Museum of Art

CHANCEL SCREEN, FIFTEENTH CENTURY, FRENCH GOTHIC DESIGN

Garden influence is apparent in the leaves, flower and cones of this ornate and yet beautifully restrained pattern that spirals upward into ever lighter form in true vine fashion

popular a craft in Italy as in Germany, where ornamentation seems to have been lavished on well covers, for instance, for the mere joy of decoration.

Just as an Indian arrow-head or an antique seal opens a sudden vista into the past and reminds us that at one time on this continent every man was an archer; as an engraved gem reminds us that at another time, about the Mediterranean, every man of substance wore a seal ring; so does an old iron-bound chest recall an age when bank vaults and steel safes were not. The huge complicated locks of the old chests and caskets suggest that no burglar could ever have thought of attempting to open the chest by way of the lock, when it would be so much easier to cut through the wood or leather. Spanish workmen often used stamped leather with ornamental ironwork at the corners.

In ironwork generally in Germany and Austria there was more use of gilding and various colors than elsewhere, perhaps for the same reason of taste, whatever it may have been, that made the house fronts of old German cities so polychrome. Heraldry, too, played a larger part there in ironwork design; though indeed nearly all ironwork for interior decoration in the 15th and 16th centuries was painted and gilded. John Evelyn, the diarist, speaks of the gilded iron beds he saw in Italy.

Sixteenth century iron furniture was often damascened; the process seems to have come through Spain from the Moors.

Another characteristic of German, Swiss, and Scandinavian ironwork is the interlaced knotted motifs—the same interlaced patterns that appear in illuminated manuscripts and in Scandinavian and Irish woodcarvings.

**D**URING the Renaissance and through the 18th century, decorative ironwork played an important part in the gardens of both northern and southern Europe, but especially in Spain and Italy where the climate was more suited to life out of doors. The skill of designer and craftsman was lavished on gates, railings, window grilles, well-heads and weather-vanes. Often the arms of a noble house were wrought into a pair of entrance gates as a central motif, and remain as the only memorial of a family which has long since disappeared and been forgotten.

# AMONG THE NEWER GARDEN BOOKS



LUCY EMBURY HUBBELL



**A**LL the romance of gardening, the long chronicle of trial and achievement is held between the two covers of that very solid and illuminating recently published volume, the "Catalogue of the Library of the Massachusetts Horticultural Society," "believed to be the oldest, most complete, and best organized strictly horticultural library in the world," containing more than twenty thousand books and, incidentally, some eleven thousand seed catalogues. Begun in 1829 and enriched by the slow accumulations of nearly a century, the interest and the significance of this great collection of garden literature can scarcely be overestimated, recording, as it does, the thought and effort of many men in many climes in this primal field of human endeavor. A mere turning of the pages of this book (a practical bibliography of gardening now available to the public at a cost of ten dollars), reveals a fascinating diversity and scope—a diversity and scope echoed in lesser degree in the half-score or so books, newly published, which have recently reached our desk.

**O**F THESE let us start with Richardson Wright's "Truly Rural" (Houghton Mifflin Co.)—a perfect cocktail among garden writings with a delicious extra-special flavor quite its own. The reader, whether gardener or just mere man, closes its gay green covers with an appreciative snap—never a dull moment, many a mirthful one, and some that leave him a purged and better being. In characteristically modern fashion, seriousness is overlaid with a light veneer of flippancy, redeemed on this occasion from any suggestion of cheapness by the nimble wit of the author who leads us from laughter to soberness with masterly skill and leaves us—after too short entertainment—in stimulated mood. Nor is Mr. Wright merely a magician of words—he knows his plants—is he not specializing in Columbines, and has he not visited Georges Truffaut!

By way of appetizer comes Katherine Morse's first bound group of poems linked under the title, "A Gate of Cedar" (The Macmillan Co.), a happily chosen title to lure the lover of outdoors who finds gratification in the light lyricism of "In the Orchard," "Birds," "Colors," and the "Maple Tree."

**M**ORE solid nourishment is to be had in the recent edition of "The Trees of North America" (Houghton Mifflin Co.) revised with the punctilious exactitude that characterizes all of Prof. Sargent's work. Since its original appearance in 1905, much additional information has become available, research has gone on apace in the South and Southeast, and the Craetagus family in particular has been the subject of considerable study, with the result that eighty-nine species (besides many recently distinguished varieties) have been definitely added to the list of trees, making a total of seven hundred and seventeen. The nomenclature conforms to the standards determined upon by the International Congress of Botanists (Vienna 1905, Brussels 1910). The manual has in other ways been so thoroughly gone over and brought up to date as to constitute practically a new volume which represents the fruit of the author's forty-four years' continuous study of trees. It is a constructive contribution, undisputedly holding first rank in its field.

**F**OR mature students there is meat aplenty in Frank A. Waugh's "Textbook of Landscape Gardening" (John Wiley & Sons, Inc.), and for youngsters in A. B. Stout's "Gardening, An Elementary School Text Treating of the Science and Art of Vegetable Growing" (World Book Co.), the salient significance of both lying, it seems to me, in what gardening (using the word in its full sense) as a conscious, organized force is beginning to

mean in our national life. To learn that in 1919 two million and a half children were actually and actively engaged in learning to plant and till the earth, that even in congested New York space was found (1917) for eighty thousand little gardens, that the state of New Hampshire has made the teaching of gardening part of the elementary work of all her schools—such facts as these are slowly laying an inconspicuous but none the less sound substratum upon which to build a more fruitful national life. Though Dr. Stout's textbook was prepared to meet the special needs of these juvenile citizens-to-be, it furnishes succinct and safe guidance also for the grown-up who has just become aware of his garden and its potentialities.

Despite the fact that we might question some of his generalities, Prof. Waugh's latest book on landscape gardening, "designed especially for the use of non-professional students" impresses us not only as a very serviceable working manual upon which to base group study but as a broadly educational conception of the subject. Without in the least minimizing the importance of the personal garden, the far-reaching civic aspect and obligation is brought forcefully to the fore—a timely reversal of emphasis unless swiftly spreading towns and cities are to be left to utter barrenness. Wisely, too, the student is led to serious contemplation of our native landscape for basic lessons in his art, and Prof. Waugh strikes truth when he says that "that native landscape not only forms the foundation of landscape gardening but also supplies a reservoir of beauty upon which the human race has drawn from the beginning of time and which is now of the utmost importance to our national culture."

**H**EARTY greeting must be accorded Julia Lester Dillon's "The Blossom Circle of the Years in Southern Gardens" (De La Mare Co.), a sturdy little pioneer in the scant family of garden books for the South. Not only will it prove a boon to the individual gardener now struggling somewhat blindly with the heretofore almost uncharted conditions of growth below the Mason and Dixon Line, but as a harbinger of the reviving interest in gardening throughout the "new South" it carries gratification to gardeners everywhere. It is not so much a matter of how or what to plant as *when*—this is the crucial difference upon which gardening success in the South hinges. Out of an extended and intelligently recorded personal experience Mrs. Dillon offers help to her fellows; and, remembering the parched and spindling lawns of central Georgia, we feel moved to give her a special vote of thanks for Chapter XIX with its practical suggestion on "The Making and Care of Southern Lawns."

**T**WO volumes have recently been added to the Scribner "Home Garden" series which, despite their pleasant exterior, we regret as not being generally applicable to conditions in this country. "Bulb Gardening" and "Rose Gardening" both by Mary Hampden, with creditable color plates by Maud A. West, are written from the viewpoint of the Britisher who gardens under dissimilar and perhaps more propitious climatic limitations. Though the reader comes upon some treasure among the carefully arranged lists, he feels nevertheless that Miss Hampden is an interesting personage of the past rather than a constructive prophet of the future.

**T**HE ORCHARDIST will find a genial ally in Benjamin Wallace Douglass whose latest book on "Fruit-Growing" (Bobbs-Merrill Co.) has all the earmarks of authority and is a companionable sort of volume as well.





# “COMFORT ME WITH APPLES”

JOHN L. DOAN

First Advance on Fall Planting for the Home Orchard or Grounds—Considering Merits and Adaptability of Varieties for Various Localities



**T**HE apple is the fruit that satisfies. We may tire of the orange and banana. The berry season that we welcome so eagerly may pass with scarce a sigh. But, give us a real apple each day—a Baldwin, Stayman, Grimes, or McIntosh—not a cork imitation masquerading under the name Ben Davis or some alias of that variety) and it will never wear out its welcome, though it be a daily guest through all the year.

Not only is the apple the prime favorite as a dessert fruit, but it is preëminent for culinary uses. Sauce, butter, jelly, pudding, fritters, pie, are only a few of the countless good things prepared from it that would fill a fair-sized cook book.

The Apple tree is beautiful for a roomy lawn. It is one mass of fragrant blush and white bloom in the spring; its abundant and hospitable shade is most welcome in the summer; and it is a delight to watch the small green fruits enlarge and then take on shades of yellow and red as they ripen.

## What Soil and Site?

**T**HERE are more Apple trees grown in the world than any other kind of fruit tree. This would be impossible were the Apple not adapted to a wide range of soil and climate conditions. The Apple in fact thrives from Carolina and Arkansas to Quebec and British Columbia.

Bearing age and length of life vary greatly with soil and climate. In irrigated regions and light soils Apple trees usually bear earlier and die younger. The varieties marked as very young bearers are likely to bear a little four or five years after they are planted, under average northern conditions. A majority of varieties will begin bearing about eight years after they are set out and reach full bearing in fifteen to twenty years. They may bear for fifty or a hundred years in the North.

It flourishes in the heavy red soils of the Piedmont Region, the sandy loams of Long Island, and the volcanic ash of Oregon. The ideal apple soil is “sugar tree land”—the deep, strong, well drained, gravelly loams on which Sugar Maples abound. The land best adapted to white potatoes is fine apple soil, and some mountain lands half covered by loose stone produce excellent apples.

Do not try to grow Apple trees in wet soil, or on low ground conspicuously subject to frosts, or on land where bed-rock or water-tight soil lies near the surface. But, if you have the room and a soil different from the forbidden ones just mentioned, for a home supply it is well worth while to plant varieties suited to your conditions and give them a chance to grow.

## Planting Times, Distances, and Ages

**I**T IS always safe to plant in spring; but autumn is a rather better time to plant the Apple, except in dry or severe climate or exposed situations. However, don't prune fall set trees until the next spring.

Give the trees plenty of room. For such weak growers as Yellow Transparent, Oldenburg (Duchess), and Wealthy, 30 feet apart is ample and 35 feet suffices for Jonathan, Grimes, or Williams; but Baldwin, Rhode Island Greening and Paragon need all of 40 feet, which is counted the standard planting distance in the North Atlantic States. In some other sections the trees do not grow so large and require less room.

Intercrops of vegetables may be grown for several years; and a very resolute person may plant early bearing varieties of Apples half-way between the permanent trees as “fillers,” to be kept until the former need all the room. But it is hard to find a person with the courage to cut out the fillers “that are bearing so well,” until they have crowded and injured the permanent trees.

Don't lose time by trying to save it. Many set out four-year trees to hasten the bearing of the orchard, only to see them outstripped by thrifty trees, one or two years old, set in the neighbor's orchard. It you wish to train the framework of the tree entirely yourself set one-year trees. If you would prefer to have the framework already started, plant two-year trees.

## Early Pruning and Later Training

**D**ON'T have a long, bare trunk, unless the Apple tree be on the lawn; leave the lowest limb as close as 18 inches or 2 feet from the ground. Train the top to form three to five main framework branches. These should be evenly spaced around the tree and should come out at different heights, to lessen the danger of splitting. It will usually take two or more years to start a well distributed framework.

A one-year Apple tree usually has no branches. The first spring shorten it back to a height that will leave several good buds near the top. The uppermost of these will usually grow into a leader and the others will be more spreading. The second spring remove branches that are not needed for the framework. Leave the leader rather long; but shorten the other branches retained to two buds, letting only one shoot grow from each. New branches will start from the leader and suitable ones of the first and second years' growth (distributed along at least 18 inches of the length of the trunk) are selected for the framework the third spring. If needed, additional framework branches may be grown from the leader the third year.

If a two-year tree be planted it will have some framework branches already. The first spring give it the treatment the one-year tree received the second spring, and the second spring the treatment the one-year tree received the third spring.

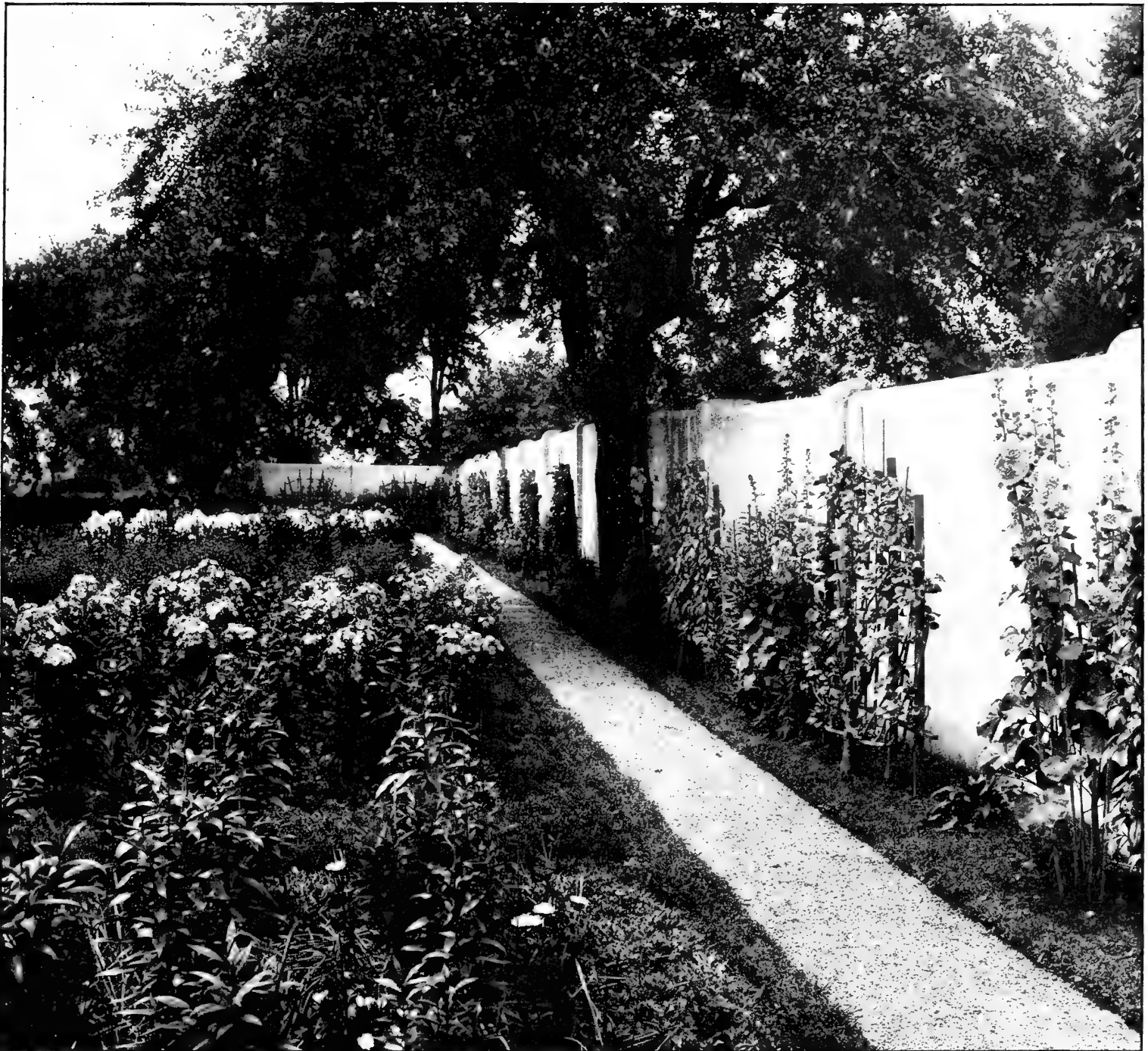
If you wish your trees to begin bearing young, do only what trimming is necessary and do not prune back the framework branches except to secure stockiness, to prevent forking, or to keep the most vigorous ones from outgrowing the others. Heavy pruning delays bearing.

If you plant fillers do not prune them at all, if you can avoid it; for no pruning whatever will bring earliest bearing and the training of the framework of the temporary trees is not so important.

Some growers cut out entirely the leaders of the permanent trees, after their framework is established, to get a low, open, spreading top. Others let the trees take their natural form, except to correct faults of habit. Either method may give good results.

Don't be too tidy. While the trees are still small, many crooked, stunted branches may start on the framework. Of course, you will be eager to cut them off; but refrain, for they will be the first branches to become fruit spurs and bear.

The leading shoots of some varieties, as Northern Spy, that tend to grow too upright, should be headed down to outside buds, or, still better, to small horizontal branches growing



Mattie E. Hewitt, Photo.

#### DIGNITY AND IMPUDENCE IN THE GARDEN

The ideal Apple tree of fancy is here translated into arresting reality so dominant in this garden scene that the dwarf cordons on trellises along the wall seem mere perky upstarts by comparison. Long found and favored in continental gardens because of the interesting variety furnished in small space, the cordon Apple is less at ease in the American garden where conditions of growth are unlike; and, truth to tell, it requires closer attention and more constant pruning than most of us are willing to give. Garden of Mr. D. E. Seybel, "Hillandale," Portchester, N. Y.

outward, to make more spreading tops. Varieties that are naturally spreading, as the Rhode Island Greening, do not need such treatment. The framework branches of all varieties will spread farther away from each other as the trees grow older. After the framework is started, the beginner is much more likely to prune Apple trees too much than too little. *If in doubt whether to save or remove a branch always leave it.*

#### Keeping Up With Events

**T**HE young Apple trees should have the cultivation and the cover crop treatment recommended for the bush fruits in the April number of THE GARDEN MAGAZINE. Usually the same treatment will give the best results for bearing trees, except where the ground is rough, stony, or inclined to wash.

However, good results may be obtained from bearing trees in sod, if the grass be mowed and left where it falls.

Neither stuff nor starve your trees. If the young ones make a yearly growth of two or three feet, no fertilizer should be used. If trees of bearing age have dark abundant foliage, grow a foot per year, and produce well, do not fertilize. If trees make less growth and have pale foliage they need nitrogen and may need other fertilizing elements. Usually nitrogen is the element most needed by under-nourished Apple trees.

Manure is perhaps the best fertilizer for them. It may be applied in autumn, winter, or early spring and worked under as soon as the ground is fit. If used each year, apply 100 to 125 pounds per square rod. This would be from 400 to 750 pounds to a full-grown Apple tree depending on the rate of application and the planting distances.

If the soil has sufficient organic matter, a fertilizer containing 6 per cent. of nitrogen, 8 per cent. of phosphoric acid, and 5 per cent. of potash may be used instead of manure, and applied at the rate of from 12 to 20 pounds per full-grown tree, in early spring, and worked in. Nitrate of soda applied four weeks before bloom may greatly increase the same year's crop, by invigorating the tree so that it holds its fruit better.

### Troubles That May Threaten

THE Apple has more insect enemies and diseases than our other common fruits, but relatively few insects will attack trees; and parasites will be equally busy attacking the insects themselves in turn.

Such enemies have in fact greatly benefited fruit growing by compelling us to prune, spray, and take better care of our trees. Never before have spraying equipment and materials been so efficient. Never has it been possible to grow better apples. Manufacturers of spraying equipment and materials give clear, concise directions for the control of these enemies, which need not be enumerated here.

If, from any cause, patches of bark should die on the trunk or branches of the trees remove all diseased and injured tissues with a strong-bladed knife and what other tools may be needed; then coat all parts with a rather thick paste of dry bordeaux and water, carried in a wooden or earthenware vessel, applied as whitewash would be, repeating this application each spring and fall until the wound is healed. The common practice has been to use lead paint, but there seems to be evidence that moisture and disease germs get beneath it.

Fire blight is not usually a serious danger to Apple trees. If it should appear, sow the ground to Buckwheat at once (about a pint to the square rod), to check growth. It is common to cut off the branches as fast as they show the blight, well below where the infection can be seen, disinfecting the tools and wounds and burning the severed branches. But the sap is apt largely to neutralize the effect of the disinfectant, and there is danger of spreading the disease by trying to control it. It is usually safer for the amateur to leave it alone until time to gather winter apples, when the disease will be in its resting stage. At that time cut out and burn all affected branches. A thorough

application of the winter strength lime-sulphur spray usually affords a sufficient disinfection for the wounds.

### What Varieties to Plant

THIS is a big problem, with different local answers, and lists can only be suggestive and must omit many meritorious varieties. The right way is to study, list, and then consult the county agricultural agent and your state experiment station. Two general lists running through the season are here given. The first is for the Baldwin Belt—New England and westward, and the second for the Stayman Belt—New Jersey, Maryland, and westward. The varieties are given without regard to their commercial value, because home quality is our chief consideration in this series of articles.

Those marked "T" should *not* be purchased from the nursery, but be top worked on some healthy vigorous variety, such as Paragon or Northern Spy.

FOR THE BALDWIN BELT: *Yellow Transparent*, a very young bearer, very early in season; excellent culinary variety, but blights badly. *Red Astrachan*, reliable old culinary variety; red. *Early Harvest*, excellent dessert apple; yellow. *Oldenburg (Duchess)*, immediately after Red Astrachan; very young bearer; good culinary variety; red. *Primate*, superior dessert variety; long season; yellow. *Gravenstein*, excellent dessert and culinary variety; season very long; uncertain bearer in some localities; yellow and red; not very healthy; T. *McIntosh*, beautiful, excellent, red dessert variety; in season with Maiden's Blush and Wealthy, which are also good. *Fall Pippin*, excellent dessert and culinary variety; yellow; in season with McIntosh. *Tompkins King*, superior dessert and culinary variety; not healthy; T. *Hubbardston*, excellent dessert variety; brownish; not very rugged; T. *Esopus (Spitzenburg)*, excellent dessert variety; not healthy nor reliably productive; T. *Rhode Island Greening*, excellent culinary and good dessert variety; green. *Northern Spy*, a tardy, but abundant, bearer of very superior dessert and culinary quality; red; a very healthy vigorous stock for other kinds. *Baldwin*, most popular variety; a rather tardy but abundant bearer; good dessert, excellent culinary variety; red or yellow and red.

FOR THE STAYMAN BELT: *Yellow Transparent*. *Red June*, a choice dessert variety in season with Yellow Transparent; hard to get. *Red Astrachan*. *Early Harvest*. *Oldenburg (Duchess) Williams*, beautiful choice dessert variety; red. *Primate*. *Wealthy*, very young bearer; excellent culinary and fair to good dessert variety; beautiful red. *Maiden's Blush*, good culinary variety; yellow with blush; excellent for jelly. *Fall Pippin*, in season with the two preceding varieties. *Smokehouse*, good dessert and excellent culinary variety; a favorite for apple butter; dull red. *Grimes*, standard of excellence as dessert variety, also a choice culinary variety; not healthy; golden yellow; T. *Stayman*, unexcelled for culinary and dessert purposes; red. *Jonathan*, very young bearer; excellent dessert variety. *York Imperial*, good cooker and keeper. *Delicious* and *Golden Delicious* are very good autumn or early winter varieties. *Yellow Bellflower*, *Newtown*, *Mother*, *Fameuse*, *Chenango*, and several other varieties are very desirable kinds in some localities.

## ORCHARD FACTS FOR READY REFERENCE

—Apples lying on the ground quickly collect bacteria, and frequently spread fungous and insect pests.

—It is claimed that the farther north the apple is raised the longer it will keep.

—Plant standard Apple trees 40 feet each way. Peach or Plum trees may be used as fillers between them.

—The bearing life of the Apple tree is from 25 to 40 years, the Pear, 50 to 75 years; and the Plum, from 20 to 25 years.

—The time to pick pears is when the stem readily parts from the branch when the fruit is slightly lifted.

—The Pear orchard does best when allowed to grow up in sod. Slow and hardy growth in sod renders Pear trees more resistant to disease.

—Blue-grass makes a good sod for the Pear orchard.

—Thin plums the same as peaches.

—Plums require a light, open soil and subsoil.

—Cherries are most successful in light, open subsoils.

—The Quince is easily propagated from cuttings.

—Cultivation is more essential in the Peach orchard than either pruning or spraying.

—Peaches should be thinned to at least five inches apart; for first quality of fruit from six to eight inches.

—The Peach does not require fertilizing until it has set a crop. Then fertilizers should be applied freely in order to maintain the vigor of the tree.



# DIVERSIFIED GARDENS OF CLEVELAND, OHIO

KATE B. BURTON

**I**N AND about Cleveland, gardens of many sorts may be found and the little group here presented contains some happy examples of widely varying types, from the "farmhouse" garden among the hills to its more sophisticated fellow along the shore of Lake Erie. Such divergent treatments may hold illuminating suggestion for gardeners elsewhere.

Cleveland was originally laid out by one Moses Cleveland, an engineer for the Connecticut Land Company, which had purchased a large portion of the Western Reserve from the State of Connecticut. The spirit and possibilities of this untrammelled region must have been immediately sensed by the engineer, who evidently had remarkably enlightened ideas as to the width of streets and other matters of city planning.

The discovery of iron ore in the neighborhood of Lake Superior and the construction of the railroads gave the city a tremendous industrial impetus, and after its master minds had achieved wealth, they turned naturally to the creation of beauty in and about their homes.

Originally Euclid Avenue was the Ultima Thule when it came to the choice of a dwelling place, but smoke followed on the heels of prosperity and in order to escape from its evils, suburbs were developed in every direction.

At present the only garden of any importance left in the city proper is that of Mr. F. E. Drury which lies on the opposite side

of Euclid Avenue from the residence. Charmingly laid out by Vitale, it will soon be only a memory, for Mr. Drury intends moving to the country.

Much may be said in favor of a water view, as Mr. W. G. Mather's place on the Lake Shore Boulevard testifies. The side away from the water has its pergola, formal beds, and pleached walk. Across the road is the wild garden, unforgettable if seen when the *Mertensia* is abloom in May.

South of the city is a hilly district once owned by the Shakers. This has been divided and subdivided, laid out with boulevards, and built up extensively. In this neighborhood is Mr. Warren Bicknell's home, which has been cleverly landscaped by featuring the different levels and by the introduction of an exceptionally attractive pool.

Turning east again on Mayfield Road, we come to the Prentiss and Severance (see below) estates, too large to be counted in "suburbia" as they cover many acres. Both possess the natural advantages of rolling ground, water, and fine trees.

On the edge of a high bluff at Willoughby Mr. Sherwin chose a site for his farmhouse with a marvellous view across the Chagrin Valley, strongly reminiscent of the Berkshires.

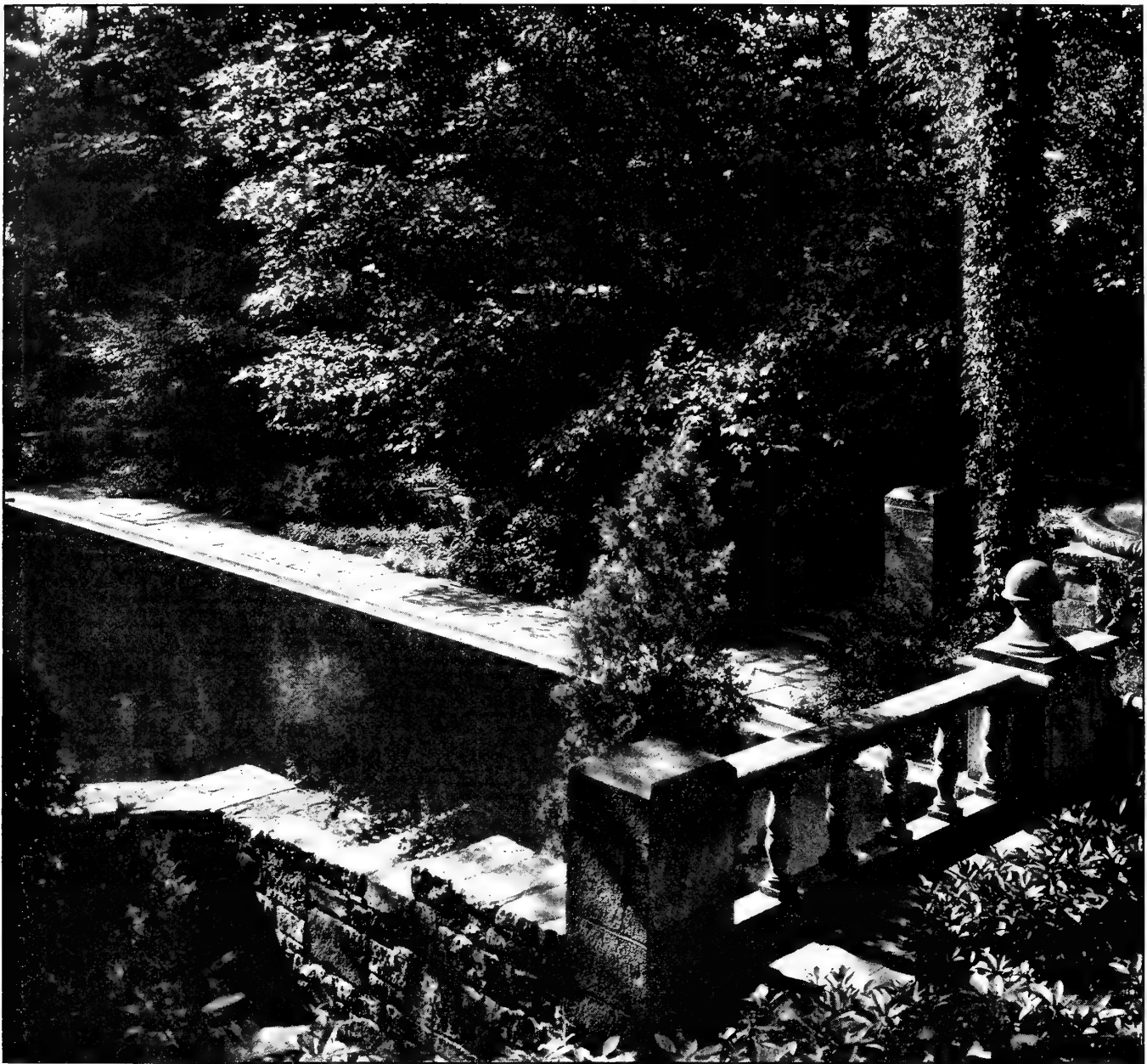
When the Cleveland and Shaker Lakes Garden Clubs entertain the Garden Club of America, these representative gardens and others equally attractive become a Mecca for the visitors.



*Clifford Norton, Photo.*

## GARDEN OF MRS. JOHN R. SEVERANCE, MAYFIELD ROAD

Where shaded walks and the cool tinkle of falling water offer refreshing suggestion on the hottest of midsummer days



*Clifford Norton, Photo.*

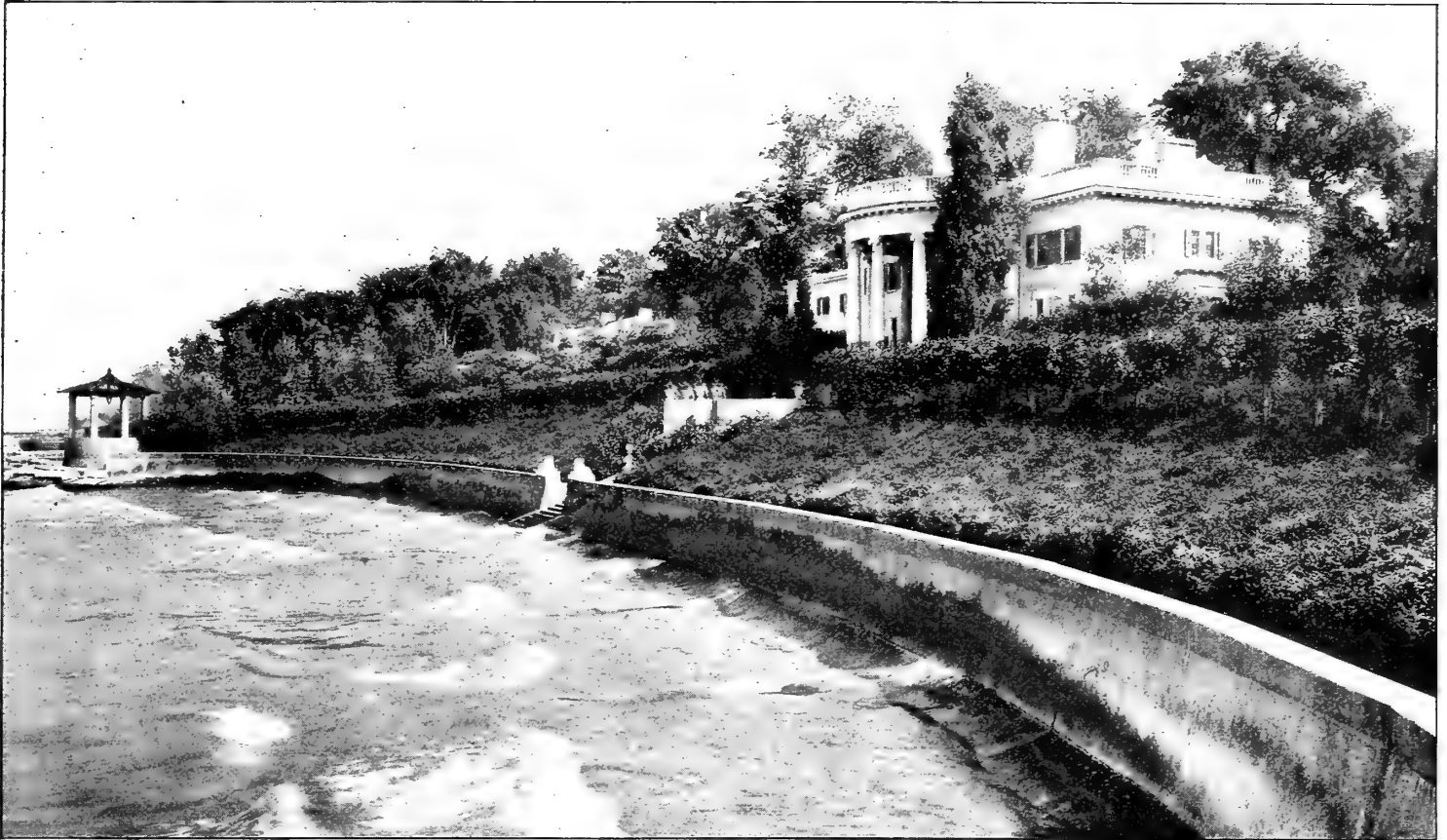
IN MRS. WARREN BICK-  
NELL'S GARDEN, EUCLID  
HEIGHTS

The pool is a focal feature and, despite certain natural luxuriance, this garden is characterized by dignity rather than abandon. Olmsted Brothers, Landscape Architects



GARDEN OF MR. F. E.  
DRURY, EUCLID  
AVENUE

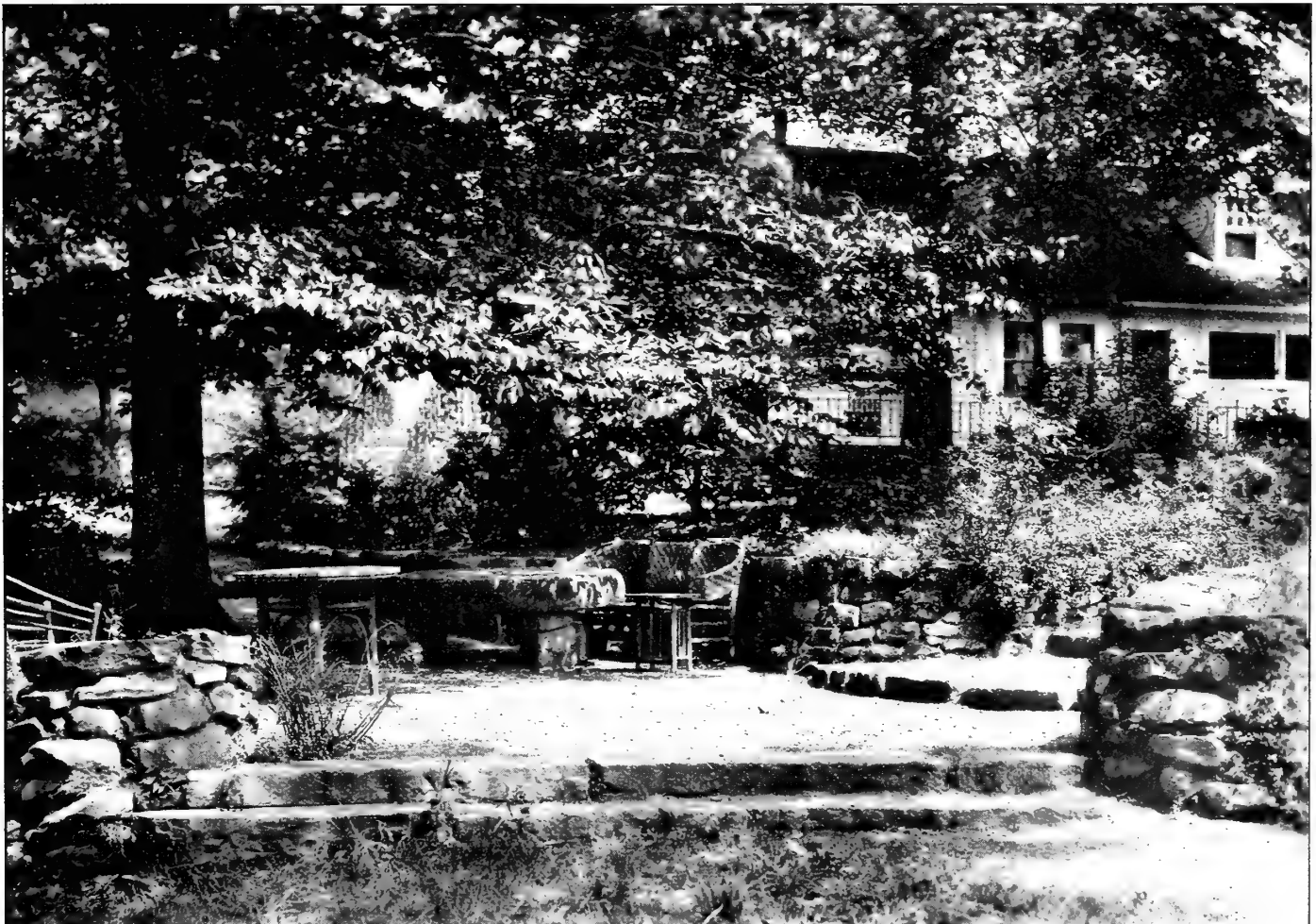
A spacious teahouse (at right) overlooks this "city garden," designed by Mr. Vitale in a manner that graciously lets us forget the city



J. F. Knoblock, Photo.

HOME OF MR. W. G. MATHER, LAKE SHORE BOULEVARD

Barberry stalwartly rims the sea-wall, presenting a solid front to winter winds and as beautiful in a coat of icy spray as in its summer green; a pleached walk runs just above



Hilderbrand, Photo.

THE "FARMHOUSE" GARDEN OF MR. JOHN SHERWIN, WILLOUGHBY

Informal planting with a casual air of having, like Topsy, just grown is admirably in harmony with this type of dwelling which wears a friendly and welcoming aspect



# THE SINS AND VIRTUES OF THE MOLE

CHARLES D. DAVID

Checkmating Nature's Gimlet in Seed-bed, Flower-border, and Lawn

**T**HE man owning a velvety lawn, a pet Tulip bed, or a vegetable garden, sometimes wonders why moles were ever created, and finds no answer, unless he concludes that they are a part of the primal curse of the soil, along with the "thorns and thistles," and the "sweat of the brow"—just something to keep us reminded of the far-reaching mistake our first parents made in the Garden of Eden so long ago.

Wherever the mole population is numerous, there is an immense amount of damage done where seeds are planted, bulbs are set, or where a smooth sward is desired. It is a hard matter to convince the irate gardener that moles do not seek vegetation of any kind, but subsist entirely on animal food, though that such is the fact has been proven beyond the shadow of a doubt. In law, the mole might be regarded as an "accessory before the fact," as in his everlasting search for earthworms, he opens up a convenient runway down a row of sprouting seed for the field-mice and other small vermin who follow along and commit the actual crime of eating the seed. Naturally, the mole seeks soft, loamy soil for his tunneling operations, and this leads him to gardens and flowerbeds, where his prey abounds, and in his careless digging, he displaces bulbs, leaves roots of growing plants exposed, and buries seeds so deep that they fail to germinate. In this way he scatters destruction in his path, and makes himself a pest to be reckoned with. How to get rid of him, is the question often perplexing the gardener.

Traps set at the opening of their tunnels, may account for a few vacant chairs in the mole family, but the number destroyed in this way is negligible compared with the hundreds that sometimes infest certain localities. The Agricultural Department at Washington has given the subject careful attention, and, after much experimental work, has decided that poison is the only effective method of getting rid of the pest.

Unroasted peanuts, first dipped in the white of an egg and then liberally sprinkled with paris green and allowed to dry; or raisins rolled in strychnine are recommended. Of course, this must be done with a stick or toothpick, and never with the hands as strychnine is a violent poison. When the peanuts and raisins are dry, drop at intervals of a few feet into the runways, through openings made with a broomhandle or walking cane, and then press down with the foot.

This is considered much more efficacious than any kind of trap. Chopped or pulverized tobacco, scattered over the surface and worked down in the soil, is also suggested as sure to drive moles away. It seems that they cannot endure nicotine-scented soil, and even a fat earthworm with a tobacco flavor is more than they can stand. While this plan does not lessen their numbers, it makes them seek other hunting grounds.

Sunken barriers of boards, stones, or wire mesh around the borders of beds have been tried with indifferent success, as it seems still a moot question how deep a mole will go. It is known that their galleries sometimes extend down in the ground for three or four feet, but as vertical digging is much harder work than horizontal tunneling, it does not seem likely that they would follow an obstruction more than a few feet, before concluding the "game was not worth the candle." Moles seldom trouble plants growing close to the foundation of a building, so that is a safe place for valued bulbs.

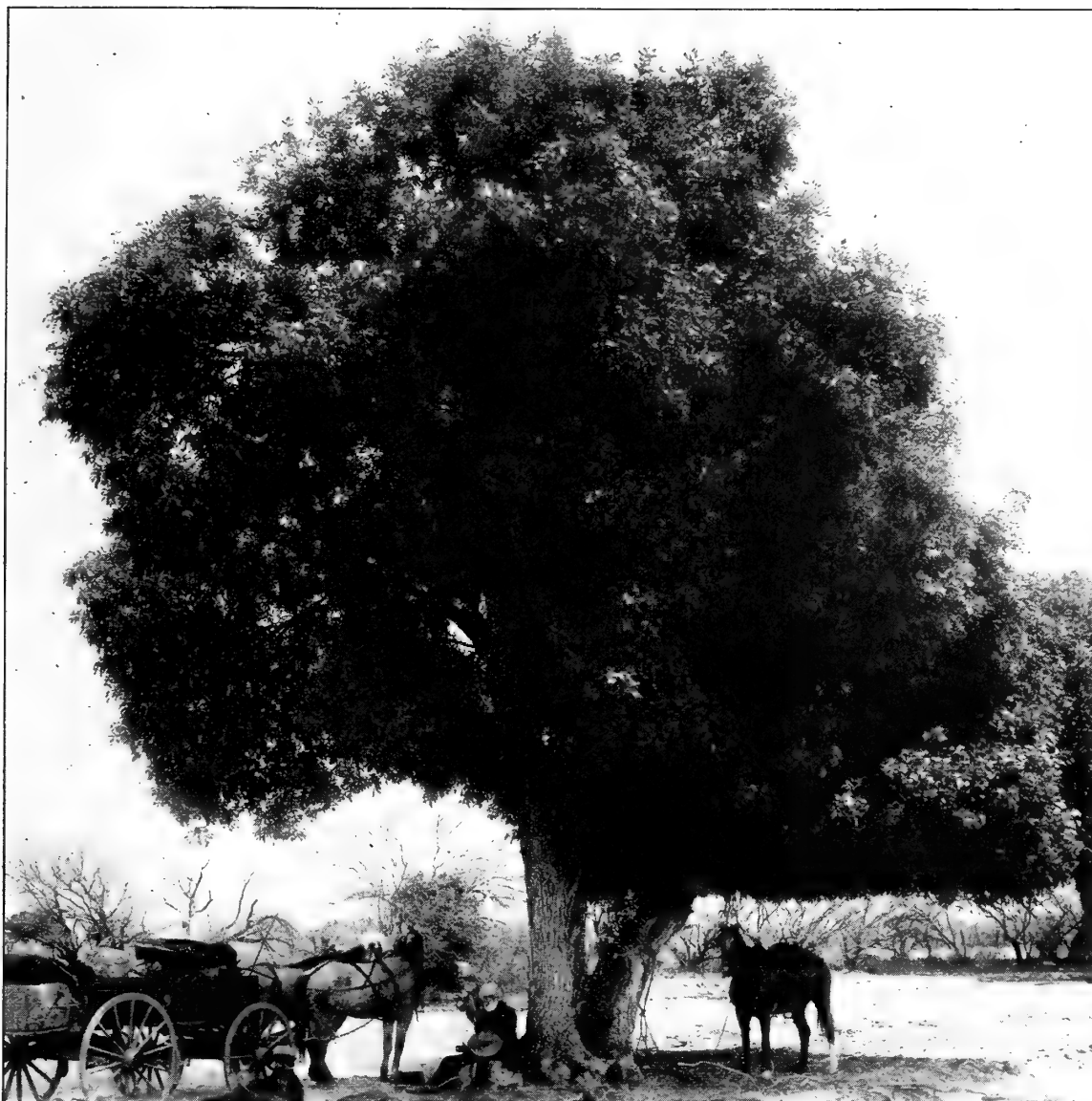
**S**O MUCH for the mole as a pest, and now something as to his personality, and as one of nature's most highly specialized machines for moving earth. No detail has been overlooked that could add to his efficiency as a worker in clay; his flexible snout is the last word as a boring implement; his neck has practically been eliminated, and his shape is just a gradual slope from the point of his nose to the largest part of the body. His ribs are braced to withstand pressure from above, and his out-turned hands have never been duplicated as earth-movers. Even his tail has been fitted with a system of nerves so sensitive as to keep him posted as to what may be going on behind. As he lives in the dark, eyes would be no particular asset, so they have about become obsolete, and are little more than pin-points hidden under the fur. His very fur has become so modified and different from that of other animals, that it will lie one way as well as another, thus doing away with any possible friction against the walls of his tunnel, an arrangement that enables him to travel backward as well as forward, with equal ease. The strength of a mole compared with his size is simply beyond comprehension, and when ploughing through the mellow soil, and throwing up the winding breast-works that play such havoc with the looks of the lawn, he pushes himself forward with the strokes of a powerful swimmer, and apparently with no more effort.

When he travels just below the surface, he is hunting for earthworms, cut-worms and other game, and the deeper tunnels lead to his underground nest. He shows a decided preference for soil that holds more or less of moisture, so his rambling trails are oftenest seen in meadow lands, gardens, and across the smooth expanse of well-kept lawns—just the places he should not go! Nature endowed him with a digestive apparatus that does its work so rapidly that he is kept in a perpetual state of hunger, with starvation just around the corner, if he goes without eating for a few hours. About twelve hours is his fasting limit, longer than that is fatal so, if he would live, he must keep a steady flow of worms stomach-ward. In his efforts to keep his engine fired-up, he devours an incredible number of worms, some of them harmful to vegetation.

To give some idea of the appetite of a healthy, normal mole, on one occasion a captive, in the space of twenty-four hours, got away with "fifty large, white grubs; one chestnut worm; one wire-worm; the grubs of forty-five rose-bugs, and thirteen earthworms." So while it cannot be denied that he does a lot of damage, at the same time, he destroys an unbelievable number of worms and grubs, some of them hurtful. As proof of their feeding habits, captive moles have been surrounded with potatoes and bulbs, but were invariably found dead in the morning—starved to death in the midst of plenty.

The mole can dig all night in clay, and in the morning appear arrayed in a spotless suit of velvet that fairly glistens with cleanness, without a speck of dirt from the end of his pink nose to the tip of his pink tail. Though he lives right in the dirt, no one ever saw a dirty mole. He rarely comes to the surface, and if dragged out into the light, he is frantic to get back in the ground; and if placed on soft soil, will almost instantly disappear, and the manner of his going suggests more the steady sinking of some object, than digging in.





THE ARIZONA ASH (FRAXINUS ARIZONICA)

Growing on the margin of a sandy streamway near Tucson, this Ash is one of the valuable shade trees of the region to which it is native

## THE AUTOGRAPH OF AN ASH TREE

D. T. MACDOUGAL

Director of the Department of Botanical Research, Carnegie Institution of Washington

### Measuring the Growth of Trees—A New and Ingenious Method of Exactly Recording Reactions and Seasonal Development

EDITORS' NOTE: Formerly Assistant Director of the New York Botanical Garden, Dr. MacDougal came well equipped to his present work of directing botanical research, and the Desert Laboratory of the Carnegie Institution at Tucson, Arizona, offers abundant opportunity for direct experiment and study of many forms of plant life. This authentic record of an Ash tree's growth has considerable scientific value and anything that throws fresh light on the fascinating and mysterious movements of the plant world is fraught with significance for the gardener. Preceding articles of the series may be found in *THE GARDEN MAGAZINE* for February and June (1922).

**T**HE daily variations in the ascent of sap and in rate of growth of a tree are highly suggestive of pulsations, and the seasonal changes of the activities of all plants when viewed in the open give the impression of a rhythm or alternating periods of rest and action determined by or inherent in the organism. When we couple a plant to an instrument designed to register its changes, we may obtain a record from which it is apparent that it is highly responsive to the conditions under which it lives. Growth begins when temperature, moisture and food-supply are adequate. Quickening,

depression and stoppage result from changes in these factors. A glimpse at some of the arrangements of cells in a tree and an analysis of its autographic record for a season or two will put the reader in possession of facts supporting these conclusions.

The trunk of a tree of the type with which we are most familiar begins as a thin, tapering, cylindrical shoot in the seedling, and by the addition of thin conical shells or layers of wood each year builds up the shafts which may reach majestic proportions in some species. The young stem at first shows a central pith soon becoming enclosed in a shell of woody cells, external to

which are the bast and the corky formations of the bark. The formation of these durable elements and the way in which the outer dead bark may be recurrently split and patched from within is complicated mechanically, and need not engage us further at the present time. In the development of the original young cells of the seedling, the greater number pass over into permanent form, with the exception of a thin layer between the wood and the bast, and it is upon the activity of this cambium layer, as it is called by the botanists, that the future of the tree depends.

When the cambium layer is at rest or nearly so, the protoplasm of its minute cells is dense and granular, but when these awake with the advent of spring the cells imbibe such a large proportion of water that over ninety-nine per cent. of their substance is made up of this liquid, and when the cambium is in this highly hydrated condition it has but little mechanical resistance and is easily torn or rent so that the bark external to it "slips" and may be easily stripped from the trunk.

The cells or elements of the cambium are extremely minute spindle (needle-shaped) masses of a grayish, shining, protoplasmic jelly, the length of which may be as much as several hundred times the thickness (see below), and these elements form a layer two to ten deep in thickness over the entire trunk and branches underneath the bark, terminating in little cones or growing points at the tips, which are enclosed in the buds. The spring growth due to the awakening of the tips and the bursting of the buds is one of the most familiar yet one of the most fascinating features of the green life about us.

The chief business of a tree is to grow and to reproduce. These two departments of its activities are conducted on widely diverging lines, one being carried out in a highly effective manner and the other quite regardless of cost or of wasted energy.

In many plants this extravagance is carried to the greatest possible extreme; thousands of brilliant-hued flowers are developed for a dramatic display advertising the period of fertilization, and large colorful edible fruits are perfected later which have but little proven value for the seeds they carry. The country is sown with thousands, perhaps millions, of nuts, acorns, samaras, beans, and seeds year after year, to the end that a single parent tree may be replaced when it falls by a young and sturdy successor, or at most, a few dozen saplings.

In contrast with this wastefulness is the unseen, quieter construction of new masses of protoplasm, the formation and differentiation of additional cells with the resulting visible enlargement of the body which we designate as growth.

These hidden processes are the intimate

life of a tree. To record its daily "pulse," to measure the swelling growth in spring, and to write the record of the variations caused by rains, high temperatures and dry days, it was necessary to devise a delicate apparatus, so small that it might be carried by the tree without injury and yet so finely adjusted that its tracing pen would write everything the tree might do in the way of change in size, whether carried out quickly or slowly.

The dendrograph which I have perfected for this purpose consists essentially of a floating frame of an alloy which does not change with the temperature placed around the trunk. Swelling or shrinking pushes a small quartz rod and moves a pen tracing a line upon a sheet of paper carried by a revolving cylinder. So long as the tree is quiet, as it may be in the dormant condition of winter, the pen traces a level line (see opposite). When it awakes it unavoidably moves the pen and writes its story as surely as might the typewriter on which this article is written, and like all living things, it speaks its own language, which must be translated.

