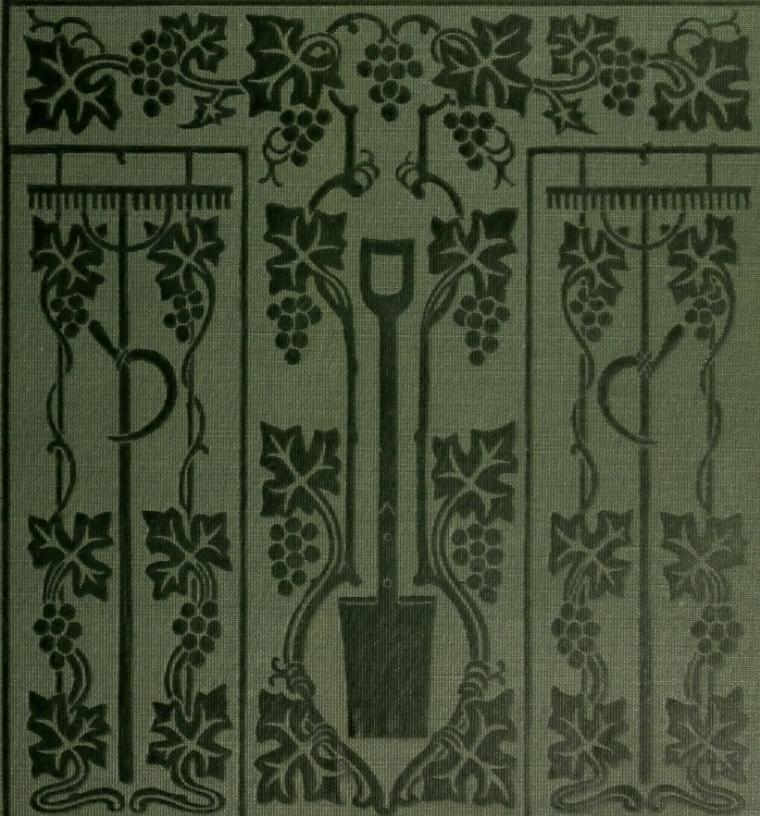


THE GARDEN MAGAZINE





9NA

7100

G 218

V. 3

1906

Hort.

642-13

(331-4. m.)

THE GARDEN MAGAZINE

*Devoted to Planting and Managing the Grounds About the Home
and to the Cultivation of Fruits, Vegetables and Flowers*

Volume III

February, 1906, to July, 1906



NEW YORK

DOUBLEDAY, PAGE & COMPANY

1906

Copyrighted, 1906, by
DOUBLEDAY, PAGE & COMPANY

INDEX TO THE GARDEN MAGAZINE

Copyright, 1906, by Doubleday, Page & Co.

Volume III. February, 1906, to July, 1906

An asterisk signifies that the article is illustrated

- Achillea, 145.
 millefolium, 135.
 tomentosa, 135.
 Acorus calamus, 137.
 Actea spicata, 135.
 Adam's needle, 136.
 Adonis vernalis, 135.
 Agapanthus, 27.
 umbellatus, 136.
 Ageratum, 300,* 304.
 Agave reptans, 135.
 Akebia quinata, 306.
 Allen, J. K., photographs by, 110.
 article by, 110.
 All the Spirea Worth Growing, 206*
 Alveolar, 27*
 Alpine Flowers of Easiest Cultivation, 133*
 Althaea rosea, 212.
 Alyssum, 139, 149.
 argenteum, 135.
 maritimum, 139, 141.
 saxatile, 135.
 Amaranthus caudatus, 140.
 "American gardens," 334.
 Ames, Oakes, photograph by, 323.
 Ampelopsis quinquefolia, 24.
 Anderson, J. A., article by, 230.
 Andromeda, 336, 338.
 floribunda, 136.
 polifolia, 338, 340.
 Anemone, 135, 210,* 212, 242.
 Canadensis, 134, 135,* 87.
 coronaria, 135.
 Japonica, 135, 210,* 211, 212.
 Pulsatilla, 135.
 St. Bridgid, 135.
 sylvestris, 135.
 Whirlwind, 135.
 Angell, H. E., photographs by, 132, 133, 138, 143, 144, 152, 153, 162, 211, 244-1, M., article by, 20, 71, 223, 330.
 I. M., photographs by, 20, 21, 32, 71, 72, 73, 74, 223, 224, 225.
 Annual flowers, how to get early, 82.
 Most Fragrant, 226.
 started in coldframe, 82*
 Anthers to quarters, 242, 306, 352.
 Anthracnose, 234.
 Ants, 352.
 Aphides, 150,* 151,* 352.
 Apples, dwarf, 13*
 spraying, 65*
 Apple Tree Pests, 36*
 worm, 36.
 Apricots, dwarf, 13*
 Aquatics in a tub, 78*
 Aquilegia Canadensis, 135.
 Arabis albidia, 135.
 Aristolochia macrophylla, 306.
 Armeria maritima, 135.
 Armature of lead, 66, 346, 348.
 Art of Growing Exhibition Chrysanthemum, 213*
 Arundinaria Fortunei, 272.
 Japonica, 270,* 272*
 Simoni, 272.
 Arundo Donax, var. macrophylla, 270, 271*
 Aries, hardwood, 117c.
 Asparagus, 61, 155.
 fertilizers for, 61, 129.
 flowers, 18*
 Asplenium Filix-foemina, 26.
 platyneuron, 25.
 ruta-muraria, 26*
 Trichomanes, 25*
 viride, 26.
 Aster, 27, 135, 139, 148.
 alpinus, 135.
 condifolius, 210, 211*
 disease, cure for, 166.
 grandiflorus, 210.
 Nova-Anglia, 135, 210, 212.
 pennsylvanicus, 210.
 Stokes', 135.
 trivertis, 210.
 Astilbe Japonica, 135.
 Azalea, 136, 306, 336.
 amena, 136.
 arborescens, 336.
 calendulacea, 136, 335.
 Canadensis, 136.
 Gandavensis, 136, 336.
 India, 136, 335.
 nudiflora, 136, 335, 340.
 occidentalis, 336.
 Pontica, 136, 336.
 Sinensis, 334,* 335.
 Vaseyi, 135.
 viscosa, 336.
 Baby's breath, 135, 139.
 Bachelor's button, 272*
 Backyard Gardens, 27* 28,* 90.
 Japanese, 27*
 Play-Garden with a Japanese Idea, 27*
 Bagging grapes, 232.
 Balloon vine, 139.
 Balsams, 27* 140.
 Bamboo, 272.
 Bambusa aurea, 272.
 Metalic, 272*
 nigra, 272.
 pygmaea, 272.
 Banding trees, 36.
 Barnes, P. T., articles by, 139, 155, 188, 270, 294.
 Barron, E. M., articles by, 143, 354.
 Leonard, articles by, 62, 130.
 L. and E. M., articles by, 158, 318*
 Bartonias, 139.
 B. B., article by, 196.
 Beans, 73, 155, 156, 283, 317, 330, 331,* 333.
 Beard-tongue, 135.
 Beauty in Garden Grasses, 270*
 Beavis, Walter R., article by, 27.
 photographs by, 27.
 Beckwith, Florence, articles by, 94, 226.
 photograph by, 94, 226.
 Bedding Plant Grown as a Tree, A., 142*
 Beds and borders, 148,* 149,* 300*
 Beet, 73, 155, 156, 283,* 317, 331, 333.
 Beetles, 151, 234, 246.
 Beginner's Garden, 10,* 11*
 Begonia, 27, 149, 242, 304.
 Bellflower, 27,* 135, 138, 212.
 Berry moth, 234, 350.
 Best Hardy Plants of the Heath Family, The, 334*
 Better Stakes or None, 340.
 Bettis, J. R., article by, 228.
 photographs by, 228.
 Bird's foot trefoil, 135*
 Blackberries, 327.
 Blanching celery, 332.
 Blanket flower, 135.
 Bloodroot, 134.
 Blue bells, 135.
 flag, 137.
 lotus, 132.
 sage, 135.
 spirea, 145.
 bog garden, 80.
 Boltonia, 240.
 Book Reviews.
 Manual of the Trees of North America, 112.
 The Vegetable Garden, 112.
 Bordeaux mixture, 65* 346, 348.
 Border, hardy, 212*
 Borers, 36,* 38,* 244, 265.
 elm bark, 244.
 Bouté, E. M., photograph by, 14, 81.
 Brachycome biflorifolia, 139.
 Braunton, Ernest, articles by, 241, 248, 284.
 Bridge, the garden, 110*
 Brown, Caroline M., article by, 88.
 Brugmansia as a House Plant, 194.
 Brunella grandiflora, 135.
 Bud worm, 36.
 Bughane, 211.
 Bugle-weed, 135.
 Building of a Hothead, The, 22.
 Bulbs, 61, 96, 188,
 and roots, keeping, 242.
 to School Children, 182.
 Butterbach, N., article by, 166.
 Cabbage, 151, 155, 156, 283, 317, 331, 332, 333.
 Caladium, 304.
 Calendula officinalis, 140, 141.
 Callifloria's Reminder, The, 104, 160, 248.
 Calliopsis involucrata, 135.
 Callistephus borensis, 139.
 Calluna vulgaris, 335,* 336*
 Campanulas, 246.
 Carpatica, 135.
 persicifolia, 212.
 Camptosorus rhizophyllus, 25,* 26.
 Candytuft, 135, 140, 141.
 Cane-borer, 234, 329.
 Cannabis, 188, 304.
 Canning, E. J., photographs by, 82, 133.
 article by, 82.
 Canterbury bells, 246.
 Caper substitute, 88.
 Carbolic-soap wash, 244.
 Cardinal flower, 80.
 Flowers as Annuals, 180.
 in the garden, 86.
 Cardiospermum Halicacabum, 139.
 Carnations, 148.
 for Cut Flowers Next Winter, 392, 294.
 Carrots, 72, 156, 317, 330,* 331, 332, 333.
 Caryopteris Mastacanthus, 146.
 Case-bearers, 36.
 Castor-bean, 330.
 Catch-fly, 140.
 Cattleya labiata, 42,* 44.
 Cauliflower, 155, 156, 333.
 Celery, 155, 156, 317, 331,* 332,* 333.
 Centaurea Cyanus, 141.
 gymnocarpa, 138.
 moschata, 139.
 Ceratostigma plumbaginoides, 135.
 Cerastium tomentosum, 134, 135.
 Chafers, 346.
 Chamaedaphne calyculata, 338, 340.
 Channon, F. E., photographs by, 106, 108.
 Chard, Swiss, 73.
 Cheapest Kind of Hothead, The, 76*
 Cheese-cloth Protection for Garden Seeds, 168.
 Cheilanthes lanosa, 26.
 Chelone Lyoni, 186*
 Cherry branches, 19*
 Chickweed, 135.
 Child's Garden, 27*
 Chionodoxa gigantea, 135*
 Chrysanthemum rose, 212.
 Chrysanthemum Indicum, 212.
 albiguum, 138, 212.
 Chrysanthemum, 138, 141, 148, 212, 213,* 214,* 215,* 216,* 217,* 274,* 275,* 280,* 298.
 disbudding, 215, 274*
 Pompon, 280,* 281*
 Cimicifuga foetida, 211.
 Clark, W., articles by, 118, 300*
 Clarkia elegans, 140, 141.
 Classified Planting List for Annuals, 139.
 Vegetables, 155.