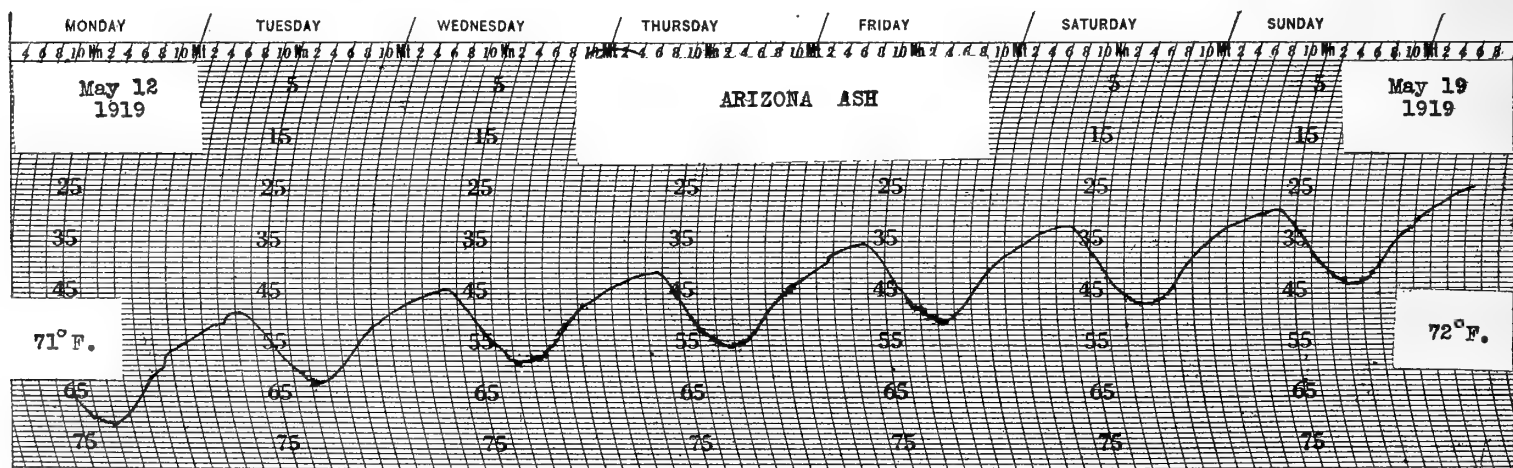
SUCH a story of the Arizona Ash since March 8th, 1919, now lies before me in the form of slips a foot in length on each of which the tree has written its diary for seven days. This tree stands in the grounds of the beautiful residence of Dr. H. W. Fenner in Tucson, Arizona, where it was placed in 1908, being then two years old. This Ash is native to the region and makes trunks one to two feet in diameter with great spreading crowns, rendering it one of the valuable shade trees of the region (page 313). It is usually come upon along the margins of streamways, where the roots may find a good supply of water, and it therefore is under fairly normal conditions in this irrigated garden.

When the dendrograph was attached to the tree early in March, 1919, the staminate flowers (it is a male tree) were already nearly fully developed but the leaves had not yet begun to unfold. For the first few days the pen showed only equalizing movements, tracing a downward course beginning early in the morning and continuing until late afternoon, at which time a slow increase in size began which continued through the night until the level of the previous morning was reached. In this action is to be seen the fact that a slow stream of water is passing up through the trunk even when it is dormant, being given off by evaporation from the leaves. During the warm sunny and windy days the drying out of the branches and trunk carries away more water than is received from the sluggishly acting root system, with a resultant shrinkage.

The advancing temperatures of spring awaken the cambium and the cells of the growing points not only in the buds but also



Spindle-shaped cells of the cambium of White Pine (*Pinus strobus*), the division and enlargement of which constitutes the main feature in the growth of a tree. (After drawings by Prof. I. W. Bailey)



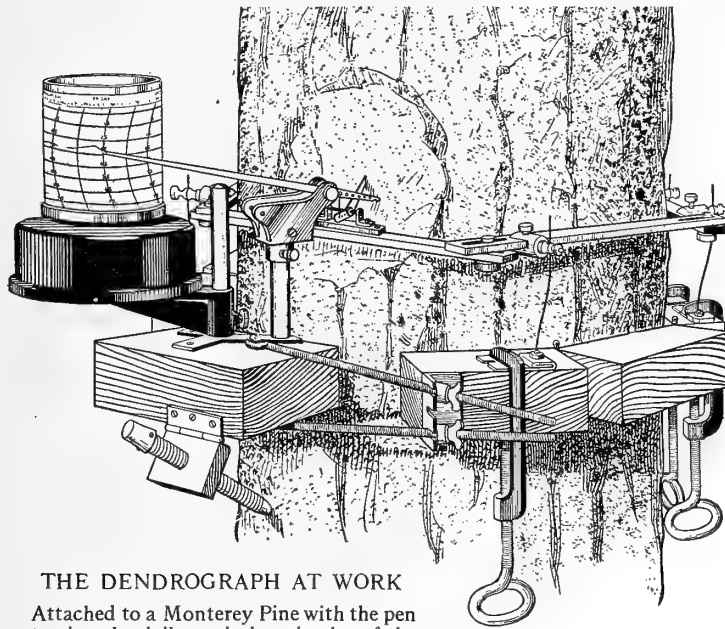
DENDROGRAPHIC RECORD OF THE ASH, MAY 12 TO MAY 19, 1919

The ruled sheet is carried along at such rate that every day at noon the pen crosses the curved line carrying figures. A shrinkage has taken place every day at this time, having begun about eight o'clock in the morning and continuing until four or five in the afternoon



in the root-tips, and new cell-masses are formed which may take the form of additional wood and bast, and the thickness of the trunk may increase by a minute accretion every day of the growing season. When this is taking place, the pen makes movements of much wider amplitude during the course of the days, as may be seen by the record of a May day shown on page 314. If we examine the record closely, we may see that beginning about four or five o'clock in the afternoon the pen commences

the previous Monday at the same time, denoting that the trunk had made an increase of an eighth of an inch in thickness, as much as many Oak and other hardwood trees make in an entire season. The records for the following weeks show that the rate became less and less with the advance of the summer until on August 25th growth came to a standstill, although the temperature was still favorable and the soil moisture content was high. Later and separated by intervals of a few days were feeble impulses of growth lasting for a week perhaps, which some writers believe to be due wholly to formation of bast and not to wood. Finally in the latter half of November the leaves began to drop, the trunk became quieter, and its daily variations equalized as shown in the diary from November 10th to 17th (see below).



THE DENDROGRAPH AT WORK

Attached to a Monterey Pine with the pen tracing the daily variations in size of the trunk. Cylinder and needle are protected from the inclemencies of weather by a box which fits snugly over both and is held in place by a bracket fastened to the trunk above

AS ONE follows these records from day to day, many features of the weather may be connected directly with these changes. Looking closely at the record for the week in May, the reader may see that the inked line appears broadened especially in the bottom parts of the loops, a feature due to high winds which increases the water loss from the leaves and branches and an increased shrinkage of the trunk.

Early in April a storm brought a heavy rainfall which fell as snow on the neighboring mountains and caused a drop in temperature so that a thermometer thrust under the bark showed the cambium had a temperature not over 50 degrees which stopped growth for five days, when rising temperatures again caused the pen to rise on the sheet.

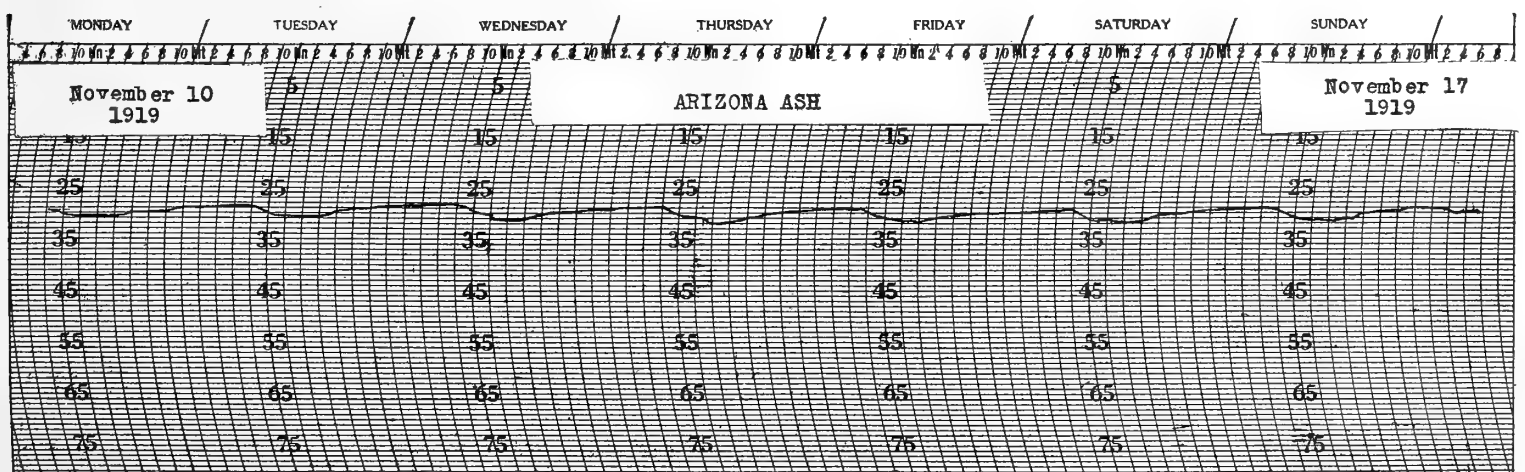
The total increase in the trunk during the growing season of something over five months was about an inch and a half in diameter or a formation of an encircling woody layer three-quarters of an inch in thickness.

The observer who expects rigidly regular habits in growth will be due many surprises when his measurements are made with the dendrograph, for, as illustrated by the effects of the storm just cited, the tree is delicately adjusted to its environment and the forester who has studied the annually formed layers which appear as rings on the end of a log or stump knows that the amount of wood varies widely year by year; that none may be formed in some seasons while two or even three appear in the record of other years.

The Ash tree which forms the subject of this article exhibited this specialization by deferring the beginning of growth in 1920 until June, the period of enlargement ending in midsummer, much earlier than in 1919, with a total formation of wood not more than a third that of the previous years. It has been fitted with a new instrument of improved design and the story which it has written for these two years of its life is being continued day by day.

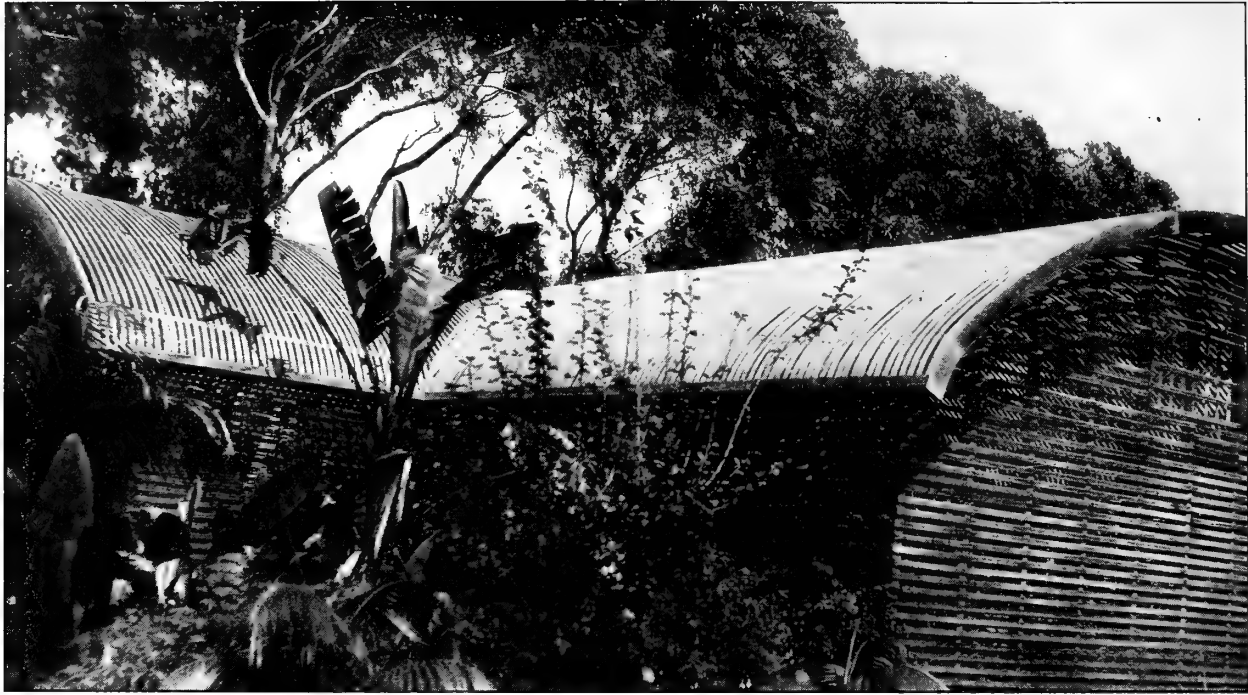
to rise on the sheet and continues to do so until about eight o'clock the next morning. Thus on Tuesday morning the pen had moved upward about twenty millimeters on the sheet, and as the instrument was set to amplify growth twelve times, the trunk was actually about a sixteenth of an inch thicker on Tuesday morning than at sunset on Monday evening. Some of this gain, however, was simply water and about half of it was lost during the day, but a similar gain was made Tuesday night, only part of which was lost during the day.

Likewise some of the gain of Wednesday night was lost on Thursday, but it will be noted that the pen rose higher each day so that on Monday morning the end of the line tracing the variations in the trunk stood forty millimeters higher than on



RECORD OF THE ASH IN AUTUMN, NOVEMBER 10 TO NOVEMBER 17, 1919

During this period when the leaves were coloring and falling off the daily variations were very small; note on opposite page the much greater fluctuation recorded in May of the same year



LATH HOUSE AT POINT LOMA, CAL.

Built in the form of a Greek cross, it has a special kind of soil in each of the four wings for the growing of different types of plants

## TEMPERING THE SUNSHINE

ELOISE ROORBACH

Substituting the Lath House for the Greenhouse in the Californian Country Where Shade is at a Premium

**G**ARDEN MAKERS of Southern California frolic from one year's end to another with the most recklessly gay and brilliantly bedecked of known flowers. Their gardens fairly dazzle the eye and certainly astonish the visitors who can not believe the testimony of their senses when they see Geranium hedges which put fire to shame; Marigolds that checkmate the sun; and Heliotrope that so far forgets its conservative habits that it climbs entirely over a house, dragging a cloud of purple fragrance with it. These garden enthusiasts have walked or motored out to their own sunny hills, have taken ship to the tropics in search of trees, shrubs, plants, and vines which will thrive beneath the untempered rays of their ardent sun, and then set these blazing things against a white wall or massed them in beds until even their intemperate joy of color has, at last, been satisfied.

Giant size, novelty of species, and brilliance having been achieved, attention has recently been focusing upon choice and lovely plants which shun the sun and love only the cool, moist shade of forests. So means have been devised to simulate the shifting light and shade, to imitate the aerated leaf-mold floor, and to create the draftless, cool atmosphere of the woods, in an adequate and charming way. Hence the lath house, a structure sometimes resembling a pergola, through which the visitor walks on stepping-stone paths, beneath the subdued light of flowering vines, between running brooks, fern banks, and all sorts of sylvan surprises. Sometimes it is more like a summer house, made perhaps in the form of a square, cross, octagon, or circle, with a pool in the centre or a stand of giant Tree-ferns or tree-like Begonias, baskets of Moss hanging about, wall pockets holding swinging sprays of Butterfly-orchids, and tropical vines rioting up the supports. Such a place furnishes dramatic contrast and a delightful foil to the blazing brilliance

without. Occasionally it is found in the form of a lean-to against the house, making a pleasant sort of outdoor dining room and place to serve tea.

But no matter what its form, the lath house is always knit into the garden by the vines seething over it and by Ferns and Begonia blooms that peep out in friendly fashion from within. Unfortunately these houses are not always designed by architects who understand how to make a structure beautiful through fine proportion, and therefore are sometimes unsightly from the outside, unless redeemed by vines.

**Q**UITE often a lath house will grow to a vast size from some small beginning, perhaps a pergola, developing a wing on each side, as the leisure and enthusiasm of the owner permits, until the entire yard will be under cover, with only a space in the centre for a blaze of the sun-loving plants. The W. L. Frevert lath house, San Diego, has grown in this way until it now affords vaulted shelter for Tree-ferns, a Fern edged pool, a rocky bed for Columbines, etc. At one end of the grounds is a greenhouse in which seedlings are nursed and plants grown which like a hotter atmosphere than that furnished by the lath house. Here are full sun, shade of lath house, and warmth of conservatory, all in the space of a city back yard. Bamboo furnishes a background for the lath house, the sides of which toward the centre are provided with slat curtains that can be raised or lowered as needed.

The A. D. Robinson lath house, at Point Loma, a large structure designed by an architect who understood the importance of good proportion, takes the form of a huge square with the centre raised in a rounded dome—much the shape of the conventional conservatory. Beneath this dome is space for chairs, tables, hammocks. All about is a circle of Ferns grow-

ing among rocks and from above hang many wire and rustic baskets of Maiden-hair Ferns, Orchids, and Begonias. Stag- and Moose-horn Ferns ornament the columns and a wonderful old Wisteria has been trained to cover the ceiling with a pattern of green and lavender. In this famous lath house are growing eighty-four kinds of Fibrous-rooted Begonias, thirty-two varieties of Rex.

**C**ONDITIONS at San Diego are ideal for Begonias and a real collection is that of Mrs. Frank Waite who recommends a long list of ever-blooming out-door kinds which only ask a protected position and a well drained soil. The choicest varieties of Rex, Haageana, metallica, and all others whose beauty depends upon unblemished velvety or silky-textured foliage, need the protection of the lath house. Beneath its shelter they find just the right degree of warmth; moist air undisturbed by rough winds; light and sun to bring out the colors of their blossoms; and rich, loose soil for their roots. The beautiful Tree Begonias climb like vines up the columns, or stand alone, pushing their blooms even through the slats of the roof with astonishing vigor and display of color.



AT BALBOA PARK

The lath house may be variously constructed and often affords a picturesque setting as well as effectual shelter for plants of the tropics



In nearly all lath houses watering is done by overhead irrigation.

Vines of many kinds find the lath house exactly to their liking. It furnishes them with the support needed, at the same time permitting a wholesome circulation of air all about them and a chance to drop pendant blooms through the laths or lift them high up into the sun on the outside. Wisteria makes a splendid showing whether planted outside or in. The Marechal Niel Rose also does its very best beneath such shelter. The blue-belled Sollya, Passion Vine, Clematis, Kudzu and numerous tropical vines transform the lath house into an enchanted bower.

Cinerarias, Tigridias, Gloxinias, Anemones, Lobelias, Impatiens, Primulas, Crotons, Coleus, and many Lilies reach an enviable state of perfection within a lath house. Besides being used to make masses of color they are frequently grown in pots which can be moved about when special displays are wanted. Of course, Ferns in variety thrive in this woody sort of home.

LATH HOUSE OF MR. A. D. ROBINSON, SAN DIEGO, CAL.

At present sheltering Miss Kate Sessions, pioneer planter and botanist, who has Mr. Robinson's new Dahlia Fairchild in her hand; overhead are magnificent hanging baskets of Begonias





EDITORS' NOTE: *Further constructive contributions to the vital question of keeping up the interests in the Garden Clubs. The earlier articles in this series appeared in the June GARDEN MAGAZINE*

### III. IN THE DOLDRUMS BUT HEADING OUT

JULIAN HINCKLEY

President of The Cedarhurst (N. Y.), Garden Club

Collapse of All the Conventional Activities but Glimpses of an Expanding Usefulness Appear in an Appreciation of the Peculiar Problems of the Locality

**W**HEN I look back over the old programmes and announcements of our garden club, and especially the little, inevitable "Constitution and By-laws" so neatly printed and bound and tied with a ribbon, I confess that I am smitten with sadness. Gone, all is gone of the freshness, the dewy enthusiasm, the almost vital seriousness of first organization. I can hardly believe that the Club met regularly twice a month, much less that it was incumbent upon every member to attend regularly, bringing fruits of her (or his) own bodily toil together with remarks apropos. There were a score of members, and their gardens were new, and they knew nothing (apparently). Here before me is the list of lecture meetings, two a month, with shows for almost everything. How delightful it must have been! That first aspiration for enlightenment combined with those first fruits of one's own planting! That mutual dependence and coöperation, that running in upon one another for advice or to bring plants or to beg plants, or merely to enthuse with a fellow enthusiast upon a morning too fair to waste indoors crouched over a card table.

I wish I might begin as another has already done: "When we organized in the spring of last year—" Unfortunately years have passed over our Club. The organization has grown, but it has lost all its importance. Even new gardeners with new gardens and new illusions cannot put back into the desiccated husk the green freshness. There is less chance of these new enthusiasts forming an intimate inner group than there would be of their setting up a brand-new independent club, with the usual first-year seriousness.

#### Anent Meetings, Shows, and Lectures

**W**E GAVE up meeting in the gardens once a fortnight, those charming morning experience meetings—I know not just why. That was before my time. Probably it rained every second Thursday, and the few Thursdays that it did not rain were not worth the exasperation of the other Thursdays when it did. Or perhaps the mosquitoes controlled the meetings. More likely still everyone had the same experiences, or could make nothing of them, or simply the generous impulse to admire somebody else's garden petered out. Possibly the gardens had got too big, too much of a part of the other responsibilities of a country place. The members stayed home from these jejune meetings to give orders to head gardeners and assistant superintendents. I find that the big garden clubs like that in Lenox, Mass., are semi-professional affairs, conducted for and by the employed gardeners. Clubs like this run to shows where the

professionals compete with collections of "six onions" or "five orchids," and the ladies set tables for Barmecide banquets. These shows have a certain obvious value in stimulating the activities of one's employees.

Our Club has for several years held a regular Tulip Show (early May); Rose and Peony Show (June—sometimes held separately) Fruit, Flower, and Vegetable Show (September—principal flower being Dahlia); Chrysanthemum Show (not held since the cold winter of '17-'18). Interest in these shows has steadily declined. At first competition was so keen that rules upon rules were required, and classes upon classes. There was a class for (1) gardeners who employed a regular gardener, and (2) gardeners who did their own work with the help of a useful (useless) man. And there was a special class for novices. Ribbons were liberally bestowed for first, second, and honorable mention in collections, single specimens, and I know not what else. When I came to attend these shows everything was bedizened with a badge of comparative merit. At our Tulip Show this year one collection of Cottage Tulips was entitled to all the ribbons, as there was no other competitor.

Now as for lectures, I really haven't space to go into the reason why we gave them up. Briefly, however, it amounted to the fact that few of the lecturers were either interesting or informative. There was quite a well-known lecturer going about for years among garden clubs who did not know—well, perhaps that, too, is a long story. We got tired being told to dig our rose beds three feet deep. I remember interrupting once to inquire the cost per cubic yard of such a bed. Advice of this kind is so stereotyped as to be not even detrimental. Fortunately nobody pays any attention to it, or surely the race of charlatan horticulturists would long since have been cut down in the midst of their prevarication by an infuriated and disillusioned multitude. As a matter of fact, few real experts (at least those I have approached) care to lecture; they know too well the fundamental ignorance of their audiences. "I spend most of my lectures explaining why a Darwin is a Darwin," a bulb grower told me, despairingly. I have repeatedly tried to induce America's Miss Jekyll (not to embarrass the lady by mentioning her real name, familiar to readers of this magazine) to address an informal gathering of our club; but she knows too much! She knows the futility of garden club lectures, where to be comprehensible she would have to restrict herself to poetic allusion. My personal opinion is that almost any garden club could profit by a series of lectures or readings, say a chapter each meeting, from Clute's "Agronomy". And there is an article on nomenclature in Bailey's "Standard Cyclopaedia of Horticul-

ture" which every member should read before presuming to sit at the feet of Wisdom.

### Spontaneity the Keynote

SO HERE we are as a garden club facing that after-harvest when the fruits have been garnered and the question is whether the straw and the corn-stalks are worth the effort of hauling. Facing dissolution, the club reduced its dues from five dollars to one dollar, hoping thereby to bring in all the small gardeners with their tremendous enthusiasms. We hope now to have members enough to assure a quorum at every meeting. Of course a small circle of dependable enthusiasts is much better, but no club can be born twice. Then we are making an effort to get back into our gardens, away from exhibition tables and the hard folding chairs of the lecture room. We have revived the morning meeting (monthly) without any of the folderol of our original constitution and by-laws. We just get together to talk about garden matters. Nobody holds the floor; there is a general chatter, in which the shyest, newest member may unblushingly hold forth. I admit that the servant question and other extraneous worldly matters intrude upon pure horticulture. But after all the most important thing about gardening is the garden, and we are there in it, seeing it, breathing it, strolling about in it. We are supposed to exchange plants at these meetings, but exchanging plants is a very complicated procedure. We have stipulated that plants for exchange shall be brought to the meetings, or a list shall be sent, the duplicate of which is held by the gardener who is instructed to surrender the items upon demand. The latter device eliminates much of the embarrassment of giving and receiving. It even gives an excuse for running in on your neighbor just to see if she happens to have anything you might conceivably want. A few such visitors will inspire any garden owner to feel that having a garden is worth the effort. The American garden is an objective garden, a garden of palpable effects; and if no one will come to see your effects till after storm and drought have laid them low, why it's better economy to put the money into jewelry that you can wear in the crowded street.

We have thought of having garden parties or afternoons "at home." The club sends out the cards and so lends its auspices. But these larger, more formal occasions (weather permitting) do not promise as well as the morning rendezvous. We still stage our three exhibitions, but most of the rules have been slashed away. I think that growing for exhibition ruins the garden as a garden, much as it contributes in other respects. I know very well that some garden clubs make a great thing of their shows, but perhaps we are too busy with golf and bathing here. We shall eventually be reduced to exhibiting Tulips without distinction of Darwins, Cottage, or Breeders. "A vase of Tulips," or "An arrangement of Tulips with other flowers," or "A display of Tulips, not to exceed fifty blooms." We can't ask a judge to judge such a show, but we can do better; we

can judge for ourselves, knowing nothing but knowing what we like, by the simple expedient of a general ballot. The results will tend to establish new criteria, I hope, in which the biggest or reddest flower will not invariably capture the championship.

### Finding New Ways

I AM dealing with no glorious enthusiasms and golden illusions; I speak from the hard-pan of practical necessity. If we are to survive as a useful organization, contributing anything to the joy of gardening, we have got to find a new way. The infant society for the preservation of our national wild-flowers (seeds of which are best obtained from Switzerland!) is an excellent step forward by associated gardeners. We could not conceivably get up a club picnic party to go "smelling for flowers" in the woods and fields. Such a party would run up against many previous engagements. Besides, we have practically no woods and fields, and these are swept bare by Sunday trippers. This ought to make us more sensible to the need of taking interest in native plants, but it is an interest that provides an activity of doubtful benefit to the cause. In my own case have I answered that question by buying native plants from the dealers who are accused of despoiling nature. I am grateful to them.

I count a number of possibilities by way of new interests. We have no rocks, hence no rockeries, ergo no rare plants. Collecting rare plants and swapping them, comparing notes, and all that, is something I hope we may work up. And there is hybridization. I wonder how many garden clubs, besides Short Hills, New Jersey, go in for growing new varieties. Where all the standard activities of other garden clubs seem to fail us—shows, village beautiful work, lectures, inter-club activities—nevertheless, I believe we are finding an upward path out of our difficulties—difficulties that other clubs seem mercifully to have been spared.

While the great American passion for organization, for badges of office and meetings and parliamentary procedure and committee work and red-tape and beribboned barges and all that sort of thing which begins on Main Street, Gopher Prairie, with the Thanatopsis Club and the Jolly Seventeen—while this passion stirs no pulse in this sophisticated community, while we lack even club-consciousness enough to act as a club in association with other clubs, we are, I think, justifying our existence as an organization. When in the face of dissolution it was put to the vote whether we should cease to continue as a club we found that to dissolve was impossible; we were an institution. We became aware of a membership of well over a hundred, and of a score or more of very beautiful gardens. The essential interest was there, buried deep under other more pressing engagements. In fact, I believe we have greater opportunities for justifying our existence as an organization than many another more flourishing club. And in this realization I venture to say that we are booming.

## IV. THE SOUTH SPEAKS CONSTRUCTIVELY

HATTIE W. CARTER

President of the Lexington (Kentucky) Garden Club

THESE suggestions—practical and of much benefit to our own club—are offered in the hope that they may interest and stimulate the organizing of garden clubs elsewhere. I wish there might be, and believe that some day there will be, clubs in every county and state of the Union. If some reader of this article organizes even one garden club somewhere, I am more than repaid—and great pleasure will be hers, I am sure; and for my part I am happy at any time to help forward this great movement in every way possible.

### What We Are Striving For

THE objects to which our energies are directed are many: to encourage and promote the beautifying of country homes, villages, school playgrounds, parks, roadways, rural counties as well as cities; to create a love in the rising generation for, and disseminate a broader knowledge of, the best varieties of flowers, bulbs, shrubs, trees; to strictly observe Arbor Day, to especially encourage and promote school gardening, the study of ornamental horticulture, and to instil the love of planting

and a love for nature study, with particular attention to and coördination of its social and civic aspects; to further landscape planting and to awaken an interest in reforestation among the people of every state in the Union.

### Working Plans and Policies

FOR putting the machinery to work select a good motto, and live up to it!

Membership in our club consists of active, associate, honorary, and auxiliary groups; the dues for each class to be determined, of course, by individual clubs in accordance with the needs of their individual treasuries.

Two meetings a year, spring and autumn, are devoted to the "question box," and to the interchange of seeds and plants from members' own gardens. The surplus is also distributed by a committee to community and school gardens.

A vase of choice blooms exhibited occasionally by club members in some centrally located shop window greatly stimulates public interest.

Beautify some special spot in your village or city, and arrange to have at least one lecture a year by some eminent horticulturist open to the public without charge. For example, the Lexington Garden Club presented Mr. John C. Wister, President of the American Iris Society, who spoke on "American, English, and French Gardens," illustrating his talk with beautiful slides.

Clubs whose policies are broad and democratic prove much more far reaching in their influence, I believe, and accomplish infinitely more good than those organized on social exclusion. A club may gain much by affiliation with such organizations as the American Iris, Rose, and Peony Societies; and by all means have membership in the Garden Club of America.

## THE RIGHT WAY TO CUT A ROSE BLOOM

S. C. HUBBARD

Summer Activities Among the Roses to Keep Up Growth and Build the Plant for Next Year's Flowers—Feeding and Pruning



HERE'S more to cutting a Rose than appears at first sight, and done the right way you not only get longer stems to your flowers but the plant is improved in vigor and habit. When gathering a bloom cut the stalk at a point within two inches of the branch which bears the flowering shoot. This usually leaves two good eyes which will, in about four weeks, produce more flowers. There are several reasons for cutting so hard:

1. The quality of the bloom is always in proportion to the strength of the stem which carries it; and the strength of that stem is always in proportion to its proximity to the base of the plant.
2. Cutting low builds up a well-branched plant which will give more flowers of fine quality than one which is allowed to make a tall scraggly growth of light wood.
3. In many localities the latter part of June and July are very hot and dry and what few flowers are produced at this time are always of inferior quality even though the growth be fairly strong.

It is admitted that cutting low tends to check the continuity of bloom. On the other hand it must be borne in mind that all the shoots do not flower at the same time, so that even when cut back to two eyes a succession of bloom will be the result. The slight check in the succession of bloom at the beginning of the season is more than offset by the growth made during the hot dry weather; and, when the nights grow cooler, this new strong growth will yield flowers of exceptional quality.

The disadvantage of cutting blooms with short stems is that, as a rule, too many buds are allowed to remain which produce either flowers of very poor quality or "blind wood" (shoots which contain no flower buds). In other words, there are so many buds to nourish that none of them are perfected. During the hot, dry weather the transpiration is so great that the smaller shoots or branches become very hard and, there being almost no action in them, the eyes cannot possibly develop. Letting the flowers remain till the petals fall and then removing the old head reacts in the same way, through not forcing new young growth.

Plants thus properly pruned in the process of cultivation frequently require little pruning the following spring other than cutting back the heavier canes.

TO INSURE the keeping qualities of a rose bloom cut it early in the morning while the wood is cool and firm. After the intense sun has been shining upon a plant for a few hours the stems become somewhat wilted and the colors of the flowers start to fade.

Cut blooms that are placed in the display vases as soon as they are gathered do not last as long as those that are plunged into cool water and placed in an ice-box or cool cellar for four or five hours before being brought into use in decoration. Also remember that a rose cut just as the *outside petals start to unfold* and put into a cool place will develop to larger size than if left on the plant.

Feeding the plant while it is giving its flowers means much if done with a thought to the effects of different treatments. For the sake of refreshing the memory let us recall the three most essential elements of plant food, their functions in plant growth, and their sources.

### A Little Dissertation on Fertilizers

NITROGEN is the one element to a great extent lacking in most soils. It causes a somewhat rapid vegetative growth and must be used with care on flowering plants. If the plants are not making sufficient growth or are somewhat backward, two or three light applications of nitrate of soda (2 oz. in 5 gallons of water) at intervals of ten days is usually enough to give them a decided start. The five gallons of this solution should cover thirty to thirty-five square feet of bed surface. Using the nitrate in liquid form insures an even distribution and lessens the danger of root injury. Dried blood and tankage also contain a high percentage of nitrogen but in a form not as readily available. Nitrogenous fertilizers should always be used early in the flowering season rather than too near the blooming period.

PHOSPHORUS is the next most important element, giving color to fruit and flower, and stimulating flower and seed production. The two most common sources of phosphorus are bonemeal and acid phosphate, but the phosphorus is not as readily available in either of the above fertilizers as is nitrogen in nitrate of soda; therefore it must be applied three or four weeks before the flowering season for full benefits. A pound of bonemeal should cover twenty-five square feet, for the same area about half that



amount of acid phosphate. In applying any of the chemical fertilizers in dry form it is always best to work them well into the soil with a small rake and then give the bed a thorough watering.

POTASSIUM, as potash, gives strength to the cell wall and the rich green color of foliage which denotes a plant in perfect health. Most garden soils of a clayey nature usually have enough potash. However, if the growth of the Roses be somewhat slender and of a poor color, it may usually be corrected by an application of wood ashes, one of the common sources of potash. A single application of wood ashes at the rate of one pound to twenty square feet will be sufficient for the entire season.

If these fertilizers were applied the last of May or in June and followed by a two-inch mulch of rotten manure about the first of July there will be sufficient food in the soil to last the rest of the growing season. This mulch also helps retain the moisture, which is important, for should the soil become very dry, many of the small feeding roots of the plant are injured.

The type of soil is to be considered before choosing the manure as a Rose fertilizer. Cow manure, especially if well rotted, is undoubtedly the best all-around fertilizer for our purpose; but if the soil is decidedly clayey, the water content of the cow manure is apt to cause the surface of the bed to



become pasty, which in hot weather is likely to bake very hard. If only recent manure is procurable (not more than a few months old) horse manure will give better results on a heavy clay soil.

Both cow and sheep manure may be procured in dry pulverized form and are undoubtedly pleasanter to handle. The most satisfactory way of applying this type of manure is in liquid form. A bushel of manure to fifty gallons of water is the usual proportion. At this strength a gallon should cover about ten square feet. Apply once a week up until the middle of August.

If used dry, first lightly stir the surface of the bed and then apply a thin evenly distributed coat, working it into the soil, and then giving a good watering.

Several "Don'ts" to be observed when fertilizing Roses are:

Don't feed unless the plant is in active growth.

Don't overfeed at any one time; little, and not too often is better.

Don't feed unless the soil is moist when using chemical fertilizers or fresh manures. Otherwise the feeding rootlets will be injured and growth checked rather than stimulated.

Don't feed later than the middle of August. To do so is to stimulate late growth which means unripened wood in the fall with danger of winter injury.

### LOOKING THROUGH AUGUST TO THE EARLY FALL

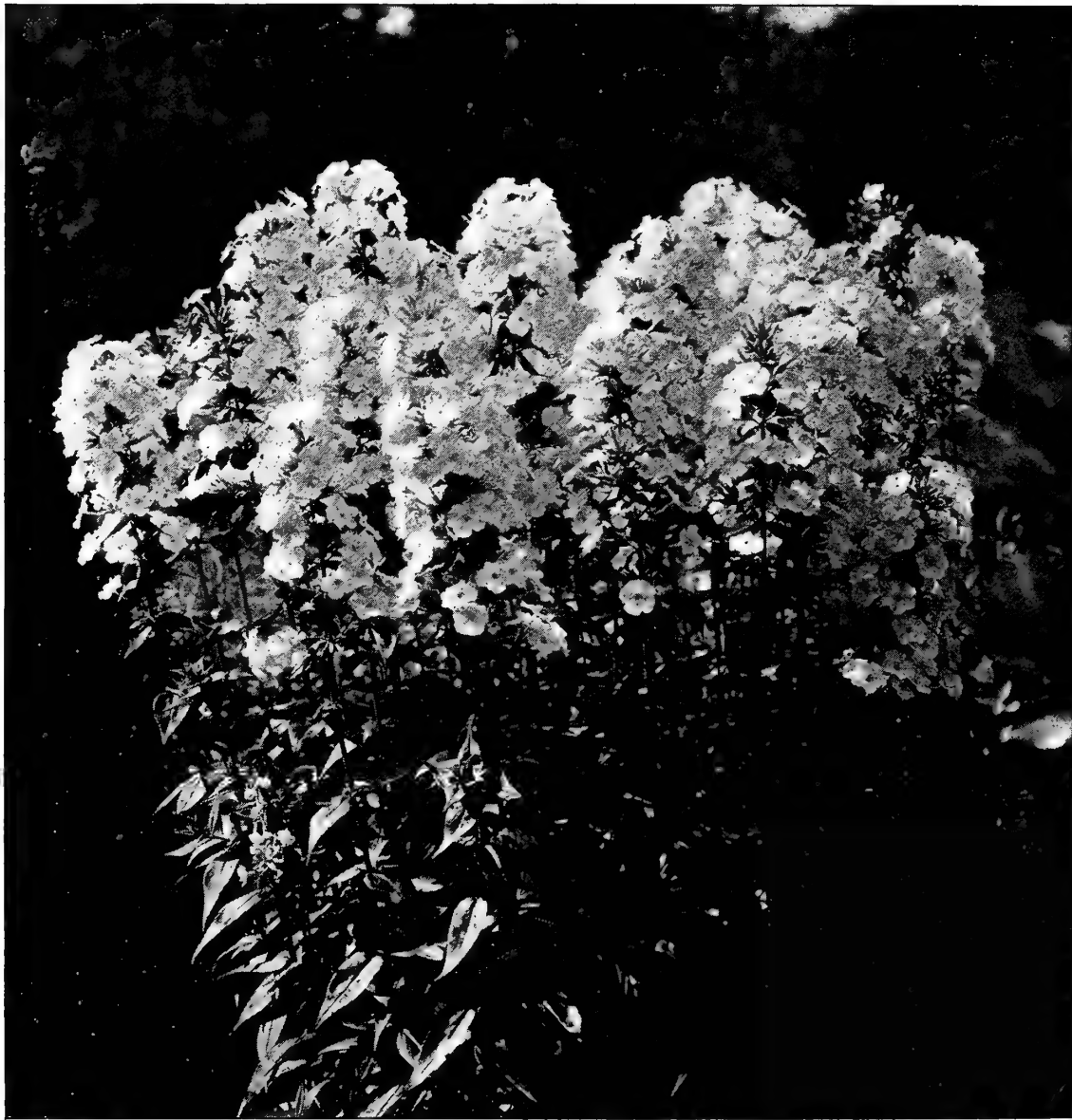
**I**N THAT magic slogan "Next Year" lies half the zest of gardening! Already as we watch this season's garden procession—humble vegetable, goodly fruitage, and flower—file slowly past, we are beginning to plan a repetition of its successes and a correction of its omissions, and have dreams of plunges into the still unknown.

And because **EVERY TIME IS PLANTING TIME** for some things **SOMEWHERE**, immediately we commence to figure on what can be put in now. Fall and winter are not at all the ogres convention fancies them, but rather beneficent slumbrously inclined old friends, so why waste months when newcomers to your garden might be getting comfortably settled and ready for an early start in the spring?

**EVERGREENS, IRISES, PEONIES**, all kinds of **HERBACEOUS PERENNIALS, STRAWBERRIES** take kindly to **AUGUST PLANTING**. Also **SOW SEEDS** of **PERENNIALS** and **BIENNIALS** for your hardy border of 1923.

In **EARLY FALL** plant **SHRUBS, TREES** (except the thin-skinned and the spongy-rooted), and **BULBS**, unless you live south of the Mason and Dixon line where things in the plant world move faster. If it happen you be in Florida, you will find a reliable guide in Emily Wilcox who writes (**August GARDEN MAGAZINE**) out of the fulness of extended personal experience about gardening conditions there, where the fall planting season begins considerably earlier than in the North.

**HOW TO KNOW AND GROW GLADIOLUS**, a miniature compendium for the amateur, is being specially prepared for our August issue. Mr. Charles E. F. Gersdorff will tell about **BEST GARDEN VARIETIES**; other recognized experts will deal with **SOIL, SITE, CULTIVATION**, and the **DECORATIVE USES** of the flowers. Mr. Gersdorff's lists of standard and new varieties hold illumination not alone for the newcomer in the field of Gladiolus growing but for the initiate to whom he is already an authoritative figure. Compact and comprehensive and practical—a manual to be read with interest and kept for reference!



## “LADIES IN THEIR SUMMER FROCKS”

I ALWAYS think  
Of garden phlox  
As ladies in  
Their summer frocks.

COLORS gay  
And patterns laid  
With careful plan  
And lovely shade.

AND when they're hidden  
By the night  
They scatter perfume  
To invite

SHEER lawn  
And dimity,  
As fine as one  
Could wish to see.

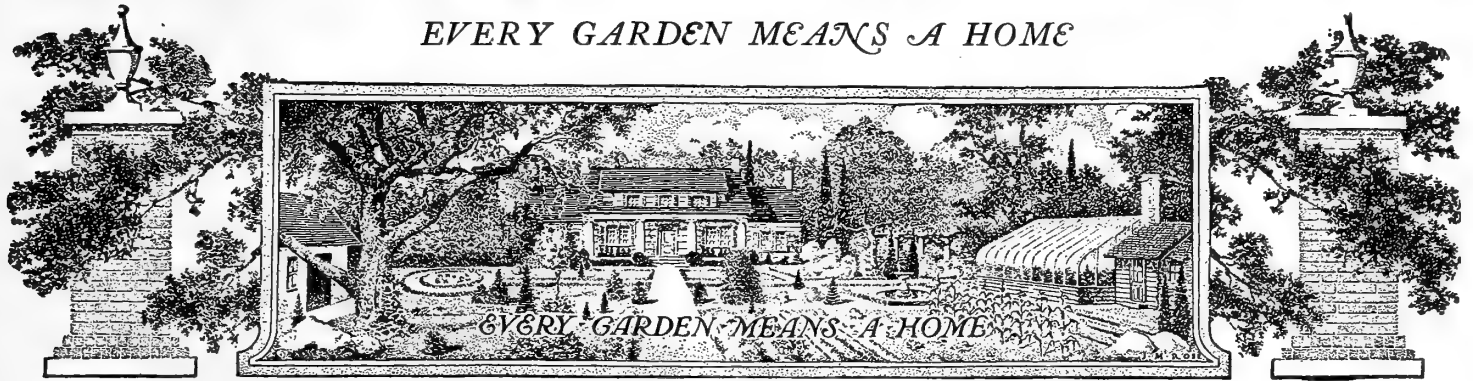
THEY spread their skirts  
And dance all day  
With any wind  
That comes their way.

THE wandering moth  
That brings them word  
Of things the day  
Has never heard.

LOUISE DRISCOLL

# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



“SUB ROSA”

FROM very early times the Rose has been accepted in classical literature as the symbol of secrecy. A pretty fancy indeed, around which much of romance and poetry has been woven; but whatever may have given rise to this association it can hardly have been the premonition of an idea that has justly lately been uncovered by modern research that the Rose has been carrying with it all these years a dark and solemn secret. As the State Entomologist of Maine would have us believe the Rose, adopting the guise of beauty and fragrance and appealing strongly to the aesthetic senses, is in fact a secret monster, stalking through the land scattering devastation and ruin along its path. Such, however, is the result to be read in Bulletin 303 of the Maine Agricultural Experiment Station.

With the facts of the case as they are presented there is probably little, if any, ground for dispute. The claim is made that the pink and green potato aphid is harbored and distributed solely through the sheltering branches of the Rose. This is a new and terrible indictment, and Potatoes, we are told, should be separated by a mile from the nearest Rose bush. The bulletin goes on to state that not only is the injury to the Potato crop by reason of the sucking of the juices by the aphid, but the Potato mosaic disease is carried from Potato plant to Potato plant by this same aphid which shelters over exclusively on the too friendly Rose that offers a permanent and comfortable home during the cold winter.

It is an interesting and curious fact that many insects as well as many fungi occupy alternating hosts. Thus the wheat rust migrates from Barberry to Wheat and back, and not from Wheat to Wheat; and so this louse which takes up its abode in winter is found, according to this bulletin, to menace the Potato fields in summer; but not alone the Potato—almost everything else one might imagine as over three and one-half pages of the bulletin are taken to list numerous other summer hosts or “secondary food plants” running from Corn, Asparagus, Tulips, Iris, Gladiolus, Cannas, Elm, Beet, Buckwheat, Pokeweed, Clematis, numerous Brassicas, Clover, Pea, Bean, Wood Sorrel, Storksbill, Citrus, Ceanothus, Hollyhock, Grape, St. John’s Wort, Fuchsia, Milkweed, Morning-glory, Mint, Red Pepper, many Solanum relatives, including Tobacco, Tomato and Egg Plant, Mullein, Catalpa, Rib Grass, Squash, and the host of other things in the Sunflower family, including Lettuces, Cineraria, Aster. And all these things draw their pests each summer from the criminal Rose bush.

So the Rose bushes must go; in all events the Maine bulletin urges “no better, easier way of doing this [destruction of the aphid] can be suggested than the removal of Rose bushes and thus destroying the primary food plant.” To what a pass are we coming? The entomologists may be, possibly are, quite true in their statements, but their deductions may be all off, since they see with the oblique vision of the specialist. Discover-

ing the insect and its life history they attack the insect with very little regard to the intricate ramifications that abound elsewhere.

One question that comes to mind, seeing that the Potato is an introduced plant, not native, coming from South America to the North, is: where was the louse before the Potato came here, did the louse find the Potato more accommodating than other previous hosts, for instance? The whole subject of insect menace of our plants deserves study subjectively rather than objectively. It is the objective point of view that is responsible for Plant Quarantine 37 which takes no thought of anything but the insect and its direct destruction. If the State of Maine is justified in urging the destruction of Rose bushes throughout its region because of the proportions of the Potato growing industry in that state, then the State of Illinois perhaps may be justified (because of the enormous investment in the florist industry in that state) in demanding the destruction of Potatoes.

Is it proven beyond a reasonable doubt that the destruction of the Rose bush would starve out the potato louse? Is it not possible that the Rose is made a victim because it offers special facilities and in the absence of the Rose another winter host may be found—the Apple, let us surmise? Aphids *do* infest Apple trees all the year; surely then these trees must go! When the twelve-lined Chestnut borer on Long Island found itself deprived of the Chestnut as a host it didn’t quietly die of starvation but, surveying the ground, found the native Oak very much to its liking.

If the policy of demolishing and destroying host plants is logically followed out, we can imagine the world very soon devoid of everything but exclusively, human food plants! Doesn’t it suggest that there is something wrong with the whole point of view if one-half of the vegetation of the earth must be destroyed in order that another half of it may survive? The Maine Bulletin does offer this comfort: “a thorough-going spray early in September and another in June ought to reduce the numbers greatly”, and it is further suggested that fumigation under tents or portable box cages would be more certain.

## THE BARRIERS OF QUARANTINE

THE hearing on Plant Quarantine 37 at Washington on May 15th was presided over by Secretary Wallace. Arguments for and against any modification of the Quarantine were presented, and the sessions lasted through the evening of the first day and were continued into the morning of the next. Speaking on behalf of the Committee on Horticultural Quarantine as representing the Allied Interests of the Ornamental Horticulturists, the Garden Clubs, Botanical Gardens, and so on, Mr. J. Horace McFarland presented a lengthy argument urging for a reasonable Quarantine with a sympathetic understanding of the needs of ornamental horticultural research and plant questions.

The opposition to any modification whatever was strongly



urged by the representatives of the State Boards of Florida and California and in the latter state, as was demonstrated by Mr. Beattie of the Federal Horticultural Board through a series of comprehensive charts, important operations are being developed based upon the present protective features of Quarantine 37.

While there were no new arguments adduced, full advantage was afforded by Secretary Wallace to make him cognizant of the details. The decision of the Secretary and the Department of Agriculture has not yet been announced, although there is every reason to feel that some modification of the heretofore ironclad exclusions, especially with regard to bulbs, may be looked for—little enough in all goodness! The legality of the entire Quarantine and other actions of the Federal Horticultural Board was called into question, and that phase of the subject is being carefully looked into.

Concluding a brisk correspondence with THE GARDEN MAGAZINE in which the improper (if not illegal) use of a quarantine power has been persistently protested, comes a letter (under date of June 7) from the Secretary of Agriculture. It is a frank acknowledgment that there have been friction, inconvenience, and loss, much of which can be reduced without serious risk to the country's health. So far, so good! The letter follows:

"I have your letter of May 29, with further reference to Plant Quarantine 37. These and similar criticisms of the Department's action are being considered and weighed against the supporting arguments of that group of the public who desire the continuance of the present quarantine. Such changes in the quarantine regulations as will reduce friction, inconvenience, and loss, without seriously increasing risk from plant pests, will be announced in the near future."

## THE OPEN COLUMN

*Readers' Interchange of Experience and Comment*

### Saving the Corn for Ourselves

*To the Editors of THE GARDEN MAGAZINE:*

TO PREVENT birds from eating Corn, wind strips of cloth around the ears just before they are ready to pull, or wrap the long blades around and fasten well. I have used this method successfully now several years as the birds do not bother until the Corn is about ready for the table.—AMELIA B. APPLGATE, *Washington, D. C.*

### On the Trail of "Sweet Mary"

*To the Editors of THE GARDEN MAGAZINE:*

AMONG the earliest recollections of my boyhood home in Michigan was a deliciously fragrant-leaved plant which had escaped to the roadside from pioneer gardens, and which went by the common name of Sweet Mary in our locality. We children plucked the fragrant leaves on the way to Sunday School and used them in nosegays and for book-marks in our testaments.

After coming West I searched catalogues and botanies for twenty years in a vain endeavor to locate Sweet Mary. I thought of Rosemary (*Rosemarinus officinalis*) but found it to be a rather tender perennial in the north, especially for an "escape" as Sweet Mary was. Sweet Marjoram (*Origanum Majorana*) proved equally disappointing. I saw in Dreer's catalogue a plant listed as Costmary or Bible Leaf but the botanical name was given as *Tanacetum Balsamita* and as all the Tansies I knew had finely cut leaves and my old friend Sweet Mary had oval entire leaves with serrated edges, I dismissed Costmary and thereby missed the clue.

Finally, through an accidental correspondence with Mrs. Fannie S. Heath, who has probably the largest collection of hardy plants in North Dakota, I found the long-sought-for Sweet Mary and she sent me a specimen from her garden, under the botanical name of *Chrysanthemum tanacetoides*. I searched Bailey's *Cyclopedia of Horticulture* and could find no *C. tanacetoides* but did find *C. Balsamita* var. *tanacetoides*, commonly called Costmary which answered identically to my specimen and the end of the trail of Sweet Mary was found at last!

The confusion was caused by Dreer's use of the old Linnean nomenclature which classified the plant with the Tansy because its com-

posite blossoms have, like the Tansy, no rays. Later botanists, using a more rational system, classified it with the *Chrysanthemums*, gave it the Linnean specific name *Balsamita*, alluding to the odor of the leaves, and the varietal name *tanacetoides* because of its bearing Tansy-like blossoms without rays. No wonder a struggling amateur like myself lost his way! Here are some of the common names by which this enticing old plant is known according to the locality: Rosemary (sic) Costmary, Sweet Mary, Alecost, Sweet William (sic), Bible Leaf, Lemon Leaf (sic). I favor Sweet Mary, and what could be more enchanting than a Sweet William and a Sweet Mary side by side in a cottage garden?—A. L. TRUAX, *N. D.*

—Why stop here when beginning to enumerate duplications of popular names of plants, of which there seems hardly any limit? According to Lyon's "Plant Names Scientific and Popular," *Melissa officinalis* has Sweet Mary for one of its score of English names and yet again it is applied with ten other English names to *Monarda didyma*.—ED.

### Roses for the Hedgerow?

*To the Editors of THE GARDEN MAGAZINE:*

DOES *Clematis paniculata* climbing over shrubs interfere with their growth? Could it be combined with Hybrid Perpetual Roses to make a good hedge? Does Ferdinand Conrad Meyer Rose make a good hedge, and is it everblooming? I have been in the habit of pruning my climbing Roses by cutting off the flowering shoots at the ground as soon as they were through blooming. Is this the accepted practice? I get good bloom in June, but climbing Lady Ashdown and Flower of Fairfield which are advertised as everblooming give only a few flowers in the late summer, in addition to the June crop. Should they be pruned differently? What about *Rosa Hugonis*?

How can I tell *Hydrangea arborescens* from *H. paniculata* and how should each be pruned?

What is the best cover crop to be dug in heavy clay soil in a young orchard?—ARTHUR PRIER, *Glen Rock, N. J.*

—The method you have adopted for pruning climbing Roses is the approved one when extra large trusses of bloom are desired. A greater wealth of bloom but not such large individual trusses can be had by letting the canes remain and using the extension growth from them for subsequent growth the next year. Lady Ashdown and Flower of Fairfield would not be expected to yield more than a scattering few blooms in the late part of the season. They are not naturally constant bloomers in the same way as some of the Hybrid Teas. If looking for a second crop, defer pruning until the winter. *Rosa Hugonis* is best left to grow naturally unpruned.

*Hydrangea arborescens* and *Hydrangea paniculata* belong to two totally different groups. *Paniculata* is a shrub or small tree with pyramidal inflorescence, stamens ten, petals expanding; *arborescens* belongs to a group with corymbose or somewhat flat inflorescence and grows four to ten feet, the leaves are pubescent and somewhat glaucous beneath and it has practically no sterile flowers. It blooms in June and July, whereas *paniculata* flowers during August and September. To prune, both can be cut back during the dormant season as they flower on the new growth.

As an orchard cover crop where it can be grown, nothing is better than Crimson Clover, sowing about August or September and turning in the following spring. As an annual cover crop use Soy Bean or Cow Pea, turning under and then planting with Crimson Clover as suggested. That is better than Rye for a young orchard; Rye does not increase the nitrogen content in the soil appreciably. You might try sowing Hairy Vetch in the spring. The great need of a clay soil is vegetable matter and anything that you can grow on it and turn under will be good. If you have a bare spot at any time, sow Turnips and dig them under.

All clambering plants that haul themselves up by gripping for support must eventually cause some injury to the shrubs over which they climb. Moreover, they effectually cut out light and air. We do not approve of the combination of *Clematis* and Roses unless grown separately. Ferdinand Conrad Meyer is an ideal hedge Rose but is not ever-blooming; very good for a blooming hedge Rose is *Gruss an Teplitz*. Of course, it does not make a very dense hedge.—ED.

### True Stars and False

*To the Editors of THE GARDEN MAGAZINE:*

THE Open Column is to me one of the most useful as well as one of the most interesting features of your paper. I have learned many valuable things from the various writers and so am glad to be of service to someone else now.

Your correspondent, A. Dwight, of New York City, asks for the identification of a plant given him under the name of Star-of-Bethlehem. From his description the plant is undoubtedly *Campanula isophylla* alba; there is also a blue variety, but I have never heard of a pink. The true Star-of-Bethlehem is *Ornithogalum umbellatum*, a bulbous plant.—MURRAY HORNE, *Yorba Linde, Cal.*

—On page 204 of the May number, a correspondent, A. Dwight, of New York City, asks the name of a little white *Campanula* given her last summer up in Maine. It is *Campanula isophylla*, apparently a favorite thereabouts—I recently saw a beautiful plant in the window of a shop at Gorham, N. H. Further information about it can be found in Bailey. An occasional catalog offers it.—ANNIE LORENZ, *Hartford, Conn.*

—In the May number I note that A. Dwight of New York City asks about Star-of-Bethlehem. I do not remember ever having heard of it myself until my mother brought some plants up from Baltimore from a neighbor's garden to plant upon my father's grave one Memorial Day, but it has been familiar to her for a good many years. Perhaps this particular use of it has something to do with its popular name. Botanically it is *Ornithogalum umbellatum*, the only common garden representative in this country of something over a hundred kinds common in the Old World and in Africa. It has not quite disappeared from the American catalogues—Childs still lists it, and also *A. arabicum*, a tender pot bulb sometimes incorrectly called Sea Onion. Star-of-Bethlehem is, as Mr. Dwight says, a charming little plant, its chief bad habit being that of crowding its neighbors in mixed plantings which, of course, indicates its utter hardiness.—ALBERT BENJAMIN CONE, *Chicago, Ill.*

—I think the plant asked about as Star-of-Bethlehem in the May magazine is the same that puzzled me for a long time. In the course of my reading I came upon a description that I think fits it. So I now call it by this name *Campanula isophylla*, Falling Star, but would of course like to be positive as to its accuracy.—ANNA B. LEWIS, *Watertown, N. Y.*

### Studying Larkspur Disease

To the Editors of THE GARDEN MAGAZINE:

IT MIGHT interest your readers to know that we are working on *Delphinium* leaf-spot, and would be glad to receive material of it from any part of the country.

Fresh specimens, addressed to this laboratory, should be sent dry, wrapped in newspaper.—EDWIN F. SMITH, *Pathologist in Charge, United States Department of Agriculture, Bureau of Plant Industry, Washington, D. C.*

### What's Wrong With the Dahlia?

To the Editors of THE GARDEN MAGAZINE:

WITH a feeling something between distress and exasperation I have read the article in the May number on Dahlia culture, which shows how easy it is and why everyone should be rioting in these flowers in their season.

Cannot the writer somehow be induced to move into this territory and find out why we can no longer do these desirable things? We certainly do not know. Time was when we were able to vie with other favored parts of the country, but that time is long gone by.

What is the matter? Sometimes we say it is the tarnished plant bug, sometimes we fear the climate has changed. It is plainly something and yet the experts break our hearts by serenely telling us how easy it all is, when we sometimes see long rows of apparently thrifty and well-grown plants with only here and there a bloom. I think it is too bad that articles are published with no effort on the part of anyone to relieve us of our distress and even without admitting that anything is or can be wrong. A good many raisers of the Dahlia gave it up years ago, but I never have and I hope to live to see the old favorite in its glory again. Cannot someone be found who will at least sympathize with us?

To be more cheerful: I think our household has found a way to get seeds to germinate. We have a small plant room with some roof light. Seeds sown in strawberry baskets or other convenient boxes are kept moist and set up pretty close to the glass. In an incredibly short time the plants appear, after which there is nothing to do but see that they do not get scorched or too wet or dry. Put the boxes outside as soon as they will not suffer and a supply of bedding plants is assured. We try to keep a continuous succession of plants in flower, but sometimes find it difficult for awhile after the spring bulbs are gone. Pansies and the *Bellis* Daisies come in well then. During this period the Apple

blossoms go out just as the Lilacs come in; at least, so it is in my yard this year.—JOHN W. CHAMBERLIN, *Buffalo, N. Y.*

### Lilies for the Cold Northwest

To the Editors of THE GARDEN MAGAZINE:

ANSWERING the inquiry of George Higgins of Saskatchewan, Canada as to the probable hardiness of *Lilium candidum* in his region, I will say that this Lily is not reliably hardy in North Dakota. The same is true of the *speciosum* and *auratum* varieties.

*Lilium tigrinum* is the hardiest of the family and will grow and bloom anywhere. *Lilium dauricum* and the *Lilium elegans* varieties appear to rank next in hardiness. We are hoping that *L. regale* will give us a white Lily hardy enough for the cold northwest. I have the following in my garden which have survived at least one season when protected by six inches of straw manure, and which I would consider worthy of trial in North Dakota and Saskatchewan: *L. regale*, *L. croceum*, *L. Hansoni*, *L. Henryi*, and *L. superbum*.—A. L. TRUAX, *Crosby, N. D.*

### Artificial Rain When Rain's Wanted

To the Editors of THE GARDEN MAGAZINE:

IN a recent issue, a gentleman told of the nice vegetables that he raised in a dry summer, simply by keeping the cultivator going. Now, I have only a small garden, about 40 by 60, but my enthusiasm for working a hand cultivator, or the good old hoe, disappeared some years ago.

You may call me lazy; but the fact remains that my garden is now more of a thing of beauty and joy forever than it was before I put in an overhead irrigation system. Being of average intelligence, I realized that watering will not take the place of cultivation, but the kind of watering I do certainly makes me push the cultivator less. Any one who has depended upon hose for watering the garden is not to be blamed for questioning the value of artificial rain. By that method the water is applied entirely too fast, in too large drops, and generally in too small quantity.

I turn on the water and the tiny drops fall gently, watering without driving the soil particles together, without bruising or chilling the plants. The irrigation line isn't called upon until I am convinced that water is really needed, and then it gives the ground a thorough soaking, often running for nine or ten hours. After planting, a crust sometimes forms and keeps the little seedlings from breaking through easily. A few minutes of "artificial rain" and the crust is softened and the plantlets simply hop along. At transplanting time, I get the ground in that desirable "just right" condition—I don't need to wait for rain, or lug around a messy bucket of water. You'd be surprised how small the mortality is among my transplants. Often lack of rain makes some pretty tough summer spading, but that's no bugaboo any more—my irrigation system softens the ground just right.—L. T., *New Jersey.*

### Appreciation from the Grower of a Century-old Garden

To the Editors of THE GARDEN MAGAZINE:

THE March number of THE GARDEN MAGAZINE is being read this sunny Sunday and there are so many things in it that I want to talk about! I enjoyed the walk in the Breeze Hill garden with Mr. McFarland and his rheumatic knees (I have two of that variety of my own, also an elbow); it is nice when others have noticed something you have always looked out for, as for instance the *Rhododendron* "weather bureau." Every Breeze Hill article is a pleasure to us, the proprietor and his remarks remind us of a favorite garden lover of this state who lives in our Twin City.

In the "Shrubbery Border" (March, 1922) I wondered if the Evergreen Thorn was a shrub we used to have and called Hawthorn. It had white blooms in spring followed by bunches of tiny berries which turned orange-red and hung on all winter; also small, neat foliage, but the berries were apt to get coated with a black deposit which kept them from showing very effectively. Our native Red Haw, which grows quite large, has fruit which makes nice jelly or sauce to be used like cranberries.

We have some Christmas Roses which were given us from an old garden and are named "Phoebe Shull" for the donor; Madonna Lilies from the same source are called "Margaret Spainhour"—we are fond of so naming our flowers.

Several years ago I read an article in THE GARDEN MAGAZINE by the possessor of a garden who spoke of the York-and-Lancaster Roses which he had, and many other old flowers I have always been familiar with.

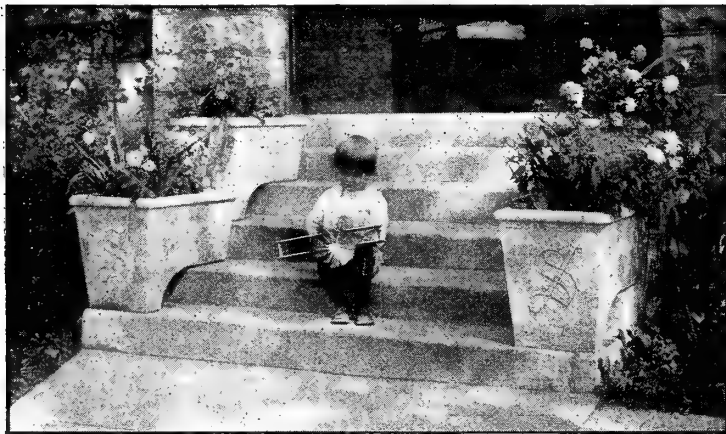
Ours is pretty much an old-fashioned garden, having been started in 1825 by my grandmother with the help of her father. Though many of the original denizens have disappeared from the garden, it still has Box-bordered beds and quantities of both white and purple English Violets, Cowslips, Blue Bottles, Bouncing Bet, a slender Iris called by us Fleur-de-lis or Blue Lilies (oh! so sweet), and old-time Roses—pink Musk Cluster, Harrison Yellow, Pink Daily, Cabbage Roses, pink and red Moss, Damask, Maiden's Blush; and a variety known to us only as Hybrid Perpetual. There are such dear spots in this old garden, banks of Violets and Clove Pinks; sheltered spots under the little single white Spiraea devoted to the earliest Snowdrops, a double variety so low growing that it hardly gets above ground with its early blooms which are generally the first flowers, except the Violets which bloom all winter.

I must ask about a little Iris we used to have which was called Fair Maid of February, very light colored, delicate lavender or nearly white, and quite fragrant. It was one of the earliest flowers to bloom. Does any reader know where it can be had?—AMY HENDERSON, *Worry, N. C.*—We do not recognize the name, nor is it in the Check List of the American Iris Society.—ED.

### Making Your Own Porch Boxes

To the Editors of THE GARDEN MAGAZINE:

THE home-made Portland cement flower boxes shown in accompanying photograph have stood two winters without a crack. The mold was so made that the foot could be omitted if desired and the initial letter was on a piece of tin plate and could be used or not as one chose. They cost about \$1.25 each, including the mold.—WM. H. SINGER, *West Allis, Wis.*



PORCH BOXES THAT WITHSTAND THE WINTER

Cement serves many purposes nowadays and the ingenious gardener can turn slack moments to good account

### Of Platycodon and Mignonette

To the Editors of THE GARDEN MAGAZINE:

ALWAYS interested in color effects in the garden, I have a spring border along the south side of the house that is very charming. I call it my pastel border. The colors are white, pale yellow, lavender-blue and rose. They are furnished by *Arabis alpina*, *Primrose veris superba*, *Phlox divaricata*, and *Tulip Clara Butt*. The *Primrose* is superb and was first made known to me by a letter in your Open Column several years ago.

There is one hardy flower, the *Platycodon*, that I would like to see receive more prominence in lists of perennials. It is such a dependable member of one's garden family that I always turn to it with gratitude after disappointing experiences with the (for me) elusive *Delphinium* and the *Hollyhocks* and *Foxgloves* that disappear during a wet winter. *Platycodon* is easily raised from seed; blooms when very small; increases in size from year to year until it forms a handsome bush, blooming when other perennials are scarce; its leaves are glossy and seem to be absolutely immune from the attack of insects and disease, and the plant does not winter kill. I have a large number of plants all raised from two packages of seed, and when they are in full bloom the garden is a blue and white delight. It is true, I will admit, that the blue is not the lovely pure blue we seek so diligently, and it is also true that the flowers fade quickly when cut. I describe the color as delft blue and, with the

white, it reminds me of old china and old quilts. Two of the plants (a blue and a white) show a tendency to produce double flowers, the white double resembling a *Camellia*.

May I ask for suggestions as to the raising of *Mignonette* from seed? I crave it in quantities; but if I start the plants indoors they refuse to transplant or sulk so long after transplanting that it is late before I get any bloom. If I plant the seed outdoors when the weather is warm, the result is the same. I am not one of the fortunate ones who possess a greenhouse. How can I get bloom reasonably early from seed?—GERTRUDE H. SMITH, *Haddenfield, N. J.*

—Start your *Mignonette* in pots and transplant.—ED.

### Evergreens and Bulbs in Northwest Washington

To the Editors of THE GARDEN MAGAZINE:

I HAVE become very much interested in the letters of the Open Column telling about plants of all kinds and how to grow them. Our native tree, the Douglas Fir, grows here in the valleys and on the hills; also on the islands of Puget Sound. The *Rhododendrons*, and many species of Cedar, Juniper, and other evergreens including the *Madrona* tree—which has brown bark—also grow wild on the islands and are used as lawn specimens in ornamental planting. The queen of shrubs, the Rose, is at her best on Puget Sound for about six months, and bulbs—*Tulips*, *Narcissus*, *Daffodils*, etc.—are widely used. In fact, *Tulips* have become so popular here that last year we named our city *Tulip Town* and had a large and successful parade, and in the fall planted about 100,000 new *Tulips* and probably as many more other bulbs of various kinds. There seems to be no enemy or drawback to growing bulbs here in this cool, damp climate and good clay subsoil. *Darwin Tulips* grow 24 in. tall; and *Daffodils*, *Hyacinths*, *Jonquils*, and *Narcissus* are wonderful in their blooming season.

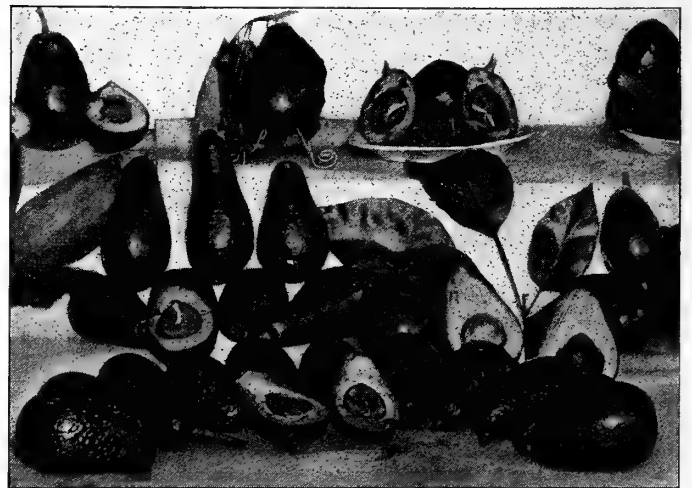
THE GARDEN MAGAZINE grows better every issue. I think I will try to get some new subscribers. I keep all the issues on file and often refer to the pictures, designs, and articles for suggestions in my business, landscape gardening. A friend who paints is using the first page pictures as studies.—C. R. S. EGBERT, *Bellingham, Wash.*

### Growing the Alligator Pear

To the Editors of THE GARDEN MAGAZINE:

HAVE any of your readers ever tried raising the *Alligator Pear* (*Persea gratissima*) in the house from seed? I planted two this autumn in 6-inch pots. One is a great success, being now 12 inches high, leaves green with a tinge of red; the other has been very slow in developing, but is alive. Can they be put out-of-doors in summer and what would be the best treatment?—MRS. EDWARD A. BRIGHAM, *North Grafton, Mass.*

—The *Alligator Pear* is a sub-tropical plant. It will not endure frost but will thrive fairly well in about the same conditions during the summertime as will an Orange. It requires a fair amount of heat to carry fruit, but if grown in the North needs protection each winter and good feeding, being naturally a very gross feeder.



ALLIGATOR PEARS ON EXHIBITION

Here are a dozen varieties of *Alligator Pear* (*Avocado*), the highest priced fruit on the market, as exhibited at the Los Angeles (Cal.) Chamber of Commerce



As the plant grows more or less continuously it should not be subjected to great changes of heat, water, light, or other conditions.—ED.

### Achimenes May Be Had

To the Editors of THE GARDEN MAGAZINE:

IN THE May number, page 204, ("Where the Iron Fetters of Quarantine Are Felt,") I notice an inquiry for Achimenes. I grow Achimenes in four named varieties and can possibly supply Mr. Tanner, if he is still in want of this flower. I grow large numbers and still have a few dormant bulbs that I shall not use. THE GARDEN MAGAZINE is fine; the Open Column especially interesting.—MRS. I. L. TEAGUE, Fayette, Miss.

—Many letters have been received citing offerings of Achimenes in several dealers' catalogues this season; often a diligent search will uncover supplies.—ED.

### Says One Neighbor to Another

To the Editors of THE GARDEN MAGAZINE:

ONE of your readers was so kind as to write me about the "old-fashioned Clove Pink" which grows in her garden, offering the further very helpful suggestion that information about Pinks can probably be had from Horace Whiteman, Parkesburg, Pa., or Maurice Brinton, Christiana, Pa., "because they grow the genuine old-fashioned flowers for an old-fashioned market in an old-fashioned community." I gladly pass on this interesting bit of information to other gardeners who love the oldtime things.

If this is an example of the interest and helpfulness of an enlarged "Garden Neighbors" department, it must be counted a success unanimously!—R. F. HOWARD, South Lincoln, Mass.

### Some Identities and Whereabouts

To the Editors of THE GARDEN MAGAZINE:

IN REPLY to A. Dwight, New York City, inquiring for the identification of a very dwarf miniature white Platycodon with roundish leaves, I suggest *Nierembergia rivularis*. There is no pink variety. There is a blue *Campanula carpatica* which nearly resembles it, though the leaves of this are heart-shaped. *Nierembergia* is one of the dug-overs. It doesn't show up in the spring till the first part of May, taking its time along with *Plumbago Lapentae* (*Ceratostigma plumbaginoides*) and the dilatory *Eupatorium caelestinum*. Annually I distribute large quantities of this excellent plant, but the recipients as regularly report that it has winter killed. I have had it come up in July; that was after the cold winter of 1917-18. I confess I dug some of it over that summer myself.

*Justicia New Dwarf* can be obtained from J. L. Childs, Floral Park. Also *Achimenes Heavenly Blue*. *Lithospermum prostratum*, widely as it is advertised, does not materialize upon being ordered. I have tried for years both seeds and plants. Seeds do not germinate. I have this year planted seed from Thompson & Morgan, England.

R. F. Howard should have little difficulty in obtaining *Muscari botryoides* from some GARDEN MAGAZINE reader. Other species are possibly extinct in this land of the free. I should like one specimen bulb of the feathered *Muscari monstroza* or *plumosa*.

A small patch of *Puschkinias* have seeded themselves in my garden. A myriad progeny are making a grass-like first growth. I mention this to whom it may concern.

I do not altogether join with the critics of Quarantine 37. Shut out as we are from much that makes gardening worth while, that is from the interesting things like *Scilla* species, *Helleborus*, *Eranthis*, *Fritillaria* (to observe the names on the page before me), nevertheless we are thrown back upon certain primary sources. For example I regard it as absurd that I should be obliged to import seeds of American wild flowers from Correvon in Switzerland, but such is the fact. The quarantine ought to give American growers a chance to establish themselves in what should be their own domain. It has at any rate discovered a demand for the interesting plants, apart from the demand for the showy things whose value is entirely objective.



A THIRTY-FOOT HOLLY AT MT. VERNON (MD.)

A fine specimen of native Holly (*Ilex opaca*) still standing near the home of our first President. No wonder that the Garden Clubs of Maryland and Virginia feel moved to protect this beautiful native from the ruthless depredations of commercialism and to translate the Christmas cry for Holly into the saner cry for preservation and propagation

My only quarrel with Quarantine 37 is that it discriminates against the subjective garden in favor of the objective, and that its prejudices are essentially vulgar and tend to perpetuate vulgar standards of American horticulture.—JULIAN HINCKLEY, Cedarhurst, N. Y.

### Mountain Plants Found at the Seaside

To the Editors of THE GARDEN MAGAZINE:

DR. D. T. MACDOUGAL'S experiments in moving plants from the mountains of the West to the Pacific Coast (February GARDEN MAGAZINE, page 305-307) calls to mind some interesting things I have noticed in my travels. In Maine, New Brunswick, and Nova Scotia, many of the mountain plants are also to be found at the seashore. Whether they had travelled down from the mountains or up from the seashore appears doubtful, as the same plants found on the seashore are not found again until we get well up in the higher regions—few in the intervening territory. Is it not possible that an adjacent country in Canada was once mountainous and the coast-line then far out at sea?

I found the following plants both on the mountains and at the seashore; *Potentilla tridentata*; *Coptis trifoliata*; *Vaccinium oxycoccus*;

*V. macrocarpum*; *Chiogenes hispida*; *Trientalis americana*; *Comptonia asplenifolia*; the various Blueberries, particularly *Vaccinium* (*Cyanococcus*) *canadense*; *Limoea borealis*, *Oxalis violacea*, *Campanula rotundifolia*, and *Dalibarda repens*.

Gray's Botany states that *Rubus Chamæmoris* is found on the mountains of New England above the timber line, and also on the seashore at Lubeck, Maine. There has never been a time in my botanizing when I found *Cornus canadensis* that I did not also find *Trientalis americana*, *Potentilla tridentata*, and *Gaultheria procumbens* near by, whether at mountains or seashore.—T. D. HATFIELD, *Wellesley, Mass.*

### Do Dahlias Need Acclimating?

To the Editors of THE GARDEN MAGAZINE:

IT SEEMS to be a rule in this section of the country that Dahlias do not bloom freely and perfectly except when we have a cool season with plenty of moisture. Last year Dahlia tubers purchased from dealers on the West Coast, also from those in the East, did not bloom. The year before I bought Dahlia plants from Illinois, and they bloomed. Is it possible that Dahlias need to become acclimated to a certain section?—E. R. KEAST, *Davenport, Iowa.*

—We do not think so; your previous failures were perhaps due to a check in growth.—ED.

### How to Get Rid of Ants?

To the Editors of THE GARDEN MAGAZINE:

OFTEN I have seen stated that castor oil beans planted in the borders will keep moles out because of their intense dislike for the odor of the plants. Now when Charles Eberman states in the May number

that beans dropped in runs will similarly eliminate moles, is it because the beans become moist and odorous, or is it (as he suggests) that, being fond of the beans, they eat them and are thereby poisoned?

Moles do not bother me, but my grounds are overrun with ants. I distributed honey and syrup mixed with arsenical preparations on a number of occasions last summer and it seemed that the whole ant population invited themselves to the banquets, and yet there were about as many left afterward. Who has had experience in getting rid of them? This year I am going to try tobacco stalks and dust, liberally, and have some hope also of results from the use of flaked naphthalene. I have already tested it and find it not at all detrimental to grass or other vegetation; and if so disagreeable to moths in the form of the familiar moth-balls it may convey to the ants a hint that they would find a warmer welcome elsewhere. Has any one ever tried it?—ALBERT BENJAMIN CONE, *Chicago, Ill.*

### The Magic in Fallen Leaves

To the Editors of THE GARDEN MAGAZINE:

DURING the "flu" epidemic the city in which I was then living issued an ordinance prohibiting the burning of leaves because the smoke from them aggravated the sufferers. As each individual householder was responsible for his lot and parking, and as we had several big trees, our problem was no mean one. As they were raked up we had the leaves spread very thickly over the garden at the rear of the lot and after a rain or two spaded them under. In the spring the ground was again spaded, the soil now being wonderfully rich so that during the season we enjoy large juicy peas, beans, onions, lettuce, cabbage and tomatoes.—EDITH HUNT, *Oak Park, Ill.*

## QUESTIONING THE QUARANTINE

Summary of Proceedings at the Conference on Quarantine 37 held in Washington, May 15, 1922

THE Committee on Horticultural Quarantine was represented by the Chairman, the Secretary, Mrs. F. B. Crowninshield as proxy for Mrs. Turnure and as representative of The Garden Club of America, Mr. A. C. Burrage, and Mr. Elisha Hanson, who for some weeks previous had been cooperating with the Committee as Washington representative. There were also present in behalf of related interests Mr. Leonard Barron, Editor of THE GARDEN MAGAZINE; Mr. Richardson Wright, Editor of *House and Garden*; Professor E. A. White of the New York State College of Agriculture, and representatives of The Society of American Florists.

There is much cause for gratification in the fact that Secretary Wallace presided in person throughout almost the entire conference, and that the conference was thrown wide open for the discussion of any phase of the quarantine situation. This made it possible to directly inform the Secretary regarding the attitude and objectives of those who criticize Quarantine 37—something that we feel had not been accomplished theretofore.

As a result of Mr. McFarland's presentation of the formal brief (which was essentially that left with Secretary Wallace on January 20th, but to which no reply had been received), of two short but vigorous statements by Mr. Burrage, one of which dealt specifically with the importation of hybrid Orchids, and of Mrs. Crowninshield's plea for greater latitude with respect to the importation of small bulbs, it appears that any existing misconceptions have been cleared up, and that the way has been paved for logical and legitimate modification of present obnoxious and unnecessarily severe restrictions, provided Dr. Marlatt's distorted point of view does not dominate the Secretary.

Of large significance is the fact that the Committee had secured, on the very eve of the conference, from a lawyer who has specialized in the analysis of departmental law and practice, a formal brief or report on the legal status of Quarantine 37 in its relation to the Act of August 20, 1912, under which it was imposed.

This brief declares unequivocally that *Quarantine 37 is illegal* in that it exceeds the authority conveyed by the Act. The report made by the Congressional Committee when the Act was passed is quoted in obnoxious support of this contention.

When at the opening of the conference the legal question thus raised was introduced by Mr. McFarland, Secretary Wallace, agreeing that it was not a matter for discussion at a general meeting, also agreed

that it ought to be definitely settled, and that opportunity would be given to have it reviewed at a conference at which both sides could be present with counsel. Such a conference was held on May 31 and the Solicitor of the Department now has the matter under consideration. Obviously if the quarantine is found to be illegal, there is no object in working for modifications of its regulations until it and they are brought into thorough accord with the law.

On the other hand, pending the settlement of the legal question, the Secretary has authorized, and the Federal Horticultural Board has agreed to hold, conferences with groups interested in specific modifications. There appears reason to believe that the reasonableness of the demands for at least some of the recommendations made can be proved to the satisfaction of the Federal Horticultural Board. The Board having left for California immediately after the conference, further discussion of modifications were delayed for a few weeks.

This Committee will advise any one interested of all important developments as they occur, or of any need of further active cooperation that may arise. On the whole, it feels that from the amateur standpoint the Washington conference was a distinct success in that it:

- (1) Gave all the facts full publicity and brought them to the personal attention of the Secretary of Agriculture.
- (2) Elicited acknowledgment by the Federal Horticultural Board that certain of its rulings have been arbitrary and might suitably be subjected to examination.
- (3) Raised the fundamental question of the legality of Quarantine 37, thus bringing about a definite study of the situation.
- (4) Assured the discussion of such matters as the admission of more kinds of bulbs and other plants, the more general issuance of permits to amateurs, and other specific recommendations made on May 15.

(5) Gave opportunity for official delegates from England, Belgium, and Holland to present arguments in behalf of a broader policy as regards international horticultural trade and reciprocity in international control of plant pests and diseases. The calm and clear statement of Mr. W. G. Lobjoit, head of the government service which protects England adequately against the introduction of plant diseases and insect pests without any of the discriminations, annoyances, and hardships of the American practice, was most impressive.

E. L. D. SEYMOUR, *Secretary.*

# APPRAISING SOME OF THE NEWER IRISES

A Silhouette of What's New and Noteworthy as Seen Through the Expert Eyes of the Secretary of the American Iris Society at the Annual Exhibition



THE recent exhibition held in conjunction with the third Annual Meeting of The American Iris Society at the New York Botanical Garden on May 27th provided a quite unusual opportunity for noting the recent developments in Iris culture. It will be remembered that the organization meeting of the Iris society was held January 31st, 1920, at The Garden. Since that date the membership has increased to some six hundred and fifty, and the Test Garden of Bearded Varieties initiated two years ago now contains a good thousand different forms contributed by members, both in this country and abroad. With such a collection at hand, the exhibition, though fine, had a close rival as an attraction to visitors.

Owing to the abnormal season, the scheduled date was advanced one week and many exhibitors found it impossible to attend, but on the other hand it enabled Washington and Boston growers to compete, in fact, T. F. Donahue won the amateur sweepstake despite this handicap of distance. Among the commercial growers John Lewis Childs, Inc., was by far the biggest exhibitor, although there were noteworthy varieties in the exhibits of John Scheepers Co., and Cedar Hill Nurseries; and Mrs. Frances Cleveland and Miss Sturtevant showed seedlings to advantage. A vase of *Mariposa*, an *orientalis* seedling introduced last year by Mrs. Cleveland, was charming, just a few stalks and leaves rising from a simple holder set on a dull green, wavy-edged plate; and I was glad that Mrs. Robert C. Hill, the judge, should have honored so simple and yet so satisfying a bouquet. The winning vase staged by Mrs. James Montague was equally suggestive of garden combinations; *Queen of May* and *Her Majesty for Iris*, with *Purple Beech*, *Nepeta Mussini*, and dull blue *Columbines* all pleasantly arranged in a dull greeny-blue pot. It is not often that flowers arranged for indoor decoration can be so happily grown together.

THE lasting interest, however, lies not so much in the exhibitors as in the flowers exhibited and the showing of many novelties gives me an opportunity to speak in detail of recent progress toward better Irises. Inasmuch as *Lent A. Williamson* (Wmsn., 1918) has been given the highest score (9.6) in the recent symposium published by the Society, it deserves first recognition and yet as shown it was not typical. I have been interested to hear from Mr. Bliss, the English breeder, that *Lent A. Williamson*, his own *Dominion*, and *Valkyrie* (Sturtevant) possessed very similar fine qualities that suggested similar parentage. The first named is well known and possesses height and a richly colored lavender and pansy-violet flower; while *Dominion* with its brilliant prune-purple, and *Valkyrie*, light drab and dark maroon are still rare. All have that intensity and sheen found only as an accompaniment to exceptional substance, a quality that is becoming more indispensable among the newer Irises. Off-hand one would expect that it would not be apparent in the lighter tones, but the old *dalmatica*, *Princess Beatrice*, has the same reflecting texture and lasting quality of bloom. Others of the *Dominion* race have been introduced within the last few years, and we can look forward to many more in the future. That the coloring of this type will be in the deep purples, both red and blue, is sure; that it will give yellows is improbable, though not an impossibility.

Quite clearly these trace back more or less directly to *cypriana*, or *trojana*, and the new *Ambassadeur* (Vilmorin, 1920) shows similar parentage. It has not quite the intensity in its bronzen tones nor quite the substance, but it has far greater height, wider branching, and, in appearance at least, larger flowers. Whereas *Lent A. Williamson* is a blue-purple dulled with yellow, *Ambassadeur* is a red-purple lighted by yellow, and among these four top-notch varieties *Valkyrie* is the only one of distinctly novel color which might perhaps be explained by the fact that its sombre richness needs size to prove attracting.

Another result of progress breeding has been in the CLEAR YELLOW SELFS. Among the old varieties only *Aurea*, *Foster's Yellow*, and *Sherwin-Wright* show complete absence of venation on the falls in all conditions of climate and weather, but these are all low, not over thirty inches at the best, and when we consider the wealth of lavender selfs we appreciate the dearth of similar yellows. This year I have compared yellows galore—*Empire* (Sturt.); *Virginia Moore* (Shull); *Soledad* (Mohr); *Mrs. Neubronner*, *Loie Fuller*, (Vaughn); *Sunshine*

(Yeld); *Topaz* (Bliss); *Shekinah* (Sturt.)—and of them all only two show no traces of the venation which is a sure proof of their variegata origin. *Soledad* is a *trojana* seedling without *trojana* height and this year at least bloomed but shortly after the pale yellow intermediates and revealed their characteristic texture. *Shekinah*, however, clearly shows its pallida origin, grows a good three feet, and is of a very clear though not intense tone. As an "insider" I might add that there are others of varying shades on the way. At the exhibit Miss Sturtevant was awarded Honorable Mention on two yellows; one a pale pallida with faint veining at the haft; the other, *Gold Imperial*, of deeper tone and with the glister that we find in *Caterina*. It is surprising to note the difference in the effect of a hue on a pallida and a *cypriana*, the first seems to absorb light, the second to reflect it and give greater intensity to the color.

Among the LAVENDER SELFS AND BICOLORS we have already established a new standard by the introduction of *cypriana*, *mesopotamica*, and *trojana* blood. *Mlle. Schwartz* (Denis); *Delicatissima* (Millet); *Ann Page* (Hort); *Caterina* (Foster); and *Queen Caterina* and *Mother of Pearl* (Sturt.) are all in the delicate tints of blue- and pink-lavender. That they are all lovely cannot be gainsaid, but they sound much of a muchness to those that do not know them intimately. *Crusader* and *Lady Foster* are still among the finest of the lavender bicolors, but are proving rather poor growers in our Eastern gardens and when we consider the rival claims of *Lord of June* and *Neptune*, *Halo*, *Emir*, *Sarpedon* and many more we are frankly at a loss. Miss Sturtevant's *Jennett Dean*, though very pale, is rather of the *Halo* type and received an Honorable Mention.

Among the PINKS *Dream* and *Wild Rose* (both Sturtevant seedlings) are proving popular, and personally I found much of charm in *Pink Pearl* (Cleveland). *Harriet Presby* might be classed with these, but is really deeper in tone, almost as deep as *Pauline* (Farr), but its unusual height and rampant growth merits the award. Visually we perceive a great difference between these and the claret of *Edouard Michel*, but in the chart colors there is a close relationship; and insensibly we blend into vivid red-purple bicolors things like *Seminole* (Farr), which received an Honorable Mention in 1920 at Philadelphia, and *Morning Splendour* (Shull), which is even richer and most worthy the Honorable Mention it received this year. Mr. Shull, by the way, brought a number of seedlings from Washington, and his *Nimbus*, a rich, dull *Lent A. Williamson* seedling, is worthy of note even though as exhibited it did not receive an award. That Mr. Farr and these other exhibitors from a distance could have shown such splendid blooms in the pink of condition was a constant surprise.

There is a wealth of NEW FLICATAS, chiefly originated by M. Denis and Mr. Bliss. The former's are apt to be veined and of blended tones, flowers of *Mary Garden* (Farr) type, whereas the latter's are practically all marked with blue. *Mme. Chobaut*, the standards flushed with a clear bronze, is very fascinating, and *Whim*, a seedling of Mrs. McKinney's has the same clarity of unusual color, though in a way it resembles the more lavender tints of *Mercedes*. The blended lavenders frankly do not appeal to me, but among the Bliss seedlings variously marked on white it is hard to choose. *Hilda* is deep at the throat, *Dimity* delicate throughout, *Camelot* a bit bluer, and *Princess Toto* rather like *Hilda*; these are only a few, all good if not fine, but I find it difficult to carry their differences in mind from year to year.

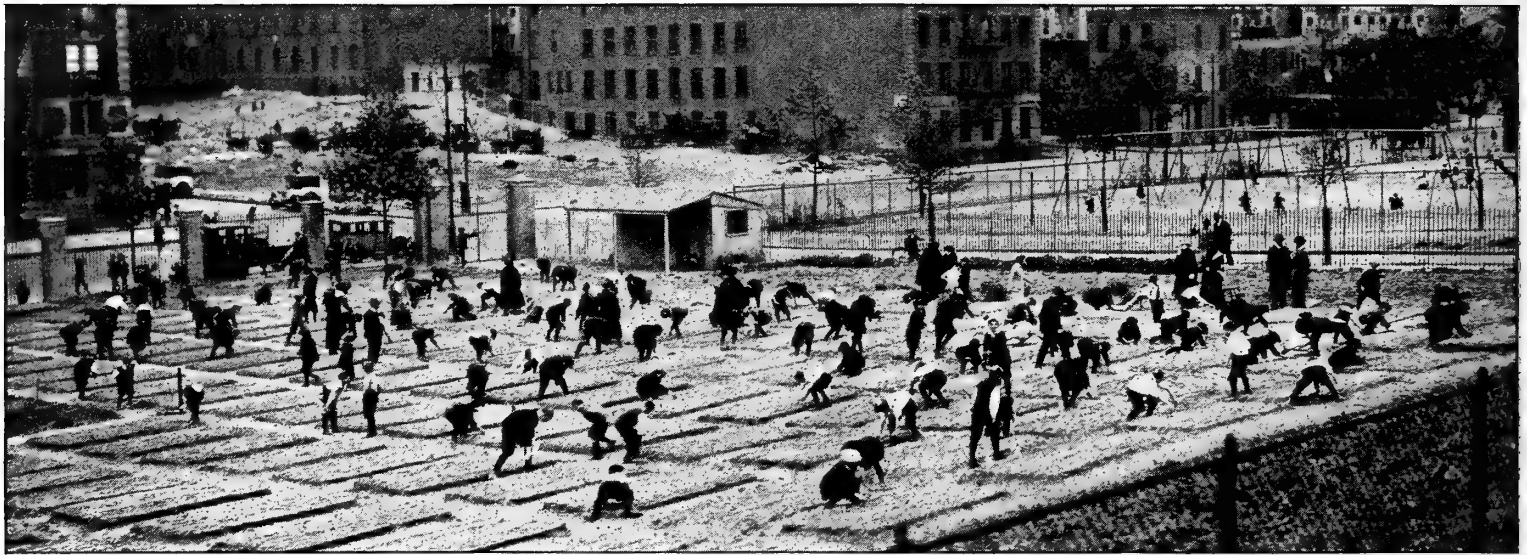
With all this talk of novelties, the VARIEGATA CLASS alone shows no conspicuous additions, in fact until the breeders have succeeded in adding *trojana* height and branching or *cypriana* size and form I look for few really worthwhile yellow bicolors.

THIS report is made a vehicle for a talk on varieties, but must end with at least a brief mention of the Annual Meeting. As the President, Mr. John C. Wister, was in attendance at the International Iris Conferences abroad, Vice-President William A. Peterson of Chicago presided. With the change that brought in W. E. Saunders of London, Ontario, as a Regional Vice-President, the 1921 officers were unanimously reelected. That members had contributed between six and seven hundred dollars for special expenditures was most promising and that a second Bulletin was to be published this year proved excellent news. The dues are \$3.00.

Wellesley Farms, Mass.,

R. S. STURTEVANT. Secretary





Paul Thompson, Photo.

AT THE AVENUE A GARDENS—EVERY MAN FOR HIMSELF IN SEED-TIME

Some of the boys on the grounds of the Rockefeller Foundation, where six hundred school children planted vegetable seeds inoculated with bacteria to produce twice the crop yielded by an ordinary seed

THE UNFORTUNATE MR. WEED

**M**R. WEED was a member of a world-known family, more celebrated than esteemed. The mistake he made in the choice of a scene of his activities, was what led to his ultimate down-fall.

With the whole world to choose from, he selected the Effendi Garden over on the East Side of New York City in a tenement district. The Effendi Garden is one of six hundred plots, each 5 x 10 feet, planted and cultivated by poor children who otherwise would be playing in the streets and exposing their young lives to automobiles and even worse dangers of the crowded city.

The Effendi Garden gets its name from the generous gentleman who contributed the ten dollars needed to provide a tenement child with the necessary seeds and tools to plant and cultivate it and raise a crop of flowers and vegetables. The ten dollars also helps in the instruction and supervision of the child during the spring, summer, and autumn while engaged in this joyous out-of-door playwork of planting and cultivating.

The child didn't recognize Mr. Weed at first sight. In childish ignorance it thought Mr. Weed might be Mr. Beet, Mr. Onion, Mr. Green Pea, or Mr. Radish whose arrival on the scene the little gardener was anxiously and impatiently expecting. Therefore the child welcomed Mr. Weed's arrival and enjoyed the way the new-comer made himself at home and proceeded to grow and show every sign of prosperity and satisfaction with himself and his surroundings.

The instructor at the Avenue A Gardens in her regular rounds came to see how the child who was cultivating the Effendi Garden was getting along with that particular plot. Her experienced eye recognized Mr. Weed at once and it did not take her long to explain to the child that Mr. Weed belonged to a very objectionable family none of whose members were permitted to be received as temporary or permanent guests in the Avenue A Gardens. She also instructed the child how to execute Mr. Weed painlessly and permanently. This the child promptly did with its little hoe. And the child was also taught to look out for any other members of the family. Thus it will be seen that Mr. Weed was indeed unfortunate to select one of the Avenue A Gardens where six hundred pairs of bright eyes are now on constant watch for any of his kin.

**O**VER in Brooklyn, which is really part of New York City, although Brooklyn does not always seem proud of that fact, dwell the Marsh children. THE GARDEN MAGAZINE received a letter from the Marsh children; with the letter came ten dollars. That sum has now established the ELF Garden which

is giving to a little East Side child of the tenement the "good time" and "good fun" the Marsh children so generously wish for it. Here is part of the letter:

We intend to earn the money between ourselves.

We would like to have the garden named "ELF" after our own names.

We have a country place of our own and we have very good times there.

We would like other children to have as good fun.

We are.

EDWARD MARSH  
Lee Marsh

Frances Marsh

This contribution, it seems to THE GARDEN MAGAZINE, means something more than the mere giving of the sum necessary to maintain one of the Avenue A Gardens. In the hearts of the young donors, who are giving of their own to help another less fortunate child to know some of their own happiness, there must have been implanted impulses which tend to make fine men and fine women. The instance is one of those things which helps every one concerned—the givers, the child who gets the gift, and all of us who know it.

FUNDS have been received by THE GARDEN MAGAZINE to establish Avenue A Gardens from

THE NEW CANAAN BRANCH, NATIONAL PLANT, FLOWER AND FRUIT GUILD, New Canaan, Conn, for The Cecelia Garden

THE HOLLAND DAMES, New York City, for The Caro Cooke Macdonald Garden

EDWARD, LEE, AND FRANCES MARSH, Brooklyn, N. Y., for The ELF Garden

MRS. E. G. VAUGHAN, New York City, for The Margaret Vaughan Garden

MISS M. I. JOHNSON, Akron, Ohio, for The Biggie Garden

MRS. ALICE DE GRAFF, Oyster Bay, N. Y., for One plot, not named

MRS. MOSES H. CONE, Baltimore, Md., for The Blowing Rock Garden

THE GARDEN CLUB OF ENGLEWOOD, N. J., for The Englewood Garden Club Garden

Ten dollars maintains for the entire season one of the 5 x 10 gardens in the total of six hundred located on Avenue A in New York City, between Sixty-third and Sixty-fifth Streets. The Avenue A Gardens are cultivated under proper supervision and instruction by children from the neighboring tenements for whom this sum provides the necessary seeds, tools, and oversight. Checks to the order of The Avenue A Gardens may be sent to THE GARDEN MAGAZINE, Garden City, N. Y. or to the Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City.

## The Business End of Your Irrigation System

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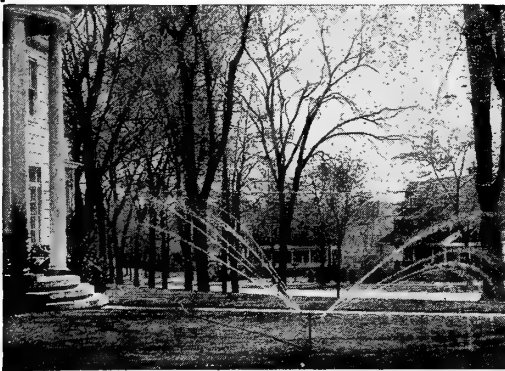
**Empire Adjustable**—This sprinkler embodies a new idea in irrigation; that of having two nozzles on adjustable arms to be set to throw at one time two fan-shaped sprays in any direction. Each of the two nozzles will throw a spray to cover 40 feet. By turning the arms in opposite directions, the spray will cover 80 feet. Height, two feet. Weight six pounds. Price, \$6.25 F. O. B. New York City.

**Empire Rotary**—This is universally adjustable—its arms, its nozzles, its direction, the height of its throw, can all be adjusted. Will cover evenly a 75-foot circle. By pointing the nozzle upward, you can restrict the area. Simple adjustment changes the spray from a rotary to a stationary. All essential parts are of the best brass. Rust proof, handsome finish, strainer in each nozzle, can not get out of order. Height 22 inches, weight ten pounds. Price \$10.00 F. O. B. New York City.

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# When August Comes—Be Ready!

Half the success of garden enterprise is due to correct preparations, the other half to proper planting at the right time! This holds particularly true of Coniferous Evergreens including Firs, Spruces, Hemlocks and Pines; Yews and Junipers; Rhododendrons, Kalmias, Leucothoe, and like ericaceous evergreens. August and early September have proved to be the best time for transplanting Evergreens. Why? It's the season of root growth.

## A Year's Growth Earned—Valuable Time Gained

*Kalmia latifolia*—our Mountain Laurel—will surprise you next spring with glorious flowers as shown below, if you give the plants a chance to make root growth during August-September in your garden.

Heavy Nurserygrown clumps of *Kalmia latifolia* at the following prices; balled and burlaped.

<i>Kalmia latifolia</i> The Mountain Laurel,			
	Each	10	
9 to 12 in. clumps	\$1.25	\$10.00	2 to 3 ft. clumps
12 to 18 in. clumps	1.75	16.00	3 to 4 ft. clumps
18 to 24 in. clumps	3.00	28.00	Each
			10
			\$4.00
			\$36.00
			6.00
			50.00

*Kalmia latifolia*, Pink variety, at double prices of ordinary color.

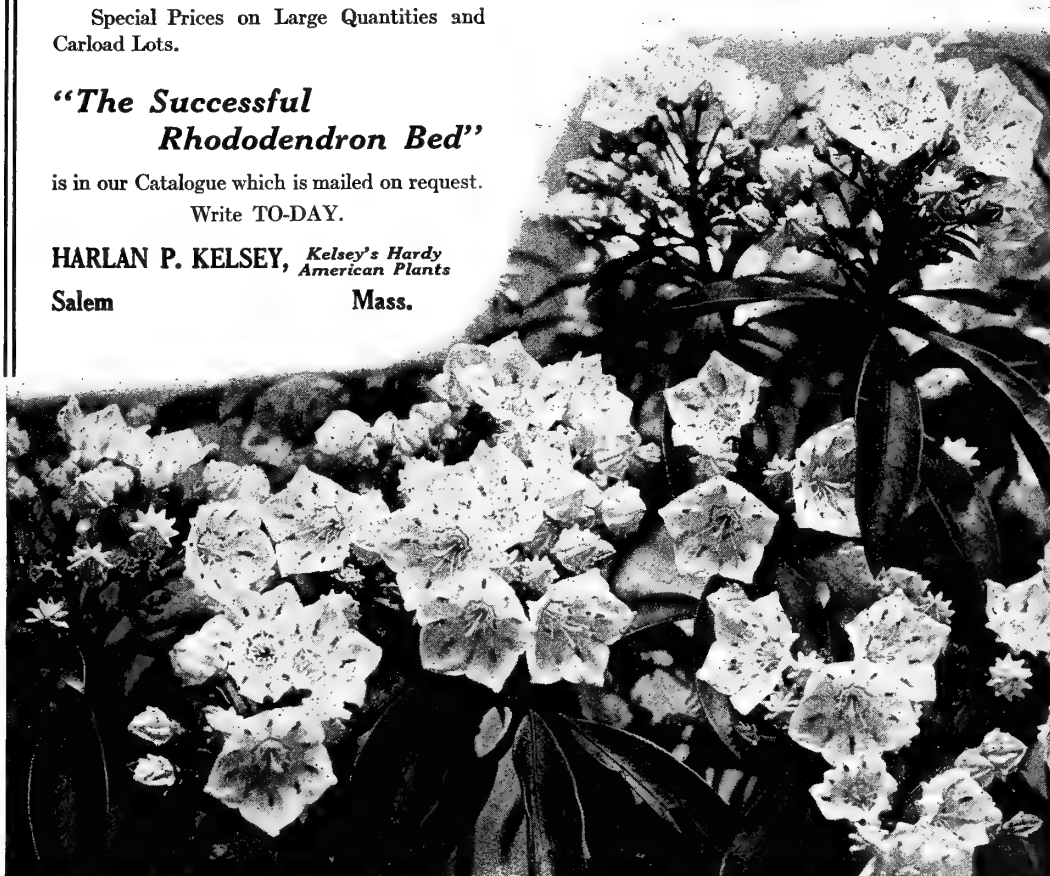
Special Prices on Large Quantities and Carload Lots.

### "The Successful Rhododendron Bed"

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Write TO-DAY.

**HARLAN P. KELSEY,** *Kelsey's Hardy American Plants*  
Salem Mass.



## I Think it's Time to Think of Peonies!

Make your slogan for fall work:—Plant more Peonies! It's been my own for nearly half a century and I have never regretted it. Five hundred distinct sorts I am growing now! Too many, many of you will say, "Yes, but they are like children. The more you have, the more you love them and which would you give up?" So please let's get together on the subject of PEONIES. The first step is to get a copy of my free catalogue—please ask for it. For those in search of rare kinds I offer one eye divisions at a reduced price.

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THEY add the crowning glory to the home garden plot—the final satisfaction to the perfect meal. Their culture is a pleasure—their flavor a delight.

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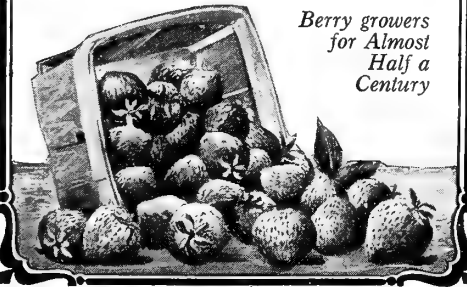
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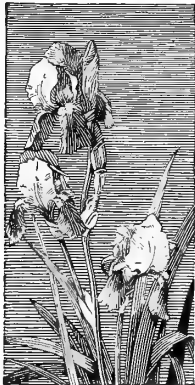


Berry growers for Almost Half a Century

## IRISES

### of Superior Merit

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Celeste . . . . .	.25	Mme. Chereau . . . . .	.25
Darius . . . . .	.25	Monsignor . . . . .	.45
Dorothea . . . . .	.25	Mrs. H. Darwin . . . . .	.25
Eldorado . . . . .	.60	Mrs. Neubrenner . . . . .	.25
Fairy . . . . .	.25	Nibelungen . . . . .	.30
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## WHAT SHADING DOES

THE effect of withdrawing sunlight was carefully investigated by J. H. Curley and G. T. Nightingale, at the New Hampshire Experiment Station. Cloth screens of two different thicknesses were constructed over Apple and Peach trees, and careful comparisons made between these trees and others growing in the open. Similar observations were made with Geranium, Snapdragon, Buckwheat, Lettuce, Aster, Tomato, Nasturtium, and Egg-plant. In proportion as the plants were shaded it was found that in general the leaves increased in size and decreased in thickness. The green color of the foliage was intensified and the surface became distinctly glabrous. The leaves dropped earlier from the shaded trees than from the others. Of particular importance was the effect upon flowering, which was modified by shading and in some cases entirely suppressed. The fruit trees failed to develop flower buds as freely under the shade. In a majority of species studied the shading resulted in a delay in flowering of from a few days to more than a month.