INDEX TO THE GARDEN MAGAZINE

- Clematis paniculata, 27, 206.
 Clematis, 340.
 acuminata, 340.
 alfinifolia, 338.
 Cliff-brake, 25.
 Clintonia borealis, 26.
 Coal ashes, 92.
 Colling moth, 36.
 Colobus, 135.
 Coix Lacryma-Jobi, 272.
 Colchicum autumnale, 135.
 Coldframe, 9,* 82,* 129, 133.*
 Coleus, 304.
 Columbine, 115.
 Timopot, 214.
 Conard, Henry S., article by, 78, 321.
 photographs by, 322.
 Confections, 225.
 Convolvum celsatum, 135.
 Constant Succession of Hardy Flowers, A., 145.
 Convolvularia majalis, 134, 135.
 Coogan, W. P., photograph by, 27.
 Cooking utensils, 145.*
 Coopers Drummonds, 273.
 pedunculata, 273.*
 Copper sulphate solution, 65.
 Coral bells, 135.
 Corynephorus rostrata, 135.
 tinctoria, 159.
 Corn, 21,* 73, 155, 156, 283, 317, 330,*
 331, 332, 333, 344.
 Cornell Countryman, photograph by, 144.
 Experiment Station, photographs by,
 73, 329.
 Cornflower, 141.
 Cortaderia argentea, 270.
 Cosmos, 27, 342.
 Until November, 118.
 Cosmos, 202.*
 Cover Crops, 70.*
 Craig, John, photographs by, 66, 277, 330.
 W. N., article by, 142.
 Cranesbill, 135.
 Crocus, autumn, 135.
 Crocuses, 81.*
 Cropping aids fertility, 333.
 Crown imperial, 145.
 Cucumber, 21, 74, 155, 156, 283, 317, 330,
 331.
 tree, 267.
 Culture of Magnolia, The, 292.
 Cuphea elegans, 137.
 Cut-worm, 230, 306.
 Cypripedium alternifolium, 28,* 136.
 vine, 139.
 Cypripedium, Edwards, 62.*
 Fairreanum, 62,* 63.*
 spectabile, 94.*
 Daboeia polifolia, 336.*
 Daffodils, 61.*
 Dalails, 147, 188.
 Daisy, 138, 212.
 Swan River, 159.
 Darlington, E. D., article by, 325,* 342.
 Day lilies, 135.
 Delphinium formosum, 210, 212.
 grandiflorum, 212.
 Deutzia, 130, 151.*
 Device for Reaching Over the Border, A.,
 110.*
 Desfontaines, 239.
 Dianthus barbatus, 212.
 Caryophyllus, 211.
 Chinensis, 139.
 latifolius, 211.
 Dianthus Florida, 246.
 Digitalis ambigua, 135, 211, 212.
 lanata, 212.
 purpurea, 212.
 Dribbudding, 215,* 274.*
 Disgraceful "Annual Cleaning," The, 92.
 Dodecatheon Meadia, 135.
 Dodging the Cutworm, 230.
 Dolichos Lablab, 139, 140, 141.
 Domesticating Fringed Gentians and Cardinal
 Flower, 80.
 Drain pipe rollers, 106.*
 Drake, F. B., article by, 168.
 Dryopteris Goldiana, 25.
 marginalis, 25.
 spinulosa, 25.
 Dugmore, A. R., photos by, 213, 214, 215,
 217.
 Dunbar, John, article by, 206, 244, 334.
 Dwarf fruit trees, 12, 13,* 14.*
 Eames, E. A., article by, 15.
 photographs by, 17.
 Earlier and Better Annual Flowers, 82.*
 Earthworms, killing, 84.
 Easiest Way to Can, The, 354.
 Edelweiss, 134, 153, 162.*
 from seed, 162.
 Edgings, 136.*
 Eggplant, 155.
 Eichornia crassipes, 78.
 Eight Varieties of Apples on One Tree, 52.
 Eldred, Arthur, photograph by, 266.
 Endive, 332.
 Eriochthonia Ravenna, 270.
 Erys carnea, 336.
 herbacea, 336.
 longifolia, 335,* 336.
 vagens, 336.
 Erigeron grandiflorus, 210.
 Villarsii, 210.
 Eupatorium caelestinum, 135.
 Evening primrose, 135.
 212,* 273.
 Everlasting, 140.
 Esau good-bear, 135.
 Fast-growing Vine, The, 240.*
 Elett, E. P., article by, 36,* 244.
 photograph by, 38.
 Fern, 25,* 26,* 27, 246.
 Fertilizers, 68,* 69, 158, 196.
 Fertilizing the Home Garden, 196.
 fruit garden, 68.*
 Festuca glauca, 271.
 Fifty-two Lily Blossoms from a Hopeless
 Bulb, 96.*
 Flax bulbiferus, 25,* 26.
 fragilis, 25.*
 Firecracker plant, 137.
 Fleabane, 310.
 Fletcher, S. W., articles by, 68, 220, 232,
 276, 327.
 photographs by, 68, 69, 70, 220, 221,
 212, 276, 277, 327, 328, 329.
 Flowers, 150.
 Flower That Blooms in Three Days, A.,
 273.*
 for bulb bed, 352.
 Flowering Shrubs from April to November,
 139.*
 Forcing Large Branches — A New Idea, 19.
 twigs, 18,* 19.*
 Twigs in the Home Window Sill, 18.*
 Forget-me-not, 134, 153, 212.
 Forsythia, 130.*
 Foxglove, 212, 246.
 Frazer, Samuel, article by, 75.
 French, Allen, article by, 280.
 photographs by, 280, 281.
 Frost, 50, 205.
 protection from, 275.*
 Fruit garden, 232.
 on Walls, 14.*
 Fruit trees, 276,* 277,* 279.*
 dwarf, 12,* 13,* 14.*
 Fuchsia, 27.