## APHIS IN THE ORCHARD

DWARFED, misshapen apples which display pimples and red stippling of the surfaces, and the appearance of fruits marred by the sooty fungus which thrives upon the excretions of the lice is evidence of the presence of green aphid in the orchard.

The eggs of the green aphid are deposited in the autumn, and hatch the following spring. The majority hatch out as color is showing in the leaf tips of the opening blossom buds. Development is rapid, and winged forms of the second generation appear in late May or early June, when there is a migration to other trees. The species breeds continuously throughout the summer, producing many broods.

They prefer succulent tissues such as exist on terminal growths, water-sprouts, and suckers and are generally present in injurious numbers for more or less extended periods during the summer months in nursery plantings and young Apple orchards. In occasional years destructive outbreaks of the insect occur in bearing orchards.

Their attacks cause curling of Apple leaves which may result in defoliation of affected branches. Succulent growth often exhibits a dying back of terminal areas.

The work of this pest and its control have been studied at the Geneva, N. Y., experiment station. The delayed dormant, or bud spray, treatment of lime-sulphur and nicotine sulphate protected bearing orchards until about the middle of June, when there was a reinfestation from winged migrants. Further spraying with nicotine sulphate and soap, during midsummer resulted in efficient control. Following the treatment, there was noticeable improvement in the condition of apples in most orchards with respect to shape, size, and freedom from reddish discolorations.

Comparative tests of nicotine sulphate with soap or large amounts of lime indicated few differences in insecticidal qualities of these preparations. The advantages of the lime wash were its deterrent action on the aphids and its cleansing properties to the fruits. The rapid killing with nicotine sulphate in combination with soap and its greater spreading properties point to its superiority for large trees.

# PEONIES

## Queens of the Garden

Do you want to add an attractive collection of good peonies to your garden? We grow all the best of the standard varieties besides an excellent collection of the rare European and Japanese introductions that are as yet not well known in American Gardens. Every Peony we offer is a worth while Peony.

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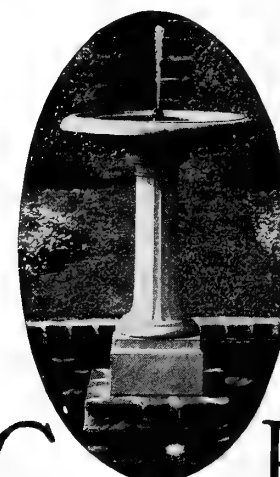
J. J. Dean, our own creation, is a very large, tall, handsome bearded bi-color. Standards light violet and falls velvety royal purple. Stock limited, \$10 each.

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- BOXES, ETC.

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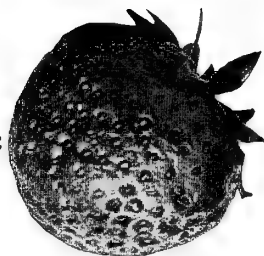
In the Garden a Bird Bath is a delightful spot of interest; a Sun Dial lends quaint charm.

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**California.** Great big firm berries, carried well above the ground. Thrive in any soil and climate. Mid-season. \$3 per doz., \$11 per 50, \$20 per 100.

**Buckbee.** Immense crops of huge crimson berries. Second early. \$2.50 per doz., \$8 per 50, \$15 per 100.

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Midnight.....	3.00	Candidissima.....	.50
			\$15.00

### IRIS

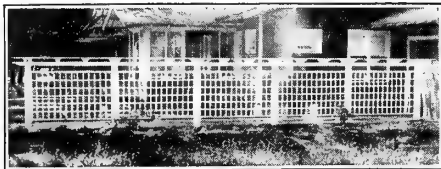
#### 21 Fine Varieties

Value \$7.55 for \$5.00

Niebelungen.....	\$.25	Mithias.....	\$.35
Loreley.....	.25	Lohengrin.....	.30
Rhine Nixe.....	.35	Mrs. W. E. Fryer.....	.50
Perfection.....	.30	Gertrude.....	.15
Fairy.....	.25	Zanardelli.....	.25
Prosper Laugier.....	.50	Madam Chereau.....	.15
Isoline.....	.75	Caprice.....	.30
Mrs. H. Darwin.....	.20	Snow Queen.....	.25
Orientalis.....	.15	Rose Unique.....	.50
Monsignor.....	.35	C. A. Pfeiffer.....	1.00
Princess Vic Louise.....	.35		
			\$7.55

Iris plants are large divisions from 1 year clumps.  
Peony plants are strong 3 to 5 eye divisions from 3 year clumps.

**THE PFEIFFER NURSERY Winona, Minn.**



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Our equipment enables us to manufacture at low cost a very large line of original designs—the attractive kind. It will be a pleasure to mail you our booklet, "LANDSCAPE BEAUTY HINTS."

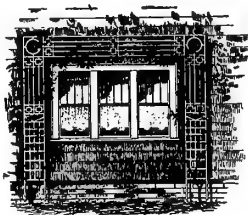
Our drafting department will design especially for you—No Charge.

If interested in Fences, ask for our Blue Prints showing many attractive designs.

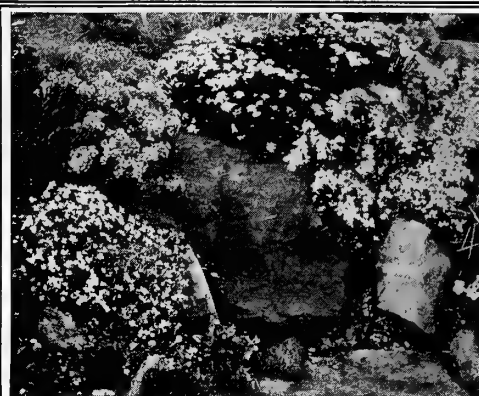
Our lattice trimmings for walls both inside and out have proven welcome additions in gardens and homes. We have many styles suitable for the most elaborate mansion or the humblest cottage.

Free Catalogue

GARDEN CRAFT, 5 Lake St., Crystal Lake, Illinois



No. 355 Lattice Trim



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Alyssum Saxatile (Gold Dust) Silene Shafta (Moss Champion)  
 Arabis Alpina (White Rock Cross) Primula Veris (Cowslip)  
 Helianthemum (Rock Roses) Viola Cornuta (Tufted Pansies)

Pot-grown Plants set out last July, made above showing this May.

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To encourage midsummer activity with pot-grown plants we will mail 2 each of above 6 bright favorites (a \$3.00 value) for \$2.50 postpaid.

List of Palisades Popular Perennials gladly mailed free on request.

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## Irises, Peonies and Gladioli

The Flowers that Bloom from April until October



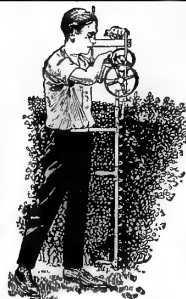
Order Irises and Peonies now for early fall delivery. We grow over 600 varieties of Irises and 85 varieties of Peonies of the finer sorts including the choice new importations. Our rich black soil enables us to grow the finest of roots and bulbs. Our stock is grown under Minnesota climatic conditions and is therefore acclimated to grow well in all parts of the United States and Canada.

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offers a choice list of Strawberries, including the best ever-bearing sorts, and gives directions for planting so that you will raise a full crop of Strawberries next year. It also offers a select list of Celery Plants, Seasonable Vegetable, Flower and Farm Seeds for summer sowing. Garden Implements and Tools, Fertilizers and Insecticides.

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TAKE time during your summer outing to become acquainted with the wild bushes, wild flowers and ferns. You will find the keenest pleasure in identifying them, learning their names and studying their habits. Take a Gillett catalogue along with you. You will be surprised how many kinds you can locate with its help. It will also tell you of many choice and beautiful species that you will not be able to find for yourself, but which you can obtain of me. (If you haven't a copy, write me, and I'll mail you one.)

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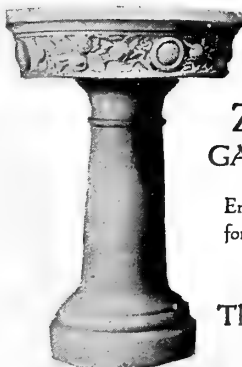


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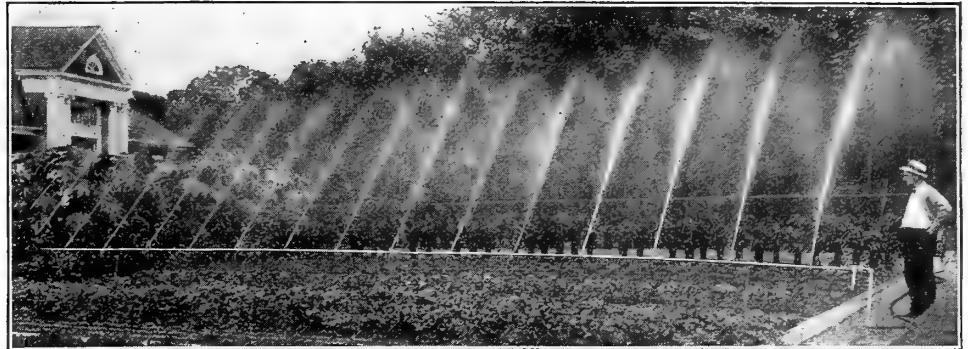
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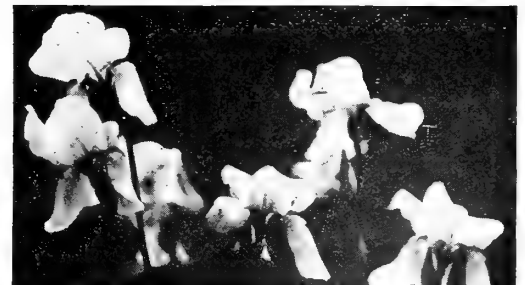
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## IRISES AND PEONIES

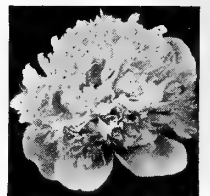
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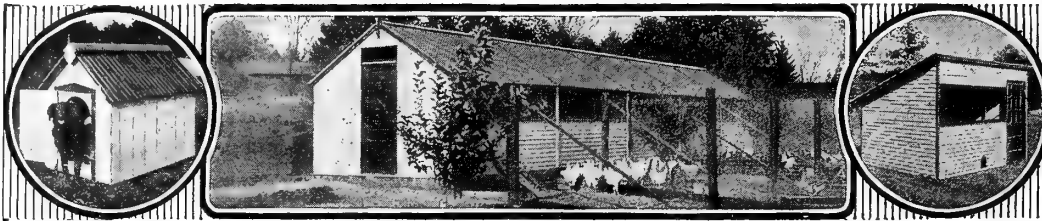
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**SPECIAL OFFER**  
 To introduce "Pet Stone" a light grey, non-staining cast stone, a thoroughly tried and tested product of unusual merit, we offer the saucer bath as illustrated for \$2.25, 3 for \$6.00, f. o. b. factory.  
**HLADKY CAST STONE CO.**  
 230 S. A. Avenue  
 CEDAR RAPIDS, IOWA

### School of Horticulture for Women

**AMBLER, PA.**  
 (18 miles from Philadelphia)  
 SUMMER COURSE—August 1st to 26th  
 TWO-YEAR DIPLOMA COURSE—Entrance Sept. 12th, 1922  
 Write for Circular  
**ELIZABETH LEIGHTON LEE, Director**

### Prindle HUMUS

For the Price is the Best and Cheapest Fertility Maker

Unequaled for making new and keeping old lawns and gardens in condition. May be used at any time. Write for cultural directions.  
 \$5.00 for 5, 100lb. bags, f. o. b. Stanhope, N. J.  
**H. B. PRINDLE, - - 70 E. 45th St., New York**

### WEED SANITAS KILLER

Cleans up Paths, Drives, Tennis Courts, Gutters, etc. Economical, effective. Saves time and labor. Just sprinkle about.  
 Gallon can \$2.00, covers 1000 sq. ft.  
**THE SANITAS CO. 33 Keap St., Brooklyn, N. Y.**

### Garden and Farm Work Made Easy

The Macultivator lessens labor costs in many ways. Prevents help troubles. Does the work of five men. Sold on an absolute make-good, tryout guarantee. Write for interesting proposition.

**THE MOTOR MACULTIVATOR CO.**  
 1319 Dorr Street Toledo, Ohio

### AWAY WITH THE CESSPOOL

Secure all the sanitary comforts of a city building by installing an **Aten Sewage Disposal System**

Allows continuous use of washstands, bathtubs, toilets, sinks, showers, etc. The septic tanks of all Aten systems are made of concrete forms, not wooden forms. No expert engineering service or experienced supervision in the field required.

Simple to install, nothing to get out of order.

Our booklet No. 11 tells how and why. Sent free upon request.

**Aten Sewage Disposal Co.**  
 286 Fifth Ave., New York City

# Some Greenhouse Conclusions Of Decided Interest To You

Many wholesome facts have been forced on all of us by the recently past reign of high prices.

There was a time when greenhouses were doubtless designed and built with an overabundance of fussy detail which cost a lot of money without adding anything to their growing qualities (rather detracting than otherwise). Year after year we have striven to eliminate all parts except those that were absolutely essential to good construction, always keeping in mind, having the outline and proportion of the houses correct and pleasing.

The money that was formerly spent in over-ornamentation is now put into practical construction, thus for the same money can be secured more growing space for palms, flowers, fruits and vegetables.

This house shown is a splendid example of just such common sense designing and planning.

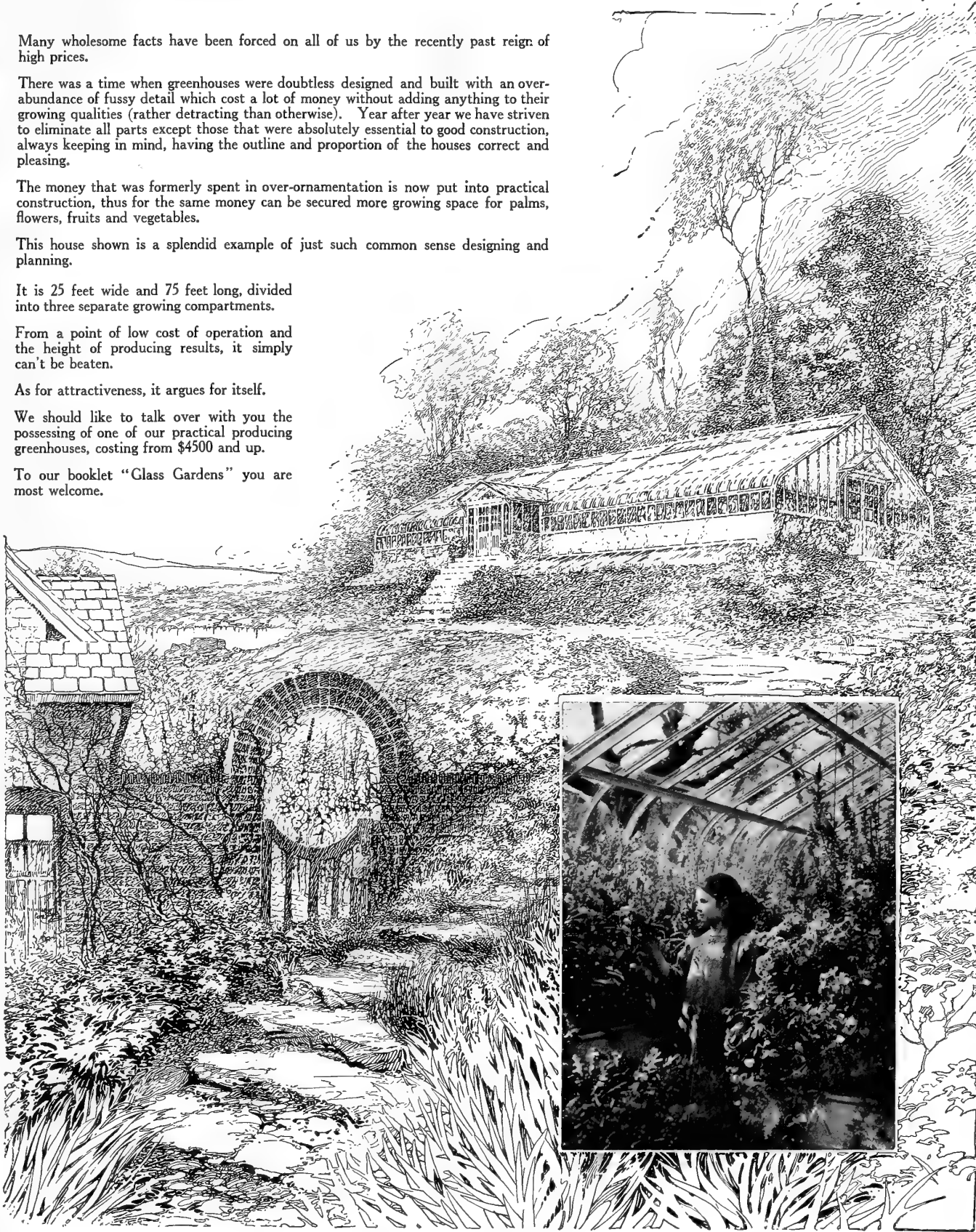
It is 25 feet wide and 75 feet long, divided into three separate growing compartments.

From a point of low cost of operation and the height of producing results, it simply can't be beaten.

As for attractiveness, it argues for itself.

We should like to talk over with you the possessing of one of our practical producing greenhouses, costing from \$4500 and up.

To our booklet "Glass Gardens" you are most welcome.



## Lord & Burnham Co.

IRVINGTON  
New York  
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**“Cottage  
Garden  
Grown”  
Means Quality  
of the Highest  
Standard**

Soil, Season and Skill — the three factors necessary to produce guaranteed Peony roots.

Of these three factors — skill is perhaps the most important.

Here at Queens, with men skilled in Peony growing, we produce plants that are conceded by connoisseurs to be as fine as are grown anywhere in the world. We were among the first to specialize in this magnificent hardy plant. After many years of hybridizing, selecting and improving, we offer a collection comprising approximately 400 selected varieties holding a grand total of over 100,000 healthy plants.

**Plant Cottage Garden Grown Peonies,  
With Assurance of Immediate Results**

We offer 2 year old and 3 year old *plants only*—no divisions which mean long waiting for results. In price our roots range from One to Fifteen Dollars. Nor would we say that a Ten Dollar variety is ten times handsomer than a Dollar variety. Your Peony Dollars spent here will buy the greatest value in the plant product plus frank advice based on many years of working with Peonies. Send for free booklet.

**Cottage Gardens Company, Inc.**

**Nurseries**

**Queens, Long Island, N. Y.**

Above:—  
A Field of Our Peonies.

Alongside:—  
Specimen of Japanese Type.

Indoor Flower Decorations

Growing and Using Gladiolus

# GARDEN MAGAZINE

AUGUST 1922



25 CENTS

Vol. XXXV. No. 6

August, 1922

Doubleday, Page & Company

Boston

Los Angeles

Garden City, New York

Chicago



# The Brand Peony Farms

The largest plant breeding establishment in the World that is devoted to the originating of new varieties of Peony.

The second symposium taken by the members of the American Peony Society, as to the comparative merits of all the good named peonies in the World, shows that, based on a vote of not less than 20 ballots on a flower, there are but 57 varieties that rank 8.5 or better.

## 7 of these 57 varieties or 12½% are Brand Varieties

Further analysis of this symposium also discloses the fact that, based on a vote of not less than 20 ballots to a flower, there are but 22 varieties that rank 9.0 or better.

## Of these 22 World's Best Peonies 4, or 18%, are Brand Varieties

This confirms us in the belief that the peonies we have sent out in the past rank right up with the World's very best.

At the great London, Ontario Show, the American Peony Society's first great International Exhibition just held, the *Newest Brand Varieties* demonstrated the fact that our very latest productions are right up to the high standard of our earlier ones, that the peonies we are bringing out now are as good if not better than the best of those we have heretofore brought out.

Three hours before starting for the London Show we cut eleven buds just opening from our seedlings, placed them in water two hours, then wrapped each bud individually in waxed paper, and packed them in a little paper-lined wooden box which we carried right with us on the train. This box was handled exactly as our luggage on the way and after being so handled for 36 hours the flowers were placed in water at the show.

We made 9 entries at the London Show with these buds and received in very strong competition *Three Awards of Exceptional Merit*, all the awards allowed in this class. Mr. Fewks, Mr. Farr, Mr. Norton acting as judges.

Besides some of our very newest peonies we are offering this fall the largest and most complete line of 1st class *Brand Varieties* such as Brand's Magnificent, Chas. McKellip, Chestine Gowdy, E. B. Browning, Frances Willard, Luetta Pfeiffer, Judge Berry, Longfellow, Mary Brand, Henry Avery, Richard Carvel, Phoebe Carey, Martha Bulloch, etc., and also a complete line of the very choicest of all other American and European sorts.

Our new Catalogue will be ready for distribution about Aug. 1st. We intend that this Catalogue shall be virtually a Peony Manual. That it shall be filled from cover to cover with just that information which those interested in peonies need. It gives the beginner with peonies the benefit of our 43 years of labor with the flower. This catalogue costs us about 50 cents to print. We are making a charge of 25c. for it to prospective customers which sum will be credited on their first orders amounting to two dollars or more. The book will be mailed free to all our old customers as soon as out.

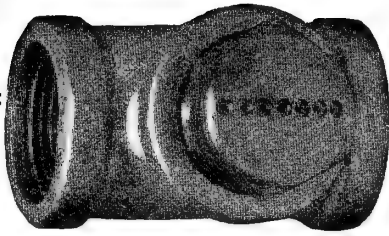
*New free 1922 Price List now ready, send for it*

**BRAND PEONY FARMS Box 424 Faribault, Minn.**

*Peony Growers for 43 Years*







## The Business End of Your Irrigation System

No sprinkler is better than its nozzles. The best nozzles are those that break up the water streams in most thorough fashion. The Empire system gives you nozzles the like of which have heretofore been unobtainable by the broad public.

### All Empire Sprinklers are Equipped with Special Empire Nozzles

There are three types, as described below. The Empire Rotary is shown in action. Every Empire Sprinkler is of most substantial construction, guaranteed to do thorough work for many years.

**Empire Midget**—portable and compact, solid brass nozzle, having forty-seven holes. Sprinkles 50-foot circle. Inside the nozzle a strainer prevents outlets from clogging. Weight, two pounds. Price \$2.50 F. O. B. New York City.

**Empire Adjustable**—This sprinkler embodies a new idea in irrigation; that of having two nozzles on adjustable arms to be set to throw at one time two fan-shaped sprays in any direction. Each of the two nozzles will throw a spray to cover 40 feet. By turning the arms in opposite directions, the spray will cover 80 feet. Height, two feet. Weight six pounds. Price, \$6.25 F. O. B. New York City.

**Empire Rotary**—This is universally adjustable—its arms, its nozzles, its direction, the height of its throw, can all be adjusted. Will cover evenly a very large circle. By pointing the nozzle upward, you can restrict the area. Simple adjustment changes the spray from a rotary to a stationary. All essential parts are of the best brass. Rust proof, handsome finish, strainer in each nozzle, can not get out of order. Height 22 inches, weight ten pounds. Price \$10.00 F. O. B. New York City.

Orders filled same day as received.  
Shipped by parcel post or express.

Send for booklet

"The Gentle Art of Watering Your Garden"

**RAMAPO IRRIGATION CO.**  
88 West Broadway New York



## An Unbeatable Combination

Many floral combinations are lauded by the faddists. Personally I have very little use for the fads and fancies that are not practical. That is the reason why this combination of Peonies and Iris so strongly appeals to me. They are thoroughly practical in that they are absolutely hardy and utterly reliable under all conditions of soil and season, while they are practically free from disease and become increasingly beautiful as the years roll by.

Some years ago I bought the matchless collection of Hollis Peonies. Then my love for the Iris caused me to add a modest collection of these. My stocks are getting so now that I can divide some, hence this appeal for Garden Magazine readers' patronage.

Iris and Peonies, for Spring Bloom, **MUST be Planted This Fall.**

### Now for a few Unbeatable Offers:

Both the intrinsic value of the varieties offered here as well as the volume of bargains which these offers contain, you will find to be unbeatable.

### IRISES

- Pallida Dalmatica.** Stately lavender. 50c each.
- Loreley.** Lemon-yellow with ultra-marine blue falls bordered cream and veined white. 50c each.
- Madame Chereau.** White edged and fringed mauve. A regal flower. 35c each.
- Queen of the May.** Delicate old rose. 25c each.
- Herant.** Lavender and blue. 25c each.
- Mrs. H. Darwin.** Pure white with orange beard. 25c each.
- Siberica (Siberian blue).** Rich blue. 25c each.
- Lord Grey.** Clouded rose-fawn. 50c each.

**SPECIAL OFFER:** One each of above 8 magnificent Iris (a fine value at \$2.85), for **\$2.00**

### PEONIES

- La Coquette.** Collar rose-white, center flecked carmine. \$1.00 each.
- Felix Crousse.** Bomb type. Brilliant tyrian rose. \$1.00 each.
- Festiva Maxima.** Pure white, center flecked crimson. Most popular white. \$1.00 each.
- Alexander Dumas.** Violet-rose crown with creamy white collar. 50c each.
- L'Etincelante.** Carmine, broadly edged with silver. \$1.00 each.
- Umbellata Rosea.** Violet-rose shading to amber-white center. \$1.00 each.

**SPECIAL OFFER:** One each of above 6 winners will be mailed postpaid for **\$5.00**

#### COMBINED OFFER

We will forward, postpaid, the 8 superb Irises, plus 6 magnificent Peonies (total value \$8.35) for **\$7.00**

### You are welcome to my Fall Guide

Only a few years ago I confined my efforts to the Dahlia. Soon, however, my customers began to call for flowers blooming during every season. Besides Peonies and Irises, I added other hardy perennials besides importing a limited line of Dutch Bulbs for Fall planting.

To properly introduce this recent departure in my business to Garden Magazine readers, I am publishing a fall catalogue, a copy of which is gladly sent on request.

**J. K. ALEXANDER**

World's Largest Dahlia Grower

27-29 Central St., East Bridgewater, Mass.



"The Dahlia King"





## You Can Have Beauty and Fragrance, Too

I have studied this matter for years, and find that many of our most beautiful Peony varieties are as desirable for their fragrance as for their beauty.

There is no reason why your Peony planting should not yield both beauty and fragrance. And it will if you make your selections from my 1922 Peony catalogue with that thought in view. For the descriptions are complete and dependable.

You can also work out any color scheme which appeals to you. My two hundred varieties, more or less, include every shade from snowy white to deep maroon.

Still another possibility. You can prolong the peony season for nearly a month by selecting for a sequence of bloom.

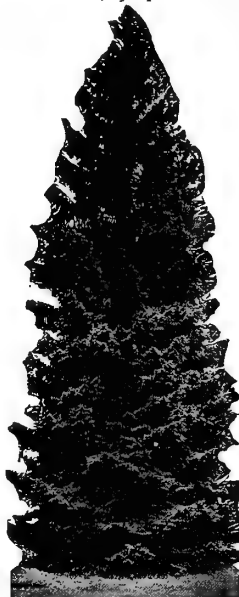
In short, my catalogue will help you to enjoy peonies more fully than you ever have thought possible—free for the asking. Write for your copy to-day.

## What about Conifers?

While your grounds are still in full leaf, you can accurately weigh the relative effects of both evergreens and deciduous trees. Have you enough conifers with their interesting foliage and rich variety in coloring?

Plan to fill any blank spaces from the fine stock growing here. Your choice of 77 varieties; sizes up to 25 feet. All have been frequently transplanted, causing the root systems to form compact growths close to the trunks. Such trees stand transplanting and thrive anywhere.

Write for Catalogue describing Evergreens, Shade Trees, Fruit Trees, and a large list of Iris, Phlox and other Perennials for Fall Planting.



My Favorite Evergreen  
The Majestic Douglas Fir

**S. G. HARRIS,** EVERGREEN and PEONY SPECIALIST  
**ROSEDALE NURSERIES**  
Box A TARRYTOWN, N. Y.

AUGUST, 1922

# THE GARDEN MAGAZINE

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LEONARD BARRON, Editor

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VOLUME XXXV, No. 6

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## DOUBLEDAY, PAGE & COMPANY

GARDEN CITY, N. Y.

CHICAGO: Peoples Gas Bldg.	BOSTON: Tremont Bldg.
LOS ANGELES: Van Nuys Bldg.	NEW YORK: 120 W. 32nd St.

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Entered as second-class matter at Garden City, New York, under the Act of Congress, March 3, 1879

# Burpee's Winter Flowering Sweet Peas for Your Greenhouse

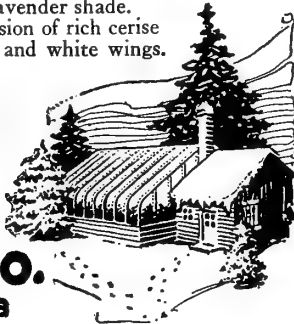
WHAT could be lovelier than dainty and fragrant Sweet Peas right in the midst of winter when all outdoors is covered with a cold blanket of snow? Burpee's Early or Winter Flowering Sweet Peas are revelations of beauty and have been greatly admired whenever exhibited. You can have your greenhouse full of Sweet Peas all winter long by planting in August or September. We have prepared a special Winter flowering Sweet Pea Greenhouse collection containing one-half ounce each of the following six varieties:

- Snowstorm Improved**—The finest white of enormous size.
- Enchantress**—Bright rose-pink with deeper pink exquisitely waved margin.
- Blue Bird**—A charming shade of light blue.
- Lavender King**—Large flowers of a deep lavender shade.
- Glitters**—Bright fiery orange with a suffusion of rich cerise
- Fordhook Pink and White**—Pink standards and white wings.

Purchased separately this collection would cost \$3.45. It will be mailed post-paid to any address for **\$3.00**

**Burpee's Annual**

The Leading American Seed Catalogue will be mailed to you free.



**W. Atlee Burpee Co.**  
Seed Growers Philadelphia

## Permanency

The greatest factor in favor of "Hardy Gardens" is that their Initial Cost is their Only Cost. Once established they increase in beauty and also in value as the years go by.

### Over Four Million Hardy Field-Grown Plants

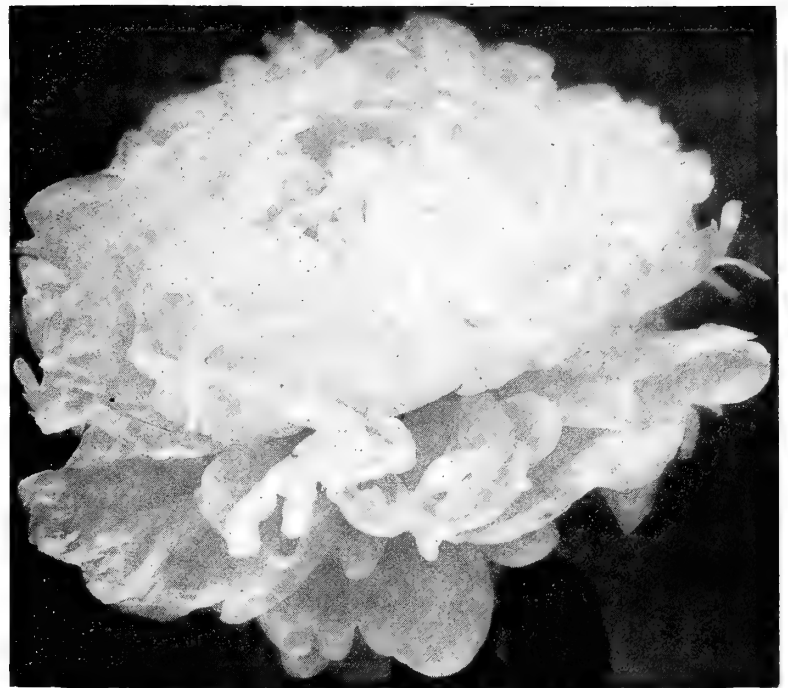
will be ready shortly for Fall and Spring shipment. This is the largest amount of "Field-grown Plants" ever raised and offered by a single grower and every plant is guaranteed to satisfy. The selection is choice, comprehensive yet practical and of the highest quality.

Our catalogue is recognised as the best of its kind, well illustrated and accurate as to descriptions. We will gladly mail it to you for three consecutive years if you will send 10c in postage stamps.

## Wayside Gardens

Mentor

Ohio



## DO YOU WANT PEONIES OF MAGNIFICENT FORM AND WONDERFUL BEAUTY?

Do YOU WANT YOUR GARDEN to be THE ADMIRATION OF ALL YOUR FRIENDS?

Do YOU WANT TO BE KNOWN AS A CONNOISSEUR OF FINE PEONIES?

Then ORDER YOUR PEONY ROOTS OF THE FAMOUS CHERRY HILL STRAIN KNOWN the WORLD OVER AS THE ARISTOCRATS OF PEONYDOM.

This STRAIN of WONDROUS FORM and BEAUTY REPRESENTS OVER FIFTY YEARS SCIENTIFIC CARE in DEVELOPING THE RAREST AND BEST OBTAINABLE of AMERICAN and EUROPEAN INTRODUCTIONS.

We exhibited at the National Peony Show in 1919 and again in 1921 and EACH TIME WERE AWARDED THE GOLD MEDAL, FOR THE BEST ONE HUNDRED VARIETIES IN THE SHOW.

THIS YEAR AT THE INTERNATIONAL AMERICAN PEONY SOCIETY SHOW HELD AT LONDON, ONTARIO, WE WERE AGAIN AWARDED THE GOLD MEDAL, also FIRST PRIZE FOR BEST INDIVIDUAL FLOWER IN THE SHOW and THE SILVER CUP FOR BEST COLLECTION OF PEONIES RATING AT 9.0 AND OVER. Also other notable awards.

Our PRICES ARE REASONABLE indeed FOR FIRST CLASS PLANTS, GENEROUS IN SIZE, VIGOROUS of GROWTH and FREE FROM WEAKNESS or DISEASE.

*The cost of planting and caring for good stock is cheapest in the end.*

Some varieties are scarce indeed and we urge you to place your orders early so as to avoid disappointment. Shipments will begin about the last week in August.

## CHERRY HILL NURSERIES

(T. C. Thurlow's Sons, Inc.)

West Newbury, Mass.

Catalogue on request

Not open Sundays



# This is the Month to Plant Your IRIS Garden!

If you have an Iris Garden, this is the month to enlarge it. If you do not have one as yet, then this is the month to start it. A row of Iris or a whole garden full, you can not go wrong on this magnificent hardy perennial. Every year sees its value and beauty appreciated to a greater extent, and the day will come when Iris, rare named varieties, will be as common throughout America as the field Daisies are right now. And imagine what much greater beauty they will bring to the gardener.

*Since Time is Here Right Now to Plant Them, Let Me Suggest that You Make Out Your Order Right from this Adv.*

Here are some good ones:

Alcazar - - - \$1.00	Monsignor - - - \$ .50
Amas - - - .25	Mrs. G. Darwin - - .25
Arnols - - - .25	Mrs. H. Darwin - - .25
Aurea - - - .25	Nibelungen - - - .25
Carthusian - - 1.50	Mme. Chereau - - .15
Darius - - - .25	Perfection - - - .35
Dr. Bernice - - .25	Queen of May - - .15
Halfdan - - - .25	Rhein Nix - - - .50
Helge - - - .25	Rose Unique - - .50
Her Majesty - .25	Sherwin Wright - .35
Ingeborg - - .25	Victorine - - - .25
Isoline - - - .75	Walhalla - - - .25
Lohengrin - - .35	Walneriana - - .25
Loreley - - - .25	Siberica Alba - - .15
Mithras - - - .25	Siberica Orientalis - .25
Mrs. G. Reuthe - .25	Siberica Snow Queen - .25

15% off on orders of \$3.00 or more received during August. No order filled for less than \$1.00

IRIS in choice mixture, 100 for \$5.00; 1,000 for \$45.00

My customers I consider my friends and I treat them as such. Here is what one man says: "I see your ad. in the Garden Magazine says you are 'still growing.' . . . Your 'prompt, cheerful and careful attention' to my previous orders is such that I am depending on you for a few good things this fall provided your prices are right."

*I'll guarantee You a Fair and Square Deal*

I'll assure you the same liberal and fair treatment as is enjoyed by thousands of my customers throughout the country (and beyond) if you will join their ranks. A modest little catalogue awaits your call as well.

**Geo. N. Smith, Wellesley Hills 82, Mass.**



# Your Last Chance

To get these Extraordinary Bargains in Quality Bulbs at Import Prices. Don't fall into the error of supposing that Bulbs are just Bulbs! There is a vast difference,—and the results show. Get these superior top-notch-quality Bulbs at the price of the ordinary kind! An advance order means a very considerable saving!

## Remarkable Values in Bulbs for Outdoor Planting

*100 Darwin Tulips, finest assortment.....	\$4.00
*100 Breeder ("Art") Tulips, finest assortment....	4.50
100 Single Early Tulips, finest assortment.....	3.00
100 Double Early Tulips, finest assortment.....	3.50
*100 Parrot or Dragon Tulips, finest assortment	4.50
100 Hyacinths, Red, White, Blue or assorted....	6.00
100 Daffodils, Double Varieties.....	6.00
100 Daffodils, Large Trumpets (Jonquils).....	5.50
100 Poets Narcissi.....	3.50
100 Crocus, Finest Assorted.....	1.50
Total value .....	\$42.00

**Special Offer for Above Collection of 1,000 Choicest Bulbs \$38.00 (or 500 at \$20.00)**

Delivered FREE within 300 miles (beyond, add \$1.00)

Delivery is not guaranteed, nor will these prices hold good if your order is not received in August. Bulbs delivered to you as soon as they arrive from Holland in September. (Special 5% discount if you send cash with order.) Our "Bulb Book" free with every order To avoid disappointment, please order immediately!

# Schling's Bulbs

24 West 59th Street  
New York



\*Bloom in May and June. All the rest bloom in April and May—the Crocus earliest of all, as soon as the snow melts.

# The House of Childs' and GLADIOLI

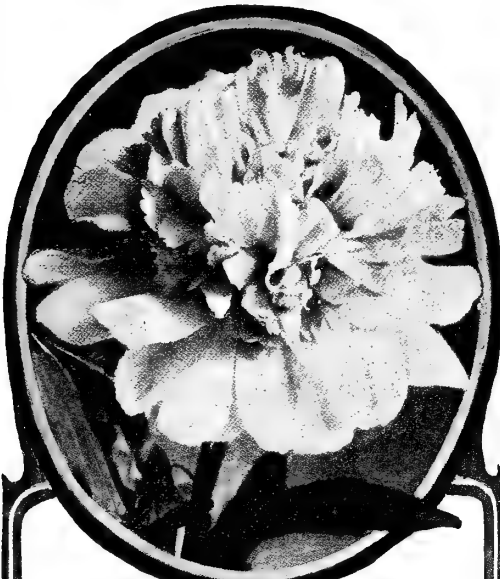
We are told that August Garden Magazine is to be a Manual of the Gladiolus. Many readers know the part which our establishment has played in popularizing this magnificent bulbous flower. Others will be interested to learn that we are among the Pioneer growers of America and one of the largest producers of high class "Glads" in the world!

## Study "Glads" at Headquarters This Month, and Next

You are cordially invited to visit our Show House at Floral Park, or, if you desire to see fields with thousands upon thousands, motor to Flowerfield, Long Island, on the Jericho Turnpike. Study the many splendid strains and varieties at first hand at the home of glorious "America" and Childs' Gladioli.

Incidentally, you'll find hundreds of worthwhile hardy plants ready for inspection, and courteous service ready to help you plan more glorious gardens. Those unable to call will oblige us by asking for copy of latest catalogue.

**JOHN LEWIS CHILDS, Inc.**  
Floral Park Long Island, N. Y.



# Peonies and Iris

OUR aristocrats of spring flowers—the PEONY and the IRIS—have been for a third of a century under the unceasing, loving and specialized care of the Peterson's, father and son. Peterson's Peonies and Iris are in a class by themselves—strong, hardy and vigorous. Noted for their brilliant hue, coloring and fragrance. Where intelligent selections are made a gorgeous, artistic effect is produced by either Iris or Peonies.

## Peterson's Master List of Peonies

We have concentrated our efforts on a select number of standardized varieties best known to and in demand by the peony fancier—quality varieties recognized as the sure-to-bloom, large flowering kind, with well developed root and eye system. Peonies are easy to grow when properly planted at the right time and in the right soil. Success with the Peterson peony in every variety listed is assured if planting directions are followed. Our judgment as to the most desirable varieties has been recently confirmed by the rating ballot of the Peony Society, all of which are explained in thorough and comprehensive detail in the Peterson book. It is handsomely illustrated, contains a fund of valuable information and every peony lover should have it. It's free for the asking. Several valuable specimens not yet rated are also included. You see we keep in advance, constantly presenting something new, when we find the merited article in the form of a new peony.

## Peterson's Master List of Iris

Will assist you in a selection of these remarkable flowers, classifying, as they do, colors, seasonal blooming period and fully describing each kind and variety. We offer in addition to the varieties yielding the highest ballot in Iris some as yet not generally known.

This is true of both our Peony and Iris Master List Selections. Peterson's Unique Guarantee as applied to both Peonies and Iris states emphatically "We will replace with three any plant blooming not true to description."

Iris shipped after July 1st; Peonies after September 1st. Orders for one-eye peony divisions must be received before October 1st. Peterson's Master Lists of both Peonies and Iris are a part of the Peterson book in broadside form, making it easy to select intelligently. Write for this book. It contains helpful information to flower lovers—it's different.

PETERSON NURSERY  
30 N. La Salle St.  
Chicago, Ill.



## We have some rarely beautiful Columbines!

Visitors to our grounds never fail to enthuse about the exceptional strains of Columbines found here. We grow many kinds and another season will find us offering some extraordinary hybrids of rare beauty. In the meantime you will be delighted with

### Totty's Long-Spurred Hybrids in various colors

These are of exceptionally strong growth with long spurred flowers varying in color from creamy-white to pink and running into the blue tints as well.

We will send one dozen of these special hybrids for \$3.00 postpaid anywhere in the United States.

When contemplating the establishment of hardy borders or old-fashioned gardens, please remember,

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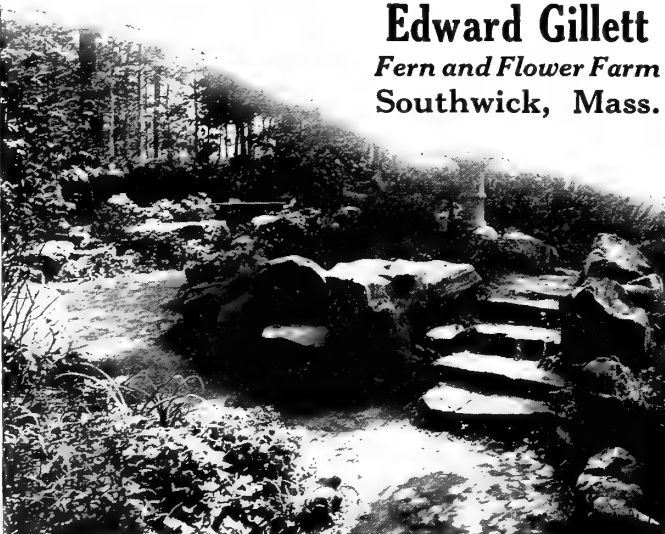
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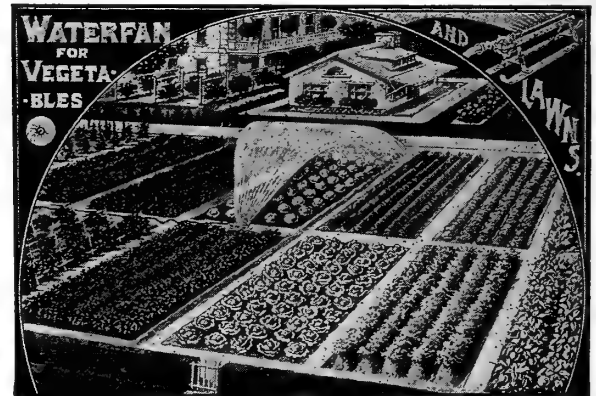
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# The Garden

Vol. XXXV, No. 6

MAGAZINE

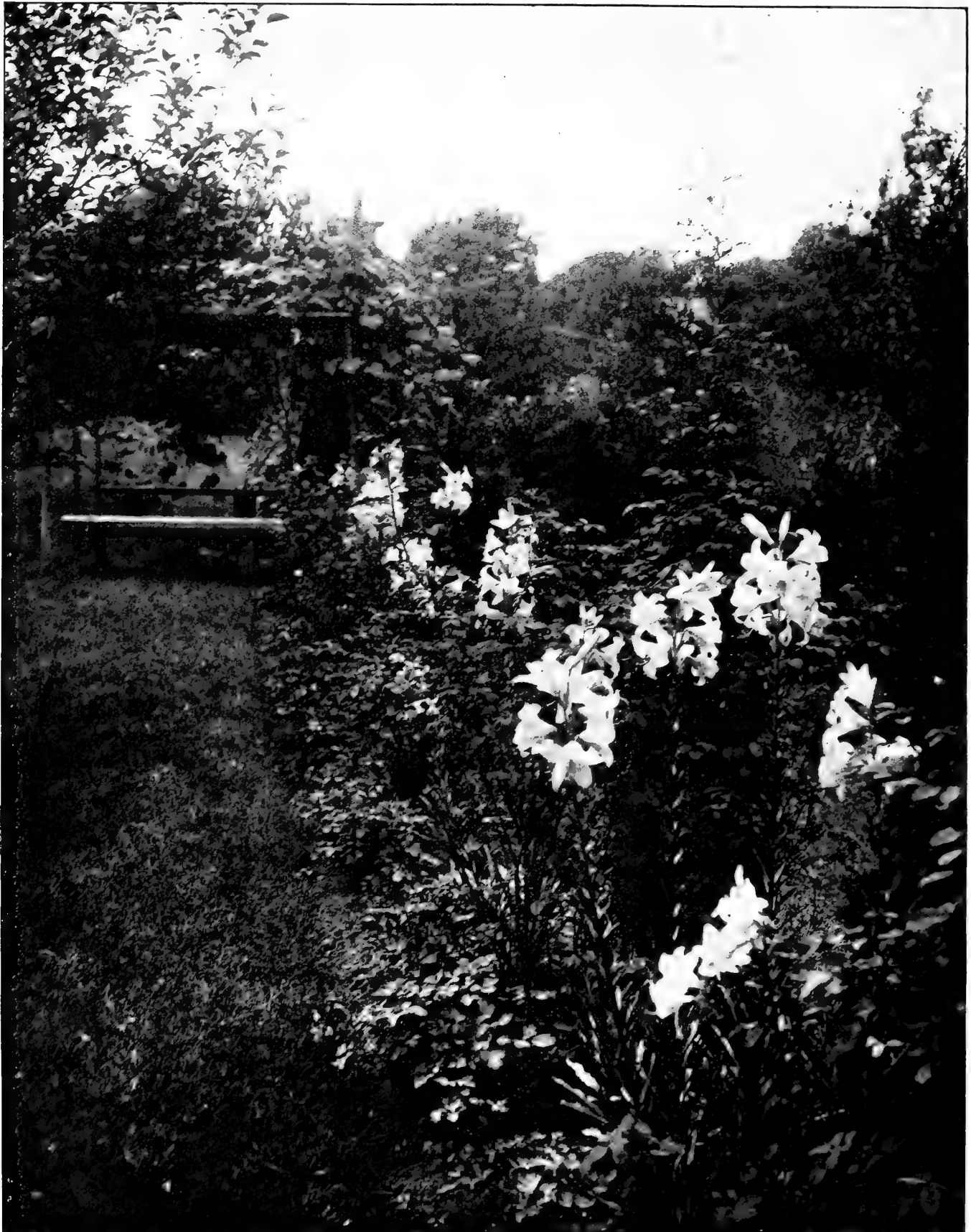
August, 1922



*J. Horace McFarland Co., Photo.*

"IN DEEP FAIR POOLS, NEW BEAUTY LINGERS,"  
*Anna Hempstead Branch*

What better background could a planter ask than water and gray walls! Roses trail downward through the openings (at right) thirstily, or perhaps merely vain and seeking their own reflection in the long pool ringed with Azalea bloom, the rich shining green of Evonymus, the stiff stateliness of Iris blades, and the varied hues of Evergreens



*J. Horace McFarland, Photo*

"ALL TRANSGURED IN THE WHITE LIVING LIGHT  
SHED FROM OUT THE SOUL OF THINGS;"

*Alfred Noyes*

The much misused word ethereal truly characterizes the high loveliness of Madonna Lilies (*Lilium candidum*); their drifting scent and gleaming whiteness make the moonlit July garden forever memorable. August is the recommended month for setting out bulbs to assure bloom for next season as a fall growth must be made. Garden of the Misses Keasbey, Morristown, N. J.



*Mattie Edwards Hewitt, Photo.*

“STILL TO THE SORCERY OF AUGUST SKIES  
IN FRILLED CRIMSON FLAUNT THE HOLLYHOCKS,  
\* \* \* LIGHTLY POISED ALONG THE GARDEN WALKS,”  
*Percy MacKaye*

At the knees of the tall Hollyhocks (left) stand Canterbury-bells and Swan River Daisies with Sweet Alyssum lifting lowly bloom in front, while just opposite Petunia and Larkspur play the favorite French tune of rose-et-bleu. One of the pleasantest things about a walk like this is the tiny gay rivulets of bloom that meander underfoot yielding spicy fragrance to the careless tread. Garden of Mrs. L. H. Lapham, New Canaan, Conn.



# WHEN TO DO WHAT YOU WANT TO DO

## The Month's Reminder

AUGUST—GOOD-BY SUMMER, HELLO FALL!



Herein are listed the seasonal activities for the complete garden. Details of how to do each item may be found in the current or the back issues of THE GARDEN MAGAZINE—it is manifestly impossible to make each number of the magazine a complete manual of practice. References to back numbers may be looked up in the index to each completed volume (sent gratis on request); the Service Department will also be glad to cite references to any special topic if asked by mail and to send personal replies to specific questions; a stamped, addressed envelope being enclosed.

When referring to the time for outdoor work of any sort New York City (latitude 40) at sea level in a normal season is taken as standard; but at best dates can only be approximate. Roughly, the season advances northward fifteen miles a day. Thus Albany, which is one hundred and fifty miles from New York, would be about ten days later, and Philadelphia, which is ninety miles southwest, about a week earlier. Also allow four days for each degree of latitude, for each five degrees of longitude, and for each four hundred feet of altitude.

(Copyright, 1922, Doubleday, Page & Co.)

**D**ESPITE the lazy days of August which incline him to vacation mood, the gardener is already turning with zestful purpose toward the fall. Well he knows that the next two or three months offer abundant opportunity to do all sorts of permanent planting—trees, shrubs, bulbs etc.—and that once these things are in, winter works as his ally and spring finds him well ahead of the game with leisure for the niceties that stamp the individual garden and lift it out of the commonplace.

Routine details are now so thoroughly in hand that watering and weeding are done almost automatically as needed, leaving the mind free to plan and plant for future effects.

Time to move evergreens; also certain herbaceous plants, such as Iris, Oriental Poppy, Madonna Lilies—even Peonies.

Keep flowerbeds neat and tidy by gathering seed-pods as they form. Window boxes, hanging baskets, vases, etc. will be benefited by top-dressing with good loam and commercial fertilizer.

Red spider on the evergreens makes them look “rusty.” Standard spraying preparations (solution or dust) are effective, and don't overlook the effectiveness of water applied under pressure through the hose.

### Lawn Making

Lawns may be top-dressed with bonemeal or wood ashes, or both. Apply on a wet day; or just before rain, if possible. Weedy growth will be practically terminated for the season and this is a good time for any renovating or making new lawns. The one drawback to August sowing is drought. It is no use trying to get seed to germinate by watering—the weather conditions must be right.

### The Roses

Climbing Roses and Vines to be looked over and tied to trellis or trained into position; and do not allow them to suffer for want of water; bonemeal worked around them will show results next year. Rose beds to be cultivated and watered to prepare for the fall bloom. If orange rust proves troublesome, pick off affected leaves and burn them. Spray with a copper preparation and give general good care. If the disease reappears year after year, remake the beds with fresh plants, which may be done in November.

Cuttings taken from firm growths and put into gritty soil in frames will root well. Growth that have just borne flowers are best. Cut into lengths six inches long, retaining the leaves on the upper half; insert in frames two inches apart both ways.

### Bulbs and Flower Seeds for Next Year

Bulb orders to be placed and preparations made for planting. Early ordering ensures getting just what is needed. Bulbs need good soil in well dug beds. Poor condition gives poor results. For showy beds for display purposes, use Hyacinths, Tulips, and Narcissus; for naturalizing, Narcissus, Crocus, Lily-of-the-valley, Trilliums. For cut flowers, Darwin Tulips, various Narcissus, and all the hardy Lilies; and don't forget the Regal Lily—it's hardy, grows on average soils, dislikes heavy feeding, and flowers freely in June.

Seeds of perennials may still be sown; and if saving your own, sow as soon as available, the earlier the better. Best to sow in coldframe where protection may be given during germination.

Sow Pansies, English Daisies, Forget-me-nots, Canterbury-bells, etc.

### In the Fruit Garden

Strawberries, bigger and better than ever before, by getting the new bed planted early! Pot-grown plants give best results, though they do cost a little more. Runners from the old bed may be taken up and planted with satisfactory results, and better still if they were pegged down into pots last month. Give good soil; use plenty of manure and fertilizer. There will be no visible immediate returns; but, next June—ah! A mixture of dried blood, or guano and fine bonemeal, with two to four parts humus may be worked into the hills. Keep the ground hoed and runners pinched off.

Summer pruning of fruit trees to be continued during the early part of the month—thin fruit as circumstances warrant. Better less quantity and greater quality of Peaches, Plums, Apples, Pears, or Grapes. Get up your nerve, sharpen your knife, and thin half the set! It's hard to do it, but it actually pays.

Cut away old Raspberry and Blackberry canes that have fruited and thin out the new shoots to three or four to each hill or plant. Tied to stakes and topped when four or five feet high, they will make strong canes for fruiting next year.

Gooseberries and Currants to be layered; or take cuttings six to eight inches long, planting up to the terminal bud.

Continue to spray for brown rot on Plums and Peaches.

### In the Vegetable Garden

Hoe all crops and keep down weeds. Herbs in flower to be cut and dried in shady place for winter use.

Onions to be harvested when tops turn yellow and fall down. Best dried by placing them in a dry shed in thin layers or on boards in a coldframe with the sash elevated above them to keep off rain.

Rutabagas sown last month to be thinned.

Sow up to end of month the various soft varieties of Turnip, such as Strap Leaf, White Globe, etc.

Last sowing of String Beans to be made by middle of month, using an early maturing variety. Several short rows planted close together may be protected from frost readily.

Lettuce sown now will afford a salad until late in the fall if protected from early frosts.

Spinach to be sown in succession for this year, also for wintering over outdoors; and Shallots.

Celery still to be planted and early varieties to be blanched; also plant Cardoons. Beets and Carrots to be sown for winter use. Tomatoes to be kept well tied and disbudded. Dig Potatoes as ready.

Artichokes to be sown for next year's supply if there is a coldframe in which to winter them. They do best in pots and should be in the six-inch size by the time it is necessary to give frames protection.

Late Cabbage to be well watered to prevent club-root. Spray with arsenate of lead (absolutely no danger, if done early before the head forms) to check cabbage worm.

Chinese Petsai (Chinese Cabbage, or Chinese Lettuce) to be sown for fall use as salad or as greens. It is as easily grown as Lettuce and matures in from 80 to 90 days.

Melons leaving the stem when thoroughly matured are over ripe at the flower end. Pick fruit at first sign of separation from the stem; place in high temperature for several hours (greenhouse or frame) turning once or twice. The flesh will ripen evenly to the outer rind giving practically no waste. Put the ripened fruit on cellar floor to cool, then chill with ice.

Ground not required for late crops, to be spaded and sown with some cover crops; say Vetch or Rye, or a mixture of both. It adds fertility to the soil, prevents erosion during the winter, and greatly increases the moisture holding capacity.

### Greenhouse and Frames

See to necessary repairs in glass structures which will soon be needed for winter crops. This is indeed the beginning of the new year in the greenhouse.

### Seeds for Present Sowing

Annual Gypsophila and Clarkia grown in flats and disbudded to single stems, make fine material for table decoration during October.

Sow succession batches to maintain supply.

Schizanthus for Christmas to be sown after middle of month.

Sweet-peas may be sown about the middle of the month for flowers by Thanksgiving. Be sure that winter-flowering strains are used for this. Calendulas sown in a coldframe or cool greenhouse will provide cut blooms at Thanksgiving.

Sow Mignonette in 2½-inch pots for planting to be benched next month. Young plants of Asparagus Sprengeri will be planted to permanent quarters in the benches. Root cuttings of Ivy, Zonal Geraniums, and Show Pelargoniums.

Winter-flowering Stocks to be sown for subsequent transplanting to flats, and then to small pots, and finally benched or repotted to flowering pots.

Sow Cineraria stellata for flowering next Easter and Primulas for late winter and spring bloom. Allow about seven months from date of sowing until blooming time and sow accordingly.

### Chrysanthemums Now Growing

Keep Chrysanthemum house well watered at this stage. It is not enough to just wet the tops of plants during extra hot spells. Get the water under the leaves, on the walks and under the benches.

After August 15th, buds may be "taken" on most of the midseason varieties; while those of the late varieties may be "taken" during next month. This means, of course, the selection of the flowering bud and removal of all others.

Fertilizers may be applied in moderation after the buds have formed and before they show color. Excessive feeding is the cause of imperfect flowers and cracked stems.

### Roses Indoors

Roses are in a critical period right now. Hot, muggy days combined with cold, clammy nights are not conducive to the welfare of the plants. Fire heat will be essential at times and a little sulphur painted on the heating pipes will assist checking mildew as will "grape dust" blown over the plants with a pair of bellows. Encourage growth and give all necessary care to induce free breaks to lay a foundation for the winter work.

### Orchids to Have Attention

While we may have warm weather for some time yet, the days are getting shorter, and the nights perceptibly cooler; and some humid cloudy weather will be experienced before the month is out. Therefore, see that the shade on the house is not too dense. If on a cloudy day the house looks dark inside, the shading is too dense. Under such conditions Cattleyas will have nice green foliage, but will not flower well. Water during the morning.

Temperature is a variable quantity during August, but keep as near 60°-65° as possible. It will run higher some nights and no harm will accrue if it falls to 58° on cool evenings. Do not close the house up tight on a cool night.

### Fruit Houses

Borers are liable to attack Peach and Nectarine trees inside just as they do those in the orchard. At the first sign of dust coming from the tiny hole, promptly either cut out the borer or kill by running a piece of wire into the hole.

Grape vines will have been making unrestricted growth (with no little benefit to the roots) since the crop was removed from the early vinery. Water the border well, and give the roots plenty of food in the late vinery where the berries are fast swelling. If a mulch is already there, give clear water first then dust on the fertilizer and water that. Pinch out all sub-laterals and give an eye to red spider, sponging the foliage at once when that pest is found.

It may not sound very seasonable to speak now of Tomatoes for winter work, but in sections where early frosts occur it is not too soon to make a sowing to keep up a supply after the outdoor crop is done. If grown in pots until a later sowing comes into bearing they do not occupy any permanent bench space.

## WINTER FLOWERS UNDER GLASS

AN ADEQUATE supply of flowers for the winter months must be provided for on a definite plan, worked out to make the most of the restricted space available. It is a mistake to try to grow too great a variety in a small house; yet, with a definite programme it is possible to secure a continuous feast of flowers in great variety until we can get outdoors once more. An example of such management is this:

Plant Freesias in 4-inch pots, and let them come along in a coldframe. Sow a good strain of Pansies also in coldframe. By the first of October, the Freesias can be planted out in rows across the bench in the greenhouse. Don't divide, but set them out just as they come out of the pots. At the same time more Freesias may be planted directly into the benches for a later crop. Between these, some of the young Pansy plants may be set out, the rest of the space being used for Myosotis, Calendulas, or Dwarf Snapdragons. By the new year the Freesias out of the 4-inch pots started now will be out of the way and these places can be replanted by others, or by Gladiolus America. More Gladiolus may be started in 3½-inch pots to follow these; and in the meantime Spanish Iris will be available to follow them.

In January double Corn-flowers may be started and grown on in small pots, to be planted between the Pansies in early spring and will not interfere with them for some time.

When the first Gladiolus are cut, a change to things edible may be made. Comet Tomatoes from seed sown in January may be planted in place of them, grown to single stems with 15 inches of space between the plants; or more Gladiolus may be used. A scheme like this will not meet the needs of everyone, of course, but it affords a clue to the method of ensuring a succession of crops from limited space which may carry suggestion.

There is hardly a handsomer winter flower than Bouvardia, and plants set outdoors earlier in the season should be lifted and benched with a good ball of soil adhering to the roots. Pinch back the growths before lifting, and in a month after benching pinch again. Spray

freely overhead until they are established. Godfrey Callas to be potted up three to a 6-inch pot, later shifting to 8-inch size. Finish planting Carnations as soon as possible. Give plenty of shade for a few days, and discontinue as soon as plants show signs of becoming re-established, or growth will become soft. Syringe overhead frequently.

Snapdragons for early winter-flowering to be benched as soon as possible. Stevia planted outdoors to be kept pinched back, as they are likely to get too tall and they break only too readily at best. Where there is room make preparations to have the plants lifted and potted. If possible put into a deep frame where they can be shaded until re-established.

Cuttings of Coleus, Alternanthera, and other bedding plants root readily at this time, and will make nice stock plants by November, and will then furnish any number of cuttings. Bench Marguerites for winter-flowering. Plants carried along from the spring in 4-inch pots with the wood somewhat hardened give the best results.

Lilium formosum bulbs to be planted, and allowed to come along in a coldframe covered with six inches of soil.

Small plants of the winter-flowering Begonias may be purchased in small pots and grown on for Christmas. They do most of their growing during the next two months and with only ordinary care good results may be expected in any greenhouse.

Adiantums weakened by frequent cutting need rest by gradually letting up on the water supply, and maintaining a progressively dryer atmosphere. When the plants show any renewed activity, top-dress with equal parts of old cow manure and good loam, or some approved commercial fertilizer.

Bulbs for forcing to be ordered at once and planted as soon as received. The early Roman Hyacinths and Polyanthus Narcissus are the first to hand. Use fibrous soil intermixed with one third well-decayed manure. Water well after planting and place in a bulb cellar to root, or outdoors covered with six inches of soil or coal ashes.



# FLOWER ARRANGEMENT AS A FINE ART

EDWARD A. WHITE

Professor of Floriculture, Cornell University



An Analysis of the Much-talked-of Yet Little Understood "Japanese Method"—Genuine Understanding of Plants and Their Habits a Prime Essential—Getting Down to First Principles and Explaining Their Application to the Every-day Flowers of Our Own Gardens

EDITORS' NOTE: Popular interest in the indoor use of flowers swings high, and eagerness to achieve something really "artistic" has led to rather indiscriminating imitation of this fine art of Japan without equivalent understanding of its underlying significance. For this reason we are glad to be able to present an intelligent and authoritative interpretation of a subject so alluring to gardener and garden club alike (The Garden Club of America made a special feature of "Japanese Arrangements" at this season's International Flower Show held in New York; for prize winning exhibits see page 189, May GARDEN MAGAZINE)—an interpretation which may help us in future to make floral arrangement a distinctively American expression without any sacrifice of Japanese simplicity and grace.

**F**LOWERS mean more to us to-day than ever before. We are growing them more understandingly and are beginning to use them more understandingly, too. The subtle cheer of a few well-chosen Roses, Sweet-peas, or what-you-will on the dining table; the radiant welcome to home-coming master and incoming guest of a tall jar of Hollyhocks or some fragrant, favorite Lily in the hallway—we appreciate the beautiful importance of these sentient bits of color and know how they bring the dullest room on the dullest day brightly to life.

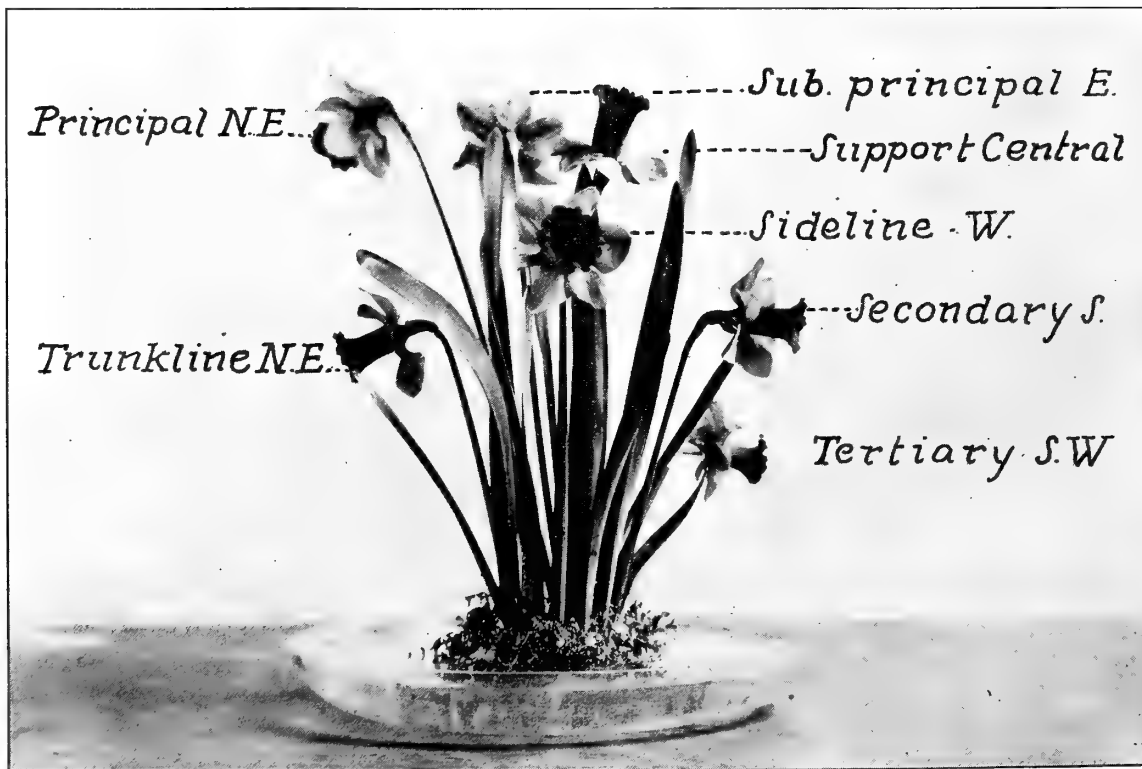
And though the innate beauty of flowers is such that it is never squeezed to nothingness in even the tightest of nosegays, it needs a sympathetic touch for fullest revelation. Thus we turn to the Japanese, so finely in tune with nature that they seem instinctively to see and present her decorative shapes—in this lies their secret, which is indeed no secret at all, but open sesame to any and every gardener on genuinely friendly terms with his plants.

**F**LOWER arrangement as practised in Japan has characters so definite and so pronounced that it seems necessary to discuss the governing principles in order that we may, to a

certain extent, follow the principles if not the methods of Japan in arranging the flowers of America.

Josiah Conder (for many years Professor of Architecture and Architect to the Imperial Japanese Government) wrote a very valuable book, "The Flowers of Japan and the Art of Floral Arrangement." This book and the lectures given at Cornell by Miss Kichi Harada, lecturer on Japanese Art at Columbia University, form the basis of the thought here presented.

Miss Harada tells us that: "the art of floral arrangement in Japan has developed through centuries. It started out with devotions to the Goddess of the Sun. At first just green branches from tiny trees were brought before the goddess and offered up with a prayer, without any idea of artistic arrangement. Tradition was followed without principles or a background. The use of flowers was extended to other gods and goddesses, and the flowers and their beauty pleased them. The courtesy then came to be extended to our parents, next to our friends. The art of flower arrangement came to be studied, and in the 15th century, when all arts in Japan reached their golden age, flower arrangement reached its height of perfection. Flowers are now intimately associated with the daily life of my



A SEVEN-LINE JAPANESE ARRANGEMENT

Daffodils arranged with reference to points of the compass; this gives shape balance to the composition while the varied lengths of stem give shape rhythm



First Know Your Plants

THE Japanese have an intimate acquaintance with the plant material they use for decorative effects. Conder says: "the imperative necessity for a proper familiarity with the nature of all flowers used in compositions is one reason why it is forbidden to employ those of rare or little known plants however beautiful they may be. The use of wild flowers, only known to the botanist, as well as rare or foreign flowers with the names of which ordinary folks are not familiar, is prohibited, unless the arranger has previously made himself perfectly acquainted with all the natural characteristics of such flowers. As one exponent of the art has quaintly expressed it, the artist must be thoroughly imbued with a sympathetic feeling for the character, habits, virtues and weaknesses of the members of the floral kingdom from which he seeks his material, till he possesses almost the same love and tenderness for their qualities, as for those of living beings."

The Japanese are flower lovers, but it is not the rare or unusual flower that most interests them. It is the material of everyday life which they use to the largest extent. This material varies with the season, and they do not try to force it into flower at unusual seasons with glass-houses for winter production of flowers, as is done in America. True it is that climatic conditions better favor the Japanese in this respect. Attractive native material is available every month of the year. There is no desire on the part of the writer to depreciate the value of flowers grown in greenhouses. They afford an appropriate means of ornamentation at



A GOOD BALANCED COMPOSITION (above)  
IN CONTRAST WITH A POOR ONE (below)

The success of an arrangement depends largely upon the selection of harmonious materials; balance is displayed above in the judicious placing of Deutzia (shrub) at the centre supported on the left by Kalmia (shrub) and on the right by Campanula (herb). Below is an example of unfortunate "sandwiching" with Philadelphus (shrub) as a pivot inadequately accompanied by Campanula (herb) and Astilbe (herb). (See text page 355)

people, and we see in them much that is symbolic of the development of our race. The common flowers of the seasons are given prominent places in our fête-day calendar. We treasure them as heralds of each season and they are inseparable from the favorite occupations and outdoor life of my people."

IT IS rarely that an American would care to have flowers arranged in characteristically Japanese manner. The setting has much to do with the value of a flower arrangement. There are few rooms in American homes and but few occasions where distinctly Japanese flower arrangements would be appropriate. The peculiar atmosphere of the Far East is necessary for an interesting harmony between the flower arrangements and their environment. Flowers arranged in essentially Japanese style would be as much out of place for a dinner in an aristocratic Washington home, as would one of farm produce or woodland material. Japanese furniture, draperies, lights, and table service are needed to make such a decoration appropriate and harmonious.

There are, however, many principles governing the way flowers are used by the Japanese which are valuable in American flower arrangement, and on these principles it is desired to place emphasis.



seasons of the year when the majority of Americans could not obtain decorative material out-of-doors.

A point to be emphasized, however, is that even though one cannot afford or cannot obtain flowers grown in greenhouses, there is still much ornamental plant life within the reach of many, especially dwellers in small towns and rural sections.

An evergreen spray, a few twigs of shrubs with colored bark, or a few clusters of winter fruits from the Barberries or other winter-fruited shrubs have ornamental value.

In Japan there is a comparative scarcity of wild

many varied ways in which wild flowers are arranged on the plant. This arrangement always signifies some special character. If the flowers are small and inconspicuous, they are usually massed in a compact flower-cluster, like the Clover. If they are large and beautiful in outline, they are solitary or in small clusters, as in the Rose. In artificial arrangement these teachings of nature should be observed for the most pleasing effects. Daffodils arranged in a mass are a spot of color. When spaced so the value of the lines of stem and foliage are apparent, their attractiveness is greatly increased. Goldenrod, with its little flowers clustered on wand-like branches, may be gathered in masses and inserted in a receptacle so there is no indication of the character of the flower-bearing stalk. However, when sufficiently separated as to render the natural habit of the stem and flower cluster apparent, the arrangement becomes much more interesting. Within recent years we have arrived at a better appreciation of the value of line in flower arrangement. Much instruction has come from the Japanese who have long appreciated the fact that beauty demands more than masses of color or a conglomerate combination of form. We are told that a Japanese girl will spend hours arranging a single flower, working over the stem until it assumes a position that satisfies her sense of appropriateness and beauty. In a

recent lecture, a Japanese student of art stated that she was once asked how she would arrange a bowl of Daffodils on the dinner table and she replied: "Bring me all the vases you have and I will show you."

#### Harmony of Line and Space

**L**INE distribution is the basis of composition in Japanese flower arrangement. The study of the directions taken by the different lines and branches gives to the flower arrangements a peculiar charm. There is no crossing or intersection of stems or branches, and if these occur the offending elements are carefully eliminated. The relation of one line to another, the proportion of one space to other spaces, and the varying lengths of stems are all factors which require most careful consideration.

Professor Arthur W. Dow of Columbia University, in his book "Composition" says that "spacing is the very ground work of design. If a composition is in any sense a work of art it must have good spacing." This may refer to the arrangement of lines

as well as of forms. Often a composition is uninteresting because the lines are incorrectly spaced.

As has been stated, the Japanese spend a long time selecting just the right material for a floral composition. They make a mental picture of the finished design, then go to work eliminating all material not desired in the completed composition—here a branch, there a leaf, a bud, or a flower. Quoting again from Conder:

The surface of the water in which the flowers are placed is technically considered to be the soil from which the floral growth springs, and the designer must here convey the impression of stability and strength. However good the upper lines of the composition may be, a weak springing at the base deprives it of life and vigor, for it must be remembered that not flowers alone but floral growth and vitality are to be expressed in the designs. The direction of the stems at starting need not be strictly vertical, but if curved, the curves employed should be strong ones, and all weak bends or angles should be avoided.

In the distribution of the principal lines of the composition from the point of their separation, the artist studiously avoids an equal-sided



#### THREE FAULTY ARRANGEMENTS

Badly placed Poppies (*Papaver orientale*) showing "flower stepping" (above) and "cross cutting" (at right); also Spanish Iris exemplifying the uninteresting arrangement known as "equal ranging." (For fuller discussion see opposite page)

flowering plants in the natural landscape, therefore foliage is quite largely used as an element of decoration. Unfortunately for the American eye there is scant appreciation of beauty of plant material unless it be radiant with colored flowers.

According to Conder, "the peculiarity of treatment noticeable in the flower arrangements is closely connected with the Japanese manner of observing and enjoying floral nature. Whereas the Western amateur devotes his attention mainly to the blossoms, the Japanese lover of flowers bestows his admiration on the whole character of the plant or tree producing them. The rugged nature of the Plum trunk with its straight, stiff shoots, or the graceful sweep of the branches of the Cherry, are to him inseparably associated with any beauty which the blossoms themselves possess. The loveliest buds and blossoms torn from their stems and crushed together in a mass with ferns or other greenery between them convey to the Japanese mind no idea of floral art or beauty. The art under consideration is, in fact, based upon a representation, more or less conventional, of floral growth; and principally for this reason the positions are made to assume an open character in which the individual forms of branches, stems, leaves, and flowers are all clearly expressed."

When plant material of varied character is to be arranged, the Japanese study the material to ascertain how to get the greatest value from it. This should be an important principle in American flower arrangement. Let nature again be the teacher. In the study of botany the student seeks to learn the

or symmetrical arrangement, but he obtains a balance of a more subtle nature that is at the same time productive of a pleasing variety of form. Balance and harmony without repetition is a governing principle in this as well as in other Japanese arts. The lines of each stem or, in cases where numerous slender stems are combined, the central lines of each group of stems receives first attention. The triple arrangement, by which is meant that governed by three prevailing lines, may be taken as the original model for all arrangements.

The three lines of such a composition may be called, with sufficient fidelity to the more quaint nomenclature, *principal*, *secondary*, and *tertiary*. The *principal*, as the name implies, is the central and longest line of the design, and this is made to form a double curve with the upper and lower extremities nearly vertical and in a continuous line; the general shape thus assumed being that of an archer's bow. The *secondary* line should be about half and the *tertiary* line about one-quarter of the length of the *principal*, supposing all to be straightened out; and these two lines are arranged on different sides of the *principal* in graceful double curves of varied character. As a general rule, the *secondary* line has a more vertical and the *tertiary* line a more lateral tendency; the former being on the outside of the arched bow formed by the *principal*, and the latter making the counterpoise on its hollow side. According as the hollow of the *principal* faces right or left, the arrangement is called a right or left composition. By changing the direction and giving a different character to the curves of these three lines, a great variety of design is produced.

To produce a five-lined arrangement, two additional lines are introduced between the three previously named. The one placed between the *principal* and the *secondary* is called the *support*, and the one between the *principal* and the *tertiary* is called the *sub-principal*. The *support* in length and importance approaches more to the *secondary* than to the *principal*; while the *sub-principal* as its name would imply in length and importance approaches more the *principal* than the *tertiary*. In this way a lineal balance and harmony is obtained. In the seven-lined arrangements, two more extra members are added, one called the *sideline* and the other the *trunkline*. Their lengths are about intermediate, the *sideline* being placed between the *support* and the *tertiary*, and the *trunkline* between the *sub-principal* and the *secondary*.

In the arrangement the Japanese do not place these flowers in a vertical plane; but, as Conder points out, each element in the design has a definite direction. For example, if the designer stands at a table facing north, he would arrange each element in the design with definite relation to the points of compass. This adds symmetry to the arrangement. The *principal* of a seven-line arrangement would point northeast; the *secondary*, southeast; the *tertiary*, southwest; the *sub-principal*, east; the *support*, central over the vase; the *trunkline*, northeast, and the *side-line*, west. In this way a pleasing balance and harmony of line relations are obtained.

A STUDY of the principles of Japanese flower arrangement shows that the interesting elements of their design consist in a definite placing of the material. In every arrangement



TRUE JAPANESE ARRANGEMENTS

Daffodils (left) and Begonia (right) arranged by Miss Kichi Harada of Columbia University, demonstrating the fundamental simplicity and grace so characteristic of all Japanese Art

there is a point of emphasis and the other units of the design have a definite relation either in size or in length of stem to the *principal*. Too frequently an American will throw together a large number of flowers without regard to the relation one flower bears to another.

In attending an English flower exhibition I was impressed by the artistic arrangement of all the flowers. One exhibition of commercial varieties of Carnations was particularly artistic. The owner remarked that he could not understand how the amateur could be interested in an American exhibition of commercial Carnations or Roses, for the exhibitors at American flowershows seemed rarely to consider an artistic element in their arrangement of material. Twenty-five, fifty or one hundred Roses are put together so the buds are all of uniform height, then they are all crowded into a vase so there is no beauty in the

individual; the whole is simply a mass of color and blooms. The same thing applies to arrangements of Carnations. An American exhibition of commercial varieties of Roses or Carnations is simply a representation of quality and perfection of culture. Were the same flowers arranged artistically the effect would be much more pleasing.

#### Choosing and Combining Material

IN SELECTING material for flower arrangement the Japanese rarely combine many species. Combination of two or three species is the most common. The character of the plants used is carefully studied so there is never an inappropriate combination. In regard to this Conder says: "Important distinctions are made between trees and plants, and between land and water plants. The locality of production, whether mountain, moor, or river, considerably influences the arrangement adopted. In arranging two or more species in one composition, variety must be sought by combining trees and plants. In the case of three lines being used, the branches of a tree should never be 'supported' on both sides by a plant, nor should a plant be placed in the centre with a tree arrangement on either side. This fault is called by a term which will be better understood if freely translated as 'sandwiching'."

As an example of what the Japanese would consider a defective arrangement may be taken a composition of Philadelphus (shrub) in the centre and Canterbury Bells and Astilbe (herbs) on either side. A correct composition would be one with a Deutzia (shrub) in the centre, with Kalmia (shrub) on one side and Campanula (herb) on the other, as illustrated on page 353.

The Japanese recognize many errors in combinations of plants and in the placing of the material in receptacles. For instance, the regular spacing of flowers of quite uniform size, one above the other is called "flower stepping." The arrangement of Oriental Poppy on page 354 illustrates this. Another error is to place a flower of one color between two of another color.



This is also called "sandwiching." "Dew-dropping" is the use of a leaf so weak in the stem that it assumes a wilted appearance and could not support a drop of water. "Equal ranging" is placing flowers at equal heights as shown in the accompanying illustration of Spanish Iris (page 354.)

It is also considered objectionable for one branch to intersect another. All twigs which so cross in the line of vision are carefully cut out when arranging material. This is called "cross-cutting." (See illustration of Oriental Poppy, page 354.) "View cutting" is the crossing of a twig with the main trunk of the branch. This, however, is allowed in arranging Plumblossoms, for such a crossing is characteristic of the growth of the species. Parallelism occurs when two adjacent stems or branches are exactly parallel to each other. There are several other objectionable features in arrangement recognized by the Japanese, but the ones cited are features particularly objectionable in any arrangement of flowers. There are other features described by Conder which, if observed by Americans in their arrangement of flowers, would add much to the interest of any composition by creating variety and eliminating monotony:

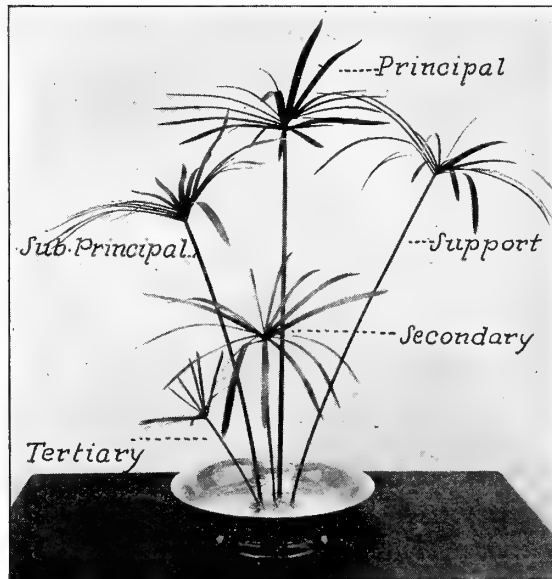
Three distinct characters are observed both in flowers and leaves. In flowers there are the full blossoms, the half-open blossoms, and the buds; and in leaves, the young green leaf, the full leaf, and the reddening or falling leaf. In flower arrangements with one material, as for example, the Cherry or Peach blossoms, a different character of blossom is selected for the chief lines of the composition. For the *principal*, full-blown flowers will be used; for the *secondary*, half-open flowers; and for the *tertiary*, buds are employed. Some designers, on the principle that the half-open flower is more powerful than the full-blown blossom, use the half-open flowers

for the *principal* and the full-blown blossoms for the *secondary*. Straight leaves are considered strong, and curled or bent leaves weak; the strong flowers should be near the weak leaves, and the strong leaves near the buds or over-blown flowers. A flower below a leaf is weaker than one above. In thinning out leaves in a composition, two strong leaves must remain for every weak one.

The appropriate placing of flowers in the home is carefully considered by the Japanese. The placing of their furniture, wall decorations, and pictures is very definite, and the flowering material is carefully set so it in no way detracts from other decorative features in the home. Regarding this point Miss Harada says: "Flowers go to the place of honor in the home. The style of the room in which they are to be arranged plays a great part in the arrangement. We carefully consider the other decorative features in the room, whether they are rich tones or soft, quiet ones. As a rule, our drawing rooms are decorated in gray and mostly with one or two paintings. The flowers are placed in a definite position in a recess and we have but few other ornaments in our rooms. We have only those things in our home which give one rest and repose, as he comes in from the busy world. Flowers do this."

The Japanese consider carefully the scenery portrayed in a painting and aim to make the floral compositions placed near it harmonize as closely as possible. If the picture represents

lake or river scenery, water plants are used in the flower arrangement. If a painting of Plum blossoms is hung on the walls, Plum blossoms would not be selected for the vases, but species which are seasonable with the flowering of the Plums would be chosen.



A FIVE-LINE COMPOSITION

The Umbrella Palm (*Cyperus alternifolius*) in a type of arrangement much favored by the Japanese. (Explained on preceding page)

A Photograph Competition for Flower Arrangements will be announced shortly

## A PROMISE OF PERFECT PEACHES

JOHN L. DOAN

Easily Grown, Luscious Fruit of the Orient that Has Found a Congenial Home—Certain Soil Affinities that Vary According to Latitude

EDITORS' NOTE: This is the seventh article in the series dealing with the fruits for the home garden, and the home viewpoint. Together they form a handy compendium of practical facts for the man who is growing fruit to use in his own household or eat at his own table.

**T**RULY an American fruit is the Peach. You may think "that cannot be, for it came from the Orient"; but we are thoroughly American, though only a few generations removed from Europe. The Peach was brought over when the Colonies were founded, before any Federal Horticultural Board issued quarantine orders and, in much of our territory, found a soil and climate as congenial as in China, its native home, or Persia, the country from which it was carried to Europe. Long before the Revolution Peaches were growing wild in abundance in Virginia and the Carolinas. No wonder that with these favorable natural conditions, we now produce more of this excellent fruit than all the rest of the world together. Where conditions are reasonably favorable Peaches may be very satisfactorily grown in any garden.

Near the middle of the last century occurred one of the most important events in the annals of American horticulture—the introduction of the Chinese Cling. No gala day celebrated the event nor was its importance realized for many years; yet it has revolutionized and greatly extended Peach growing in the United States, for a majority of our leading commercial varieties are descendants of the Chinese Cling; and they are grown from southern Maine, Michigan, Iowa, and British Columbia, to Georgia and California. Excepting the Elberta, most of them are white-fleshed. As a group, they are superior in quality, hardiness, vigor, and productiveness to the Persian race of Peaches.

In the North, the Peach prefers a warm sandy or gravelly loam, though it will grow well on a considerably heavier soil that has been thoroughly drained, and will flourish on a very

light sandy soil that is well supplied with moisture and humus and reasonably well fertilized. In the South, a somewhat cooler soil is congenial, and many of the Georgia Peach orchards are on heavy red clay loams.

The Peach blooms from ten to twenty days ahead of the Apple; so good air drainage is important.

The soil should be moderately fertile, but not over rich in nitrogen. This condition would encourage a late, sappy growth, likely to winter-kill. Avoid the use of manure, except on thin soils, and on these do not apply more than 60 lbs. per square rod.

If the young trees make 2 or 3 ft. of growth and have dark green foliage, no fertilizer need be applied for the first three years. A complete fertilizer carrying about 3% of nitrogen, 8% of phosphoric acid, and 5% of potash, worked in early in spring with the cover crop of the previous year, is a good one for the average bearing orchard. From 4 to 7 lbs. per tree in full bearing is a fair application.

#### Planting Season to Fit Locality

IS IT safe to plant Peach trees in autumn? Yes, both safe and satisfactory, where winter temperatures do not fall much below zero and the soil is fairly firm; but the newly set trees should not be pruned until spring. Elsewhere, plant only in spring.

Planting distances vary greatly in different sections. In the northern districts, where the trees are comparatively dwarf and short-lived, they may be planted 15 x 15 ft. or, even closer; from New Jersey southward, the distance may be 18 x 18 to 20 x 20 ft.; and even more room is preferable for such vigorous, spreading varieties as Elberta.

#### Pruning and General Care in Growth

NEVER plant Peach trees more than a year old. Stocky specimens, 3 to 5 feet tall, are preferable to the very large or undersized ones. These may have several strong branches, or they may have a few weak ones and some strong buds. If the branches be strong, remove entirely those that are not needed; but save and cut back several vigorous, well-placed shoots to one bud each. Choose from three to five shoots growing from these the following spring for framework branches. If the branches of the one-year tree be weak, remove them all and cut off the trunk at a suitable height, immediately above several strong buds. These will produce shoots from which the framework branches may be selected the second spring.

The trunk should branch fairly low, but the base of the lowest framework branch should not be less than 18 inches high. The framework of the Peach tree splits easily. This danger may be avoided by setting large screw eyes deeply in the inner sides of the framework branches, well up from their bases, and joining them with No. 10 or 11 galvanized wire, so that each is braced by the others.

The Peach tree demands more abundant sunlight and requires more severe pruning and a more open top than any of our other common fruit trees. When the time can be spared, it is a good practice to shorten back the vigorous one-year shoots a third of their length. This encourages each year a vigorous growth of the wood that is to bear fruit the following year.

Those varieties that tend to grow too tall should be trained to a more spreading form, by the methods described for the Apple in THE GARDEN MAGAZINE for July.

You have, doubtless, noticed how the branches of old Peach trees run out like long poles, bare (save for dead twigs) except near the ends. When this tendency shows itself, each year cut back a framework branch or two to a point where a young shoot or strong bud rises from it. This can be developed into a new main branch; and, in this way, the entire top may be renewed in three or four years, without missing a crop. This is much better than cutting back the entire top at once, as is commonly done.

In severe climates, do not prune before mid-March. In reasonably mild ones, pruning may safely be done in autumn, winter, or spring.

#### Kinds to Grow and Crops to Expect

GIVE the Peach trees clean cultivation until midsummer; then sow a cover crop, to be worked into the soil the following spring.

Peach trees bear younger than our other common fruit trees. Don't let them bear more than a few fruits the second year. They may safely yield from a peck to half a bushel the third year, and a bushel or more the fourth year. Occasionally, a Peach tree may yield eight bushels in the North; but three bushels per tree in full bearing is a good average.

In the New England peach growing sections, a tree is expected to yield about three good crops. In New Jersey or Delaware, with good care, an orchard may last from ten to fifteen years, and individual trees frequently live much longer. Farther south, Peach trees are still longer lived.

Though the choice of varieties is, to a considerable extent, dependent upon local conditions, a given variety of Peach succeeds well over a much larger area than does a variety of Apple. The Elberta, the banner Peach of Georgia, for example, is also the leader in New York and California; and more than half of the Peach trees in America are of this variety. Carman, and Belle of Georgia are equally conspicuous in their seasons both North and South.

About the earliest really good Peach is the Greensboro—a white-fleshed semi-cling, which ripens about the end of July or the first of August at New York City. Following it, approximately, in the order of ripening, is a brief suggestive list which would be improved for some sections by considerable changes:

Carman; white-fleshed, semi-cling.

Hiley; white-fleshed, free.

Belle of Georgia; white-fleshed, free.

Champion; white-fleshed, free or nearly so.

Elberta; yellow-fleshed, free.

Late Crawford; yellow-fleshed, free, not regularly productive.

Fox; white-fleshed, free.

Smock; yellow-fleshed, free.

Krummel; yellow-fleshed, free, ripening a little before mid-October at New York City.

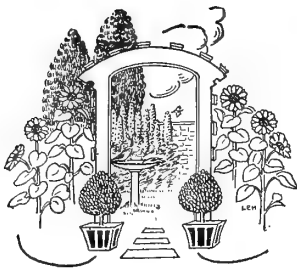
#### Troubles That Sometimes Worry

LIKE the Apple, the Peach has an array of enemies; but, with persistence and modern science, they may be controlled.

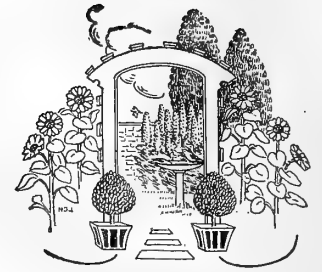
Perhaps the most serious single enemy has been the borer, which feeds upon the cambium at or below the surface of the ground. The only sure remedy until recently has been to remove with a knife, in autumn or spring. Now, however, a preparation with an odor somewhat resembling that of moth balls and bearing the formidable name paradichlorobenzene (sometimes shortened to parazene) may be used effectively upon trees six years of age or older. In its use the instructions of the bulletins must be followed carefully or harm may be done. (See also GARDEN MAGAZINE for October 1921, page 83.)

The "yellows" disease has taken its toll. The first indication is usually a sickly appearance. Then clusters of slender shoots crowded with very narrow leaves appear, particularly on the main branches. This is a sure sign of the disease. The fruit is small, poorly flavored and premature, and it is sometimes marked with reddish blotches. The disease may be controlled by promptly taking out and burning the affected trees. If the hole be well sprinkled with lime and left open during the winter, another tree may be planted in the same place the next spring.

The other insect enemies and diseases are less serious and directions for their control are given in government bulletins and the literature of companies that supply spray material and equipment.



# ONE YEAR IN A LITTLE GARDEN



The Accomplishment on a 60 x 70 Ft. Plot from Fall Planting to Picture Making after Twelve Months' Growth—Counting of Bloom Through the Spring and Summer

**T**HIS GARDEN is quite new and at the same time so old that the trees which enclose it have been tall as long as one can remember; the venerable Willow with its massive trunk and spreading branches and the Norway Maples with their rounded tops and impenetrable walls of green.

The garden was planned from the sitting-room window by Miss Alderson and Miss Dell of Greenwich, Conn., and carried out under their personal direction. It is tucked away neatly into a corner of the lawn, yet it is tied to the house by a little winding path and easily accessible from the open veranda on the east. There is a slight fall from north to south, but the inequality is corrected, at least to the eye, by a tall Privet hedge that shuts out the kitchen garden and forms the southern boundary of the flower garden. The big trees make a natural background and the enclosure is further defined by the Barberry hedge that separates it from the surrounding lawn.

The making was begun the autumn of 1920 and the accompanying photograph was taken in September, 1921. The design was first pegged out upon the lawn by means of stakes and string so that one could see before digging just how it would fit into the space. Each flowerbed was then dug to a depth of 2 ft., not forgetting the trench for the Barberry hedge, and a heavy dressing of well-rotted manure was forked into the loose soil. In this way the food value of the manure is kept within 9 in. to 1 ft. of the surface, where the roots can reach it; while the soil below is made pervious to the action of air and water. The planting was done early in November, after the beds had been allowed to settle. That autumn was open so that the Barberry hedge and the perennials and bulbs had time to make some root growth before frost.

You enter the garden through an archway which in another season promises to be hidden by a shower of Newport Fairy Roses, to judge by the growth they have made.

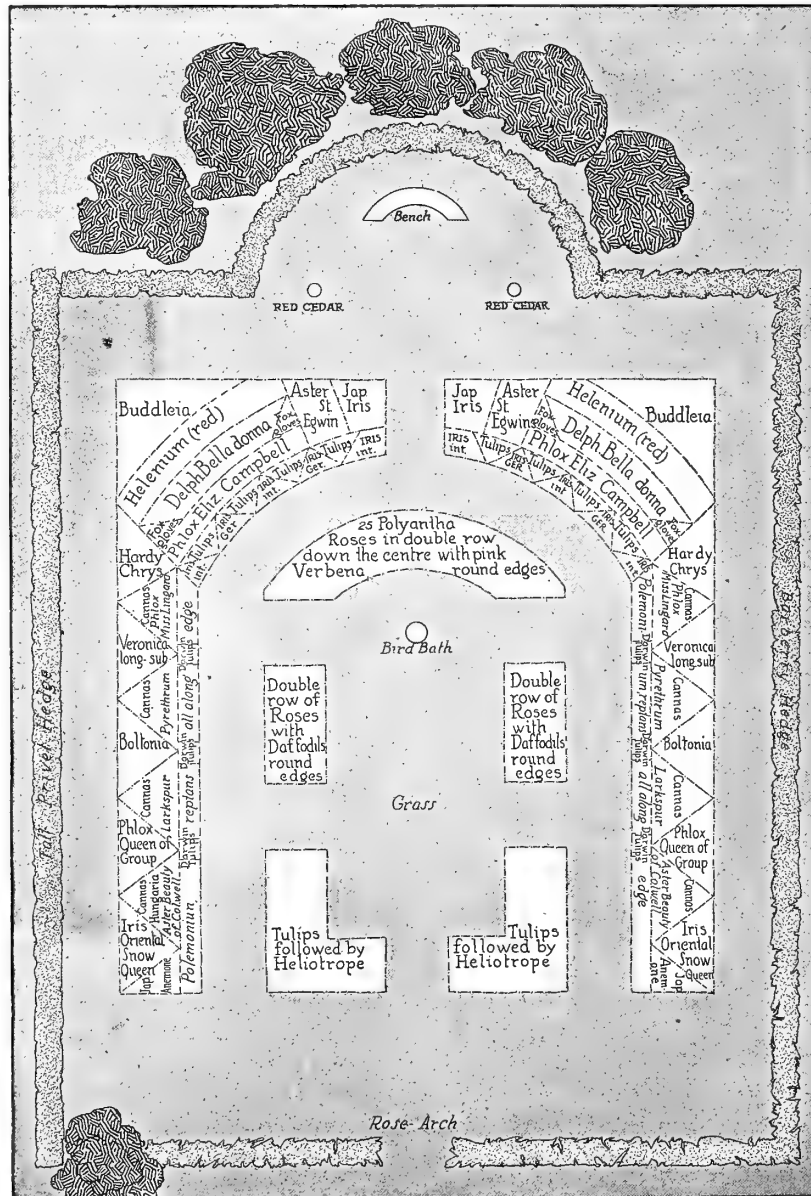
The outside measure-

ments of the garden are only 68 ft. long by 58 ft. wide, with a 14 ft. semi-circle at the far end; but what a variety of plants and changing color schemes can be brought together in so small a space!

**F**IRST come the bulbs, a double row of nodding Daffodils around the edges of the prim little rose beds, and close on their heels tread the soft pink masses of the Murillo Tulips in the L-shaped beds opposite the entrance. These are followed by the Darwins planted in V's between groups of Intermediate Iris in colors shading from tender pink through dreamy mauve to shadowy maroons and deepest purple. Let us here stress the value of Intermediate Iris with the Darwin Tulips, they are medium growers and bloom just before the Bearded Iris. The varieties here used are: Fritjof, soft purple shaded lavender with large flowers; and Gerda, creamy yellow with darker falls veined yellow. The Darwin Tulips include: Anton Roozen, rose pink; Flamingo, shell pink; Clara Butt, salmon pink; La Tristesse, slaty lavender; Melicette, rosy heliotrope; Ronald Gunn, slaty purple, lilac margin; Takvon Poortvliet, carmine, blue centre; Philippe de Commines, dark plum.

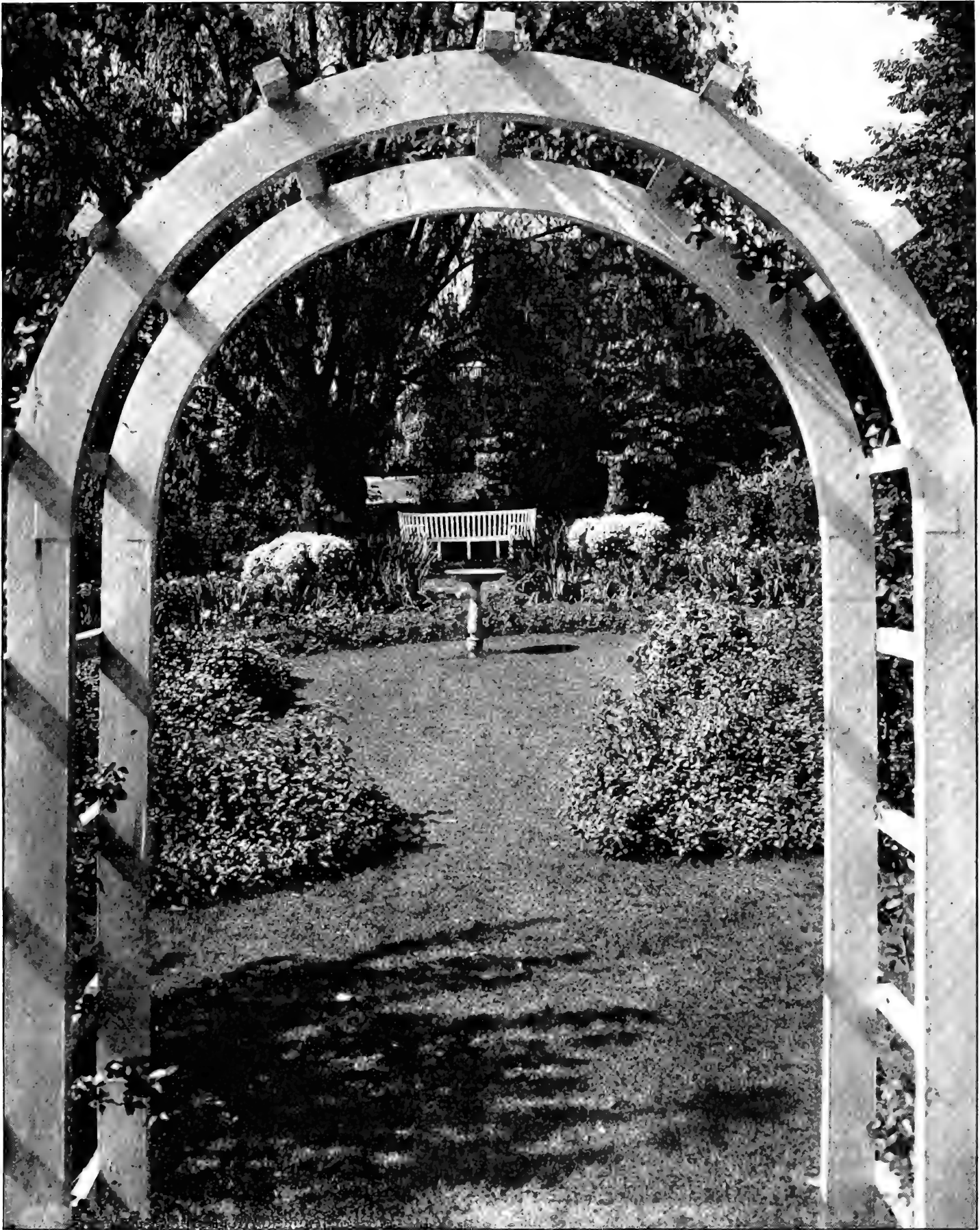
Another charming combination is repeated along either side of the garden where, however, the Iris is replaced by a long band 18 in. wide of the dainty Polemonium reptans with deep green finely cut foliage and clouds of blue flowers in May. The flower heads were cut off after blooming, leaving an edging of green for the summer months. The remaining 4½ ft. of the border is divided into V's, 8 ft. wide, filled with perennials.

By June the Roses begin to flower and although these are only 20, five each of four varieties, we really have what the catalogues call a succession of bloom. The varieties are: 1. Miss Cynthia Forde; 2. Lady Ashtown; 3. Lady Pirrie; 4. Pharisaer. Pink Pyrethrums and Foxgloves flower with the first Roses and the graceful blue Delphinium



THE DESIGNERS' PLAN FOR THE GARDEN





*Earl La Roche, Photo.*

#### AFTER A TWELVEMONTH

By September, 1921, this little garden—begun only the preceding autumn—had already achieved an air of delightful maturity; and though but a scant sixty by seventy feet, it has been so carefully laid out in relation to its neighbors that there is no oppressive sense of boundary limitation; the big, beautifully established trees creating background and a desirable seclusion. Garden of Miss Alice McCutcheon, Belle Haven, Greenwich, Conn., designed by Miss Lillian C. Alderson and Miss Beatrice Dell

belladonna, its beauty further enhanced by the pure white spikes of candidum Lilies and Phlox Miss Lingard. The Polyantha Roses in the half-moon bed were put out like a little hedge with an edging of pink Verbenas, the variety being Gruss an Aachen with large pink flowers suffused with cream. The Orientalis Iris Snow Queen makes a brave showing, and after it come stately Japanese Iris Kaempferi, in varieties.

For midsummer, dependence is mainly on that prettiest of pink Phlox Elizabeth Campbell, and the showy Speedwell (*Veronica longifolia subsessilis*) for perennials. The annuals, too, are then beginning to cover their beds, and a little later the Heliotrope fills up the foreground with a mass of lavender-blue flowers, while the Verbenas vie with one another as to which can fling its flower farthest from the edge of the bed. To accentuate the pink color note, a group of three Cannas is planted out in each of the points at the back of the straight borders. The variety used is the lovely Hungaria with rose-pink flowers.

During August and September lavender takes the place of blue and we find *Boltonia latisquama*, *Aster Beauty of Colwell*, and *Buddleia Davidii* flowering in succession with the ever-blooming Cannas.

In such a tiny garden, yellow and orange, no matter how beautiful, must be kept away from the pinks. We feel this especially in midsummer, but later in the autumn how eagerly we look for *Helenium autumnale rubrum* with its warm tints of orange and red, and for the gold and bronze of the hardy *Chrysanthemums*. As the season draws to a close, the delicate Japanese Anemones are still blooming while *Aster St. Egwin* stands erect on either side of the garden covered with mist of pink.

The silvery leaves on the Willow come fluttering down blown by the autumn wind, yet even in November a bunch of brightly colored *Chrysanthemums* may be gathered or perchance a Rose bud untouched by frost.



## PLANTING IRISES FOR PARTICULAR PURPOSES

ROBERT SWAN STURTEVANT

Landscape Architect; Secy. American Iris Society



Some Selections of Good Varieties that are Specially Adapted for Mass Effect, for Succession of Bloom, and for Specimen Plantings

**I**N ALL our garden trials, whether it is the mere trial of a new variety or the trial of an old friend in new surroundings, there is a thrill of anticipation as well, perhaps, as a pleasure in the result if we form a picture.

With Iris, above all among the newer varieties, we may choose many colors; also we can select those of similar color, but of different shape or height, that seem especially effective for certain positions. We can have a mass or sheet of color that forms part of a set design, a spot of color that gives interest to a varied group, or finally an individual specimen for close inspection of the beauty of its flowers. Now, of course, some few Iris are suited to all purposes, effective alike in mass, in clumps, or close at hand, but others are preëminently fitted to a single setting. Partly it is a matter of scale, whether they be planted as masses, or as individuals; and also a question of viewpoint, the distance from which we view the planting to be a deciding factor.

### Achieving Sweeps of Color

**I**N MASS we delight in the evenness of the color, the pattern of the design rather than in the form, size, or substance of each flower. The Apogon Irises, both Japanese and Siberian, are supreme in mass effect, the one a solid surface of rich color, the other airy with its myriad flowers interspersed with green. They are also fine as clumps where the strong leaf growth in contrast with other perennials is of value throughout the season. But with the Pogoniris or Bearded the greater delicacy and variety of color, height, and form, as well as the variation in time of bloom, tend to give continued and diverse interest from day to day. Here is an opportunity for selection, the close high-branched varieties with flaring or horizontal falls giving a more continuous plane of color. *Pallida dalmatica* is typical and well-known, its cool blue-lavender a joy in sun or shade, but loveliest, I think, toward evening when the level rays of the set-

ting sun illuminate each blossom. *Pallida* varieties in other hues and heights are many and, though few have such flaunting falls and such fine substance, they give a block of color; *Albert Victor* is a deep lavender, and darker still and taller is *Juniata*, *Edouard Michel* and *Caprice* clear claret, *Dream* almost pink. Lower for the most part are *Her Majesty* and *Rose Unique* in pale rose and deep "iris" pink respectively, *Innocenza* in white, and in yellow selfs, *Shekinah*, *Aurea*, *Flavescens*, and *Dawn*, ranging from three to two feet in height, from yellow to old ivory in tone. All these have a habit that masses well. Many of us avoid the red and yellow bicolors as crude, but most of these variegatas are effective. As a rule it is the paler color of the standards that carries from a distance, the bright yellow of *Gracchus* or *Prestige*, the intermediate tone of *Mithras* or *Gagus* rather than the varying tones of purple in the falls.