 Fullerton, E. L., article by, 22.
 photographs by, 22.
 Fumigating frame, 288.*
 melons, 288.*
 paper, 290.
 with Tobacco, 290.
 Fungicides, 65, 346, 348.
 Funkia, 27.
 cordifolia, 135, 137.
 lanifolia, 135, 137.
 ovato, 137.
 subcordata, 135, 137, 212.
 Gaillardia, 140, 145.
 aristata, 135.
 pulschella, 140.
 Garbage, 92.
 Garden Enemies, 288.
 Garden in June, 10.*
 Garden in July, 11.*
 August, 11.*
 irrigating, the, 282.*
 Planted after July Fourth, A, 330.*
 Rock, 133.
 tools, 106, 110.*
 Garden publications, 112.
 Gardener's Reminder, 9, 61, 129, 205, 265,
 317.
 Gardens, 10,* 152,* 153,* 154.*
 plan of vegetable, 74.
 prairie, 282.*
 Gathering Nasturtium Pods for Seed or
 Pickling, 88.*
 Gayest Flowers for Late Fall, The, 280.*
 Gentians, fringed in the garden, 86.
 Geranium, 137, 149, 304.
 sanguineum, 135.
 maculatum, 135.
 pratense, 135.
 Gerard, J. N., article by, 240.
 photograph by, 240.
 Golden Bell, 148, 188, 242.
 Globe amaranth, 140.
 Glory-of-the-snow, 135.*
 Gloxinias, 84.
 Gonophallium Leontopodium, 134, 135, 162.
 Godetia, 140, 141.
 Golden bells, 130.
 glow, 340.
 tuft, 135.
 Goldflower, 212.
 Gomphrena globosa, 140.
 Good News for Late Beginners, 205.
 Gourds, 218,* 219.*
 Gowran, C. C., photograph by, 223.
 Grafted apple tree, 52.*
 Grafting, 52,* 61.
 Granger, Edith, article by, 164.
 Grape, 27, 220, 232, 350.*
 arbor, 220.
 leaf-folder, 348.
 leafroller, 346.*
 root-worm, 348.
 planting, 221.
 training, 221.
 vines, 149.
 Grass, The unmovable, 34.*
 Grasses, 270,* 271.*
 Graves, Henry, photographs by, 62.
 Nathan R., article by, 76.
 photographs by, 76, 77, 131, 132, 207,
 210, 213, 214, 215, 216, 266, 270,
 300, 302, 325, 326, 335, 336.
 Greenhouse for \$100, A 12 x 19 ft., 176.*
 Greensmith, Herbert, article by, 186, 210.
 Growing Alpine Plants from Seeds and
 Cuttings, 178.
 China Asters Free from Disease, 166.
 Edelweiss from Seed, 162.*
 Growing Gourds for Fun, 218.*
 Quality Potatoes, 158.
 Glycerium argenteum, 270.
 Glycerium saccharosum, 270.
 Gypsophila muralis, 139.
 paniculata, 135.
 Haight, A. B., photograph by, 279.
 Harry Ruelius, 135.
 Hamamelis Virginiana, 131, 152.
 Heavy Owner of a Hotbed, The, 92.
 Hardy border, 145,* 186.
 Flowers for the Suburban Garden,
 212.*
 Hartley, Charles A., article by, 230.
 Hawk moth, 348.*
 Hawkweed, 135.
 Hawks, 90.
 Heath, 335,* 336.*
 Heather, 235,* 336.*
 Heating the window garden, 15,* 16,* 17,*
 Helianthus, 211.
 Helichrysum bracteatum, 140.
 Heliotropium Manglieux, 140.
 Heliotropes, 142,* 204.
 Heleborus niger, 212.*
 Hemerocallis, 138.
 flava, 212.
 Heuchera sanguinea, 135.
 H. H. H., article by, 96.
 photograph by, 96.
 Hibiscus Moscheutos, 80, 212.
 Hieracium aurantiacum, 135.
 Hill, W. H., photograph by, 78.
 Holyhock, 212.
 Home-made contrivances, 166, 228.*
 Straw Mats for the Hot-beds, 23.
 Horned violet, 135.
 Hotbeds, 22,* 76,* 77,* 92, 129.
 House Plants from Seeds, 84.
 How I Became an Orchard Grower, 42.*
 to Avoid the Spring Rush and Have
 a Better Garden, 129.
 to Get Any Plant You Want, 194.
 to Get Penny Packets of Seed, 100.
 to Make Your Garden Cost You Nothing,
 317.
 to Use a Planting Plan, 146.*
 We Sold 80,000 Bulbs to School
 Children, 182.
 Humulus Japonicus, 139, 140.
 Hyacinths, 27.
 bean, 27, 139, 140, 141.
 Hydrangea, 27, 131, 132,* 145.
 Hypericum Moserianum, 212.
 Iberis amara, 140, 141.
 sempervivens, 135.
 Ice-plant, 141.
 Iceland Poppy, 135.
 Ideal Edging Plants for Walks and Flower
 Beds, 136.*
 Immortelles, 140.
 Impatiens Balsamina, 140.
 Important Indoor Jobs, 104.
 Vegetables for July Planting, 332.*
 Insect trap, 38.
 Insecticide, 36, 38, 64, 65, 112, 151, 290.
 Insects, 36, 38, 150, 230, 233, 234, 288,
 290, 299, 349, 355.
 That Robber the Melon Patch, Some,
 288.*
 Investigator's Club, 98.
 Ipomoea Bon-nos, 139.
 fistulosa, 352.
 hederacea, 140.
 purpurea, 139.
 Quamoclit, 139.
 Iris, 27, 137, 145, 213, 242.
 Germanica, 212.
 lasiogata, 27, 242.
 Iris pallida, 212.
 Sibirica, 137.
 rectorum, 135.

INDEX TO THE GARDEN MAGAZINE

- Iris, versicolor, 137.
 Xiphium, 137.
 Irrigating, 282.
- Jacob's ladder, 28, 135.
 Japanese hop, 139, 140.
 Jasminum nudiflorum, 130.
 Jensen, Jens, article by, 136.
 Johnson, E. R., article by, 15.
 Johnston, J. F., photographs by, 148, 149.
 article by, 148.
- Kaleidoscopic Series of Small Gardens, A., 148.*
- Kalmia angustifolia, 334,* 335.
 glauca, 335.
 latifolia, 136, 335.
 polifolia, 335.
- Kerosene emulsion, 64, 65,* 151, 244.
 Killing the bugs, 36,* 112.
 Knap-weed, 138.
 Knight, Hattie L., article by, 84.
 Kniphofia uaria, 138.
 Kohlrabi, 20, 21.*
 Kudzu vine, 240.*
- Labrador tea, 338.
 Lady's Slipper, 94.*
 Lagurus ovatus, 271.
 Lantana, 304.
 Large-flowered Chrysanthemum Out-
 doors, 274.*
 Larkspur, 211,* 212.
 Lathyrus odoratus, 139, 141.
 Laurel, 136, 334,* 335.
 Lawn, 61, 117-27.
 seed mixture, 117-c.
 Lawson, K. W., article by, 170.
 Leadwort, 135.
 Leather cap, 338.
 leaf, 340.
 Leaves for leaf-mould, 92.
 Ledum latifolium, 338.
 Lemon verbena, 148.
 Leontopodium alpinum, 135, 162.
 Lettuce, 73, 155, 156, 283, 284, 317, 318,*
 319,* 320,* 333, 344.
 Leucothoe Catesbaei, 334,* 338.
 Liatris pycnostachya, 145.
 Lilies, 18, 130.*
 Lilies, the best spotted, 30.
 unspotted, 30.
 the World Really Needs, 29.*
 Lilium auratum, 96, 212.
 candidum, 29,* 30, 212.
 elegans, 30.
 longiflorum, 30.*
 speciosum, 30.
 superbum, 212.
 testaceum, 30.
 tigrinum, 30.
 Lily, 28,* 212, 272.
 Annunciation, 29.*
 Bermuda, 30.*
 bulbs from Seeds, 29.*
 gold banded, 96.*
 Madonna, 29.*
 of-the-Nile, 27.
 of-the-Valley, 134, 135.
 of-the-valley-bush, 338.
- Lime haters, plants which are, 136.
 sulphur wash, 36, 64, 112.
 Recipe for, 112.
- Limy soil plants for, 136.
 Little Known Vegetables Worth Growing,
 20.*
- Lobelia cardinalis, 80,* 180.
 sylvatica, 210.
 Lotus, 79.
 curculatrus, 135.
 Long-entangled, 135.
 Love-lies-bleeding, 140.
 Lysimachia nummularia, 246.
- McCollom, William C., article by, 12.
 photographs by, 13, 14.
 McCoin, G. E., photographs by, 282, 283.
 Viola, article by, 282.
- McDonald, J., photograph by, 138.
 MacElwee, Alexander, article by, 180.
 McFarland Co., J. H., photographs by,
 133, 134, 135, 268, 269, 292.
 Madia elegans, 140, 246, 304.
 Magnolia, 266,* 292.*
 All the Worth Growing, 266.*
 acuminata, 267.
 Alexandrina, 266.
 cordata, 269.
 cyathiflora, 266.
 Fraseri, 267.
 Galtii, 269.
 Soulangiana, 266.
 foeniculifera, 269.
 glauca, 267, 268.
 glauca, published as M. macrophylla,
 269.*
 grandiflora, 267, 268,* 269.
 hylecutha, 268.
 Kobus, 267, 268,* 269.
 Lennei, 266, 268.*
 macrophylla, 268.
 macrophylla, published as M. glauca,
 269.*
 Norbertiana, 266, 292.*
 odora, 266, 267.
 pumila, 267.
 Soulangiana, 266, 268.*
 speciosa, 266.
 spectabilis, 266.
 stellata, 267,* 268.*
 superba, 266.
 Thompsoniana, 268.
 tripetala, 267, 268.
 triumphans, 266.
 Watsoni, 268.
 Yulan, 266.*
- Making of a Water Garden, The, 78.*
 new varieties, 29,* 80.
- Manure, barnyard, 69,*
 green, 68.
 Manuring trees, 69.*
 Maple flowers, 19.
 March Flowers without a Greenhouse,
 18.*
- Marigold, 140, 141.
 Marsh-mallow, 80, 212.
 Mason, A., article by, 32.*
 Matteuccia Struthiopteris, 25.
 Matthiola, bicoloris, 226.*
 incana, 139, 141.
 Maze flower, 226.
 Meadow cranebill, 135.
 Melon, 284.
 Mentzelia Lindleyi, 139.
 Mertensia pulmarinoides, 135.
 Mesembryanthemum crystallinum, 141.
 Michelmas daisies, 135, 211.*
 Michelia, 269.
 Mignonette, 27,* 148, 226.
 Mildew, 234.
 Milfoil, 135.
 Mimulus moschatrus, 140.
 Mimulus Sinensis, 136, 271.*
 Mintflower, 135.
 Mitchellia, 266.
 Mitella diplycha, 26.
 Miller, Louise Klein, article by, 100, 182.
 Wilhelm, article by, 29, 266.
- Moneywort, 246.
 Montgomery, Jr., A., article by, 238.
 Moon flower, 139.
 Moore, Clement, article by, 42.
 photograph by, 42.
- Mordaunt Laura French, article by, 18.
 photographs by, 18.
- More Garden Problems That We Want to
 Solve, 236.
- Morning glory, 27,* 139, 140.
 Mosnat, H. R., article by, 34
 photograph by, 34.
 Moss pink, 135.
 Most Fragrant Annual Flowers, The, 226.*
 Mountain arser, 135.
 spurge, 135.
- M. T. R., article by, 10.
 photographs by, 10, 11.
- Murray, Thomas, article by, 162.
 Musk, 140.
 Muskmelon, 155, 156.
 Myosotis palustris, 134, 135, 212.
- Narcissus, 145.
 Nasturtium, 88,* 139, 140, 141, 190.
 seeds for pickles, 88.
- Nemophila insignis, 140.
 New Remedy for the Chicken Nuisance,
 A., 90.
 Type of American Rose, A., 238.
- Nickerson, Abbie S., article by, 86.
- Nicotiana glauca, 27.
 decurrens, 27.
 Tabacum, 140.
 Nitrate of soda, 117-c.
- Not All Sentiment and Roses, 265.
 Nothing Ventures, Nothing Have, 50.
 Norelides and varieties, 194.
- Nymphaea Amazonum, 323.
 ampla, 323.
 carulea, 323.
 Capensis, 323.*
 Deroniensis, 79.
 elegans, 323.
 flavo-virens, 322, 324.
 gigantea, 322.
 Lotus, 79.
 Mrs. C. W. Ward, 321.
 Pennsylvania, 322,* 323.
 pulcherrima, 323.
 stellata, 322.
 Stuhlmannii, 324.
 Surtervantii, 79.
 sulphurea, 324.
 Wm. Stone, 321, 322.*
 Zanibaricensis, 321, 322,* 323.*
- Oenothera amena, 140, 141.
 Missouriensis, 135.
- Old Palm Re-discovered, An, 284.*
 Omion, 73, 136, 283.
 culture, new, 92.
- Opuntia Rafinesquii, 135.
 Orchard Fruits in a Rented Garden, 12.*
 Orchard, T. S., article by, 178.
 Orchards, 276,* 277,* 279,*
 Orchids, 42,* 62,* 61,* 94.*
 Order early, 61.
 Osmunda Claytoniana, 25, 26.
 spectabilis, 25.
- Peonia officinalis, 212.
 albiflora, 212.
 tenuifolia, 212.
- Pachysandra procumbens, 135.
 Palafoxia, 140.
 Palms, 204.
 Palm, growing, 284.*
- Pampas grass, 270.
 Pandanus, 352.
 Pansy, 137,* 139, 140, 141.
 Papaver nudicale, 135, 212.
 Rhexas, 140.
 Parasitic fly, 348.*
 Parsi green, 151.
 Parrot's feather, 79.
 Parley, 72, 155, 320.*
 Parsnips, 156, 283.*
 Pasque flower, 135.
 Path, 138.*
 Pea lice, 150.
 Peas, 20,* 21,* 72, 155, 156, 283, 317, 333,
 334.
 Peaches in soil, 68.*
 Pear, dwarf, 13.*
 slugs, 66.
 Pellea atropurpurea, 25.
 Pennistemon, 366.
 longitymus, 136, 271.
 Ruppellii, 271.
 villosus, 136, 271.
- Pentstemon diffusus, 135.
 barbatus, 135.
 Peonies, 145, 212.
 Pepper, 155, 283, 325,* 326.*
 bush, 338.
 growing quality, 326.
- Periwinkle, 135, 138.*
 Perennials for Late Summer Flowers, 186.*
 protected, 149.
 retarding, 210.
- Petroleum emulsion, 64.
 Petunia, 141, 304.
 Phalaris arundinacea, 137, 271.
 Phegopteris polypodioides, 25.
 Phlox, 27, 149, 141, 145, 212.
 avonara, 135.
 divaricata, 135.
 Drummondii, 140, 141.
 paniculata, 21.
 subulata, 133, 135.
 Phyllis Scodoprius, 26.
 Phyllanthus aures, 272.
 nigra, 272.
 viridi-glaucescens, 272.
- Phylloxera, 232.
 Phytol, 244.
 Pickles, 222.
 Pictorial Diary of a Beginner's Garden, A.
 10.*
- Pierce Co. C. C., photographs by, 284, 286.
 Pieris floribunda, 136, 334,* 336.
 Japonica, 136, 338.
 Mariana, 338.
- Pink, 139.
 Pinxton flower, 340.
 Pistol case bearers, 36.
 Plan, backyard garden, 27.
 Hardy borders, 145,* 147,* 212.*
 radial garden, 148.*
- Plantain lily, 135.
 Plant breeding, 242.
 food most needed, 79.*
 Planting water-lilies, 80.
 Plant lice, 150,* 151.*
 Plants, month of flowering, 135.
 Plaster for land, 352.
 Playwoden, 27.
 grandiflorum, 138, 145, 212.
 Plumbago Larpetens, 135.
 Poisons, 151.
 Poker plant, 138.
 Potemnomium caruleum, 28.
 reptans, 135.
 Polystichum acrostichoides, 25.
 Braumi, 25.
- Polypteris Hookeriana, 140.
 Pond, F. H., article by, 52.
 photograph by, 52.
- Poppies, 27, 148, 164.
 as Cut Flowers, 164.
 Poppy, 140, 212.