Among the lavender bicolors (the greatest in number of any class) *Albatross*, *Perfection*, and of increasing height, *Nine Wells* and the equally dark *Othello* might be mentioned as good examples. *Othello* as a single flower is poor with narrow segments, but in mass its rich color gives us an effect that makes us realize how little the individual blossom counts under some conditions. As might be expected the contrast of white and dahlia carmine in *Anne Leslie*, velvety purple in *Victorine* or *Thorbeck*, or violet in *Rhein Nixe* carries well from a distance; but a similar contrast in plicatas is different, the white carries only in *Ma Mie* or *Jeanne d'Arc*, the pale blue in *Mrs. G. Reuthe*, the purple in *Parisiana*.

Many that are fine for massing are from their very simplicity of color and ordinary form lacking in interest to the connoisseur.

### Selecting for Succession

**I**N A clump we begin to value growth, manner of branching, and the finer points of the flower aside from the carrying quality of the color and though as fine a thing as *pallida*

dalmatica with its spreading falls still holds our interest, we appreciate also the fine branching of Alcazar, the compact rounded flowers of Hope, or the translucent quality of the substance of Mrs. Alan Gray. Height we want so that the flower is nearer the eye; we like the contrast in the bordered falls of Iris King and B. Y. Morrison, the clear venation of dark on white in the throat of Koya, the delicate tracery of Mrs. G. Reuthe, the richness of Monsignor or Archeveque, the blended tones of Mady Carriere or Mme. Cheri; there are a thousand and one niceties to be discovered.

It is the clump only that all small gardens can afford. We may have variety and yet as each space is small provide for continuous bloom throughout the season. Irises are lovely in flower but at other times the contrast of their bold foliage in gray frosted or yellow-green tones should be considered.

We enjoy the Iris leaf as depicted in Japanese art but we forget it in the garden, and crowd or submerge it in rampant annuals rather than utilize it to rise from some mat of low-growing perennial, its outlines a pleasure against perhaps the soft mistiness of Gypsophila.

#### Collecting a Favored Few

FINALLY we come to the varieties that for many reasons we must have, even though they are not up to the standard in one or more points. Often they are novelties as much talked of as was Black Knight, once expensive, now out-of-date, a wonderfully rich color, but the flowers unpleasantly crowded on the stem and the growth, from all I have heard, or experienced, less than poor. Size impresses the most casual observer and what but size makes Ori-flamme—not unusual in color, substance so poor

that the standards flop, and a flower so large that the stalk appears clumsy, the clump a crowded mess—worth growing?

Color is a more worthy character and what Iris "fan" is not familiar with Eden Phillpotts' rhapsodies over Isoline, a lovely thing but ungraceful. All these are obvious qualities and there are others highly valued by the breeder, but not even seen, perhaps, by the general gardener.

How many have noted the varying ways of branching, the lasting quality of a flower, the arching of standards, the position of falls or even the number of flowers to a stalk and their substance, that indefinable something that gives strength and yet at the same time a fineness of surface like the bloom on a plum, a sheen or a shimmer and an added intensity to color?

The much heralded Dominion, raised by Mr. A. J. Bliss, has substance to the fullest, and though my definition may differ, I appreciate that quality in pallida dalmatica and in the new American introductions, Avalon, Sindjkhat, or Rajah.

#### Quantity and Price Considered

JUST a word as to the worth in dollars and cents of these three classes, mass, clump, and specimen, as I see it. For the first I must buy in quantity, the very number of blooms forbidding individual appreciation, and I may easily spoil the effect by purchasing new and expensive varieties; for the second, three plants (or one, given a couple of years time) would satisfy my need and a great many things may be had at a nominal cost; but for the third, the specimen, only curiosity, pride, or enthusiasm may set the limit. Who would not try Gov. Hughes, "the beard much heavier than in any sort!" I have most of Mr.



R. S. Sturtevant, Photo.

#### WHERE IRISES ARE HAPPILY AT HOME

Trooping thus to the water's edge, Irises are at their loveliest; slender Siberians are shown here growing in the Sturtevant garden at Wellesley Farms, Mass







R. S. Sturtevant, Photo.

## TALL BEARDED IRIS IN MASSED PLANTING

Varieties Mrs. H. Darwin, Trojana, and Dawn as grown at Wellesley Farms, Mass.

Farr's seedlings and—shall I admit it?—Avalon and Dominion.

I append a list of varieties both fine in themselves and especially effective in masses:

**Low** (18–24 in.)

ADONIS (*S.* pale yellow, *F.* black maroon). ALBATROSS (pale lavender, the falls veined and tipped darker). CAPRICE (deep claret red self). GRACCHUS (*S.* clear yellow, *F.* red-maroon reticulated on white). HER MAJESTY (old rose, veined darker). PRESTIGE (pale bright yellow, violet veined on haft). TOM-TIT (deep violet blue). VICTORINE (the white standards often splashed with the velvety violet of the falls).

**Medium** (2–3 ft.)

ANNE LESLIE (*S.* flushed with the dahlia carmine of the falls). CIRCE (deep bronzed violet, haft veined on white). CORDON BLEU (deep blue-toned violet). DAWN (palest sulphur yellow, bronze veined at throat). E. L. CRANDAL (white, the segments heavily bordered with blue at the base). LORELEY (light yellow often splashed with the blue-purple of the falls). MITHRAS (a

deeper yellow, the falls velvety maroon). PERFECTION (lavender-blue bicolor, the falls velvety) PRINCESS VICTORIA LUISE (*S.* pale yellow, *F.* a crude pink-purple). QUAKER LADY (Blended lavender with yellow shadings, charming). SHERWIN-WRIGHT (deep metallic yellow). WINDHAM (soft lavender-pink, the falls veined deeper).

**Tall** (3 ft. and over)

ALBERT VICTOR (lavender self). DR. BERNICE (rich yellowed copper tones, falls velvety). DREAM (pink lavender self). EDOUARD MICHEL (claret toned, a taller Caprice). INNOCENZA (creamy white). JACQUINIANA (red-bronzed and velvety, type of Dr. Bernice). JUNIATA (deep lavender, darker than Albert Victor, very tall). MA MIE (pure white delicately frilled with dark blue at centre). NINE WELLS (light and deep violet purple, large and strong). PALLIDA DALMATICA (cool blue-toned light lavender, very fine). POCAHONTAS (white heavily bordered violet). PRINCESS ROYAL (dark rich mauve). RHEIN NIXE (*S.* white, *F.* deep lavender bordered with white). SHEKINAH (pale yellow deepening through the centre). SINDJKHAT (dull blended lavender bicolor of unusual substance). VIOLA (type of Princess Royal, deep lavender self).



# DECORATIVE IRONWORK

ARTHUR W. COLTON  
AMY RICHARDS COLTON

EDITORS' NOTE: Because of the growing popularity of ironwork as an architectural feature of the modern garden and dwelling, where seemingly it has come to stay, some account of its origins and present-day application seems timely. Mr. and Mrs. Colton, uniting the sympathetic insight of the poet with the trained taste of the decorator, have brought their joint gifts to an able presentation of the

theme. The first article of the series, dealing with the history of this ancient art, appeared in July (pages 301-304); and the present account of decorative ironwork for gardens and outdoor uses in general will be supplemented in September by suitable features for sun-porch and conservatory.

## II. IN THE GARDEN AND ELSEWHERE

**A** NEW shop with a wide window displaying decorative ironwork and nothing else was recently opened on New York's Fifth Avenue to the gaze of that extraordinary street. Probably the avenue never had a show window of the kind before, and the event is indicative. Decorative ironwork is coming into use again, and coming in as a distinct class of art objects. It is coming with the revival of interest in gardens, especially formal gardens, planned with some architectural structure and designed in connection with the house. The whole is associated with a special interest in gardens with Southern European feeling.

Ironwork now appears in the shape of formal entrance gates to estates; of smaller and less formal gates to gardens, with archways over these entrances and bells or lanterns pendent from the arches; of iron railings in connection with gardens, and balcony railings overlooking gardens.

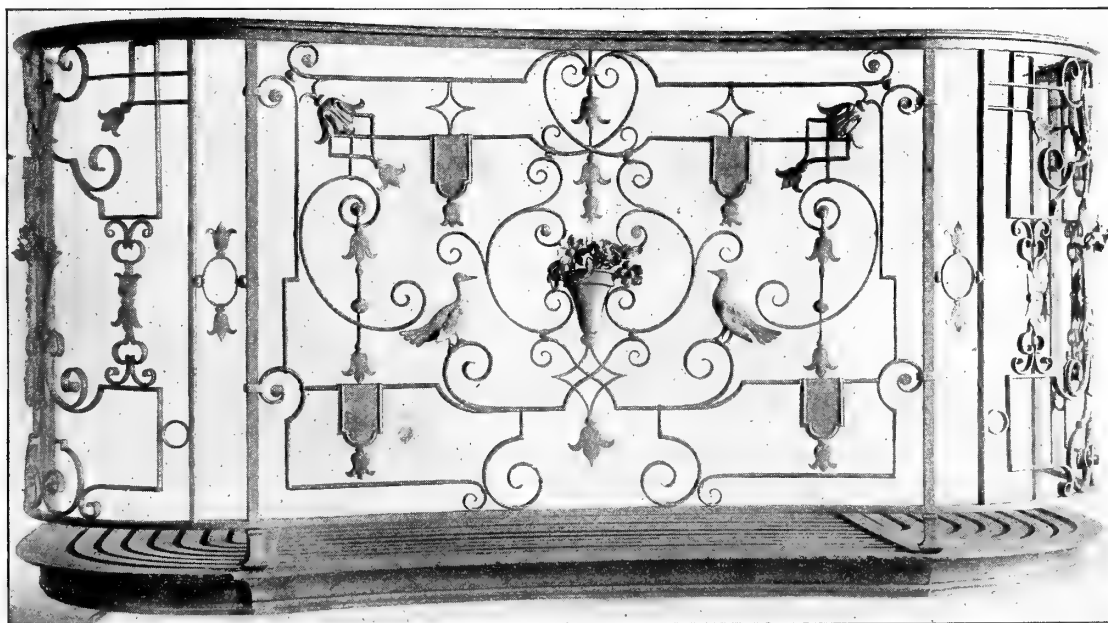
The lanterns are of great variety in placing as well as in form, some pendent with chains, some resting on top of iron or stone shafts, some standing out from the wall of the house on elaborate brackets. Electric bells have long superseded the old iron bell as a utility, but in small houses they, like iron knockers, may still be of use. They are hung from decorative iron brackets at the entrance of house or garden, and are rung either with a tongue or a hammer.

The decorative well-cover or arched support is being revived, and the designers are turning out unusual forms of weather-vanes.

The growing tendency to live as much of life as possible out-of-doors has increased the use of sun-porches and loggias, and these suggest, or offer, an excellent opportunity, for various decorative iron pieces; portable tables and chairs, iron stands (usually tripods) sustaining plant holders (which are often old iron braziers, or made on old brazier designs). Iron brackets, with copper or brass receptacles for plants, are often fastened against the walls of loggias, and other iron plant holders are hung by chains from the ceiling. The tripod stands are also used to hold a glass globe for an aquarium. Globe aquariums, however, are said to be inferior to square ones, as regards the health and happiness of the fish.

Old candelabra and their designs are easily adaptable to electric wiring and convertible into floor lamps in a loggia that has been fitted with electric outlets.

In selecting pieces of ironwork, the personal taste and feeling of the owner should be a controlling and pervading influence. That taste and feeling is often uncertain of its way; it may know what it is seeking in the sense that it is seeking self-expression and a satisfied peace, but how that self can be found and that satisfaction attained is a problem which is apt to be more difficult than anticipated. Solutions often turn out to be not final but only temporary. The difference between the possession of a really beautiful and a merely meretricious object is that with the one the pleasure of possession increases with time and use, with the other it stales.



WROUGHT IRON ITALIAN BALCONY

Executed by Samuel Yellin, a believer in tradition "whose work has the perfection of execution of the Renaissance craftsmen." The pot of flowers and the quirky pair of birds enliven the whole design which well exemplifies both the delicacy and the strength of this metal when masterfully handled. Mr. Guggenheim's residence at Port Washington, L. I.; H. Van Buren Magonigle, architect

It is well to know something about periods, for the most successful and beautiful modern ironwork, generally speaking, follows the better periods, that is the 13th, 14th, and 15th centuries, or at least earlier than the 18th.

THERE are a few American designers who have given us ironwork of interesting design, and of these very notable are Mr. Hunt Diederich of New York, and Mr. Samuel Yellin of Philadelphia.

Mr. Yellin is a metal worker in all the traditions of his craft whose work has the perfection of

#### WEATHER-VANE OF MODERN MOTIF

Designed and executed by Hunt Diederich who has turned his memories of life on a southwestern ranch to artistic account, working in characteristically free and vital fashion



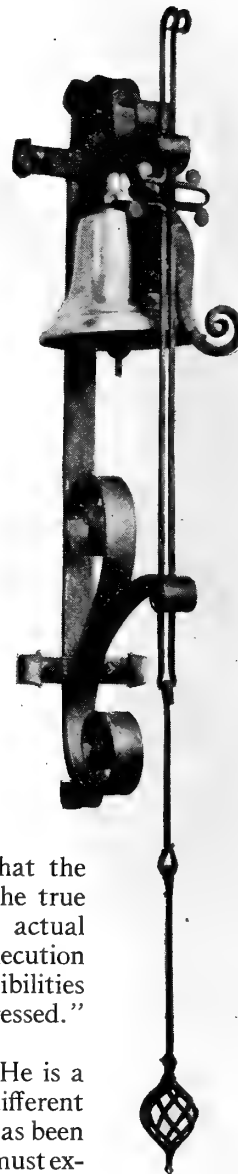
#### WELL CANOPY OF HAMMERED IRON

Durability and a certain light grace may be effectively combined as here; designed and executed by the W. Irving Forge



#### A DOOR-BELL OF DIGNITY

The wrought iron bell has so much more individuality and enduringness that it is a pity to permit the insignificant little electric push-button to take sole precedence. Courtesy of the W. Irving Forge



execution of the Renaissance craftsmen. He does not "believe in any purely original inventive art without tradition"; but believes that "any really artistic work should bear in mind the old masters who left so many examples to follow and get inspiration from"; also that "the design should suit the material; that the success of any craft depends mainly on the true craftsman who knows the design and the actual execution as well; and that this (the execution and handwork) is just where the possibilities and limitations of the material are expressed." He is a craftsman and a traditionalist.

Mr. Diederich is not a traditionalist. He is a sculptor who likes "to work in as many different media as possible. Sculpture" he says, "has been too long an affair of marble and bronze; we must extend its scope in order to insure it a wide acceptance." Hence, incidentally, he works a good deal in iron, and makes candlesticks, andirons, window grilles, fire-screens, lamps, brackets. This itself is significant, but the way he does it is more significant, the supple elegance, the daring conception, and the fluent vitality of the craftsmanship. Except for certain rounded figures which have to be cast, his work is all forged and hammered by his own hands. It is creative from start to finish. These slim, nervous animal forms, deer, greyhounds, cowboys, and bullfighters, are wrought into the most unconventional of motifs and designs that fill a given space without any apparent effort, full of beauty and strength. Mr. Diederich is the grandson of William Hunt, the painter, was born in Hungary, lived on a ranch in the Southwest, studied at the Pennsylvania Academy of Fine Arts, went to Spain with Paul Manship, and had won a European position before the War.

"Slim nervous strength"—after all, is not this the genius, the intrinsic faculty of iron? In whatever medium you work for art, you seek expression, and each medium has in some degree its own peculiar kind of expressiveness. Its limitations are easier to discover than its possibilities of expressiveness. There is no "pure art without tradition," but neither is there any living and growing art that is all tradition.

When you have asked two questions about a material and assimilated the answers, you have the principles of handling it. The questions are: first, what are its faculties, capacities, inherent characteristics; and second, what are its traditions and associations? Structural steel has very definite characteristics, but almost no tradition. Wrought iron, however, is as venerable as brick or bronze. It is a sober looking metal of enormous tensile strength. Whoever works with it in the instinct of its





THE IRON GATEWAY AS A GARDEN FEATURE

A really well-designed gateway holds its beauty the year through, long after the tumbling grace of Roses is overpast. At Planting Fields, Oyster Bay, L. I., the home of Mr. W. R. Coe

quality can express strength by it without massiveness. This is why one feels that the slim, sinewy vigor of Mr. Diederich's figures is true to the material. Such figures in stone would look fragile, but in iron they look strong.

THE matter of rust is, of course, of vital importance in exterior ironwork, and the best workmen treat it with oil, which is burnt into the surface. It is supposed, but not very definitely known that the old iron was so treated. In this way, one escapes from paint.

Do not paint your iron, for with paint you lose all the texture, all the surface quality. The Italians and Germans used to touch it with color and gilt, but that is another matter. They did it for color purposes. But it is, or has been, the fashion to paint and repaint gates, railings, and grilles from year to year, and their surfaces have no more quality than the varnish on a hearse. They seldom have much interest in design, but time would give some pleasantness to their surfaces if it were not for the perennial paint. The oil treatment will keep the surface value as well as preserve from rust.

The outdoor ironwork in cities is important, and it calls for improvement. Municipal ironwork in New York is on such a quantity scale that quality workmanship in the making is out of the question. But there is no reason why the design of the street lamps should not be interesting. Street lamps, street signs, letter boxes, park railings, and park benches may be cast in quantity and be good, if the designs are good. But the designs should all be chosen by a non-official commission of artists, not by any city official.

A great deal of well designed ironwork is being used in remodelled backyards, thrown together into an inner block garden. A good example is Turtle Bay Gardens (See GARDEN MAGAZINE for January, 1922) in which the ironwork was designed by Messrs. Bottomley and Dean, and executed by P. Fiebiger, a very competent ironworker.

Enduring then, as well as strong and sober, iron has great virtues for exterior or garden ornament and structure. All the fine traditions of grille work are at the service of balconies and garden gates—all the beautiful old designs of hinges, handles and knockers, locks and keys. Your pendent lantern may as easily be of good design as of bad. A copied design is as good as the original so far as the design goes, but one must see that the workmanship of the copy is also good. Finally, avoid black paint and glossiness. If you use paint, use it for color, but the best foundation color for iron is its own texture and weather stain.

THE FRIENDLY LANTERN

Quite aside from its obvious usefulness, the lantern holds out pleasant invitation, and in its dramatic light and shade even the smallest garden takes on mystery. Garden of Mr. Jere Downs, Winchester, Mass.





# HOUSEHOLD FLOWERS FOR THE HOLIDAYS

ELLEN D. WANGNER



How to Have Flowers All Winter Long—Christmas  
Giving That Carries a Personal Message of Cheer

**M**ORE and more each year are we coming to feel that flowers are a necessary part of Christmas. More and more do we realize that a beautiful blossom can most truly bear our message of cheer and greeting. Nothing does this so fittingly as a plant we ourselves have tended and cared for in each step of its growth and development; for such flowers acquire a wondrous quality, a something personal and friendly, that no mere purchased bloom can convey.

To have golden Daffodils in bloom at Christmas time, to be able to give a pot of royally purple Hyacinths is so easy of accomplishment that the most inexperienced flower-grower meets with success if several simple but very important rules be followed. I have forced Tulips, Daffodils, and other Narcissus, Hyacinths, Lilies-of-the-valley and Crocuses into full and perfect flower on Christmas day. Their blooming can be so easily regulated that I can say with surety: "I will have Hyacinths and Lilies-of-the-valley to bear my Christmas greetings, Daffodils and Tulips to wish a happy New Year, and Paper-white Narcissus—whenever I desire."

## What Bulbs to Use and How to Start

**F**OR forcing these flowers, bulbs must be secured for early planting. Plant all bulbs that are to bloom by Christmas not one day later than the middle of September. Bulbs for forcing, with a few exceptions, need ten weeks in which to make a sturdy root growth and six weeks after that for bringing the flower into bloom. Exceptions to this are Lilies-of-the-valley, Paper-white Narcissus, Roman Hyacinths, Crocus, and some of the very early varieties of single Tulips. Any of these can be planted in mid-September, allowed eight weeks for root growth, and be brought into perfect flower for Christmas day. The other bulbs that require ten weeks for root growth make very acceptable Christmas gifts, however, for the bud will be well developed, giving promise of the joy and beauty to come.

As to the varieties of bulbs for forcing, their name is legion! I have found that they all bloom well, provided that they be of the early varieties and are solid, firm bulbs. Of the many kinds of Daffodils, I have no choice, for this flower is so sturdy that it will do its best for you, no matter what its varietal name. The Van Sion, with its strikingly beautiful double flowers of richest yellow, is very easily forced and, if limited to a single choice, I think it would be that.

All members of the Narcissus family flower easily. The Paper-white Narcissus fills the air with a fragrance beyond description. The long, graceful yellow trumpets of the bicolor types are also lovely, though to me none quite equals the Poet's Narcissus with its snowy-white petals and its small centre cup delicately edged with scarlet. The double Roman Narcissus are exceedingly fragrant and their white, golden-cupped blossoms very beautiful.

Among Tulips for forcing, the single varieties prove most satisfactory, and almost any of the very early, standard bulbs which produce glowing red or yellow flowers, are attractive for winter bloom. The Duc van Thol type, in rich red, yellow, or white, is a sturdy, reliable old member of this family that has never failed me, no matter how I have hurried its blooming and, of all the early varieties, this is the ideal forcer.

Lilies-of-the-valley respond well when forced, and a small pan of these daintiest of flowers makes an exquisite Christmas morning gift.

When bulbs have been selected, the next step is to get pots of the right size to hold them. Dutch Hyacinths, Tulips, and large Narcissus bulbs grow best in a five-inch pot, one bulb to a pot. Roman Hyacinths and Daffodils will grow very well in a four-inch pot. Crocus and Lilies-of-the-valley, being smaller and requiring less root space, may have several bulbs to each five-inch pot. Flats or earthen bulb-pans, purchasable at any florist's, are excellent for these small plants. Where assorted colors of Crocus are selected, nothing could be gayer or more cheering than such little flats of bloom. Six Crocus to a five-inch flat and three Paper-white Narcissus may be allowed to a six-inch pot.

If bulbs are crowded in too small pots, or if too many are put in one pot, the blossoms cannot be forced to their fullest beauty. In planting several bulbs in one pot, place carefully so that they do not touch one another nor the pot itself. Before planting the bulbs, wash all pots thoroughly and allow them to soak in water for two or three hours. This fills the pores of the material and prevents absorption of moisture from the soil. Small, broken bits of pot must be placed over the holes in each receptacle for perfect drainage.

The next step, and one that is very important, is the preparation of the soil. All bulbs like a mellow, light, rich soil, and I have secured my best results when I have used a loamy garden soil, mixed with a very little sand and without fertilizer of any kind. Mix this soil carefully in a pail or small tub until thoroughly crumbled; fill each pot half-way and place the bulb firmly on the soil, but do not force or screw it into the soil. Each pot must now be filled until just the tips of the bulbs show; the only bulbs that should be completely buried, nose and all, are the Anemones—queer, shrivelled little things—which are to be planted an inch and a half below the surface.

## The Trench Method of Forcing

**A** TRENCH must now be dug in which to place the potted bulbs somewhere in a well-drained part of the garden. Make this at least one foot deep and cover the bottom of it with three inches of coal ashes to permit drainage and to keep out worms.

Place the pots in the trench with space between them and fill in around them with leaves, straw, or other coarse mulch. Fill up the trench with earth lightly tossed in. When freezing weather comes, cover over the top very thickly with leaves, straw, or boards to keep the ground from freezing so hard that the pots cannot be dug out. Here, in the dark and the cold—the two most essential factors in producing good, sturdy roots—the bulbs will grow.

When they have been in the trench from ten to twelve weeks, it is time to take them out. Put at once in a dark cellar of the house where the temperature is about 40 or 45 degrees. The leaf tips are now about two inches above the ground and of a delicate, pale green. It is vital that the plants be kept in the dark at this time for two days. They also require water, and this is best given from below. A good rule is to keep the saucers filled with water. The small plant then takes care of its own needs. The flower is already formed, in the bulb waiting to push up. Soil in the pot serves to feed the new bulb for next year—it has no effect on the current season's bloom.

On the third day, bring the plants into a little lighter and

warmer spot—about 50 degrees. Keep well watered until the leaves are about three or four inches high; they are then ready for more light and a temperature of about 60 degrees. The leaves should be a deep, healthy green and growing rapidly, and the bud by this time plainly visible.

Now take the plants to a light window but do *not* place in the sun. At the end of two days, they may be moved into the sunlight and a temperature of 65 or 70 degrees. A good rule to keep in mind as to heat for such plants is the following—40 degrees for root growth, 50 degrees for stems and leaves, 60 to 70 degrees for flowers.

This very slow journey to heat and sunlight is necessary if you would keep the bud from blasting. More flowers are spoiled because of haste at this point than from any other cause. And always must the plants have plenty of water.

If the bud seems too far down in the stalk to bloom at the desired time, it is proof that too much heat has been given too soon. By placing a stiff cone of paper over the whole plant, the flower will be drawn up quickly to the light.

If the above directions be followed carefully, success is certain and the forcing of blooms may be so regulated that flowers may be had at any time desired during the winter.

Last year I tried the experiment of leaving three Hyacinths (single varieties), two Daffodils, and two Tulips in the trench from September first to March fifteenth. When taken from the trench, the poor Tulips had sent up slender, pale shoots a foot long in an endeavor to reach the light. They, of course, did not bloom. The Hyacinths, too, had stretched up long necks in an endeavor to get their heads above ground. By placing thin supporting sticks in these pots, the plants were induced to bloom in a half-hearted way. The Daffodils, however, had remained almost normal in these adverse circumstances, like dignified, old ladies who refused to be thrown out of their usual placid routine. When brought through the various stages of forcing, they responded as beautifully as though nature had not been tampered with at all, thus proving just how easy it is to grow them, and how readily one may regulate their blooming-time.

Nevertheless, I would not advise leaving them in the trench for any such over-long period. The right way is to plant them a week or two later than usual, allowing the requisite time for root growth, then delay bringing them into the sunlight and heat.

In this way, with a little thought and care, new blossoms may be had each week throughout the winter.

### Two More Ways—Water and the Attic

A FASCINATING way in which to force these bulbs is to grow them in water; Chinese Lilies, Hyacinths, and Paper-white Narcissus being especially responsive to this method—an easy one, although not quite as interesting as growing in a trench.

Bulbs handled in this way are brought to flower by the same procedure that governs trench-grown plants: root growth in the dark, and then brought by gradual stages to the light.

Preparations are simple: first, put pebbles in a dish of water, keeping the water slightly below the tops of the stones. A few small bits of charcoal will aid in keeping the water sweet. Place the bulbs on the pebbles and set away in a cool, dark, well-ventilated closet until the roots get a good start and the leaf-spikes are about an inch high. Then proceed as directed and as carefully as with trench-grown plants.

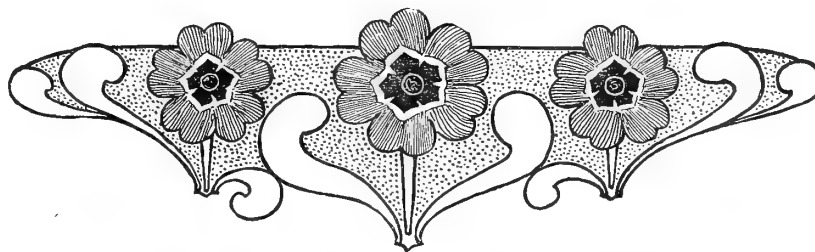
Bulbs forced in this way are particularly susceptible to drafts or to too much heat. Many a well-formed bud has failed to become a blossom because of having been placed too close to a cold, drafty window. After bringing to the light, all water-grown plants should have fresh water added every few days and two drops of spirits of ammonia each week.

A third most interesting method of forcing Daffodils and Narcissus is to grow them in the attic. To do this, plant the bulbs as for trench-growing; water well, filling each saucer with water; now place in a good-sized, corrugated paper box; cover and set in a cold, dry attic. When freezing weather comes, stand this box in a wooden one with hay or excelsior between. With this protection the bulbs will be cold, but will not freeze. Open the boxes and water the plants occasionally to keep the earth from drying out. Cold, darkness, and water are the three requisites of attic-culture as of trench growing.

When the plants have pushed through the soil for about an inch or so, bring them down to a dark, slightly warmer place, a dark closet or pantry. Uncover but still keep them in the box with plenty of water from below. When the leaves reach a height of two or three inches, lift the pots out of the box in the dark closet, gradually bringing them to the sun and a warmer temperature as directed for trench-grown plants. I have had attic-grown bulbs bloom with a beauty that is most inspiring.

### STEPS IN FORCING BULBS

1. Allow ten or twelve weeks for root growth.
2. Wash all pots and soak in water two or three hours.
3. Mix good garden soil with a little sand until mellow and crumbly.
4. Place bulbs firmly in this soil; do not screw into the ground.
5. Place potted bulbs in well-drained trench in the garden.
6. Have trench one foot deep and with bottom of it covered with coal ashes.
7. Fill spaces around pots with straw, leaves, and earth until trench is filled.
8. Cover trench with straw, leaves, or boards when freezing weather comes.
9. Remove potted bulbs to dark cellar, bringing them very gradually to sunlight and warmth.
10. Rule for temperature—40 degrees for root growth, 50 for leaves, 60-70 for flowers.







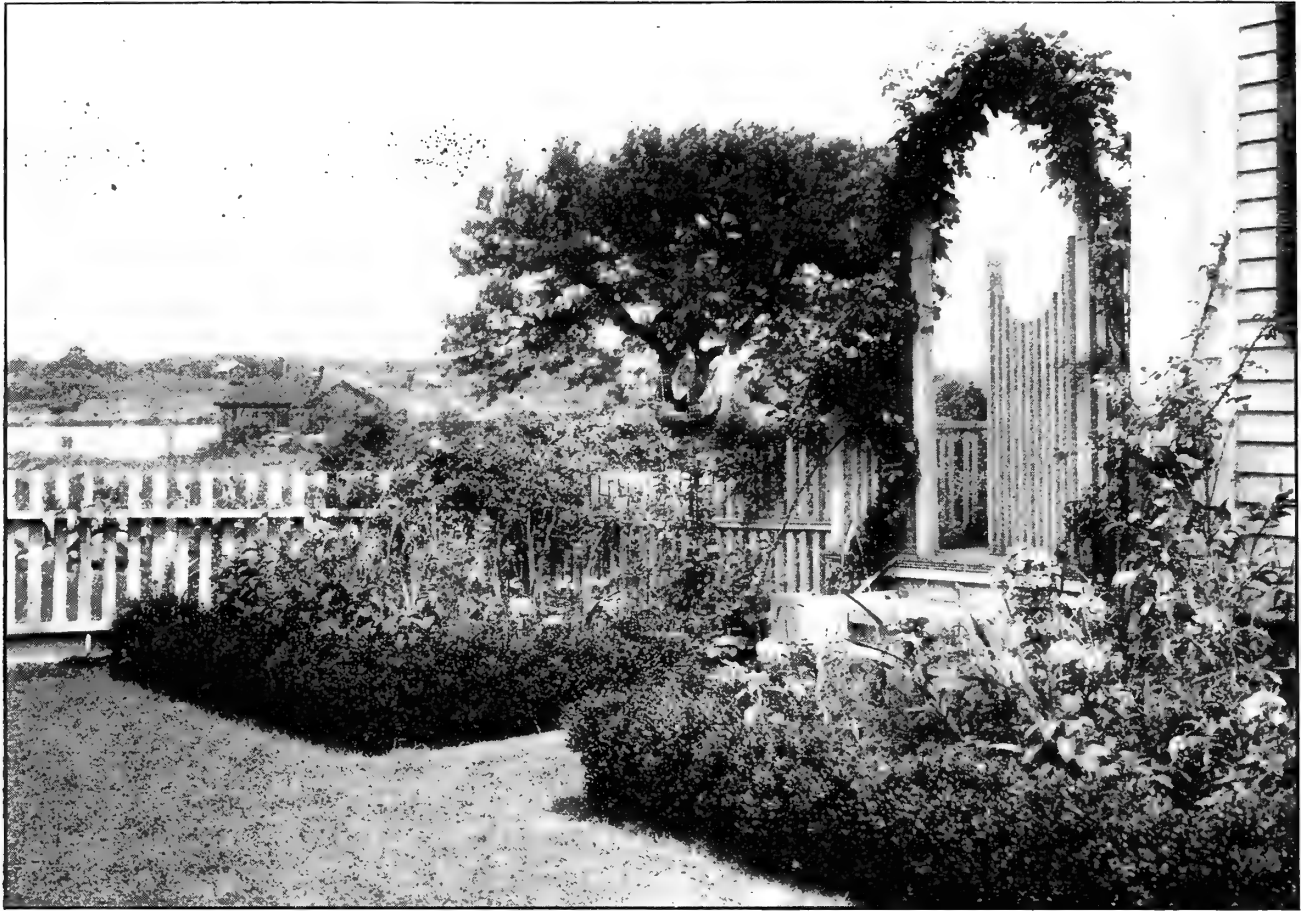
# Garden of Mrs. Vivian Spencer

At Avondale, R. I.

Miss Marian C. Coffin, Landscape Architect

Photographs by Harry G. Healy

So utterly natural in aspect is this planting, so free from pretense, so in keeping with the house it adorns as to leave us more than ever convinced that simplicity is beauty's prime ingredient. Built by an old sea captain and now altered to meet more modern needs, the house is girt about with sturdy, every-day plants that defy salt breezes—Marigolds and Gladiolus, Phlox, Funkia, native Lilies, Roses and so on. In the weather-vane, an exact copy of one of the ancient caravels of Columbus, is found a final appropriate touch. (See upper photograph on opposite page)



# GARDENING IN FRAGRANT FLORIDA

EMILY WILCOX

Garden Club of Florida

Considering Regional Differences and Getting an Early Start—Fall Planting Time in the “Land of Flowers”—Dependables for Winter and Summer Bloom on the 50 x 125 Ft. Plot

**F**LORIDA has a frost line and a great deal of this so called “Land of Flowers” is above it. The visitor arrives expecting to find a garden spot, and is disappointed but stays on, because of the sunshine and the ozone. You have come to Florida to make a home and are filled with enthusiasm. You want the outlook from this home pleasant and restful. A velvety lawn with trees casting long shadows and wonderful splashes of color in the garden. You look about, and in spite of the hosts of trees there are very few shadows. A



THE LONG SUNSHINE OF FLORIDA

Annual Larkspur and Snapdragons furnish color against the green of Oaks which form the rich background of this Southern garden

Palmetto casts about as much shadow as the skeleton of an umbrella. The tall Pine trees pole themselves so gauntly in the air before condescending to stick out their pins of leaves, that a self-respecting shadow has not a ghost of a chance.

But we can grow our own shadows! We will draw a veil across all the queer things that happen—seeds that never materialize because planted according to Northern schedules, flowers that struggle into bloom only to develop paralysis, the wrong kind of grass selected; and grass we must have. It is the canvas on which to paint our picture.

**F**OR strictly open spaces Bermuda-grass is the best lawn plant from early spring until a killing frost when it will turn brown until the following spring. Bermuda-grass spreads by creeping stems which root at every joint; St. Augustine-grass has a broad blade and is excellent for shady places. Both grasses are started by sets planted in rows about six inches apart and although April is the best time for planting, it grows at any time. Water plentifully and keep a vigilant eye for weeds. A good commercial fertilizer will lessen the possibility of weeds.

A magical effect may be produced each spring and fall by covering the lawn with a top dressing of a special lawn fertilizer mixed with an equal part of good soil, and by watering thoroughly. It takes only a day or two to produce a gay green carpet that will fairly make you gasp at its brightness. If you wish to make a deep impression on your winter guests, buy pounds of Italian Rye seed, scattering it thickly on the lawn some time between October 15th and November 15th. Cover with about one-fourth inch of loamy soil, water thoroughly, and all winter there will be a vivid green lawn while the real grass is resting. This I have always called “stage grass” it seems so unreal—but it is most effective.

When it comes to planting the picture with trees, shrubs, vines etc., the vital fact that everything is to look its very best in winter must always be in mind; it is what our Northern friends expect when they descend upon us. Therefore, beware of the type of plant that sheds its mantle of foliage or turns into a brown, wizened mummy in the winter.

If the garden is new and you are in a hurry for results, plant abundantly of the quicker growing things mingling the choicer ones among them. Later the common ones can be cut away.

I firmly believe that anything will grow in Florida if planted at the proper time and given proper care. My advice is, however, to plant only the tried and true and the catalogues of the

## WHERE CREEPING FIG RUNS RIOT

This vine (*Ficus repens*) found in China, Japan, and Australia is known to the North only through its use in conservatory and greenhouse, but grows rampantly in the more congenial climate of Florida. The variety minima is effective for hanging baskets and window boxes





nurserymen of the region hold much information for the gardener. Lombardy Poplars may be used for a sky-line effect, also Deodar Cedars with their attractive green foliage, which on the tips of the small branchlets look like tufts of blue feathers. Japanese Junipers, Red Cedars, Holly, and Camphor trees, all having thick evergreen foliage, make a good background.

The shade trees must be planted with wide open spaces to admit the soft Southern breezes yet close enough so that tops will interlock but not near enough to distort each other. *Magnolia grandiflora*, queen of flowering evergreens, is glorious in groups, but such grouping is possible only where there is abundance of space. Never crowd; better manufacture your shadows in some other way if space is limited.



SPANISH BAYONET (*YUCCA ALOIFOLIA*) ALONG THE WATER FRONT

Flanked by Palmetto (right) and Pine (left), all seen in belligerent silhouette

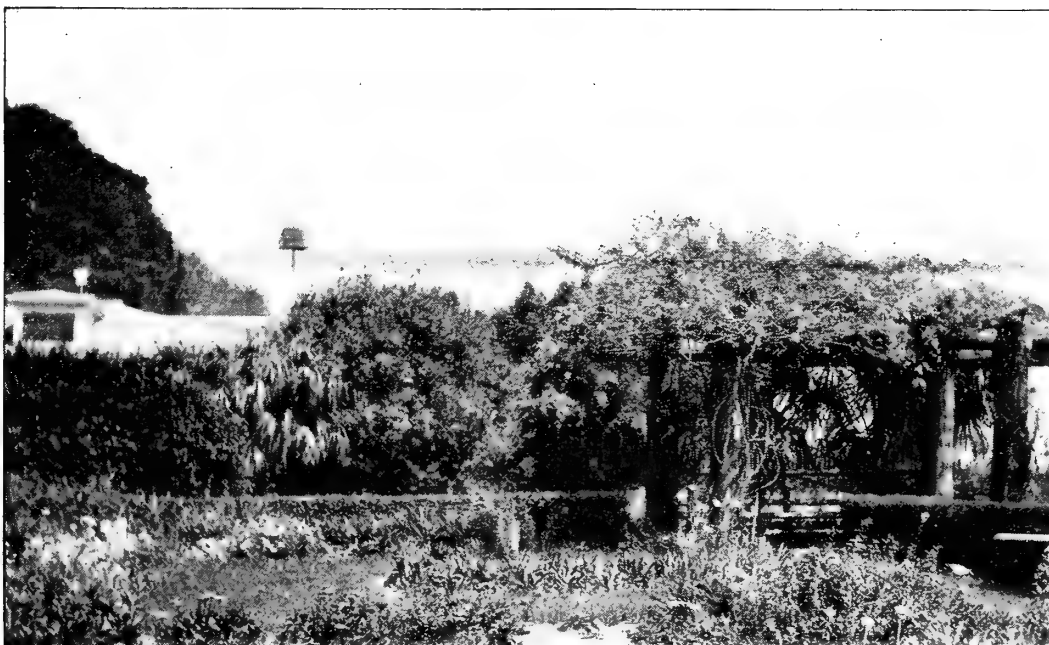
PLANTS PERMANENT AND TRANSIENT

Familiar Wisteria clothes the pergola and behind we glimpse the less familiar Bamboo; the low *Pittosporum* hedge is backed by a wall completely covered with Creeping Fig. Snapdragons, Stocks, *Arctotis*, and *Calendulas* furnish fragrance and color



TWO OAKS AND A PALM

Canary Island Date Palm (*Phoenix canariensis*); Water Oak (*Quercus nigra* or *aquatica*); and Live Oak (*Quercus virginiana*), one of the most beautiful of American shade trees with the added merit of being an evergreen, easily transplanted and rapid in growth



ON a 59 x 125 ft. lot with house and garage, you must firmly decree that the garage be turned so that the side or back will face your view, and then proceed to cover it. There is scarcely anything unsightly that cannot be covered with beautiful vines, and so softened into the picture. For an unpretentious wire fence Honeysuckle is safe, rarely affected by frost, and it blooms intermittently all year, always choosing its blooming period during the full moon. *Bignonia speciosa* is a lovely vine with glossy, dark leaves and purple bells tolling a message of fragrance to the bees and the humming birds. *Rhynchospermum* (*Trachelospermum jasminoides*) is a strong growing, twining vine with fragrant star-like blossoms, and *Jasminum pubescens* an evergreen vine

or scrambly shrub with beautiful green foliage and star-shaped blossoms.

For solid surface the climbing Rubber-vine (*Ficus repens*) is the most perfect creeper known. It has small, oval, glossy leaves and will quickly clamber up and cover any kind of wall. It is especially good against a cement background. The very exclusive may surround themselves with an impenetrable hedge of Cherokee Roses. These delicate guardians come in pink and white; the former do not grow so densely or so aggressively as the white; or a continuous wall of Oleanders may be fancied—creamy white, flesh, pale pink, yellow, and deep crimson. Beware of a deep pink form that has a suspiciously magenta look. Oleanders are easily grown from cutting—gifts perhaps from friends and neighbors, or possibly you will even bravely ask a stranger for one or two from an unusually lovely bush, and its owner will gladly give them. There is a curious bond of fellowship created by exchanging cuttings and plants. Such exchanging, however, must be done in the spring.

Put the cuttings in bottles filled with water; stand in a shady place out-of-doors, not disturbing until strong roots have formed; then remove from the bottles and plant in the ground. They will grow like weeds and bloom before you know it. Should you prefer a hedge there are Pittosporum, Cherry-Laurel, Amoor River Privet, California Privet, Camphor, and Red Cedar, all ideal for hedges closely trimmed or untrimmed.

What of Palms, you are thinking? Yes, indeed, what is Florida without a Palm? The most popular kinds, the Phoenix *canariensis* and the *Washingtonia*, are effectively used in the park space between sidewalk and road, lending dignity and beauty with a luxuriantly tropical effect.

### Plants About the House

**I**N the matter of foundation planting to unite house and earth, green shrubbery has an enduring charm, and there is a variety of material. Pittosporum looks well close to the foundation.

The Florida flower garden has an enchantment knowing no limitations and it flourishes in the season of drear winter in the North, extending its welcome in September instead of waiting till spring. All properly planned Florida gardens are planted in September and October.

Annual Larkspur, ranging in color from deep blues and purples to sky-blue, from lustrous carmine, or Newport pink, to pale shell-pink and white is wonderful both for cutting and garden effect. Not long ago I came across a marginal note I had made in an old garden book: "Be sure and plant pounds of annual Larkspur next September!" Now the gentleman from whom I purchase my seed, aside from being a most reliable seedsman, is a good business man as well, and had I followed my own advice I fear the poorhouse would have claimed me for its own. I remember ordering just two packets of each color, three years ago. The flowers more than realized my wildest dream, but for an excellent reason I have never ordered any more. Each year I have marked the strongest, most beautiful plants—a narrow strip of pink checked gingham on the double pink, a plain pink gingham on the single pink; blue, purple, and white accordingly. Thus I keep the colors and double and single varieties separate. The plants not so honored are labelled "mixture" and freely given away.

Next in the planting scheme comes Snapdragon (*Antirrhinum*) of which large-flowered strains are available. Buy the best seeds of the tall Giant variety that offers white, yellow, coral pink, a particularly beautiful deep maroon, and the new velvety copper called Indian Summer. By pinching off the tops when the plants are five inches tall, they become more stocky, branch out, and carry many more blossoms.

Happy-go-lucky, gay little Phlox Drummondii follows on the list; try sowing around your sun-dial the tiny seeds of Chamois Rose, the clearest, purest pink, and of Isabellina listed as pale

yellow, but really buff. Of course, plant plenty of creamy white at intervals through your garden.

Calendulas (Orange King, Golden King, and Lemon Queen) bloom in January and are happily accompanied by the stately white Giant Empress Candytuft. These prove most reliable flowers for winter cutting.

For summer flowering sow Zinnias with riotous recklessness as they require little attention and withstand the hottest Florida sun. Buy the named varieties of the Giant Double sort; by selecting according to color, the magenta ones, which always overbalance everything in mixed seeds, will be avoided. Sow these seeds in boxes some time in March so that the plants will be ready to follow the spring and earlier summer bloom.

Daisies make a good planting along the garage; of these buy plants, not seeds. Sow Cornflower seed thickly in front and do not thin out the plants as their very density will hold them up. Whenever you feel you must have a border, plant Parsley; it stays the cheeriest green all winter besides being a most delectable garnish for the table.

Set out Roses in November or as soon as the weather has been cool enough to send the sap to the roots. If you have room for only a few, Hybrid-teas and Teas are a wise choice. For white, Mrs. Dudley Cross, a deliciously creamy flower with sophisticated tinges of carmine edging its petals; Kaiserin Augusta Victoria, austerely pale and regal; among pinks, by all means Duchesse de Brabant and a pink Radiance; let two Red Radiance, and Madame Lombard, a rosy bronze and salmon, complete the list. Those fortunate enough to have more space might add Paul Neyron, very similar to American Beauty; Captain Christy, a delicate pink; all the Maman Cochetts, pink, white, and yellow; also Frau Karl Druschki, a huge white, and Souvenir de Malmaison, that bewitching Bourbon. There is sure to be a spot where a trellis can be placed to advantage. Let it be very simple and dignified. A Reine Maria Henriette, planted at its base, will flaunt abundant brilliant scarlet blossoms; or a Dorothy Perkins, with delicate shell-pink clusters like myriads of rosettes, will ramble gleefully over it.

Find a corner for a Poinsettia. You are expected to have one whether you love it or not. Each spring cut it back almost to the ground, stick the cuttings in the earth and next Christmas you will have a standing army of red coats to be cut before one trace of Bougainvillea shows its color, if by chance you have this purple-flowered vine.

White flowers are particularly lovely by moonlight, perhaps most of all *Nicotiana affinis*, with starry-white blossoms that seem almost phosphorescent. *Nicotiana sylvestris*, often called Night-blooming Jessamine, is more shrubby and hardy. The fragrance of both is delicious beyond expression.

Sweet-peas are irresistible. Plant them in October, digging the trench so deep that when they come up they grow six inches before they can peep over the top at the garden world. Gradually fill in the trench as they grow. For a support use wire netting; Sweet-peas thrive much better if they have plenty of air from both sides.

**D**ETAIL about soil conditions and the art of planting has purposely been avoided. It is the same the world over. Each paper of seeds has explicit directions for the ceremony of consigning them to the earth; the nurserymen from whom you purchased your plants will give you proper instruction. Have you ever stopped to think how we have to study and learn the way of doing nearly everything? But there is scarcely a little child who does not grasp a hoe as if he were a born master of it.

Only a few of the infinite possibilities of growing things in Florida have been lightly touched upon. To the transient and the temporary sojourner let me suggest the pretty legacy to us permanent Floridans of a garden, or even a vine planted to hide some ugly, ill-kept spot. The stranger passing that way will bless you for the friendly note that greets his eye—something more than Palms sticking up stiffly like vegetable feather dusters, pitched handle-end down by the gods after a royal cleaning day.

## THE SUMMER GARDEN'S GAYEST BULB

**C**OMING to us from the old world and, chiefly too, from South Africa, the modern hybrid *Gladiolus* has achieved a new home in American gardens. Gorgeous in color, upstanding in habit, prolific in bloom, decorating the summer garden from planting in the spring, it gives richly for a minimum of labor, and yet asks just enough attention and tending to remove it from the class of the casual.

The perfection of multitudinous coloring (rich, bizarre, barbaric, or subtle and delicate, as fancy may decide) which is offered to the gardener to-day is the product of blendings of several different species, first made in Europe and transplanted to our congenial clime where it achieved new heights of development. With such results from a blending of about half a dozen members of an enormously large family, who may forecast the latent possibilities that may yet be attained? The earliest beginnings of the garden improvement here, as with so many other popular plants, are not definitely known. The oldest garden form of *Gladiolus*—the *gandavensis*, or Ghent hybrids, appeared in an exhibition in 1841; this starting type is late flowering, easy to grow, has solid colors generally, and the spike compact.

The *Lemoinei* varieties are the earliest flowering, brightly colored, with striking contrasts, beautifully marked and spotted. In general the flowers are hooded in form.

The *Nancieanus* group is an improvement on the foregoing, made by crossing that and the species *Saundersi*, an "open-face" type; flowers wide-spreading, petals well expanded, great range of color; spike having a one-sided tendency and loose arrangement of blooms. Season intermediate.

*Childsi* varieties are also intermediate in season and are the product of the old *gandavensis* and the red-flowered *Saundersi*—wide expanding, well ranked, running the entire gamut of colors, and the most serviceable of the large groups.

These groups have been themselves much intermixed and blended of recent years and modern growers have developed or selected individual strains; especially, for example, the ruffled varieties.

The most recent blending in the garden *Gladiolus* is *G. primulinus*, a lax-flowered yellow species, the flower also clearly hooded. Worked on all the other types, this has exerted a very remarkable influence, giving the form known as *Primulinus hybrids*, distinguished by a new gracefulness of spike, with an orange-salmon kind of coloring unknown heretofore.

With the future promising to unfold greater beauty, can the *Gladiolus* do other than become an even greater glory in our summer garden?

## ALL AROUND THE SEASONS' ACTIVITIES

MONTAGUE CHAMBERLAIN

A Tabloid Manual of Cultural Practice from Planting to  
Harvest and Keeping the Old and New Bulbs Over Winter

**A**LMOST every one who writes "cultural directions" for the *Gladiolus* begins with the statement that these bulbs are as easy to grow as Potatoes and should be treated in much the same manner. I can not improve on that; so if you know how the farmer handles his crop, follow the same method and you will not go far astray. With whatever method you may begin you are likely to make some changes after a trial, for the different sorts of soil have their peculiarities, and a few varieties of the bulbs require special treatment. And these things are best (perhaps only) learned by experience.

Besides the men whom the farmers have taught there are others—numerous flower lovers and gardeners—who have no knowledge of either bulb growing or potato growing, and these are the folk in my mind as I write. Such folk will want to know where to plant these bulbs and when, and will require to be told the details of planting and of harvesting as well as how to care for the bulbs during the winter.

**I**T IS quite a problem in the little garden to decide just where to put the *Gladiolus*, for one is haunted by the tradition that these plants must have the full sunshine for the entire day, and there is not always within the garden limits a spot that will insure quite that. Now while it is true that to produce blossoms of the very best possible quality—"exhibition blossoms" so-called—it is almost necessary to have the entire day's sunshine, yet you can make up to a very large degree for any lack of sun by enriching the soil heavily with fertilizer and keeping the plants well supplied with moisture. Then even if you can

not give them clear sunshine for more than half a day, the result will make your labor in growing them quite worth while.

If the garden plot is large enough to provide space for a perennial, bed or border, that is the best place for the *Gladiolus*. Wherever you may decide to place the bulbs, arrange them in groups rather than in rows. They are awkward and gawky in appearance when paraded alone or in single file and appear much better when massed.

You will find it most satisfactory to decide that the *Gladiolus* in the garden are not to be cut—that they are for garden decoration only. If you must have some for the decoration of the house, plant those to be used for this purpose in the vegetable garden in rows between the Carrots and such.

The groups in the garden had better be composed of one variety only. In my day dreams I had pictured beautiful groups of contrasting and harmonious colors—and they did look exceedingly beautiful, in my dreams—but when I tried to make my dreams come true I failed miserably. The trouble was that some of the pesky things would refuse to bloom at the same time as their comrades, and the result was far from satisfactory; so I decided to get the desired contrasts and the harmonious effects with the help of other genera growing near by and with ground-covering plants and supporting shrubbery.

### FEEDING

**A** GOOD way to get these groups into the ground is to dig a trench of the required size, allowing about four inches for each bulb—four inches from the





centre of one bulb to the centre of its neighbor—which will be ample space if the ground is made rich with fertilizer. This trench may be oval in shape or of irregular outline, the latter being preferable for the larger beds. Take out all the soil to the depth of six inches or more, and loosen the soil beneath for about the same depth. Spread the fertilizer on the surface about a quarter of an inch deep or less, according to the quality of the soil, and stir it in.