INDEX TO THE GARDEN MAGAZINE

- Poppy mallow, 135.
 Portable Tomato Trellis, A, 228.*
 Window Forcing Box Heated by Gas A. 15.*
 Portulaca grandiflora, 134, 140, 141.
 Posts for trellises, 12.
 Potatoes, 75, 75* 143* 144* 156, 158, 160, 283; 330*
 baking 144.
 in Eight Weeks, 75*
 Planting, 158.
 sprouting tray, 75*
 steaming, 144.
 sweet, 156.
 Powell, I. L., article by, 213.
 Punny willows, 18.*
 Prepare for Fall and Winter Vegetables, 342.
 Preserves, 223, 225.
 Prickly pear, 135.
 Propagating water-lilies, 324.
 spires, 244.
 Protection from frosts, 276.*
 winter, 276.
 Pruning berry bushes, 50, 129.
 errors in, 132.
 Fruit trees, 13, 129.
 grapes, 129, 221* 222*
 raspberries, 328.*
 shade trees, 242.
 shrubs, 20, 129, 132.
 242.
 vines, 61.
 Pteridium aquilinum, 25.
 Pueraria thunbergiana, 240.*
 Pumpkin, 15, 284.
 Purves, B. P. C., article by, 176.
- Quality Lettuces for the Home Garden,**
 318.
 Potatoes for the Home Table, 143.*
- Radial garden plan, 12.*
 Radish, 156, 282,* 283,* 284, 317, 330, 332,* 333.
 Rain lily, 273.*
 Rantankerosus Brood of Aphides, The, 128.*
 Ranunculus acris, 135.
 Raspberries, 327,* 328,* 329,*
 Blackberries and Dewberries, 327.*
 Reading Course on Pruning, A, 50.
 Recent discoveries, 284.*
 Record Breaking Nasturtium, A, 190.*
 Red craneshill, 135.
 spider, 215.
 Reed, 200.
 Renard garden, 12.*
 Repairing the Lawn, 117-17.
 Reseda odorata, 139, 226.
 Rhodanthe, 140.
 Rhododendron beds, 334.
 Rhododendrons, 335.*
 Rhodora, 335.
 Rhubarb, 61, 129.
 fertilizer for, 61.
 Rhus Cotinus, 131, 132.*
 Robinson, N. W., photographs by, 23.
 Rock cress, 135.
 Rockery, 24,* 133.*
 Rock-loving Ferns in the Garden, 24.
 Robin, Hedwig, photograph by, 176, 178.
 Rollers Made from Drain-pipes, 106.*
 Romance of a Lost Orchid, The, 62.*
 Rose, 27, 238, 265.
 buds, 346.
 chafes, 329.
 garden, 340.*
 moss, 140, 141.
 Rosemary, 338.
 Rot, 234.
- Round-up of the Garden Peppers, A, 325.*
 R. T. F., article by, 273.
 Ruellia ciliosa, 135.
 Rue, wall, 26.*
 Rutabaga, 342.
- Sage, 137.
 Salvia, 27, 135, 137, 304.
 Sanderson, E. Dwight, articles by, 64, 150, 288, 346.
 photographs by, 64, 67, 150, 151, 288, 346, 347.
 Sanguinaria Canadensis, 134.*
 San Joe Scale, remedies for, 64.*
 Santolina chamaecyparissus, 137.
 Saurostomum, 27.
 Saw-fly, 329.
 Saxifrage, 135, 136.*
 Scale, oyster shell, 64.
 scuffy, 64.
 Schizoonium discolor, 207.*
 Schizopetalon Walkeri, 226.
 School gardening, 100, 182.
 Scirpus cernuus, 271.
 Scott, James I., article by, 133, 174, 332.
 Seakale, 61.
 Sea lavender, 135.
 Sea pink, 135.
 Secrets of Growing Good Sweet Peas, The, 300.
 Sedums, 135.
 Seed, penny packets of, 100.
 Self-hill, 135.
 Seeing Out the Summer Bedding Plants, 300.
 Seven Delights of March, 104.
 Shady Plants, Plants for, 246.
 Shasta daisy, 145.
 Shooting star, 135.
 Shrubs, 242.
 Silene Armeria, 140.
 Silver-tuft, 135.
 Small gardens, 148.
 greenhouse, 176.*
 Smokebush, 131, 132.*
 Snapdragon, 148, 149.
 Sneezeweeds, 211.
 Sneezewort, 212.
 Soil, 82, 84, 333.*
 Some Suggestive Gardens, 152.*
 Sowing Sweet Peas for Succession, 172.*
 Speedwell, 135.
 Spencer, James H., article by, 172.
 photographs by, 170, 172.
 Spider worts, 27.
 Spinach, 155, 317, 331, 333, 344.
 Spikegrass, 272.*
 Spirea, 27, 130,* 206,* 244.
 sibirica, 207.* 209.
 Anthony Waterer, 208.
 arguta, 207.
 arifolia, 207.*
 Billardi, 209.
 bracteata, 208.
 Bumalda, 208.
 callosa, 208, 209.
 Cantonensis, 208.
 China, 208.
 Douglassi, 209.
 Japonica, 208.
 Lemeana, 207.*
 Menziesii, 207.*
 omnis, 208.*
 retundifolia, 208.
 Thunbergi, 206,* 207.
 tomentosa, 209.
 Van Houttei, 131,* 207,* 208.
 Spleensort, 24.*
 Spray Grapes Three Times in July, 346.*
 Spraying apparatus, 64,* 65,* 67.*
 cooling moth, 65.*
- Spraying grapes, 350.*
 lime-sulphur wash for, 112, 129.
 Paris green for, 66.
 pears, 66.
 profits of, 66.
 roses, 129.
 rust, scab and rot, 65.
 the Home Garden, 64.*
 Squash, 74, 155, 156, 282,* 283, 284, 317, 330, 331.
 Stachys lanata, 135.
 Stagger bush, 338.
 Stakes, 340.
 Starting Cannas and Dahlias, 188.
 Statice latifolia, 135.
 Stocks, 139, 141, 226.*
 Streptia cyanca, 135.
 Stone crop, 135.
 Strawberry bed, care, 61.
 Straw mats, 23.*
 Strip Between the Sidewalk, 34.*
 Succession of flowers in window garden, 15.
 hardy flowers, 145.
 Suggestions, 98, 236.
 Suggestive Gardens, 152.*
 Superior Home-grown Grapes, 220.*
 Sure Way to Have Grapes Free from Blemish, 232.
 Sweet alyssum, 137, 141, 145.
 flag, 137.
 pea, 139, 141, 148, 170,* 172, 174.
 Peas Without Growing, 174.
 sultan, 139.
 William, 27, 135, 212.
 Swiss chard, 20.*
 Syringa chinensis, 130.
 vulgans, 130.*
- Tabor, I. G., article by, 146,* 212.*
 plans by, 147,* 212.*
 Tagetes patula, 141.
 Taliuma purpurea, 267.
 Tarweed, 140, 246, 304.
 Taylor, H. G., article by, 145,* 274.*
 photographs by, 145, 274, 275.
 plans by, 145.
 Tecoma radicans, 266.
 Tender Day Blooming Water Lilies, The, 321.*
 Ten-Minutes-a-Day-Garden, A, 71.*
 Texas University of photographs by, 273.
 Thalictrum aquilegifolium, 135.*
 Things Worth Trying, 304.
 Thuya occidentalis, 136.
 Thyme, 135.
 Thymus serpyllifolium, 135.
 Tiarella cordifolia, 26.
 Tibbets, H. C., photograph by, 78.
 Tickseed, 135.
 Tiger lily, 145.
 Tillering, fertilizer by, 69,* 277.*
 the Home Orchard, 276.*
 Toad lily, 135, 211.
 Tobacco, 27, 140, 151, 290.
 Tomatoes, 20, 21,* 74, 155, 156, 223,* 224,* 225,* 230, 284, 331.*
 as a Wall Fruit, 230.
 training, 223.*
 trellis, 228.*
 Torenia Fournieri, 140.
 Tree Names, 246.
 Trees and shrubs, 50, 292.*
 Trees in 609, 69.
 Trellis, 231,* 222,* 228.*
 Tricorys hirta, 135, 211.
 Tropaeolum, 139, 140, 141.
 Truck, photographs by, 9, 15, 16, 61, 79, 80, 88, 130, 136, 137, 138, 142, 152, 153, 154, 186, 206, 208, 209, 267, 271, 272, 302, 334, 335.
 Truth About Early Orders, The, 61.*
 Tulips, 27.
 Turnips, 151, 156, 331, 333, 333-342.
 Lurie head, 186.*
- Two crops, 146.
 Ingenious Window Gardens, 15.*
- Umbrella plant, 28, 136.
 tree, 267.
 Uniola latifolia, 272.*
 Unusual Tomatoes for Preserves and Pickles, 223.*
 U. S. Dept. of Agriculture, photographs by, 30, 318, 319, 320, 321.
- Vegetable Garden, An 8 x 30, 32.*
 Garden in the Semi-arid Region, A, 282.*
 Vegetables, 71,* 72,* 73,* 74,* 155, 158, 330,* 332,* 342.
 late plantings, 330.
 storage of, 104, 342.
 worth growing, 207,* 211.*
 Verbenas, 27, 300,* 304.
 Vermont Experiment Station, photographs by, 29, 138.
 Veronica incana, 135.
 Viola minor, 135, 138.*
 Vines, 240,* 266.
 Viola coronata, 135, 138.*
 tricolor, 140, 141.
 Virginia creeper, 24, 304.
- Wallflower, 248.
 Wall-rue, 26.*
 Walking fern, 25.*
 Walks, 61.
 Washingtonia filifera, 284.*
 robusta, 286.*
 Water gardens, 78,* 79,* 80.*
 hyacinth, 78, 79.
 Water-lilies, 79, 322,* 323.*
 from seed, 324.
 under glass, 324.*
 Water-poppies, 79.
 Webster and Albee, photographs by, 207.
 Weed, C. M., photographs by, 65.
 seeds, killing, 84.
 Weeks, Grace L., article by, 190.
 photographs by, 190.
 Weigela rosea, 246.
 White oil soap, 64, 129, 151.
 Whiteock, Gertrude L., article by, 19.
 photographs by, 19.
 Wild Lady's-Slipper Tamed, The, 94.*
 Wild rosemary, 340.
 Wilcox, E. E., article by, 218.
 photographs by, 218, 219.
 Willows, pussy, 18.*
 Windflower, 134, 135.*
 Window garden, 15,* 16,* 17,* 84, 294.
 Wash-bone flower, 140.
 Witch hazel, 131, 132.*
 W. M., article by, 201.
 Wonderful Things You Can Do With a Hobbed, 9.*
 Wood anemone, 135.
 ades for garden, 61, 117-17, 166.
 ripening, 278.
 Wood-Ward, article by, 90.
 Woodsia Ivensis, 26.
 obtusata, 26.
 Wootton, G. A., article by, 24.
 Woundwort, 135.
- Xeranthemum annuum, 140.
 Yarrow, 135.
 Yucca filamentosa, 136.
- Zenobia speciosa, 338.
 Zephyranthes, 273.
 Zinnia, 141.

February
1906

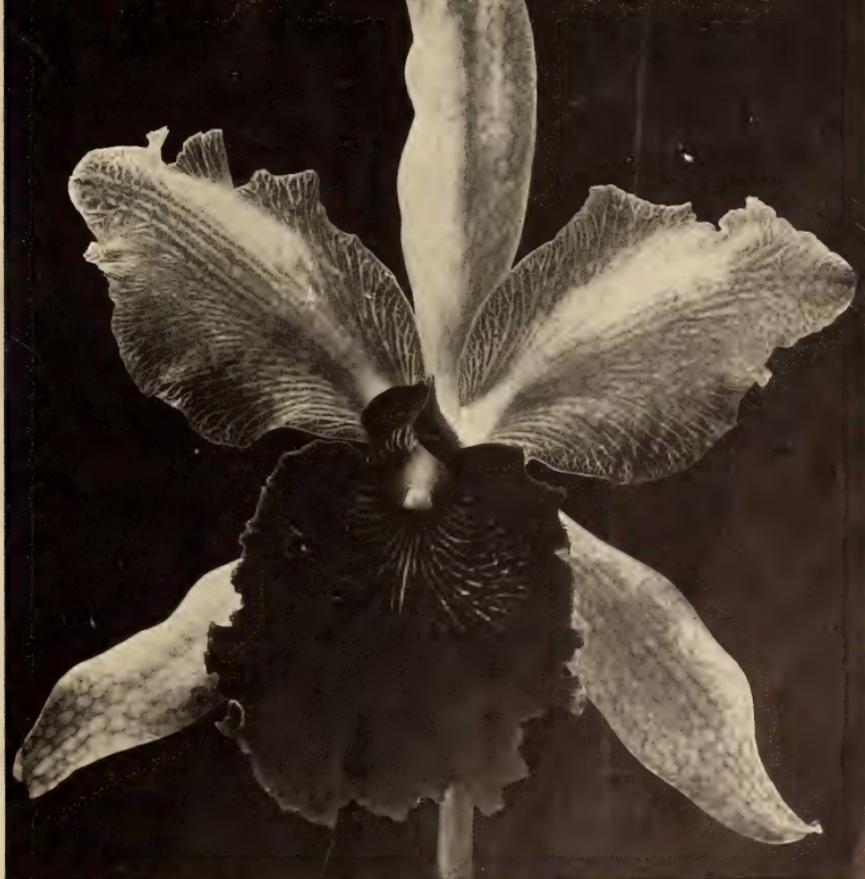
Dwarf Fruit Trees
New Lilies We Need
Orchids Without Expense

Uncommon Vegetables
Making Hotbed Mats
Fern Rockeries

March Flowers
Window Gardens
A Garden for Children

10c.
\$1.00 per Year

THE GARDEN MAGAZINE



COUNTRY LIFE
• IN AMERICA •



DOUBLEDAY PAGE & CO
133-135 & 137 EAST 16TH ST. • NEW YORK



THE WORLD'S
• WORK •



American Beauty Roses

And
Other Fine
Varieties for
the Home Garden

DIRECTIONS HOW TO GROW THEM IN YOUR OWN YARD

THE SITE. Sunny and free from the close neighborhood of trees. Southern exposure desirable.

THE SOIL. A deep loam is best. Well drained ground is essential.

THE BED. Dig to a depth of about fifteen inches—fill with mixture three parts rich loam (found under the sod in any pasture) and one part well rotted cow manure. Mix thoroughly—so that the roots of roses are not in direct contact with the manure. Then wet the roots of the rose bushes thoroughly before planting—place bush in position and tramp soil down thoroughly with the feet.

NOW COMES THE IMPORTANT POINT. Don't plant weak slips that come from hot houses and will not stand the change to the open air. **Plant good, strong mature rose bushes.** Unless you do—all the directions in the world will do no good.

WATERING. Necessary in dry weather—and copious; a gallon to a plant. Break up soil frequently. In mid-summer cover bed with two inches of old manure to keep the moisture in.

CUTTING. Pick as freely as possible—with long stems—to a joint at least two eyes below flower.

How You Can Make Success Sure—Plant Mature Rose Bushes—Use the Heller Method

Now as to what constitutes a rose in perfect condition for planting, and to give you the proper information on this we must tell you the different steps through which we take them before we ship them out for garden culture, and to show you how different these plants are from the many thousands of little rose slips which are yearly sent out for fifteen to twenty for a dollar, and which have caused more discouragement to the amateur than anything else, for success with them, or even a moderate amount of success, is impossible. The cuttings are then put in sand in especially prepared beds where they are left for several weeks to form roots. They are then taken out and potted into soil in very small pots. Now they are in the condition of the "twenty for one dollar kind"—the little slips you may have bought before—but we do not stop here. We put them into a larger pot, three inches in diameter, and leave them in these for several weeks. They are then taken and planted out in the field where we leave them about a year, and in the case of some varieties even two years. They are then again taken up and placed in the cool greenhouses, where they are kept in a partially dormant condition. Now they are ready for you—ready to go ahead and grow quickly and produce hundreds of beautiful flowers.

Our new catalog will give you much interesting information—much that we would like to tell you here, but cannot for want of space. It will also tell you all about the many new American and foreign kinds, and give you information as to how to design your garden and your rose beds.

HELLER BROTHERS
961 SOUTH MAIN STREET
NEW CASTLE, IND.

TIFFANY & CO.

Comparison of Prices

Tiffany & Co. always welcome a comparison of prices and an examination of their merchandise. This applies to their entire stock of rich as well as inexpensive jewelry, silverware, watches, clocks, bronzes, fine pottery, glassware and other artistic objects, on all of which their prices are as reasonable as is consistent with the standard of quality and workmanship strictly maintained by the house

Upon advice as to requirements and limit of price, Tiffany & Co. will send photographs or careful descriptions of what their stock affords, free of all obligation to purchase

To persons known to the house, or to those who will make themselves known by reference from any national bank or responsible business house, Tiffany & Co. will send a selection from their stock

Fifth Avenue New York

and 37th Street

Formerly at Union Square

Tiffany & Co. 1906 Blue Book

will be sent to intending purchasers without charge. This catalogue contains

no

illustrations

It is a compact little volume of 530 pages and over 6,000 suggestions of jewelry, silverware and choice artistic objects suitable for wedding or other gifts, with the minimum and maximum prices at which they may be purchased

Mail Order Department

Tiffany & Co.'s removal to their new building, Fifth Avenue and Thirty-seventh Street, has enabled them to materially increase the scope and facilities of their Mail Order Department. Patrons unable to visit the establishment are assured expeditious service and the same careful attention as is given to purchases made in person

Tiffany & Co. are strictly retailers. They do not employ agents or sell their wares through other dealers

Twenty Years' Experience

In close practical touch with large and small estates in all parts of the country enables us to offer to every owner of Grounds and Gardens our special help in Designs and suggestions for the improvement of such, and with greater economy and saving than can be secured in any other way. We study to meet the individual requirements of each place, and supply both Plans and Material our practical suggestions enable you to plant your Lawn, your Garden or any other portion of your place, with a great saving, and we ask you to write us and we will help you, giving our time to accomplish something for you in a practical and painstaking fashion. We send men of experience at any time at nominal rates to advise upon every leading question of Landscape work. Drainage, House Location, Roadways, Fences and old-fashioned Gardens and every feature of Landscape work, we give close and careful attention to. We will refer to many hundreds of private properties which we have brought to perfection. Our Nurseries are among the largest in the United States, and we secure but one profit in supplying our clients, selling at lowest rates possible. We offer every known hardy form of



Trees, Shrubs, Rhododendrons, Evergreens, Herbaceous Plants, Vines, Dahlias, Bulbs, Etc.

at prices which, after you investigate, will attract your close attention. If you have any problem to solve; any disease you are willing to combat, and will be glad to have you write us. From all parts of the country we have had inquiries in past seasons and with good results, and we invite you to contact with those who wish aid of an expert character. WRITE US, FOR CATALOGUES, which are the most valuable printed

THE SHADY HILL NURSERY CO.

155 Milk Street, Corner Broad

BOSTON, MASS.

No. 12 Double Wheel Hoe



Planet Jr. Tools

No. 4 Combined Drill



are known and used the world over, because they make Planting, Hoeing and Cultivating easy. Our new 1906 Catalog describes and illustrates Drills, Wheel Hoes, Harrows, Riding Cultivators (one and two row), Sugar Beet and Orchard Cultivators, etc. No. 4 Planet Jr. is the most popular combined tool made. A perfect seeder, wheel hoe, weeder, cultivator and plow. Sows seed in continuous

rows or in hills 4, 6, 8, 12 or 24 inches apart. No. 12 Double Wheel Hoe will enable you to hoe every day two acres of onions or any similar crop and do it faster and better than three men with hand hoes. It runs either astride or between the rows and kills all weeds. Our 1906 Catalog shows many garden

tools of all kinds. Write now for our FREE ILLUSTRATED CATALOGUE. S. L. ALLEN & CO., Box 1108 S., Philadelphia, Pa.

HEALTHY, NATIVE-GROWN FRUIT TREES

ORNAMENTAL TREES, VINES, SHRUBS, ETC. It pays you many times over to take pains to get reliable and healthy stock. The well-known Dwyer Stock can always be relied on, for it is all selected stock, grown on our home grounds and receiving constant expert inspection. **WE GUARANTEE** that every specimen is true to name, free from disease, and sure to grow. We also do landscape gardening. Write now for our FREE ILLUSTRATED CATALOGUE. T. J. DWYER & COMPANY, Box 4, Corwells, N. Y.