For fertilizer I recommend pulverized sheep manure as the best for garden use, though any commercial fertilizer that is suitable for Potatoes is about as good. I experimented with some half a dozen sorts and found but little difference in them, and chose the sheep manure because it was effective and was easy and pleasant to handle. (For topdressing, while the plants are growing, a mixture of hardwood ashes and ground bone is satisfactory. This should be applied three or four times during the season.)

When the trench is prepared, place the larger bulbs carefully top side up and cover them with two or three inches of soil, then add a thin layer of fertilizer and on that spread the remainder of the soil. Treat in similar fashion the bulbs that are put in the vegetable garden for cut flowers, laying them zig-zag in the trench, about four to the foot. If you want to grow the smaller sizes, put these in the vegetable garden also, making the trench for them about four inches deep and sowing them thickly—twelve or more to the foot. A shallow trench will best suit the bulblets. Sow them as you sow peas only thicker, as it has been proved by experiment that the thicker they are planted the larger will be the percentage of germination.

In past years the germination of the bulblets has been very uncertain. Of the large plantings the percentage has not been more than seventy to eighty as a rule, and in some varieties it has been even less. The idea prevailed among the growers that the germination would be increased if the shells of the bulblets were moistened, so they were stored in winter in moist sand and at planting time were soaked in water for a day or more. Recently, however, it has been proved that when the shells are wet they are tougher than when dry; that the dry shells are quite brittle and more readily yield to the pressure of the embryo plant. So to-day the best informed growers store their bulblets in a dry room and before planting lay them in the sun for a couple of days. The result from this treatment has proved its efficiency.

Sometimes, to make more certain the germination of rare and valuable varieties, the shells of the bulblets are peeled off, but when this is done great care has to be taken that the bulblets do not become dry. A good plan is to put them at once, as soon as the shell is removed, into a pot filled with prepared soil. The pot can be set in the sun during the day and at night removed from any dangerous draft. Such work can be done early in the spring, before the ground outside is in fit condition for planting, and this will give the plants a longer period in which to grow.

The bulblets of a few varieties will not germinate till the second year and these can be left in the ground all winter if covered by a mulch of leaves.

Gladiolus seeds may be grown in much the same way as any other garden seeds; but the ground must be kept moist to secure the best results. The top soil may be kept moist by covering it with bagging or any coarse cloth. (A black muck makes a good seed bed for Gladiolus.)

#### PLANTING

THE best time to plant? That is a problem which arises in every section of the country each season, but a good general rule to follow is to wait until the ground is dry enough to handle readily and warm enough to prevent the bulbs from being chilled. There is nothing gained by putting them into the ground any earlier, for the chilled bulbs will be passed by those which are put in the ground two or three weeks later. The latter will bloom earlier and will produce better bulbs. For a



guide I will add that more than once I have begun to plant my large stock as early as April fifteenth, in the central part of Massachusetts, also more than once I have been obliged to wait until the middle of May, and on one occasion I did not get the last of the bulbs in the ground until the "glorious Fourth."

During the summer the beds should be kept free from weeds and the plants given plenty of moisture. The ground about them should be well soaked at least once a week and sufficient water applied to make sure that it reaches the feeding roots, which are underneath the bulbs. Sprinkling is of no service, indeed it is rather injurious as it helps to form a cake on the soil. When a cake does form, which may occur after a rain or after watering, it should be broken up by a rake, and at all times the soil around the plants should be kept loose.

#### HARVESTING

YOU will find it an advantage to let the large bulbs remain in the ground until the leaves are brown for at least half of their length. The bulbs will continue to grow as long as the leaves continue green; but do not wait until the entire leaf has turned brown, for then it will be too brittle to handle—it will break when you attempt to pull up the bulbs.

For digging use a common spade or a spading fork—the latter being the better of the two. Insert the fork into the ground a few inches from the leaves and force it obliquely under the bulbs; press down the handle and raise the bulbs toward the surface; grasp the leaves with the left hand and pull the bulbs from the ground; hold them over a sieve and cut off the tops close to the bulbs—within about half an inch. Shake out the soil that has adhered to the bulbs and dump them into a box or tray. This tray should have a solid bottom to prevent the bulblets from being lost—the ordinary nursery "flat" makes a good tray for that purpose.

Use the same method when digging the smaller sized bulbs, which can be detached from their leaves in bunches by a twist of the wrist.

After digging the bulbs allow them to lay in the sun for sufficient time to dry off the outside moisture and to dry any soil that may still adhere to them, then put under cover but where they will get enough heat to dry them more thoroughly—to "cure" them, as it is called. If convenient, it is a good plan to lay them in the sunshine for a week or two before placing them in their final storeroom.

#### STORAGE

AN UNDERGROUND cellar that during the winter will be cool, though frost proof, and free from excessive moisture is the best place for the storage of Gladiolus bulbs. Too dry an air causes the outside layers of the bulbs to become hard and stiff; yet if there is too much moisture there will be danger of mould and rot. Such humidity as is usually found in a cellar where vegetables can be kept with safety will suit the bulbs. A good average temperature for the bulbs during these months is around 40 to 45 degrees.

A convenient sized tray for storing is two feet square and four inches deep. It should have an open bottom to permit ventilation. Laths laid a quarter of an inch apart make a good bottom though a better plan is to cover the entire bottom with wire netting. The trays may be placed in racks furnished with cleats on which the trays will readily slide in and out, but there must be sufficient space between each tray to admit of a free circulation of air. Small quantities of bulbs may be put into bags of coarse cloth or of heavy paper, and hung to the beams.

AT ANY time after they are dried the bulbs may be "cleaned"—that is they may be detached from the roots and from the old bulbs and the bulblets. They can be cleaned while the moisture from the soil is still on them, but the labor is then

much greater, as the adhering roots are tough when they are wet, and become brittle when dried.

During the winter the bulbs should be examined systematically and frequently for signs of mildew, and if this is found, the trays of the attacked bulbs must be placed in the sun for a few hours—until they are thoroughly dried. Also watch the temperature and see that it does not drop much below 40, though if it

should by accident slip to 30 some cold night do not give up in despair, for under good storage conditions a single unusual drop can be endured. I found the glass in my cellar pointing to 28 one morning but not one bulb suffered. Yet I know from direful experience that *Gladiolus* will not stand much of that sort of temperature, for I lost twenty thousand one winter through the excess of cold air—and a little carelessness.

## EARLY FLOWERS IN THE GREENHOUSE

HENRY GIBSON

**W**ITH greenhouse space limited, the *Gladiolus* is a valuable subject for giving variety to the supply of early spring cut flowers. It is sure of results. The plants occupy but little room, and while a whole bench, or part of one, given over entirely to their culture would not be profitable from the standpoint of quantity of bloom, yet they are excellent plants to companion Pansies, or between rows of Freesias, or for filling places where Carnations have died off. They may even be accommodated to advantage under the benches until growth starts.

Until comparatively recently the *Gladiolus* chiefly grown under glass have been of the small-flowered types known as *G. Colvillei*, to which belong such beautiful varieties as *The Bride*, *Blushing Bride*, *Peach Blossom*, *Fairy Queen*, *Salmon Queen*, *Delicatissima Superba*, *Ackermannii*, etc. These varieties are especially desirable for light decorative work, where often the heavier flowers of the garden types would be out of place. They are amenable to pot culture, perhaps the best method to adopt if only a few are grown.

Plant any time during November for flowers in April and May. By early planting and gentle forcing, some varieties, particularly *The Bride*, may be had in flower as early as January. The bulbs are set four or five inches deep and two to three inches apart, in good soil. If pot or box culture is adopted they may be set under the greenhouse bench, or other out-of-the-way place until the growths show up, when they may be brought into a light position on a sunny bench.

A temperature of 45-48° (or that of a carnation house) suits with the corresponding rise with sun heat during the day. Water they need in abundance, but the soil should never be allowed to become water-logged, or the bulbs may rot.

If the stems are not cut short the bulbs will renew themselves, and may be forced another year; or they may be given a year's growth in the garden before being forced again.

### Summer Flowering Garden Types

**I**T IS an old practice with florists to hold some of the earliest flowering of the summer-flowering *Gladiolus* until August, and then plant them in boxes of rich soil, the boxes being kept



GLADIOLUS COLVILLEI

outdoors until the approach of frost, when they are placed in the house where they are to flower, which they do during November and December. Seedsmen now make arrangements to keep the bulbs in cold storage for their clients who adopt this late flowering method.

Many of the garden types, however, may also be successfully flowered under glass during the spring some weeks ahead of the time the earliest ones outdoors commence to bloom. Recent improvements in floriferousness, form, size, color, and keeping qualities have served to attract further attention to forcing possibilities. Some, like *America*, have been grown successfully by almost everyone who has ever tried them, and it is doubtful if any one variety of the large-flowered types is in more general demand to-day than that. Failures can be traced to the fact that the bulbs were not fully ripened before replanting for forcing. It has been found that a period of chill is absolutely necessary.

Three months rest, and better four, should be given the bulbs after they are lifted from the garden before planting in the greenhouse. Thus if lifted in October, they should not be used for forcing until February first at the earliest, for a period of "chill" is essential to good growth. Bulbs grown in the North and taken South to Florida as soon as mature for planting do not even start into growth.

The size of bulb suitable for forcing is a much discussed question. Many claim that the larger bulbs—i. e., those 2 inches and over in diameter—are best, and to meet this demand what are known as "Selected Bulbs" are now available. The size of mature bulbs, however, varies considerably in different varieties. It is my own opinion that bulbs over two inches in diameter are apt to be "aged" and lack the vitality to produce first-class blooms, although I have forced bulbs of *America* 2½ inches in diameter that produced the finest of blooms; also of *Mrs. Frances King*; but this cannot be said of all varieties.

Size is not so all-important a factor as thoroughly ripened bulbs, and the bulk of those used for forcing average from 1½ inches to 1¾ inches in diameter. So long as the bulbs are large enough to have stored up enough nourishment, are well ripened, and have the quality of earliness inherent in them they will force readily. The shape of the bulbs is worth noticing too. The

young, vigorous ones are somewhat conical, while the "aged" bulbs are flat.

PERSONAL fancy may be indulged in selecting varieties. There is a more general demand for America perhaps than for any other one variety, but Mrs. Frances King, Chicago White, Augusta, and May are all popular and inexpensive.

Costing a little more, and worth it, are Baron Hulot (violet), Halley (salmon pink), Independence, (flame pink), Meadowvale, (white), Pink Beauty (rose pink), Snowbank (white), Taconie

(bright pink), The King (mauve lilac), and Myrtle (shell pink.)

SOIL that will grow Chrysanthemums or Carnations suits Gladiolus. They like a rich soil, and a liberal dressing of sheep manure well worked in will not hurt them. Planting may be done in the same way as with the small-flowered types, and the general treatment is the same. Stir the soil surface frequently; water as often as required, giving a thorough soaking, to wet the soil through and through. When the flower spikes appear give liquid manure once a week until they show color.

## GETTING ACQUAINTED WITH THE BEST

CHARLES E. F. GERSDORFF

EDITORS' NOTE:—This appraisal of varieties of course expresses the personal conclusions of one man, but his opinions have been reached by extensive study and the application of the analytic methods of a scientifically trained mind. Mr. Gersdorff's similar discussion of Roses given in the February GARDEN MAGAZINE has been recognized as a clarifying contribution to the variety discussion even of that popular flower. This present article has equal value for the Gladiolus. As an avocation from his regular profession, Mr. Gersdorff has grown, and studied, and made permanent records on variety performances of certain popular garden flowers for many years past, and all his judgments are based on personal acquaintance.

### I. POPULAR LEADERS OF PROVEN WORTH

WHAT is a popular standard Gladiolus? I would call such one that is quite generally distributed, grown in quantity, sold at a price within the reach of all, and for which there is a popular demand. There are many varieties that fall into this class, and a large number of them should, long since, have been discarded for the better kinds which may now be had at equally attractive prices. Further, there are many fine varieties, which, had they been advertised as extensively as many of the worthless ones, would to-day be numbered among the popular sorts.

Popular "Glads" naturally fall into two groups, those suitable for florists' and those for the garden. Florists' varieties, in the main, are confined to light colors which lend themselves readily to decorative purposes. In different sections of the country there are different color preferences. However, I will not go into this question analytically, confining myself to the presentation of the following list. The varieties starred have been found satisfactory for greenhouse forcing.

The descriptions are necessarily brief. However, it is desirable to state here that none of the varieties of the same

general color are exactly alike, some being blends; others selfs, blotched and throated varieties.

*America (lavender pink)	Lilywhite (white)
*Augusta (white and pink)	Loveliness (creamy pink)
Baron Josef Hulot (deep violet-blue)	Mrs. Frances King (salmon red)
Bertrex (white)	Mrs. Frank Pendleton (light pink)
*Chicago White (white)	*Mrs. Watt (crimson)
*Dawn, Tracy, (coral pink)	*Myrtle (delicate rose pink)
*Europa (white)	*Niagara (pale yellow)
Evelyn Kirtland (rosy pink)	*Panama (clear pink)
Gretchen Zang (salmon pink)	*Peace (white)
*Halley (light salmon pink)	*Pink Beauty (light pink)
*Independence (orange-rose pink)	*Prince of Wales (variable salmon pink)
*Jane Dieulafoy (cream)	Schwaben (light yellow)
*Le Maréchal Foch (light pink)	*Wilbrinck (light pink and soft yellow)
Liebesfeuer (scarlet)	*Mixed Primulinus Hybrids.

\*Also found satisfactory for greenhouse forcing

For the garden the list can be made quite extensive. Besides the varieties named for florists' use, except possibly Augusta, Europa, and Pink Beauty, which in my extensive tests of varieties I have found not too reliable in bloom or color, the following list of varieties, which may still be graded very good and best quality, should add interest and beauty to any enthusiast's garden.

#### ORANGE TO DEEP SCARLETS

Brenchleyensis  
Captain Asher Carter Baker  
Cherry King  
Contrast  
Crimson Glow  
Dominion  
Fire King  
Golden West  
Gov. Hanly  
Liberty  
Mephistopheles  
Mrs. Scott Durand  
Primulinus Alice Tiplady  
Princes  
Primulinus Linton  
War

#### PALE TO DEEP ROSY PINKS AND REDS

Cheerful  
Christine Margaret Kelway  
Daisy Rand  
Early Pink  
Harwinton  
Mrs. O. W. Halladay  
Scribe

#### YELLOWS

El Capitan  
Golden King  
Klondyke  
Lafayette  
Large Buff  
Lemon Drop  
Spring Song  
Sulphur Queen  
Yellow Hammer  
Yellow Prince

#### CREAMY PINKS

Cherokee  
Glory  
Minnesota  
Mrs. A. C. Beal  
Pride of Goshen

#### LIGHT TO DARK SALMON PINKS AND SALMON REDS

Charlemagne  
Gil Blas  
Koenigin Wilhelmina  
Primulinus Salmon Beauty  
Wamba

#### BLACK REDS AND MAROONS

Challenger  
John Merle Coulter  
Negerfurst

#### MAUVES TO WINE REDS

Czar Peter  
Empress of India  
Goliath  
Herada  
Master Wietse  
Mrs. Geo. W. Moulton  
Rosella  
The King

#### LAVENDERS AND LILACS

Atlas  
Byron L. Smith  
Mary Fennell  
Scarsdale  
Youell's Favorite

#### VARIEGATAS

Gaiety  
Hyde Park

#### WHITES

Elizabeth Kurtz  
Glory of Holland  
L'Immaculée  
La Luna  
Morning Star  
Mrs. Montague Chamberlain  
Orchid  
Queenly  
White Cluster  
White Ivory  
White King

#### VIOLET BLUES

Catherina  
Dick  
Magic  
Mr. Mark

#### LIGHT TO DARK CRIMSON

Anna Eberius  
Crackerjack  
Geo. Paul  
Velvet King



## II. COLOR SELECTIONS FOR THE CONNOISSEUR

**C**OLOR combinations are practically unlimited in Gladiolus; therefore, why confine ourselves to a certain few? With a long list of varieties to choose from, provided they are of the very good and best grades only, the listing of a collection may be governed solely by one's purse. In order not to do injustice to many beautiful varieties, this selection by color groups has been made in a somewhat haphazard way from memory, writing down the names as they recurred to mind, taking them in groups of colors and distributing them among the different growers as much as possible. The absence of the names of certain growers is, therefore, in no sense a slight on their productions.

The Gladiolus has but one rival in its diversity of coloring,—the Dahlia. Yet the Dahlia cannot boast of the many contrasting and blending combinations found among the Gladiolus. Of five great groups of flowers (including the Rose, the Dahlia, the Chrysanthemum, and the Iris) the Gladiolus, Rose, and Dahlia lead in the matter of scarlets, the Iris having none at all. In this color ranging from light to dark, self and in combination with other colors, in contrast and blended, many wonderful kinds may be had, among which the following dominate. These as well as the others which are to be brought to attention are not only fine for the garden, but are admirably adapted to cutting, their lasting qualities being of the best.

**SCARLETS.** A lighter tone than *Princeps*, from which it is a seedling, and an improvement in number of blooms open at one time is *Pontiac-Princeps* (Vaughan); Diener's *Heart of Juanita* is a deep rosy scarlet with crimson and white throat; *Jonathan Webb* (Diener) is entirely different from any other, a flame scarlet minutely speckled with cream white; *Chautauqua Red* (C. Zeestraten) a flame scarlet self of much brilliance, and *Devens* (Brown) which is a bright scarlet self, darkening toward throat with a small white spot.

**MAROONS and BLACKISH REDS** are not at all scarce. They are found even among the Irises, though here they are toned by a coppery or smoky suffusion; the Rose has them; and among Gladiolus and Dahlias there are many of varying shades and combinations. A few of the outstanding Gladiolus are:

*Cardisum* (Austin) a very deep wine red blending to a black throat; *John Merle Coulter* (Diener) stiff of petal, shading from a rich cardinal scarlet to maroon black edges and throat; *Queen of the Blacks* (Jonkheer) a fine deep blackish red.

As a class, the **ROSES and CRIMSONS** stand out prominently, even the Iris making a showing. Some distinctly beautiful in our selected flower being:

Diener's *American Beauty*, a blend of *American Beauty Rose* shades, and creamy yellow throat; *Montezuma* (Decorah Gladiolus Gardens), a dark rich carmine crimson with a yellow and maroon throat; *Mrs. Willard Richardson* (Diener), a blend of dark scarlet crimson and blackish cardinal red with high lights of cerise pink; and *Queen of Sheba* (Christy) a pure self of rich wine red. In rose shades there are *Anna Eberius* (Diener), a blend of deep rose and deep carmine, and tints of blood red in throat; *Parliament* (Kelway), a light rosy carmine with white throat, blotches, and midribs; *Peach Rose* (Kunderd), a deep rose pink blotched deep crimson.

**ORANGE or YELLOWS** of the five groups of popular plants mentioned, the Iris is without its orange bloom, though it has some deep yellow shades which are close to the border line. The Gladiolus is rich in this color. A few of the fine ones are:

*Robert J. Kunderd* (Kunderd), an orange-scarlet blending to a throat of brilliant vermilion; *Butterfly* (Burbank), also an orange red, the lower petals having yellow bases blotched velvety crimson; and *Flame* (Diener), truly a flaming orange with yellow throat.



It is strange that good yellows are so scarce, particularly in the five groups mentioned, one marked exception being the Chrysanthemum. More and better ones are slowly coming forward in the other groups, and among Glads some noteworthy ones are:

*Golden Rod* (Childs), a clear bright yellow; *Golden Measure*, (Kelway), a clear pure bright light yellow with golden tints, but not a true golden yellow; *Goldfinch* (Brown), a clear lemon yellow with canary yellow throat; *Owosso* (Vaughan), a semi-translucent pale sulphur yellow with lemon yellow and crimson throat; *Mary Roberts Reinhart* (Diener), creamy yellow blending to canary yellow throat.

**PINKS.** Whereas the Chrysanthemum rules in the matter of yellows, she steps aside for the others in the case of pinks, the Iris also being limited. As to Gladiolus there are so many choice pinks to choose from that limits of space force me to name but a few. These, too, are found as selfs and in fine combination with other colors. Choice blossoms for household use may be cut from these:

*Jean du Tailles* (Lemoine), a light salmon red blotched in its lighter throat with blood scarlet which is overlaid crimson and dull purple; *Illinois* (Vos), a charming apple blossom tint; *Leota* (Coleman), a light flesh-salmon pink with paler midribs, and white throat tinted lilac and rose; *Night Wings* (Coleman), darker in hue, a rich salmon red with deeper blotches; *Atlantic* (Brown), white slightly shaded flesh with faint pink lines in the throat; and *Liss* (from Holland), with its broad overlapping petals, and flat circular blooms of bright rosy salmon, lighter to edges and throat. *Marshal Foch* (Kunderd) is quite different from *Le Marechal Foch* (P. Van Deursen), the latter being a fine delicate rosy flesh self, while the former is a blend of delicate salmon flesh and deepest salmon pink, blotched orange and scarlet.

Fine **WHITES**, too, are at a premium, the Chrysanthemum again leading, and the other flower groups closely following. Pure whites are not as frequently met in Gladiolus as the blotched and flushed kind, and among the best the following may be named:

*White America* (Childs), a real blue-white with small throat markings of blue; *Snowboy* (Kunderd), fine in its ivory white tone and very small blotch; *Atilla* (Kunderd), a soft creamy white with a deeper cream throat; *White Giant* (Van Meerbeek), pure white with a small carmine mark in its throat; and *Emilie Ashe* (Diener), a cream-tinted white, lower petals bearing small cerise blotches.

The dull or **PASTEL SHADES** are most frequently seen in the Dahlia, the Iris, and the Gladiolus. Of the last, a few of markedly interesting possibilities, particularly from a decorative standpoint are:

*Mrs. Cotbran* (Diener), strawberry pink in tone and blended with old rose shades and grays; *Friendship* (Vos), old rose in color with a wine red throat; *Prince of India* (Childs), salmon orange overlaid and shaded dull purple, throat scarlet on white; and, *Mary Blackman* (Vaughan), vermilion heavily splashed crimson with throat of crimson and yellow.

The Rose—we who love the Rose, think fortunately—contains no lavender pinks and “blues,” though there are a number of varieties which “blue” on ageing, this being considered a fault. However, some hybridists have even striven for a blue Rose. In the other groups, many blue shades are found and are a welcome component part of their color range. Except in the Iris, however, no real blue is available, the so-called “blues” being various shades ranging from palest lavender and lilac through to deep violet-blue, the latter being far from a real blue color. I believe it is in these colors and

shades and blends that real orchid-like Gladiolus may be found. As but a few among the many, these are mentioned:

*Sweet Lavender* (Coleman) in light pinkish lavender tones blending to creamy yellow in the throat blotched magenta certainly lives up to its name. *Solfatare* (Vilmorin-Andrieux), pale lavender with pinkish overlay, suffused reddish lilac and with creamy white and sulphur yellow throat. Not very new, yet a wonderfully clear porcelain blue is *Reverend Ewbank* (Velthuys). *Mrs. Francis Sprague* (Cowee) is of a light mauve tone with a claret red throat, while *Mrs. F. C. Peters* (Fischer; introduced by Roos) is a rosy hued lilac and crimson blotched.

PURPLE as is seen in Fuchsias is the color of *Hortense* (Tracy); and *Blue Orchid* (Kunderd) is a rich violet-blue, with the lower petals blotched black with golden centres. *Louise* (Wright) is of a beautifully clear lavender tone blotched with maroon toward throat.

Intensely lilac in tone is one sent out by Meader, called *Lilac Royal*, and one of foreign origin which is being distributed by de Groat is *General Suerdoff*, a pale blue blending to lavender.

A clear pink-lavender blending lighter toward throat with white midribs and deep cerise blotches on a creamy white throat forms a bloom of distinctly refined and delicate coloring—this is *Odd Fellow* (Decorah Gladiolus Gardens), and dainty

in its coloring of lavender-blue and a throat of violet and white is *Bluebell* (Meader).

FANCY VARIETIES comprising blooms more or less striped or splashed in contrasting colors are well liked by some growers. These fancies not only occur among Gladiolus but may also be found in the Dahlia, Rose, Iris, and Chrysanthemum, and as a rule I do not care much for them. However, to complete the gamut of colors in the Gladiolus, here are some of the best:

*Elizabeth Gerberding* (Diener), a pale shell pink lightly flaked deep rose, with creamy yellow and carmine to crimson throat; *Enchantress* (Miller) creamy white with pale rosy flakes, throat of deep cream yellow and purplish rose, almost a blend and fine for cutting; *Enchantress* (Vaughan) a flesh white splashed on edges with rose pink, burnt orange and crimson throat; *Ethel Wardwell* (Alexander), quite different in character, a scarlet vermilion striped and stippled inside and out with scarlet and white, a blood red throat; *Jack London* (Diener), a light salmon flamed brilliant orange with throat of golden yellow marked ruby; *Marechal Fabert* (Vilmorin-Andrieux), a satiny rose marbled with carmine red, ruby and yellow throat. A cream white with bases of lower petals cream yellow, and the whole bloom, inside and out, heavily striped and splashed dark scarlet and blackish cardinal red, with very dark throat is *Old Glory* (Kunderd), a very distinctive bloom.

## THE CUT BLOOMS IN FLORISTRY

KATHRYN BEACH TRACY



HERE are infinite possibilities in the use of the Gladiolus, a flower developed and popularized, in this country more than any other, largely through its adaptability for household decoration for which our own gardens supply such wonderful spikes of bloom.

When Shakespeare walked in Ann Hathaway's garden he may have discovered "books in the running brooks, sermons in the stones, and good in every thing," but never the symphonies of color that greet the flower lover along his garden pathway and in his home to-day.

Nature seldom bestows upon one family such an endless range of color in such superb form as is found in the modern Gladiolus. To plant the bulbs and await development is all that is needed for out-of-door beauty; to arrange the stems of a basketful of cut blooms, and let fall into a vase is enough for satisfaction in the home perhaps, but the supreme joy is the unlimited arrangements which suggest themselves with continued handling of these marvelous flowers.

No Japanese girl is without a knowledge of flower arrangement, and each spray or twig has a message for those who look. We try to copy, sometimes succeed, more often fail, mainly because the American taste for quantity is not satisfied with artistic quality.

Gladiolus Alice Tiplady, a brilliant orange Primulinus Hybrid, is gracious enough

to bloom before the Belladonna Larkspur has left the garden; and its graceful, often crooked spikes with the heavenly blue of Belladonna gives one of the most gorgeous displays of color, rising from the golden depths of an Aurene bowl. This same Alice Tiplady is oriental, with color intensified, when used in a glossy black urn, the brilliant orange reflected in some black plate or bowl on the table beneath.

One needs only a few blooms of Crimson Glow, well named, with a few long grasses from the patch of old-fashioned Ribbongrass, arranged in an old blue lustre pitcher, to have a study for an artist.



In almost every garden the varieties Halley and Mrs. Francis King are found. The glowing salmon pink of Halley and the luminous flame of Mrs. King fill garden and home with a blaze of color in whatever arrangement one may choose. These varieties should never be combined with pure white, which seems to absorb all their depth of color. With the rich deep buff of Gladiolus Niagara, both are more beautiful. The beauty of Niagara is hard to surpass, for color, texture, and grace, for every arrangement. The

PRIMULINUS HYBRIDS  
AND FRUIT ARRANGED  
FOR COLOR EFFECT—A  
SUGGESTION FOR  
THANKSGIVING



ARRANGEMENT OF A SINGLE VARIETY

The lovely orchid-like Daybreak, light pink with blazed white throat; its dwarf habit making it easy of arrangement

bloomed-out tips are like rosebuds and very lovely when floating in a flat bowl, the waxen petals outlined against the green of Rose or Dahlia foliage.

Chaste and graceful, *Gladiolus L'Immaculee*, quite the most beautiful white, rivals all candles, when its long spikes of glistening snow are placed in slender vase on mantel or table.

Daybreak, soft jasper pink, is exquisite when fresh, but, if possible, more so as it fades. The orchid-like bloom resting on the broad edge of the modern flower bowl, is quite as artistic as one could desire, and as choice as the rarest Rose.

Unusually effective in combination are Baron Hulot, true blue-purple, and Mrs. Watt, rich American Beauty red, which together give a charming rendering of the popular French rose-and-blue conception.

THE bloomed-out tip-ends of almost any variety are as great an asset for decoration as fresh blooms, and tip-ends of *Gladiolus Conspicuous*, or any of the lavender or mauve varieties, with rubrum Lilies and Farleyense or Maidenhair Ferns, make a table decoration of rare beauty and again the "Poor Man's Orchid" is supreme.



FOR LUNCHEON OR DINNER TABLE

Primulinus Hybrids, Larkspur belladonna, and Baby's-breath (*Gypsophila*) in airy combination

The new *Primulinus Hybrids* are the coming kinds for both garden and home decoration, leaving exquisite shades adaptable for every use, and of decorative value from the first bloom to the last bud. Not a bloom is wasted, for with these, as with the larger type, the flowers are as useful when a week old as when fresh.

COMMERCIALY, the use of the *Gladiolus* is not understood or appreciated. A florist's dearest possession, during the *Gladiolus* season, should be a supply of blooms at least five days old. But usually, the buds

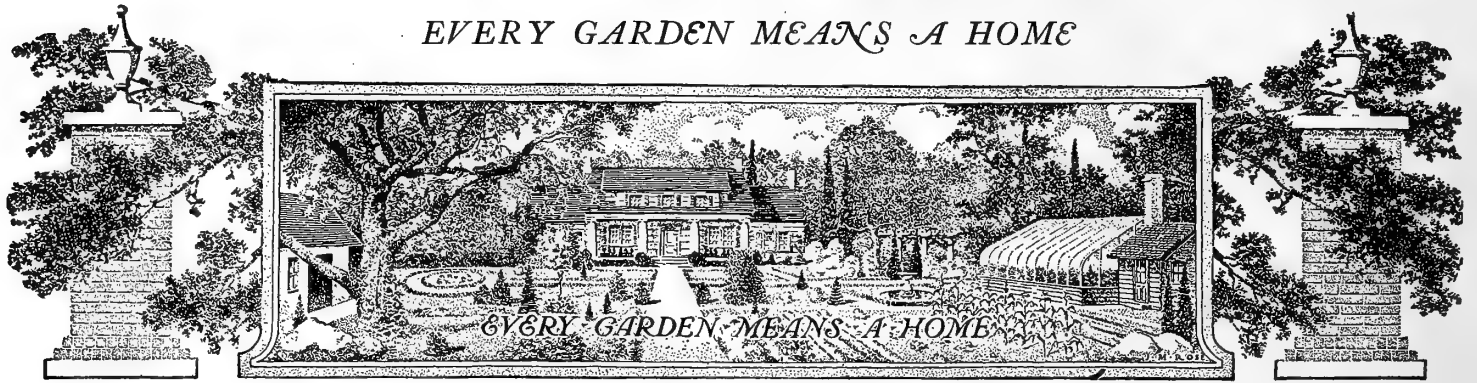
are pinched out of fresh spikes, and the mutilated stump thrust into wreath, spray or basket, with a result that is anything but artistic or pleasing.

For years the *Gladiolus* was called "too stiff." Now the demand for the flowers in decoration is greater than the supply. They grow the same as they did years ago, except that the large varieties are larger and the small ones more dainty; but the large ones, in all their wonderful colorings, are no longer "too stiff" and the dainty blooms of the *Primulinus Hybrids* are not "too small." We have learned how to use them.



# AMONG OUR GARDEN NEIGHBORS

EVERY GARDEN MEANS A HOME



## PASSING OF THE NOSEGAY

REMEMBERING the utilitarian origin of the nosegay, its gradual discarding need cause no surprise for modern methods of sanitation have robbed it of all birth-right. Like many another of uninspired beginning, the nosegay has successfully superimposed a sort of beauty which has kept it in vogue long after its initial pretext for being had vanished. How many of us, associating this old-fashioned bouquet with the flowered frocks and charming conventionality of our grandmothers, go back in time till we find some great-great-aunt binding a sprig of Rosemary, a bit of Arnica, some leaves of Herb Robert in a tight little bunch to be carried to meeting-house or market-place as an antidote to ailments that fly about wherever folk foregather? We no longer walk abroad medicine chest in hand, as it were, but store concentrated remedies away in the bathroom cabinet and go confidently out pinning our faith upon sunshine, fresh air, and water instead; but our speech is rich with reminders of old days and old ways of which we have nearly forgotten the meaning. "He'll smell Rue yet"—an echo of far-away times when the culprit was hauled hand-cuffed before a railing garnished in funeral fashion with sprays of Rue to dispel the poison breath of prison fever ere it touched His Honor and the bewigged attendant barristers safely ensconced beyond.

Plants have not lost their efficiency nor we our belief in them but their healing flows through fresh channels—we find renewal for body and spirit in the spading-up of soil, in seeding and tending, and perhaps the greatest health of all certainly the greatest happiness, in the decorative use of these bits of beauty of which we are with nature co-creators.

This brings us back to where we started, back to the nosegay which, despite the sanction of association and a prim acquired quaintness, so lacks intrinsic beauty that we are glad to see it go. Is it not, after all, fundamentally artificial—something we have forced upon flowers rather than something flowers have been permitted to do for themselves? That is where the Japanese excel, in letting plants have their own way; and it is the vital thing we gardeners have to learn from them. (See Professor White's illuminating discussion of "Flower Arrangement as a Fine Art," page 352.) Oriental symbolism means nothing to us of the Occident, and the substitution of the Japanese arrangement for the Continental nosegay—mere imitation without understanding—is the stupidest sort of artificiality.

Growing appreciation of the decorative use of flowers as practised in Japan is in itself, however, a happy evidence of our sense of national lack in this matter, a recognition of and groping after truth, with the eventual emergence, we confidently expect, of a new type of flower arrangement as distinctively an American expression of taste as the pure and dignified Colonial art of our forebears.

The nosegay showed no consideration for flowers themselves;

pungency, fragrance, and color went into its making, the element of line being totally disregarded. Sensitized by intimate study of the plant world, the Japanese have proven wiser in their fine recognition of the grace and importance of line upon which the beauty of certain flowers fundamentally rests, the Iris, for example, and the Lily. It logically follows, then, that in putting such flowers to any sort of decorative use their effectiveness largely depends upon giving this distinguishing character free play—hence the sparse and thoughtfully proportioned arrangements of the Japanese allowing each flower opportunity for fullest revelation of inherent graces.

Quite as obviously it seems merest common sense to concentrate such blooms as depend principally on color for their effect, thus minimizing any awkwardness of growth and stressing their lovelier aspect. Most Roses, for instance, gain impressiveness by grouping, and even the squat little Pansy takes on dignity when in company with his fellows.

The very wide range of material at our disposal makes possible an infinite variety of arrangements for, unlike the Japanese, we are not hampered by tradition, or by an instinctive flair for line which, while it guides his choice to the superlatively fine, also limits his scope. As a people we care rather more for sentiment and striking color effect, rather less for subtleties and symbolism than our Eastern brothers; differences which, if recognized and not despised, can be turned to good account in the forming of a definitely national taste. In the art of flower arrangement as in all arts, sympathetic sincerity is the touchstone—after all flowers are "jes' folks" and, like folks, yield up their best to him who troubles to understand.

## SPOKEN AND WRITTEN WORDS

THE proper accent of the word *Gladiolus* is indeed a bone of contention among growers, yet there is authority for *Glad'-i-ol-us*, the accent on the first syllable and the "i" short, and none for anything else. This is the ruling given in the Pronouncing Dictionary of Rev. Percy A. Miles, B. A., F. L. S., embodied as a supplement to Nicholson's "Dictionary of Gardening." The form adopted is "the Latin name used by Pliny, and is a regularly formed diminutive from *gladius* (a sword)."

In preparing his pronouncing dictionary Mr. Miles, himself an authority on classical literature, etc., consulted all available authorities. His decision was also approved by the well known horticultural amateur and former Professor of Classics at Eton College, Rev. H. C. Wolley-Dod. So why wander aimlessly afield? Apart from mispronunciation of a perfectly good word there has crept into use the vagrant "*Gladiola*," perhaps in a desire forcibly to make a "popular" name. Where and how it came into being we know not, nor when; but surely it is not needed. Isn't the old pure word good enough? THE GARDEN MAGAZINE adopts the one form *Gladiolus* for both single and plural in popular usage (also with *Narcissus*, *Crocus* and simi-

larly ending names) as being more euphonious and pleasing to the eye and simpler in practice than the strict Latin plural form ending in "i"—Gladioli, Croci, etc.

## THE OPEN COLUMN

Readers' Interchange of Experience and Comment

### "Fair Maid of February"?

To the Editors of THE GARDEN MAGAZINE:

THE little fragrant Iris, known to Mrs. Henderson as "Fair Maid of February" and inquired for by her (Open Column, July) is perhaps *I. persica*. This is one of the earliest to bloom and belongs to the Juno group of bulbous Irises. It still survives, I know, in the old-fashioned gardens of one part of the South, evidently finding soil and climate to its liking and sending out its fragrance before the Violets hardly dare.

Foster ("Bulbous Irises") tells us that this is the most widely known variety of the group and was familiar to Parkinson and Gerard and even to Clusius. A few bulbs were placed in my north New Jersey garden two years ago and April 3d of this year I was rewarded by a bloom, followed soon by another from the same bulb. The blossom of palest sea-green, black violet, and gold is one of beauty and distinction and I am hoping it will be as happy here as it has been in the southern home. The blossom is open almost before the leaves have speared the soil. Finding this little immigrant (it comes from southern Persia) in these old gardens has been one of the many happy incidents of the pursuit of the genus *Iris* as a hobby.—ELLA PORTER MCKINNEY, *Madison, N. J.*

### Two Irises that Thrive in California

To the Editors of THE GARDEN MAGAZINE:

IRIS *stylosa* (*unguicularis*) behaves so beautifully here in central California, growing easily, blooming well, and making such a good appearance at all times that it seems a pity it is not more generally known. I have three clumps established only a year and a few smaller ones set out last September, all of them in a rather cold situation, and since the first of November I have never failed to find one or more blossoms out. Many times there are nine or ten in bloom, even in the face of light frosts and with the longer days more and more blossoms are coming. Of course the stems are short, but average at least seven inches and the blossoms are so dainty and so sweet that they are lovely for the house.

Another Iris which does well with me is *japonica*, blooming in March. The blossoms are small but exquisite, on good stems, with several on a stalk. The evergreen foliage is a light, glossy green and forms a charming contrast to the light blue blossoms. It is the one Iris which I have found does well in heavy shade and it increases very rapidly.—LEILA B. STAPLETON, *Oroville, Cal.*

### More of the Rabbit and His Idiosyncrasies

To the Editors of THE GARDEN MAGAZINE:

What W. C. Egan had to say about "The Idiosyncrasies of the Rabbit" in the February magazine interested me greatly. Mr. Egan is a mind reader when he accuses the rabbit of "cussedness," for that's the animal's real name. I know, because I've long been an enraged sufferer from the "cussedness" of the animal!

Before I discovered their wicked plot, rabbits cut down to a six-inch stub a four-foot *Eva Rathke Weigela* that had all the previous summer been a miracle of bloom; they lop-sided my Japan Snowballs and *Pyrus japonica*, exterminated the *Kerria* and fourteen Rose bushes, and cut down the dwarf Apple trees. I had five *Azaleas* that in the fall were so full of buds I had great expectations of a fine springtime blossoming, but before spring came, the iniquitous, ubiquitous rabbit had nearly decapitated the entire top of the bushes, which have never regained their lost size and vigor, though that was three years ago. Now they make but a half-hearted attempt at blooming.

These rabbits mowed off my groups of *Crocus* and beds of Darwin Tulips as soon as the green spears thrust through the ground. I scattered Lettuce and Cabbage leaves in the garden hoping to lure them from the shrubs, but found they prefer a hard, thorny Rose stalk any-

time to a tender Cabbage leaf. They harvested my crop of choice *Pyrethrum* buds, and finished the repast with a salad of hardy *Chrysanthemum* tops.

The peculiar point about it is that they confine their depredations to my premises. They never inadvertently stroll over to any of the neighbors' yards and make a hearty meal off any of their scenery. Not in ten years time have they been known to covet anything that is my neighbors'!

So now I surround my rose beds and remaining shrubs with wire netting, fastened to stakes driven into the ground. It is something of a job to do this every autumn and the result is not in any degree ornamental to the landscape, giving the grounds the appearance of a poultry farm, but it puts a quietus on the hilarity of the pesky rabbit. I watched a dazed-looking rabbit hunched up against the protecting wires gazing covetously within at the Rose bushes "so near and yet so far," and he seemed to be on the point of bursting into tears as he realized his occupation was gone in that vicinity.—MRS. WILSON G. SMITH, *Lakewood, Ohio.*

### If You Are Growing "Mums" or Huckleberries

To the Editors of THE GARDEN MAGAZINE:

THOSE who are interested in William Currie's letter in the March number as to growing exhibition *Chrysanthemums* outdoors, will also be interested in the protection for *Chrysanthemums* told of by L. H. Bailey on pages 337 and 366 of his "Manual of Gardening." Following his plan, the *Chrysanthemums* would be planted on the south side of the house, with a roof of glass or oil paper about eight feet from the ground; the roof inclined at an angle of 45 degrees, the upper end resting on the house and the lower end on poles.

Mr. McFarland's hope, expressed in the same issue, for a tannic acid soil prescription and answered by you with a prescription of water in which spruce bark chips have been soaked, suggests to me that Oak leaves should be used in preference to other leaves in and on the soil where Box Huckleberry is planted, for their known tendency to acidity. This also leads me to ask whether the acid fertilizer with an acid reaction which is advocated by the Agricultural Experiment Station of Rhode Island State College, for use with Bent Grasses and Fescues, as a weed exterminator, would not be available for Box Huckleberries. The formula for that fertilizer is:

250 lbs. sulphate ammonia  
400 lbs. acid phosphate  
250 lbs. muriate of potash

The quantity is for an acre. Assuming a Huckleberry patch to be 100th of an acre, the quantity would, of course, be 2½ lbs. sulphate of ammonia; 4 lbs. acid phosphate; 2½ lbs. muriate of potash.

I am using the Rhode Island formula with the Bent Grasses and Fescues obtainable (real Rhode Island Bent seems to be impossible to get), and am watching "in vengeful silence" for what I hope it will do to all the Crab Grass this summer.—ARTHUR McCAUSLAND, *N. Y.*

—We assure you the Neighbors would like to know the results!—ED.

### Setting Up Your Own Sun-Dial

To the Editors of THE GARDEN MAGAZINE:

RECENTLY I have had the pleasure of re-reading several numbers of THE GARDEN MAGAZINE, and feel moved to tell you of the inspiration and help received. THE OPEN COLUMN especially is helpful, and I would like to see more records of the experiences of amateur gardeners. (So would we!—ED.)

The pictures of sun-dials suggested to me that the story of how I set up one in my own garden might interest other readers. I purchased the dial itself from a firm whose advertisement I saw in THE GARDEN MAGAZINE, and the next thing was to mount it in some sort of simple way in keeping with my unpretentious, comparatively small garden. From one friend I got the cheese box idea; from another the suggestion for terra-cotta pipe; chicken wire and Ivy were my own contributions to the plan. A round hole several feet in diameter was made and nearly, but not quite, filled with cement. The terra-cotta pipe was set in the centre leaving about four feet above the surface of the ground, which necessitated using two lengths. The circular plinth upon which the dial was to be mounted was made by filling the cheese box with cement. When the cement hardened the box was sawed away leaving a plinth four inches deep and three or four inches wider than the dial all around. In short, it was just right! After the dial was set and the hole filled, grass seed was sown up to the base of the pedestal. I then put chicken wire around the pipe; planted real English Ivy, the

original slip having come from the Isle of Wight; and waited for nature to do the rest. By fall the Ivy completely hid the pipe from view and clustered around the plinth, making a charming and appropriate effect at a total cost of something less than twelve dollars. The dial is accurate, though of course it cannot keep pace with daylight saving! During one very severe winter the Ivy was killed down to the ground; now I guard against that by protecting it with bottomless baskets placed around the pedestal and filled with dry leaves. After my dial was completed I remember reading Mr. J. Horace McFarland's "My Growing Garden" and learned that he, too, had an Ivy-covered dial, but I do not recall that his Ivy concealed a terra-cotta pipe!—*GERTRUDE H. SMITH, Haddonfield, N. J.*

### If You Want the Christmas Rose

To the Editors of THE GARDEN MAGAZINE:

THOSE of your subscribers who are interested in the Christmas Rose (*Helleborus niger*) can procure it from the Muller-Sealey Co., 143 West 45th St., New York City, whose advertisement I originally saw in your magazine.—*ADELE N. CHASE, Gary, Ind.*

### The Grateful Grafter Speaks

To the Editors of THE GARDEN MAGAZINE:

I WANT to thank you for the article in your April issue by E. L. D. Seymour "Now Anyone Can Graft at Any Time." I tried grafting with parafine as suggested, and it worked. Previous attempts by the old method usually resulted in failure, but with this method the grafts are all growing despite the fact this has been an unfavorable year for such work. That article alone is worth my year's subscription!—*MARIE I. DEGRAFF.*

### How Hardy is the Hardy Eucalyptus?

To the Editors of THE GARDEN MAGAZINE:

IN REGARD to the Sugar Gum (*Eucalyptus carynocalyx*) over which there seems to be some dispute as to whether or not it is really frost-resistant, I can only give the result of the work carried on by the Santa Monica station, demonstrating that this particular species cannot be successfully grown in the interior of the state, where in every reported case specimens were killed by the frost. The nomenclature of the Eucalyptus is very indefinite anyway, and it is possible that a closely allied species is meant. It is also possible, too, to develop a strain or sport from the species that is resistant. Take for instance the Scarlet-flowered Eucalyptus. There are any number of single specimens exhibiting slight variations from type, either in the coloration of the flowers, in the shape of the leaves, or in the habit of the tree. The Eucalyptus is like the Acacia in that several distinct ancestral characters may be brought out on the same tree.

The lowest recorded temperature that any Eucalyptus can stand—and there are very few species—is 18° F.; they show different degrees of resistance to frost. Some of the species considered most frost-resistant include: *E. rostrata*; *E. globulus*; *E. viminalis*; *E. tereticornis*; *E. sideroxylon*; *E. cebra*; *E. rudis*; *E. robusta*; *E. resinifera*; *E. Stuartiana*.

Eucalyptus will grow under a variety of soil conditions, but favor a medium heavy soil for their best development. They make a very rapid growth in sandy soils. They are prodigious surface feeders and absorb considerable moisture. Not much else can be grown in close proximity to a Eucalyptus. Sometimes Eucalyptus have been grown on land considered unfit for other types of plants, but they respond best to rich soil.

Information regarding the adaptability of the Eucalyptus to parts of Texas might possibly be obtained by writing to Mr. E. O. Siecke, Chief of the Division of Forestry, Texas Agricultural Experiment Station, College Station, Texas.

My attention has been called to a recent note on the introduction of the Eucalyptus into California, appearing in the last seed catalogue of the wholesale house of C. C. Morse Co. It is interesting enough to quote: "Eucalyptus globulus. A little history of this wonderful tree in commemoration of the late William Taylor, Bishop of Africa and 'a forty-niner'. The Eucalyptus is a native of Australia. It is the tallest-growing tree on earth, in that country reaching a height of nearly 500 feet. On mission tour in Australia, in 1869, Bishop Taylor was so impressed with the giant Eucalyptus that he secured quantities of seed and sent it to California. The seeds were planted by Mrs. Taylor, and thousands of seedlings were distributed by her and others, especially by

James T. Stratton, late Surveyor General of California. This was the first distribution of Eucalyptus in the Golden State, and well should every tree remind us of this great man, Bishop Taylor!"

I found your Pacific Coast Annual very interesting, and the different articles full of valuable hints on gardening in California. I am sure that such a number serves to stimulate a great interest in gardening among Californians.—*A. M. WOODMAN, University of California.*

### Finding the Medlar

To the Editors of THE GARDEN MAGAZINE:

REPLYING to Mr. Rost's query regarding the true European Medlar in THE OPEN COLUMN for January, I may say that in 1919 I purchased a Nottingham Medlar from the Armstrong Nurseries, Ontario, California. A Medlar advertised under the name Large Dutch also used to be obtainable from the Pioneer Nursery, Monrovia, California. I am not aware whether either firm can supply these trees at the present time, but it would do no harm to address a note of inquiry to them.—*S. S. BERRY, Redlands, California.*

### A Tower of Strength for the Dahlia

To the Editors of THE GARDEN MAGAZINE:

THOUGH I am quite a crank about the Dahlia, here in this Western country we have so much wind that it has heretofore been quite impossible to raise respectable looking plants; and beautiful flowers on crooked and twisted plants have spoiled half my fun. I have tried wooden stakes galore, but they are so crudely obtrusive it gives me a pain to contemplate them.

I believe I have at last solved the problem. Go to any merchant who has coiled wire for sale and buy as much as you think you will need; either No. 8 or No. 9 being my preference. Cut into 4 ft. lengths, lay one wire at a time on an anvil or some solid substance and with a hammer or wooden mallet proceed to straighten it out. This is the tedious portion of the job though not so much so as you might think. When straightened, thrust each wire about half an inch into the jaws of a vise and bend it at right angles. This end goes into the ground and serves to anchor it in place.

Next get a discarded broom handle, and drive this in four different places around the plant at a distance of 6-8 in., making the holes 8 or 10 inches deep, and as near equally distant as possible—it is a good idea to mark the handle in some way to readily indicate the required depth of the hole. In driving the broom handle into the earth, it should always be slanted so the handle may come directly over the plant.

When the four holes are made around a plant, place a wire in each, slanting toward the centre until directly over the plant, then cross the tips and tie together about an inch below the top. Fill the holes solidly with dirt, pounding down with mallet or hammer. Now you have a firmly grounded, four legged tripod of surprising staunchness, in fact, a regular tower. As the plant grows up inside the wires, it soon conceals them, filling the spaces between and offering resistance to wind which is quite remarkable.

Thus we are rid of the ugly nuisance of wooden posts and of possible injury to the plants when tied to them. If the shoots of the plant seem inclined to crowd out through the openings between the legs of the tower too soon or too much, a string tied tightly to one of the wires and carried clear around, will keep these enterprising shoots in order.

The "tenderfoot" may think this is too much trouble but, as a Dahlia lover living in a windy country, it seems to me well worth while. For ten cents I build my plant a tower that only a real cyclone can blow down.—*DR. A. W. FOREMAN, White Hall, Illinois.*

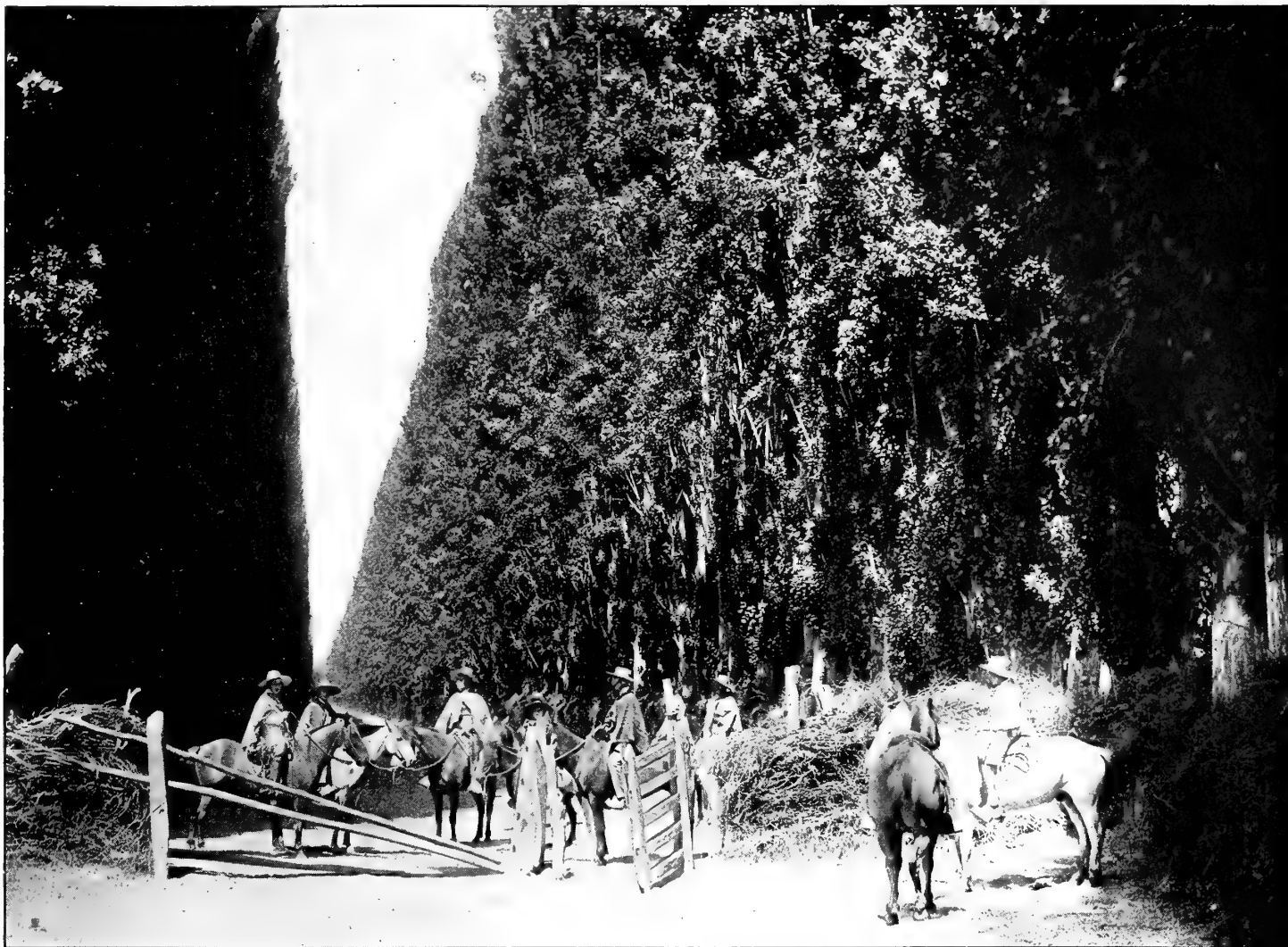
### Some More Dahlia History

IN THE hope that some further light might be shed on certain obscurities in the Dahlia's history, as told by Prof. Norton in the December GARDEN MAGAZINE, attention of Messrs. Dreer was called to the reference to Mr. Schmitz's introductions and the following letter has been received:

To the Editors of THE GARDEN MAGAZINE:

I HAVE a faint recollection that when I first took hold of revising the plant pages of our catalogue (it was in 1880) that Mr. William F. Dreer told me that Mr. Schmitz had been a specialist in Dahlias located at Roxborough, Philadelphia, but this is a great many years ago and my memory may not be absolutely reliable on this point. However, I have catalogues on file back as far as 1870. In the 1870 and 1871





WHERE THE LOMBARDY POPLAR GROWS BEST

In sending us the photograph here reproduced Prof. C. S. Sargent writes: "Such avenues of Lombardy Poplars are common in the central valley of Chile—some European plants seem to grow better in Chile than anywhere else. These Poplars are a witness of this fact; and I saw near Valdivia in the southern part of the country more and finer Foxgloves which have become naturalized there than I have seen anywhere else. One of the common Black-berry vines of Europe grows in Chile to monumental size. Ball in his travels in Chile has commented on the fact that European plants when naturalized grow to a greater size than they do in their native countries. In a small arboretum in San Diego I found Scandinavian Birches and Australian Eucalypti growing side by side in perfect happiness, and finer specimens of American Magnolia than I have seen elsewhere outside of the United States."

catalogue in connection with the introduction of Dahlias, the following paragraph appears:

"Varieties Marked (S) are raised by Mr. Gerhard Schmitz of this city (Philadelphia)." The varieties listed under this heading are as follows: Alice, Amazement, Autumn Glow, California, Canary, Celestial, Champion, Colossus, Copperhead, Crimson Monarch, Defiance, Emily, Fanny, Firefly, Frank Smith, Grace, Joshua Longstreth, Martha, Mrs. Bond, Snowdrift, and Little Gem.