Special Offer - Baby Rambler Rose

(THE PERPETUAL EVERBLOOMING DWARF CRIMSON RAMBLER)

EVERYONE will want this phenomenal new rose this year. Blooms outside all summer and inside all winter. Never without flowers, throwing truss after truss of huge bouquet-like clusters of forty to sixty flowers each. Individual flowers and trusses larger and brighter crimson than Crimson Rambler. Hardy as an oak. Insect-proof.

SPECIAL OFFER of this Gold Medal Rose at this low price to get my catalogue of 700 varieties of seeds and 200 kinds of bulbs in hands of flower lovers. PRICES: STRONG, GUARANTEED PLANTS, 35¢ EACH, 2 FOR 50¢, 5 FOR 90¢. POSTPAID TWO-YEAR-OLD PLANTS, 45¢ EACH, 3 FOR \$100.

MISS MARY E. MARTIN, FLORAL PARK, NEW YORK

PAEONIES

A choice collection of 200 varieties to select from. The best in the world. Lists free. E. J. SHAYLOR, Wellesley Hills, Mass.

NEW, RARE AND BEAUTIFUL PLANTS

From the World Over

Choice Palm, Ferns, and all Decorative stock, Tropical Fruit and Economic Trees, Bamboos, Orange Tree, Camellias, etc. Established in 1883. Send for unique and interesting plants. Our naturally grown plants are much superior to catalogue stock in every way. Write for mail, express and freight to all parts of the world, every week in the year. REASONER BROS., ONECO, FLORIDA

REASONER BROS., ONECO, FLORIDA

BIG PRIZES

TO SEED USERS

WRITE for our interesting 1906 Catalogue of Seeds for the garden, farm and lawn, and read pages 2, 3 and 4. Get the book and read it—the quicker the better for you. It tells how you can secure

\$1 Worth Vegetable FREE or Flower Seeds

These are our specialties of unusual value, offered with the view of acquainting seed users with their rare merit. Read the full details of these striking offers in our free catalogue before you invest a penny in seeds.

Our catalogue tells the plain truth about seeds and quotes prices on every variety you can possibly want.

It's worth every body to get the benefits these splendid offers.

\$1,000,000 GRAIN GROWERS' CONTEST

If you plant wheat, corn or oats, read page 2 of the free catalogue and learn how you can compete for the greatest prize ever offered, grain growers. By all odds the most colossal prize competition ever conceived in this or any other country.

OUR CATALOGUE IS FREE

Address just like this

NORTHROP, KING & COMPANY

211 Northrup-King Bldg., Minneapolis, Minn.

CALIFORNIA SEEDS are the best. WHY?

Because California's superb growing climate and soils insure a plumper seed with more vitality, and hence a more abundant and more uniform yield. We guarantee the highest quality. Be convinced of this fact by sending a trial order for our most popular selections of

- SURE-GROWING SEEDS**
- 6 Pkts. California Nasturtiums, all named, three tall and three dwarf varieties. **25c.**
 - 6 Pkts. California Sweet Peas, the finest named, fall weight. **25c.**
 - 6 Pkts. California Wild Flowers, such as Escholtzia, Tidy-Tips, Cream Cup, etc. **25c.**

The Three Collections only 50c. together with a copy of our pamphlet giving cultural directions, descriptions and illustrations of California flowers and vegetables, together with your special list of strong field-grown

CALIFORNIA ROSES
F. GILMAN TAYLOR SEED CO.
Box 185 GLENDALE, CAL.

SPRAY It Is Worth While

Buy a machine that does the work right—that cleans its strainer automatically with brush, mixers and mechanically so that foliage is never burned, but gets its due proportion of spray.

Empire King, and Orchard Monarch do these things. They throw finest spray, are easiest to work and they never clog. You ought to know more about them. Write for instruction book on spraying, formulas, etc. **Mail free.**

FIELD FORCE PUMP CO.,
No. 18 Hill Street, Elmira, N. Y.

A THRIFTY GARDEN

whether large or small, needs proper tools for seeding and cultivating. We make garden implements of all kinds, a tool for every purpose.

MATTHEWS' NEW UNIVERSAL

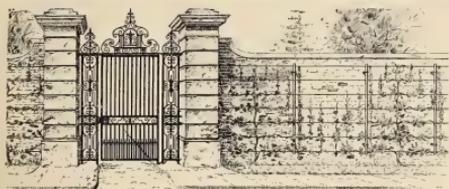
HAND SEEDERS AND CULTIVATORS singly or combined with Hoes, Plows, Rakes, Markers, etc. Over 20 styles. Free Booklet giving description, prices and valuable information mailed to any address. Send for now.

Garden Tools for Every Purpose
AMES PLOW CO., 20 Market Street, Boston, Mass.

Ferry's Seeds are best because 20 successful years have been spent in their development—half a century of expert care in making them superior to all others. We are specialists in growing flower and vegetable seeds. 1906 Seed Annual.

D. M. FERRY & CO.,
Detroit, Mich.

FERRY'S SEEDS



DWARF FRUIT TREE TRELLISES ARBORS, GARDEN ARCHES, FENCES, GATES

The Espaliers illustrated here are the most perfect form of supports for trained fruit trees and vines. They combine neatness with the requisite strength and give the garden a trim appearance.

The Wall Espalier is constructed of steel upright supports, on which are bolted arms with pointed ends so that they can be driven into the seams of the wall between the bricks, thus insuring rigidity and strength. The wires are kept taut by means of ratchets at the ends of the Trellis.

The Trellis illustrated below is built with heavy galvanized anchor posts and pipe top rail. The same construction as in the Wall Espalier is arranged for keeping taut the wires.



Send for our illustrated catalog No. 29 describing these in detail, also our Wrought Iron and Wire Fences, Entrance Gates, Tree Guards, Poultry Runs, Stock Paddocks, etc.

THE ANCHOR POST IRON WORKS 15 CORTLANDT ST. NEW YORK CITY

Five New Vegetables

which are offered in

Dreer's Garden Book For 1906

DREER'S
EARLIEST
CLUSTER
TOMATO



Early Model Beet. A beautiful globe shape variety, rich blood red and matures very early. Pkt., 20 cts.; oz., 15 cts.; 1/2 lb., 40 cts., postpaid.

Dreer's Aristocrat Sugar Corn. The sweetest of all. Ears large and mature early. Pkg., 20 cts.; pt., 30 cts.; qt., 50 cts., postpaid.

May King Lettuce. Heads delightfully crisp and tender; quick growth, good for forcing or opening ground. Pkg., 20 cts.; oz., 30 cts.; 1/2 lb., \$1.00, postpaid.

The Harbinger Pea. An English variety which is very dwarf but produces large pods in abundance. Pods are very tender and sweet. Pkt., 10 cts.; pt., 33 cts.; qt., 55 cts., postpaid.

Dreer's Earliest Cluster Tomato. The earliest and best extra early variety. Produces fruits in immense clusters and the quality is excellent. Pkt., 15 cts.; 1/2 oz., 30 cts.; oz., 50 cts.; 1/4 lb., \$1.50, postpaid.

We will send postpaid one packet each of the above five grand vegetables for 40 cts., and also to all who order any of the above seeds a copy of

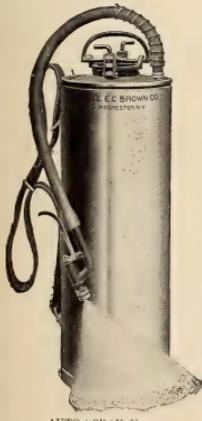
Dreer's Garden Book for 1906

A handsome book of 224 pages, with six colored plates of Vegetables and Flowers and containing the most complete list of SEEDS, PLANTS, BULBS, etc., ever offered. It will also be sent free to all applicants who mention this magazine.

HENRY A. DREER

714 Chestnut Street, Philadelphia, Pa.

The One Perfect Spray Pump

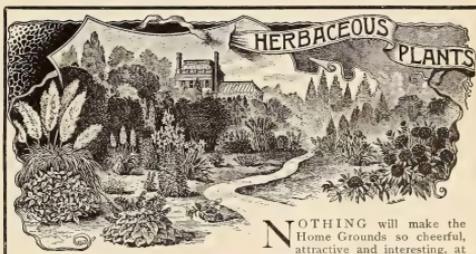


AUTO-SPRAY No. 1

for hand work. Free your trees and vines of injurious insects by use of the Auto-Spray No. 1, and the yield of apples, peaches, cherries, pears, grapes, currants, etc., will be largely increased. The Auto-Spray No. 1 is a 4-gallon cylinder of brass, 2 feet high and 7 inches in diameter, to which is attached a three-ply extra quality rubber hose with nozzle. Inside the brass cylinder is a solid brass air pump, simple in construction and practically indestructible. Just a few strokes of the piston before starting out compresses enough air in the cylinder to force out through the nozzle all the solution when the valve is open. Our patent valve is called the Auto-Pop, and with it the operator absolutely controls the amount of solution being used, at the same time automatically keeping the nozzle clean so it can't possibly clog.