Nothing referring to Mr. Schmitz's name appears in 1873 or 1874, but the catalogue of 1875 gives a list of new prize Dahlias for 1875 listed as Schmitz's varieties under the following heading:

We take pleasure in offering the following list of new Dahlias raised by Gerhard Schmitz, the successful Dahlia grower of Philadelphia. Years of experience justify the originator in pronouncing these the best he has ever sent out. Several premiums were awarded these varieties at the Autumnal Exhibition of the Pennsylvania Horticultural Society in 1873 and 1874. Green roots \$1.50 each, the set of 8 varieties \$10.00. Antelope, Bicolor, Climax, Elizabeth, Favorite, Penelope, Sylph, Unique.

The catalogue for 1876 has a similar heading offering varieties which were awarded special premiums at the Autumnal Exhibition of the Pennsylvania Horticultural Society, September, 1875. These varieties are:

Acis, Ada, Ajax, Amazon, Beatrice, Bepo, Estelle, Hiawatha, Jewel, Mabel, Mira, Resina, Signet, Siren, Soleil, Trojan.

Practically the same list under Schmitz's name appeared in the catalogue of 1877 and again in 1878. Schmitz's name does not appear in any of our catalogues after that date.

In some pencil notes contained in the catalogue of 1876 a Dr. English

is credited with the following new Dahlias, but none of these appear to have ever been listed or offered in any of our catalogues. It looks as if they might just be notes made at some exhibition. The varieties are as follows:

Trojan, Success, Daphne, Amazone, Aglaia, Arthur English, Chancellor Ranyon, Col. Wall, Florence English, Hiawatha, Mestra, Mira, Mrs. English, Pan.

There is nothing to show who Dr. English was or where he was located.

Three of the varieties of Dahlias listed under Schmitz's name, Emily, Penelope and Frank Smith, are still in cultivation.—J. D. EISELE, Philadelphia.

### Our Thanks to Friends in Deed!

To the Editors of THE GARDEN MAGAZINE:

OF ALL the publications that come into our home I personally prize THE GARDEN MAGAZINE more highly than any other. I know of no periodical that greets the reader with a more cheerful and beautiful face than THE GARDEN; and I am as anxious to see what the removal of the wrapper discloses as I am to see the photograph of a dear friend.

I wish I had the time, I'd like to send you a real list of at least trial subscribers; as it is I have interviewed a few of my friends here at the court-house and called up some others among my neighbors soliciting subscriptions and send you herewith the result. I value the magazine so highly that I desire to have my friends get the benefit of it as well as myself.—A. H. LONG, Minneapolis, Minn.

## Iris Foliage That Holds Its Color

To the Editors of THE GARDEN MAGAZINE:

IN GOING through my files of THE GARDEN MAGAZINE, making a study of the Iris, I became much interested in Mr. Sturtevant's "Decorative Element in Iris Foliage" in the October, 1920, issue. His statement that Irises with trojana or pallida blood would likely be most effective as all-season plants aroused my curiosity. I did not then have the time to check his results in my garden but I did look up two or three of the green ones and pallida dalmatica. These did not agree with his statement, so I promised myself a complete check after we had had some more cold weather.

On the last day of the year, after a period of prolonged freezing, with a minimum of 7° F., an investigation of the foliage was made. Three groups were apparent: (1) those with uninjured foliage; (2) those with injured foliage which was still green and more or less upright; (3) those whose foliage was destroyed. From catalogues the varieties were then thrown into their respective groups in so far as they could be determined and the whole tabulated as shown below.

SECTION OR SPECIES	NUMBER OF VARIETIES	UNINJURED VARIETIES	INJURED VARIETIES	DESTROYED VARIETIES
<i>Tall</i>				
Variegata . . . . .	20	0	0	20
Neglecta . . . . .	18	0	1	17
Amoena . . . . .	12	0	0	12
Plicata . . . . .	12	0	5	7
Germanica . . . . .	5	4	1	0
Squalens . . . . .	18	0	5	13
Pallida . . . . .	34	0	6	28
Trojana . . . . .	1	1	0	0
Florentine . . . . .	1	0	1	0
Other species . . . . .	3	0	0	3
Varieties in unknown sections . . . . .	18	0	2	16
<i>Intermediates</i> . . . . .	7	3	1	3
<i>Dwarf and pumila hybrids</i>	7	6	1	0

Aside from the Intermediates and Dwarfs there were but two groups showing good fans of foliage at that time; trojana, and the germanicas Amas, Kharput Major, and Violet Queen. Kochii was but slightly hurt. Trojana was as good as in June. In the face of Mr. Sturtevant's article I was much surprised to find plicata and squalens as well as germanica ranking ahead of pallida. The half dozen pallidas listed as injured were quite badly hurt; dalmatica foliage was a ruin.

From these observations covering only one year, to be sure, it would appear that winter foliage can be obtained much more surely with other germanicas than with the Iris of pallida blood, under southern Idaho conditions at all events!—DAVID C. PETRIE, *Boise, Idaho*.

## "Necessity the Mother of Invention"

To the Editors of THE GARDEN MAGAZINE:

BY ACCIDENT we discovered this way of cultivating Wistaria and Roses. A new home was being built, and as the veranda was not finished at the time, we planted a pink Rambler Rose and a Wistaria just about where they could be trained to the pillars later. Stout stakes were driven in the ground beside the vines which, as they grew, were loosely bound to them. When a foot or more beyond the top of the stakes the ends of the vines were pinched off, causing them to send forth more side shoots. As each branch grew 12 or 18 inches long it was treated in the same way, keeping the vines as uniform as possible. After two years of this training, no buds being allowed to develop, they blossomed out into the most beautiful mass of trailing greenery and flowers—the lavender racemes of the Wistaria blending with the pink of Roses across the walk. So much did they add in the way of decorative effect that they were never trained upon the veranda.—M. D. BROWN, *San Mateo, Cal.*

## My Garden Reference Shelf

To the Editors of THE GARDEN MAGAZINE:

I HAVE most of the numbers of THE GARDEN MAGAZINE for the past twelve years and find them very useful for reference. For this purpose I have a loose-leaf book with the various articles of particular interest to me listed under separate heads, as "Old-fashioned Gardens," "Rock Gardens," "Wild Gardens," "Perennials," etc; also pages besides with culture of various plants and shrubs arranged alphabetically.

I have just started a new plan so satisfactory and simple that it may be of use to other subscribers. I pick out the issues of previous years for the current month and put them on the reading table with the new magazines and in this way I have at hand all the seasonable suggestions and reminders printed for several seasons back.—RUTH L. TORREY, *Wenham, Mass.*

—I want to take this opportunity to say that I enjoy and get more benefit from your GARDEN MAGAZINE than all the others combined. Your March issue on Roses is worth many times the yearly subscription.—A. S. FENTON, *Buffalo, N. Y.*

# EXPERIMENTING IN THE AVENUE A GARDENS



THE boy and girl farmers who are cultivating the little 5 x 10 plots over in the Avenue A Gardens, in the tenement district in New York's crowded East Side, are learning something in the new school of agriculture. Dr. Thomas T. Gaunt of New York City, who takes a special interest in the children and the gardens and is also a student of agricultural science, contributed to the work specimens of seeds inoculated with nitrogenous bacteria which are supposed to increase largely the quantity of vegetables produced. The children under the direction of the instructor will have opportunity to observe the growth and learn for themselves how much man can help nature in improving on her own way of doing things.

Already the children of the gardens and their families have begun to know some of the benefits of working in the earth. On their tables have appeared radishes, lettuce, beans, carrots, and peas which have come direct from the gardens instead of from the corner grocery. This means not only freshness and a better flavor but may be the inspiration of family removals from the congestion of the tenements to the healthier surroundings of the suburbs or the country itself.

FUNDS have been received by the THE GARDEN MAGAZINE to establish Avenue A Gardens from:

MISS A. P. LIVINGSTON, Medford, Oregon; MRS. J. H. SPAFFORD; MRS. J. HOPKINS SMITH; PETER PAIGE (by MRS. FREDERICK EDEY); MISS E. F. EILERS; MRS. ISAAC GIMBEL; MRS. MARTIN VOGEL; MRS. WM. B. FIELD OSBORN; MISS JULIA WRAY; MR. GEORGE L. BECKER; THE CHAPPAQUA BRANCH OF THE NATIONAL PLANT, FLOWER AND FRUIT GUILD.

The garden provided for by MRS. A. H. STORRS, Scranton, Pennsylvania, is named THE ELIZABETH STORRS BELIN GARDEN.

Ten dollars maintains for the entire season one of the 5 x 10 gardens in the total of six hundred located on Avenue A in New York City, between Sixty-third and Sixty-fifth streets. Each garden may be named by the donor of the funds for its maintenance. The Avenue A Gardens are cultivated under proper supervision and instruction by children from the neighboring tenements for whom this sum provides the necessary seeds, tools, and oversight. Checks to the order of The Avenue A Gardens may be sent to THE GARDEN MAGAZINE, Garden City, N. Y., or to the Plant, Flower and Fruit Guild, 70 Fifth Avenue, New York City.

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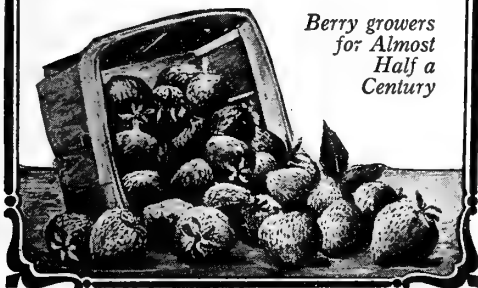
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- Monsignor**—Standards rich violet; falls velvety purple crimson with rich dark veining, 25c.
- Mt. Penn (Pallida)**—Standards soft lavender rose; falls crimson lilac with deep orange beard.
- Mrs. Newbronner**—Standards and falls rich, clear, golden yellow like giant daffodils.
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- Charlemagne.** Lilac with blush center; large rose type; fragrant late.
- Delachei.** Rosy magenta; large, rose type; very fine bloomer; late. Extra-fine variety.
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- Festiva Maxima.** Pure white, flecked with carmine; very large, rose type; free flowering; fragrant; medium early. \$1 each, \$10 per doz.
- L'Indispensable.** Lilac-white, changing to violet-rose; large bomb type; free blooming; medium early.
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**Japanesque.** Japanese type. Standards lavender, white flaked lilac. Falls deep violet lilac, edged pale lavender. Copper yellow beard. Standards sometimes same as falls. Six falls like Jap. Iris. \$3.00.

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## OFFER EXTRAORDINARY

TO INDUCE you to become acquainted with the superior quality of our plants we make the following attractive offers. For complete description see our catalogue, free on request.

Luetta Pfeiffer Peony, offered in collections No. 1 and No. 2 is one of the finest Peonies in existence and no collection is complete without one. Plants shipped at purchaser's expense.



### PEONIES

#### Collection No. 1

Value \$72.00 for \$50.00

Archie Brand.....	\$5.00	Francis Willard.....	\$ 7.50
Avalanche.....	1.50	Judge Berry.....	10.00
Ben Franklin.....	2.00	Luetta Pfeiffer.....	25.00
Baroness Schroeder.....	1.50	Midnight.....	3.00
Charles McKellip.....	5.00	Mons. Jules Elie.....	1.00
Chestine Gowdy.....	5.00	Rachel.....	1.00
Eugene Verdier.....	1.50	Karl Rosenfeld.....	3.00
			<b>\$72.00</b>

#### Collection No. 2

Value \$54.25 for \$40.00

Albert Crousse.....	\$1.00	Francis Willard.....	\$ 7.50
Ben Franklin.....	2.00	Judge Berry.....	10.00
Baroness Schroeder.....	1.50	Prince of Darkness.....	2.00
Couronne D'Or.....	.75	Rachel.....	1.00
Eugene Verdier.....	1.50	Luetta Pfeiffer.....	25.00
Fanny Crosby.....	2.00		<b>\$54.25</b>

#### Collection No. 3

Value \$15.00 for \$10.00

Chas. Verdier.....	\$1.00	Octavia Demay.....	\$ .75
Ben Franklin.....	2.00	Rachel.....	1.00
Couronne D'Or.....	.75	Sister Annie.....	1.00
Eugenie Verdier.....	1.00	Alba Sulphurea.....	.75
Jeanne D'Arc.....	.75	Purpurea Supurba.....	.75
Madam D'Arville.....	.75	Madam Emile Galle.....	1.00
Midnight.....	3.00	Candidissima.....	.50
			<b>\$15.00</b>

### IRIS

#### 21 Fine Varieties

Value \$7.55 for \$5.00

Niebelungen.....	\$.25	Mithias.....	\$.35
Loreley.....	.25	Lohengrin.....	.30
Rhine Nix.....	.35	Mrs. W. E. Fryer.....	.50
Perfection.....	.30	Gertrude.....	.25
Fairy.....	.25	Zanardelli.....	.25
Prosper Laugier.....	.50	Madam Chereau.....	.15
Isoline.....	.75	Caprice.....	.30
Mrs. H. Darwin.....	.20	Snow Queen.....	.25
Orientalis.....	.15	Rose Unique.....	.50
Monsignor.....	.35	C. A. Pfeiffer.....	1.00
Princess Vic Louise.....	.35		<b>\$7.55</b>

Iris plants are large divisions from 1 year clumps. Peony plants are strong 3 to 5 eye divisions from 3 year clumps.

**THE PFEIFFER NURSERY Winona, Minn.**



# Those of You Who Have "Tips and Pointers" Will Enjoy "Unvarnished Facts!"

"Tips and Pointers," received so enthusiastically last year, contained many good things, but as some of my friends were frank to say, I omitted all reference to Peony Purgatory. Since there is nothing in the life or culture of Peonies that need be hidden under a bushel, I have tried to remedy the shortcomings of my first attempt and it now affords me great pleasure to advise that we just completed the first 10,000 edition of the latest contribution to Peony literature.

## Too Good to "Give Away" But, I Will GUARANTEE Your Investment

"Unvarnished Facts" is by far the most expensive book I have ever published. In illustrations alone there are some color lithographs produced at a cost of \$750 each. I want every reader of GARDEN MAGAZINE to have a copy of "Unvarnished Facts," but I can not afford to distribute it to curiosity seekers or those not interested in the Peony. Send me 25c. for the book and if, after reading it, you do not think it worth \$1.00, your money will

be returned and you can keep the book besides.

Or, you may deduct 25c. from the first order amounting to \$3.00. Thus you really get the book free in the end.

This is perhaps the most unqualified guarantee ever made in connection with a book. Write promptly before the edition is exhausted. I started in with 10,000 "Tips and Pointers"; before I got through requests for 20,000 reached me.

## To Create a Healthy Appetite

For those not familiar with "Tips and Pointers," I have a few hundred copies left which I will gladly send free to those who call for them first.

"Tips and Pointers" can not fail to create in you not only an appetite for a Peony garden, but also a desire to see the greatly improved edition offered alongside under the title of "Unvarnished Facts."

As stated before, you are welcome to "Tips and Pointers" as long as the edition lasts... H. S. C.

*Henry Hooper, Peony Dan*  
Kenosha, Wisconsin

## Little Tree Farms Friendship Offer for Fall



### Six Splendid Evergreens

of the six hardiest and most popular varieties—Big rooted, vigorous, full of joyous life—How can you spend ten dollars to yield greater satisfaction than to plant these six specimen plants this Fall?

This collection includes—

- One Blue Spruce
- One White Spruce
- One Arborvitae
- One Erect Juniper
- One Prostrate Juniper
- One Douglas Fir

ALL FOR TEN DOLLARS

These evergreens range from 3 feet in height to 1½ feet in spread, their roots wrapped in burlap, a ball of native loam around them. The whole shipment carefully crated and delivered to the express at Framingham, Mass., on receipt of your remittance, which must accompany order.

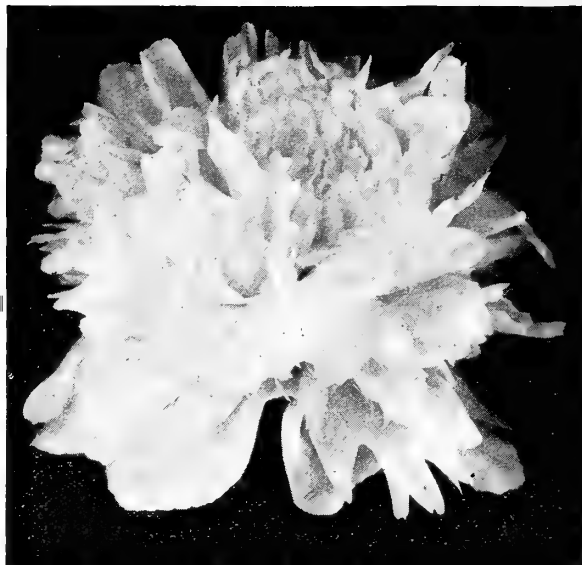
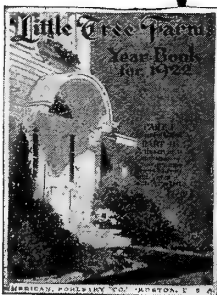
This selection is limited, order promptly.

# Little Tree Farms

Back Bay B-2

BOSTON

*You will want your copy of this Year Book, full of other offers and many pages of helpful advice. A large, beautiful book, profusely illustrated with color and hundreds of fine photographs. Mailed only on request.*



# 100,000

Peonies, Iris, Bulbs, etc., one of the largest collections in the east.

Before placing your order for fall plantings, get our Catalogue.

## We Again Offer

- 8—Large roots of choice Peonies, all different..... \$2.00
- 12—Choice Iris—very fine varieties all different..... 1.00
- 25—Darwins, Tulips—mixture..... 1.00
- 25—Daffodils, mixture of ten varieties..... 1.00

Send \$5.00 for all the above, and we will send a premium of 25—Mrs. Langtry Narcissus bulbs to you, free.

We grow all the new and rare French and English varieties—at bargain prices—get our Catalogue.

BABCOCK PEONY GARDENS, Jamestown, New York



# A Blue and White Garden

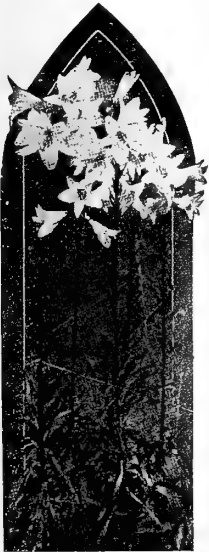
**LILIES OF FRANCE** Plant bulbs August-September  
**DELPHINIUMS** Sow seed August-September  
*Bloom together next June*

No color combination is more beautiful than *Lilium Candidum* (LYS DE FRANCE) with its rich clusters of flowers silvery white with golden stamens, exquisitely fragrant, and the soft blues of the wonderful Delphiniums. Only the NORTHERN GROWN *Candidum* are worth planting.

## NORTHERN GROWN CANDIDUM (Lys de France)

TRUE—Thick petaled Selected Bulbs,	-	3	12	50
MONSTER	-	\$ .90	\$3.00	\$12.50
		1.25	3.75	16.50

DELIVERY INCLUDED (7th and 8th Zone add 10%)



### NEW DELPHINIUMS

**BELLA DONNA.** Clear turquoise blue.  
**CLIVEDEN BEAUTY.** Rare Cambridge blue.  
**DUSKY MONARCH.** One of the NEWEST. Large smoky purple flowers.  
**FANNY STORBYNTH.** Surprisingly beautiful. Lovely azure blue flowers.  
**REV. E. LASCELLES.** Deep velvety purple blue, clear white eye.  
**NEW LARGE FLOWERED HYBRIDS.** Gorgeous Blend pale blue shades.  
**ZALL.** Sulphur yellow. Beautiful and distinct.  
 Pkt. 50c., half pkt. 30c., trial pkt. 15c.



### FALL BLOOMING CROCUS

It may be that for years you have been intending to plant a lot of these *gay little Crocus* that come at the *dearest* time of the year. DON'T FORGET THAT AUGUST is the time to plant them. They bloom within 3-4 weeks after planting, flowering from September right through till January *blooming when all else in the garden is dead.* They will give untold pleasure and win the admiration of all who see them.  
**SPECIOSUS.** Bright blue. Petals dusted and veined like Butterflies, golden anthers.  
**ZONATUS.** Delicate rosy lilac with golden base. Doz. 60c, 100 \$3.50, 1000 \$35.00.  
 These prices include delivery.

Send for our **FALL BULB BOOK**—Ready now. (All RARE bulbs and seeds).  
**H. H. BERGER & CO.**  
 Established 45 years  
**70 Warren St., New York**



# Bobbink & Atkins

Ask for Catalog



Visit Nursery

# Peonies and Irises

Our collections of choice Peonies and Irises are Complete. Ask for Booklet.

You are invited to visit our Rose Fields, in which we have growing hundreds of thousands of Hybrid Tea Roses, dwarf and tree form. Ask for Rose Catalog.

We grow Nursery Products to complete Plantings of any Magnitude.

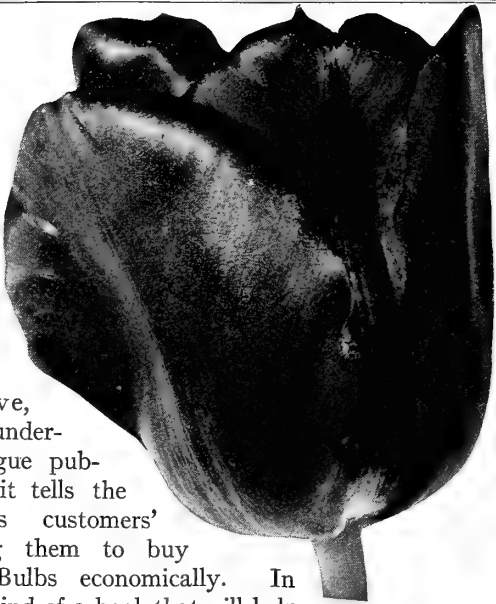
*Nurserymen and Florists*

Rutherford

New Jersey

## We Have a Bulb Catalog for You!

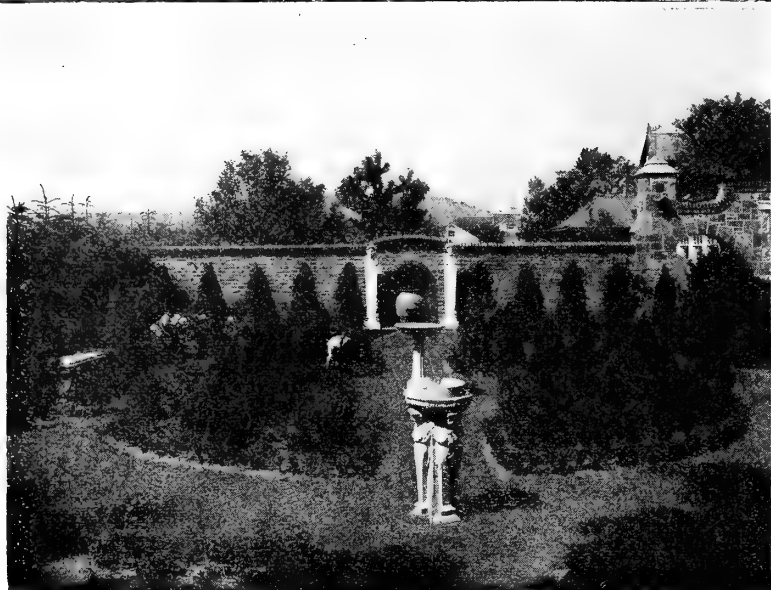
Many people, friends, customers, and otherwise have told us that our bulb catalogue is easily the most thorough, most comprehensive, and most easily understood of any catalogue published. Above all, it tells the truth, and saves customers' money by enabling them to buy top-notch Quality Bulbs economically. In short, it is just the kind of a book that will help you to an ideal Tulip garden.



## Gladly Mailed to Every Reader of G. M.

This book is produced for us at great expense in Holland. We will be glad, however, to mail it free of charge, feeling that it will help the reader to better gardens from Dutch Bulbs and thus become our friends for the future and for the years to come. Please mention G. M. when writing.

**ZANDBERGEN BROS.,** OYSTER BAY, LONG ISLAND, N. Y.  
 Bulb Farms: Valkenburg (near Leiden), Holland



“Little Home” Ferd. Von Beren  
New Haven, Conn.

## Plant Evergreens This Fall

Fall is an ideal time for setting out Evergreens. In the photograph of the garden above, arbor vitae, dwarf pines, hemlocks, rhododendrons and spruce serve as a delight to the eye during hot days of summer, or when winter's white mantel falls o'er the landscape.

Various types of evergreens are suitable either in a formal garden, or as sentinels posted at the entrance of a drive or walk, as a foundation planting, or as single specimens on a broad lawn. We can tell you which varieties fill your horticultural need best.

And while planting shrubs this autumn, add a few beautiful varieties of roses to your garden. Fruit trees, both dwarf and standard, and hedge plants, can also be planted to advantage at this season.

The Elm City Nursery Company gives especial care to the growing and cultivation of evergreens and hedge plants. We are the originators of the famous box-barberry plant. A visit to our nurseries will convince you of the high quality of our stock.

### Our Landscape Service

has been of aid to owners of estates, of suburban homes, and to directors and trustees of country clubs, hospitals, schools, churches, and industrial plants. Write and tell us your landscaping problems and secure additional information about the landscape work we do.

Send to-day for our beautifully illustrated 48-page catalogue, and place your order *early* for fall planting. You are cordially invited to visit us at our nurseries.

**ELM CITY NURSERY CO.**  
**WOODMONT NURSERIES, Inc.**  
New Haven, Conn.

*“The Pioneer Landscape Nurseries of New England”*

Elm City Nursery Co.—New Haven, Ct.—Box 191.  
Gentlemen:—Please send me your 48-page catalogue.

Name.....

City..... Street No..... State.....

## Plant this Fall

for quick and early results next spring. Now that everything still is green and lovely it is easy to select those spots you would like to make even lovelier about your place. Let us help you. Write for our handsome book, “Beautiful Home Surroundings.”

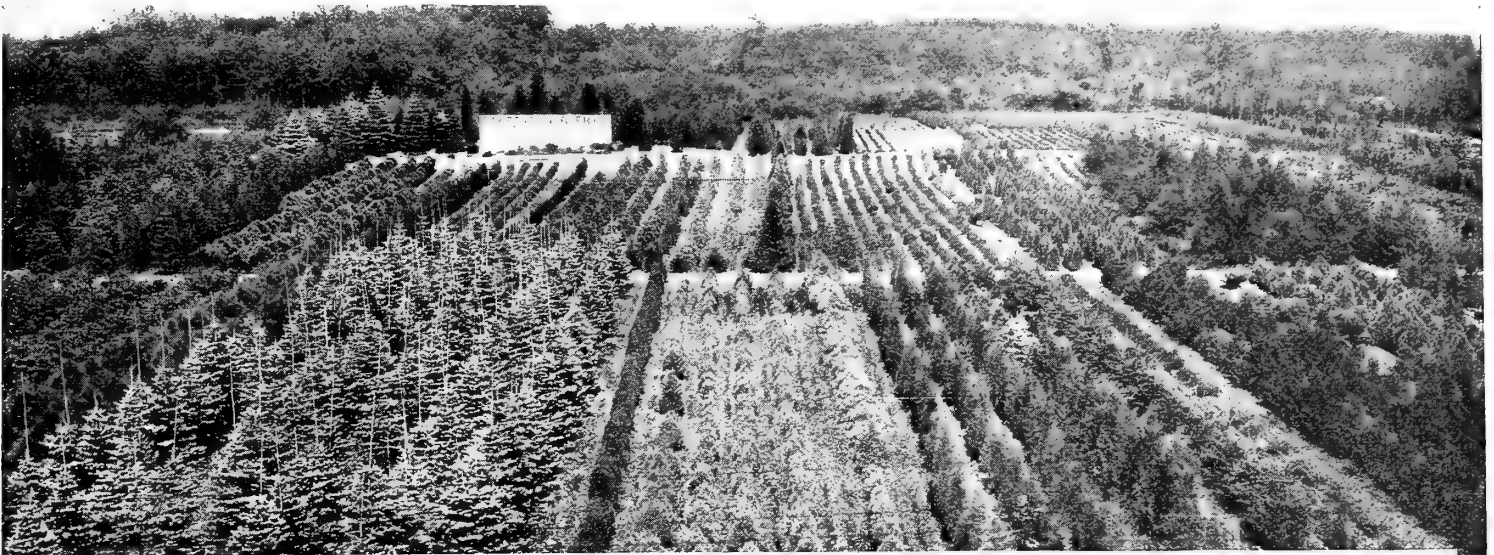
SENT FREE anywhere east of the Mississippi River and north of the Potomac. Elsewhere on receipt of One Dollar.

**WYMAN'S**  
**Framingham Nurseries**  
FRAMINGHAM, MASSACHUSETTS

## WE UNHESITATINGLY RECOMMEND

<p><b>ONE MAN IN HIS TIME</b> <i>By Ellen Glasgow</i></p> <p>A beautifully wrought novel full of arresting passages which make it a notable work. . . . “Her characters are brilliantly drawn; her plot is well sustained.” <span style="float: right;">\$2.00</span></p> <p><b>THE FIRE-BIRD</b> <i>By Gene Stratton-Porter</i></p> <p>A long narrative poem by the woman whose books have sold over nine million copies in seventeen years, Charles Wharton Stork has said of the “The Fire-Bird”: “A comparison with ‘Hiawatha’ is inevitable, but in our opinion ‘The Fire-Bird’ is the gainer, in that it is more unified and compelling as a narrative and closer to one’s imagination of actual Indians in style.” <span style="float: right;">\$1.75</span></p>	<p><b>GENTLE JULIA</b> <i>By Booth Tarkington</i></p> <p>“Don’t miss this book, but don’t try to read it aloud to anyone. You couldn’t do it justice, not in its best parts, because no one can speak distinctly who is all broken up with laughing.”—Hildegard Hawthorne in the <i>New York Times</i>. <span style="float: right;">\$1.75</span></p> <p><b>AT THE CROSSROADS</b> <i>By Harriet T. Comstock</i></p> <p>“Mrs. Comstock’s honest idealism, her agreeable literary facility, and her feeling for beauty all combine in one harmonious whole . . . A thoughtful book which will appeal strongly.”—<i>Hartford Courant</i>. <span style="float: right;">\$1.75</span></p>
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**DOUBLEDAY, PAGE & COMPANY**  
GARDEN CITY NEW YORK



### NOW FOR FALL PLANTING PLANS

After August first we begin moving Evergreens and continue through September. After September first we begin shipping perennials and continue into November. After October first we begin the shipping of our deciduous stock—so on it goes.

*Handbook for the asking*

THE BAY STATE NURSERIES

NORTH ABINGTON, MASSACHUSETTS

W. H. Wyman & Son, Proprietors



### Make Yours a Regal Garden

**REGAL LUPINS**—We believe we are the first in this country to offer the new English Hybrid strains of *Lupinus Polyphyllus*, known as the Regal Lupins. This remarkable race of Hybrids have fascinating tints and unique combinations of color that are difficult to describe. There are creamy shades, amber, coppery orange and almost canary yellow, mingled with bronze, bright rose, terra-cotta, slate and lavender blue.

**REGAL DELPHINIUM**—At the same time we have obtained a superior strain, direct from the introducer, of Hybrid Delphinium, also known as "Regal." These are grown from seed selected from the best named English varieties.

**REGAL LILIES**—These new perennials are fit garden companions for the Regal Lily, and planted with them, produce a changing and beautiful color combination.

Our Fall Supplement lists Tulips, Narcissi, Hyacinths, and other bulbs as well as Lilies, Peonies, and Iris which are best set at this time. There are described also such novelties as the Hollyhock "Exquisite", English bedding Violas, and the true Double Gypsophila. The complete list of our perennials, shrubs and trees is found in our 1922 Annual, a copy of which will be sent to all who do not have one. Send for your copy now.

**F. H. HORSFORD, Charlotte, Vermont**

### Lovely Wild Flowers of California

**M**OST of them are entirely hardy throughout the East. Among the easiest to grow are the lovely Dog's-Tooth Violets, which are successful in such widely separated districts as Michigan, Montreal, Delaware, Minnesota and Massachusetts. Plant them in colonies in a shady location, and success is assured. As a special introductory offer, let me recommend a quartet of rare varieties.

**Erythronium Californicum.** A fine creamy tint. 500 for \$6.25, 1,000 for \$10.00.

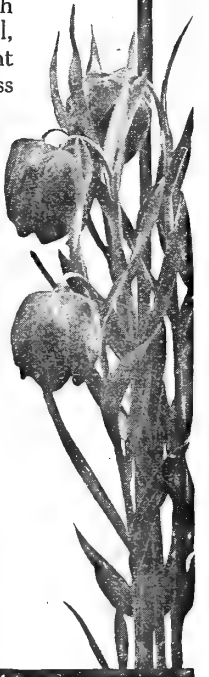
**E. Hendersonii** is delicate lavender with maroon center.

**E. citrinum** is light cream, with rich citron center.

**E. grandiflorum robustum** has the bright yellow of buttercups. Any of these three may be had in lots of 500 for \$7.50, 1,000 for \$12.50.

These are pictured in color in my catalogue. Other illustrations show Mariposa Tulips, Lilies, Ferns, and hardy plants. Ask for the **California Bulb Catalogue**.

My Perennial catalogue lists a great deal of hardy plants. There are Irises at popular prices, and the latest of Vilmorin's and Bliss's seedlings. Then there are the aristocrats of the family, including **Dominion** at \$25, and **Ambassadeur** and **Magnifica** at \$10.00 each. You'll find rock and alpine plants, and complete cultural notes. Ask for a copy of **Perennial Plants**.



**CARL PURDY**

Box 104

Ukiah, California



**RAIN WHEN YOU WANT IT**

**The Secret of Having a Late Garden  
And How to Save It From Frost**

THE secret is no secret at all. It's just one of those things that everybody knows and then forget they know it.

Water is the secret. Water *not after* your garden needs it, *but before*. Water, plenty of water, soaking right down to the very root ends. None of your surface watering. It's almost worse than no water at all. The top roots scald and the soil bakes. You know what that means.

Give your garden plenty of water with the Skinner System of watering and it will keep it growing weeks after other gardens are at a standstill and looking sorry. It's the only way to have a late garden that's worth having.

By attaching one of our Drum Oscillators so the spray will keep moving back and forth, Jack Frost can freeze ice without hurting your corn or tomatoes.

What we say is so, surely is so, or you send back the equipment and back will come your money. Portable Rain Makers 18 feet long for so little as \$9.75 waters 900 square feet.



**The Skinner Irrigation Co**

218 Water St., Troy, Ohio      286 Fifth Ave. New York



**DAHLIAS**

**Bolles Dahlia Brochures (Illus.)**  
Harvesting and Storage, Fertilizer and Large Blooms, Propagation and Breeding New Varieties (Double Number), Cultivation (Double Number).  
All Bolles Brochures are now 50 cents each.

**Everlasting Aluminum Tags**

Embossed, not printed; rustless. The sincere garden lover, the self-respecting and careful gardener, knows all his loved children by name. These tags add distinction to your garden. Tag your Dahlias, Roses, Glads, Shrubs, Trees, tools and tool box. Dates of setting shrubs and trees (so soon forgotten, or notes mislaid). Ten years hence—fifty years—tag clear and unhurt as day attached. Tag the children's plots and tools, each with the youngster's name. Abbreviate long names if possible. Type them, to avoid error, and on separate sheet. Keep a carbon copy. Two cents per tag. Add ten cents for packing and postage if order under half a dollar. Sample for four cents, stamps.

**Charlton Burgess Bolles**  
R.F.D. 3, Box 81 Media, Penna.



**IN AUGUST, PLANT  
EVERGREENS**

WE have over 800 acres full of the very choicest specimens of every popular variety. Our service department will gladly assist you in the proper selection to fill your individual requirements. This service entails no obligations whatever.

"Successful for over a century"  
**AMERICAN NURSERIES**  
Singer Building, New York



**FOR SALE**

**Private Collection of Peonies**

This collection of beautiful popular Peonies consists of 35 varieties, 350 plants, and was chosen for me some years ago by one of the former Presidents of the American Peony Assoc. The plants are 3 and 4 years old. Price very reasonable. Will sell in part or whole collection.

Erith N. Shoup      The Gardens      Dayton, Ohio

**Prindle HUMUS**

For the Price is the Best and Cheapest  
**Fertility Maker**

Unequaled for making new and keeping old lawns and gardens in condition. May be used at any time. Write for cultural directions.

\$5.00 for 5, 100lb. bags, f. o. b. Stanhope, N. J.

**H. B. PRINDLE, - - 70 E. 45th St., New York**



**HAVE YOU A  
CONSERVATORY?**

There is a certain prestige and distinction attached to the ownership of a Callahan Greenhouse, Roses and orchids in mid-winter—crisp head lettuce for the Christmas table—are a matter of course to those who own such an outdoor conservatory.

**Callahan  
Sectional Greenhouses**

are built to fit your needs and your resources. The size and the price varies, but the quality never changes. Shipped direct in completely finished unit sections, ready to assemble. Your gardener can erect one with only a few simple tools. You save on the low Factory-to-You prices.

Write at once for the Greenhouse Book. It illustrates all styles and shows how easily they are erected. **FREE BOOK**

**T. J. CALLAHAN CO.**  
908 S. Perry St. Dayton, Ohio

Also manufacturers of larger Greenhouses for Commercial Growers. If interested, ask for Commercial Catalogue.



**Did you attend the  
London, Ontario  
Peony Show?**

Illustrated booklet report of the Show now ready for distribution, and will be mailed free to all who request it. My latest price list on both Peonies and Irises will be included if you wish.

**LEE R. BONNEWITZ**

Washington Street

VAN WERT

OHIO

**The World's  
Choicest PEONIES**

Including all the New and Rare Varieties

Mrs. Edward Harding	\$100.00	Clemenceau	- - \$40.00
Le Cygne	- - - 20.00	Auguste Dessert	35.00
Kelways Glorious	- - 35.00	Renee Marie	- - 25.00
Kelways Exquisite	- 20.00	Candeur	- - - 15.00
Therese	- - - 6.00	Jeannot	- - - 30.00
Cherry Hill	- - - 25.00	Rosette	- - - 15.00
Martha Bulloch	- - 20.00	Laura Dessert	- - 12.00
Elizabeth A. Browning	10.00	Desire	- - - 20.00
Solange	- - - 8.00	Souv. de Louis Bigot	10.00
Mons. M. Cahuzac	- 4.00	Mme. Jules Dessert	7.50

Strong 3 eye roots, absolutely true, new list free.

**D. W. C. RUFF**

Buena Vista Gardens      St. Paul, Minn.

**CHOICE AND RARE  
PEONIES**

AT REASONABLE PRICES

SEND FOR LIST

**O. L. RINGLE, Wausau, Wis.**



**Increased Buying Power Is A Growth**

Increasing your buying power to-day is a growth, which depends upon keen scientific business methods as well as courage and hard work.

Our Motor Macultivator is as essential to this growth, as food is to a growing animal. We know that those who buy the Motor Macultivator will derive the greatest satisfaction in results obtained thru its use. It will pay for itself in increased production and saving in time. The Motor Macultivator will do it quicker and better, without any of the back-breaking drudgery that always accompanies hard work. Sold on an absolute money-back, try-out guarantee.

**THE MOTOR MACULTIVATOR CO.**  
1319 Dorr Street      Toledo, Ohio

## Dianthus Alwoodii

These new hardy garden carnations are a very attractive addition to our list of hardy plants. While the heaviest flowering period is in June, the plants supply a satisfactory number of flowers all through the summer. The plants are quite hardy even in our severe winters, but require good surface drainage, during winter and spring.



- Harold**  
Large double white.
- Jean**  
White with crimson center.
- Mary**  
Rose pink with darker center.
- Phyllis**  
Pale pink with light brown center. Very strongly scented.
- Robert**  
Semi-double old rose color. Free flowering.
- Special Offer to Garden Lovers**  
Strong young plants, 50c each, \$3.00 per doz. or one each of the five kinds for \$1.25 postpaid.

"Hardy Plants for the Home Garden" gladly mailed free on request.

W. A. TOOLE *Garry-nee-Dule* Baraboo, Wis.

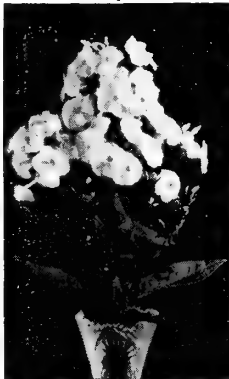
## HARDY PHLOX

Season is open again with their fragrance and beauty. I have over three hundred varieties.

Send for list

W. F. Schmeiske

Horticulturist and Hardy Phlox Grower  
State Hospital Station, Binghamton, N. Y.



## Evergreen Trees Never Take a Vacation!

PEOPLE who say, "You should come and see our garden in the summer time," are confessing an appalling ignorance of the possibilities of Firs and Cedars, Pines and Hemlocks.

It doesn't require patience nor a long life to enjoy evergreens obtained from Hicks Nurseries; you can get trees large enough for immediate effects and avoid all arduous, unnecessary waiting. Here are evergreens for all purposes, both decorative and practical:

	SIZE	EACH	PER 10		SIZE	EACH	PER 10
White Fir	3-4'	\$ 4.00	\$ 35.00	Jack Pine	8-10'	\$15.00	\$125.00
" "	6'	10.00		Mugho Pine	1x1'	2.00	17.50
" "	8-10'	25.00		Red Pine	6'	20.00	175.00
Nikko Fir (Japanese)	5-6'	6.00	50.00	Scotch Pine	6-8'	10.00	90.00
" "	8-10'	25.00		" "	8-10'	25.00	225.00
Japanese Cypress, green, golden and blue	1 1/2-2'	3.00	25.00	White Pine	6-8'	10.00	95.00
Colorado Blue Spruce	8-9'	40.00		" "	8-10'	15.00	125.00
Douglas Spruce	6-8'	15.00		" "	16-18'	45.00	
American Hemlock	3-4'	3.00	25.00	Japanese Yew, upright	5-6'	25.00	
" "	4-5'	5.00	45.00	Japanese Yew, flat form	2x3'	12.00	
Japanese Hemlock	3-4'	5.00	40.00	" "	2x4'	18.00	
Austrian Pine	6-7'	20.00	175.00	Spreading Yew	1x2 1/2-3'	8.00	70.00



### Large Trees That Give Shade Right Now

Oaks, Maples, and Lindens that are 20 to 25 feet high, with a broad spread of limb, may be obtained from the nursery in full leaf. They are dug up, packed, and replanted on your grounds before they become aware of the change. Keep them watered, and they're sure to live. No need to wait fifteen years, or even that many days for shade. We can ship large trees hundreds of miles and have them thrive.

Couldn't you use a few of these large trees, or can you afford to wait? We have smaller trees, too.

### HICKS NURSERIES

Box M Westbury, Long Island, New York

## Iris Special

ONE strong root each, Isolene, Caprice, Loreley, Princess Victoria Luise, Rhein Nixe, Victorine, Nibelungen, Lohengrin Princess, of Wales; by mail, \$1.75; express, \$1.50.

### PEONY SPECIAL

One strong root each, Felix Crousse, Mme. Boulanger, Jules Elie; Mad. E. Gaille, Albatre, Mons. C. Leveque; by mail, \$2.30; by express, \$2.00.

Write for our complete list of perennial seeds and plants for fall planting.

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**Black Leaf 40** Kills Aphis  
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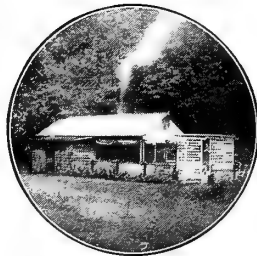
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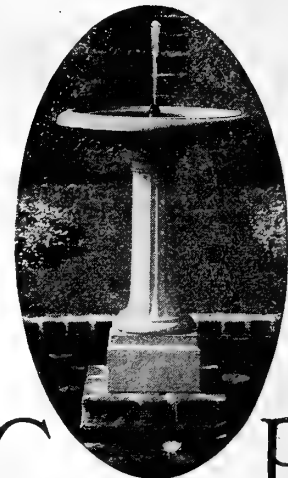
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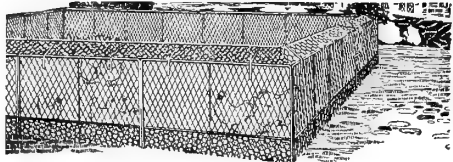
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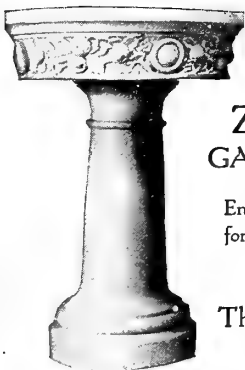
The best remedy known for green, black, white fly, thrips and soft scale. Easily applied—Effective.

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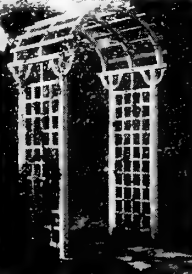
Refer to our "Advertisement" in the March Issue of this magazine, which will convey some idea of the various Home Attractions we manufacture.

In addition to PERGOLAS and ARBORS, and Garden Furniture, we can furnish attractive Lattice Fences, Sun Dials, Gazing Globes, Lawn-Umbrellas, Self-Watering-Flower-Boxes, also, Artificial Stone Bird Baths, Fountains and Flower Vases.

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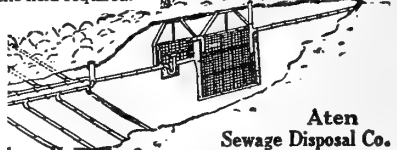
Secure all the sanitary comforts of a city building by installing an

**Aten Sewage Disposal System**

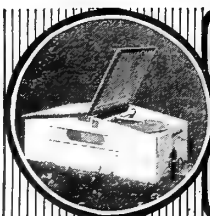
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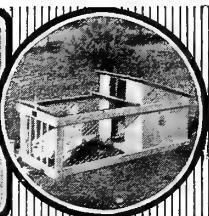
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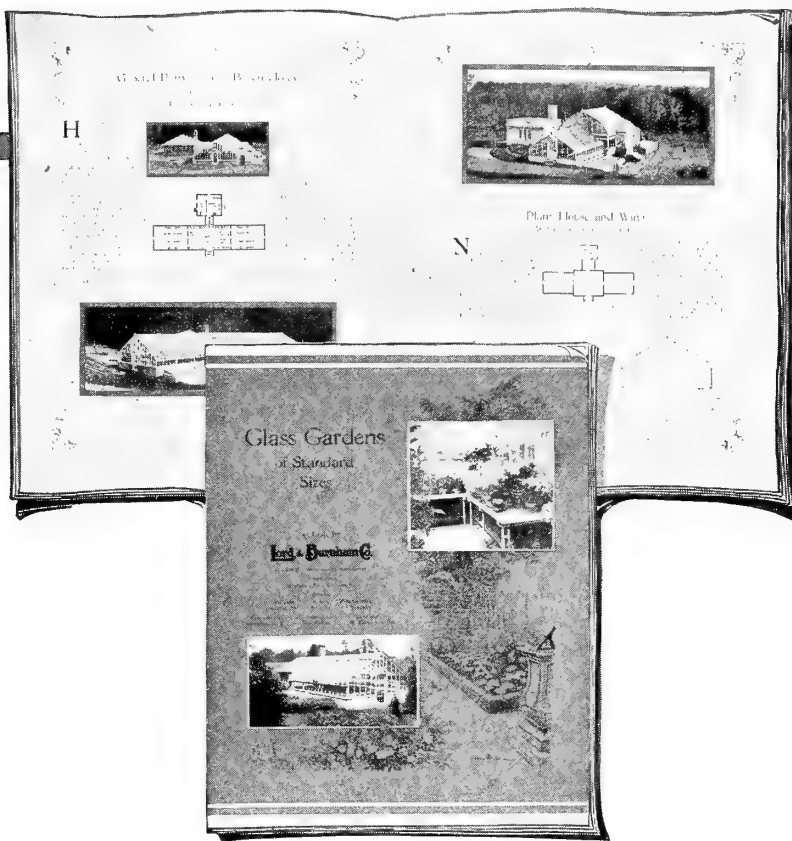


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EVERY NEED OF THE POULTRY FANCIER is met by Hodgson Poultry Houses. They are sturdy, weather-proof, vermin-proof, properly ventilated, easy to clean and move. Shipped in sections and can be erected in less

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With greenhouses as with autos and most other things, there are a certain few that are favorites.

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However, we have done it now.

Done it in a most attractive way that we are

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Five favorites are shown, among which, unless we are greatly mistaken, you will find just the greenhouse that best suits your needs and fits your pocketbook.

There are plenty of photos of both exteriors and interiors, besides plans and ample description.

So complete is it, that without any further ado, houses have been purchased directly from it.

Mayhap you will do the same.

You are most welcome to a copy of this new Glass Garden Catalogue.

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*Builders of Greenhouses and Conservatories*

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From Grower to Consumer

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5 Bulbs each of the above three varieties ( 15 Bulbs).....	\$ 2.50
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Clara Butt. 22 in. Extra-fine clear salmon-pink. Most distinct clear pink of all.....	\$ .65	\$ 4.25
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10 bulbs each of the above 12 named varieties ( 120 bulbs).....	5.50
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25 bulbs each of the above 12 named varieties ( 300 bulbs).....	16.50	
100 bulbs each of the above 12 named varieties (1200 bulbs).....	65.00	
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	DOZ.	100
Albo-pleno odorato (Double) Pure white flower very fragrant.....	\$ .60	\$ 4.00
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10 bulbs each of the above 12 named varieties ( 120 bulbs).....	8.00	
25 bulbs each of the above 12 named varieties ( 300 bulbs).....	16.50	
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**FALL 1922 CATALOGUE**—If you have not received our Fall Catalogue, please write for a copy. It gives some worth knowing facts about Dutch Bulbs, besides listing the rarer varieties of Tulips, Daffodils, Narcissi, etc., which as yet are not well known in American gardens. In order to secure the exact varieties you want for your next year's Dutch Bulb garden, it will pay you to make an early selection.

**OUR GUARANTEE**—We guarantee all our Bulbs, Roots and Plants to grow and to be true to name. We will replace any Bulb, Root or Plant found otherwise. We prepay all charges to your home if the order is accompanied by cash provided your address is in the following states: New York, New Jersey, Pennsylvania, Delaware, Maryland, Connecticut, Vermont, New Hampshire, Maine, Rhode Island, Massachusetts, and the District of Columbia.

**TERMS:** Our business is based on cash with order. If credit is desired, please furnish bank references. No credit below \$10.00.

*Be sure to send for our Fall Catalogue*

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