We manufacture the largest of hand or power pumps in America—embracing everything from hand atomizers to power sprayers for use on largest trees. Let us send you our free catalog and a copy of the most comprehensive spraying calendar ever issued.

E. C. BROWN & CO., 34 Jay Street, Rochester, N. Y.



NOTHING will make the Home Grounds so cheerful, attractive and interesting, at low cost, as Hardy Herbaceous Plants, yielding as they do, a wealth of flowers of an almost endless variety of form and color from early spring until late autumn—not only during the first year but for many years—from a single planting, and increasing in beauty as the years pass by. They flourish in almost every soil, need but little care, and it requires no special knowledge to succeed with them. That those who have never ordered of us may, at a small outlay, learn of the excellence of my Hardy Herbaceous Plants, I offer the following special collections by mail post-paid, all well-developed plants which will bloom freely the first season:

- | | |
|----------------------------------------------|-----------------------------------------------------|
| 12 Double Hollyhocks, all different \$1.00 | 10 Day Lilies, no two alike \$1.00 |
| 12 Hardy Phlox, no two alike 1.00 | 5 Columbine, no two alike ..... .50 |
| 13 German Iris, choicest sorts 1.00 | 8 Foxgloves, no two alike ..... .50 |
| 10 Hardy Pink, choicest varieties 1.00 | 6 Hardy Sunflowers, no two alike ..... .50 |
| 12 Hardy Chrysanthemums, named 1.00 | 6 Rudbeckias, no two alike ..... .50 |
| 6 Larkspurs, no two alike ..... .50 | 6 Veronicas, choice named 1.00 |
| 12 Hardy Asters, no two alike 1.00 | 10 Hardy Grasses, 3 kinds, two of a kind 1.00 |
| 6 Japanese Anemones, no two alike ..... .50 | 16 Kitchen Perennials, 3 kinds ..... .75 |

¶ All are choice named varieties. I will send the 16 collections by Express for \$10, purchaser paying charges. ¶ My special catalogue of Hardy Herbaceous Plants, a beautiful book of 50 pages, which truthfully describes and illustrates a most complete assortment of these charming flowers (over one thousand varieties), is replete with information useful to all interested in floriculture; free by mail for the asking.

J. T. LOVETT, LITTLE SILVER, NEW JERSEY

Poultry, Kennel and Live Stock Directory

Information about the selection or care of dogs, poultry and live stock will be gladly given. Address INFORMATION DEPARTMENT, THE GARDEN MAGAZINE, 133 E. 16th St., New York

GEDNEY FARM POULTRY YARDS

S. C. Buff Orpingtons White Wyandottes S. C. Black Minorcas

Yards stocked with birds of the most noted prize-winning strains in America. Old and young stock for sale, of all varieties for breeding or exhibition. 2,000 to select from.

FRANK W. GAYLOR, Manager, White Plains, N. Y.

Are you willing to give four pairs of pure

PURE-BLOOD HOMER SQUAB BREEDERS a trial? If so send us a five-dollar bill and we will forward four pairs of our famous Hesters. This trial order will convince you of the quality of our stock. As it will be impossible to order at the present low price when the spring season opens we will ship you one pair of Hesters, all orders received before March 31st at the following low price: 12 pairs, \$15.00; 25 pairs, \$30.00; 50 pairs, \$57.00; 100 pairs, \$110.00; 200 pairs, \$200.00. Terms: Cash on delivery for a beautifully colored Homer, or one extra good shape or producing qualities, we can assure that we will take care of our orders and give absolute satisfaction, at a price below the regular.

Our White Wyandottes have again been winners during the show season just closed. Should you purchase in a need of a good Trio, Male bird, or a few Hens or Pullets, we can serve you. This is the best time to order for you for hatching purposes, as it will insure prompt delivery when desired. Write for our free literature of our various strains. *Let us know what you wish and we shall be pleased to furnish all the information desired.*

FREE WHITE POLTRY CARDS

STEWART & LOEBER,

Office, 177 Walnut Street, Milwaukee, Wis.



Greider's Fine Catalog

of Prize-Winning Poultry. This book is printed on separate Beautiful Colors and is larger than ever. Contains **FREE COLORED POLTRY CARDS**.

It illustrates and describes to varieties of poultry, ducks, geese, pigeons, etc. It shows, least equipped poultry yards and houses—how to build houses; care for diseases and all kinds of information indispensable to poultry keepers. Send for this book and you will receive it free.

W. F. CRIDER, 21 REEMS, PA.

"The Breed that Lays is the Breed that Pays"
Single Comb **White Leghorns**
are the greatest layers known. We are the largest breeders in the world of this desirable popular variety. It is the best for home use. A customer in 1904 bought two sixties from our special pens and raised from them a stock that won first prize at the National Show in 1905. Our stock will win prizes for you in the hottest competition. Our raising list for 1906 gives many names that set our farm and birds. We want you to have a copy of this book. Send for it today. It is free.

WHITE LEGHORN POULTRY YARDS CO., 3 Moskey St., Waterville, N.Y.

SHOEMAKER'S BOOK ON PULTRY
and Almanac for 1906 contains 99 pages, with many fine colored "popular" plates. It is the best of its kind. It is a safe guide to beginners, and valuable to all poultry raisers. We teach you how to make your own popular varieties. Write for a copy of our book for 25 to 50 per cent on the investment. Individual attention given each order. Write for a book and we will make poultry pay. **COLUMBIA SCHOOL OF POULTRY CULTURE, 124 Harvey Bldg., Waterloo, N. Y.**

LEARN POULTRY CULTURE
We can teach you thoroughly, successfully. Our original, personal correspondence course of instruction is interesting, practical, and profitable. A safe guide to beginners, and valuable to all poultry raisers. We teach you how to make your own popular varieties. Write for a copy of our book for 25 to 50 per cent on the investment. Individual attention given each order. Write for a book and we will make poultry pay. **COLUMBIA SCHOOL OF POULTRY CULTURE, 124 Harvey Bldg., Waterloo, N. Y.**

WM. COOK & SONS

Originators of all the Orpington Fowls

Box 33, SCOTCH PLAINS, N. J.

If you want to keep the best fowls you must keep Orpingtons, and if you want the best of these you must send to their originators, who naturally have the best. Try for the largest winners wherever we exhibit.

Illustrated catalogue, 70 pages, 30 cents to cover postage.
ORPINGTON POULTRY JOURNAL, 3 Cts. yearly, 6 Cts. Inspection of farms cordially invited. Trains met. Advice free.

Eggs in Winter
Your hens will lay freely when they are properly housed and have the right food. Write for our free **Illustrated Poultry Supply Book** that tells about our "Vigor" Foods, Cyphers' Incubators and Brooders and other Poultry Supplies.
Johnson & Stokes 217-219 Market Street Philadelphia

YOUR LUCKY STAR

never brought you greater success than will **STAR Incubators and Brooders**. They make poultry raising profitable, easy and certain. Sold on a guarantee that makes you safe. Free catalog tells why. Write. **STAR INCUBATOR CO., 682 Church Street, Rosend Brook, N. J.**

EYESTONE INCUBATOR
has "success" stamped all over it. You'll know why when you learn how it's built and operated. New catalog tells why and how. Free. Write for it today. **THE EYESTONE-ACILLING CO., Box 610, Easton, Pa.**

TURN Green Bone INTO Greenbacks
By feeding your hens green bone cut with the modern **Bone Cutter**. Cuts hard or soft bones, meats, vegetables—quicker, better, easier than any other. Our 30 day's free trial offer will prove it. Interesting book free. **E. C. Stearns & Co., Box 2, Syracuse, N. Y.**

BEEES FOR FERTILIZING BLOSSOMS

If you raise fruit, vegetables or flowers, you cannot obtain the best results without bees to fertilize the blossoms. They pay well in honey with little care. A booklet on managing bees mailed for 10 cents. Catalog free. My business is furnishing bees and Apiarian supplies. Visitors welcome at my Apiaries. Our Italian bees are not cross.

I. J. STRINGHAM, 105 Park Place, N. Y. APIARIES, GLEN COVE, L. I.

SPRING LAWN FERTILIZER

Sheep manure is unequalled for top dressing the lawn in early spring. Spread on while the ground is still frozen, the early spring rains will wash in the fertilizing elements ready for the young roots immediately after they start. There is no danger of carrying in weed seeds if sheep manure is used.

10 lbs., 35c; 50 lbs., \$1.00; 100 lbs., \$1.50; per ton, \$25.00
CAIRNSURVY FARM, New City, N. Y.

Sheep Manure Kiln Dried and Pulverized. Best known fertilizer for lawns or garden. Large barrel full (more than a wagon loads of ordinary manure) freight prepaid east of Denver, \$4.00. No weeds. No odor. **Burnham Stock Farm, Union Stock Yard, Chicago.**

The Only Fertilizer that will Satisfy You
Blatchford's Garden Fertilizer
BLATCHFORD'S CALF MEAL FACTORY, Wauegan, Ill

IMPERIAL ICE PLOW
Best and Cheapest of its Kind. A Labor and Time Saver. **\$12.00 to \$20.00 Net.**
Send for Snow-Plow and Ice Tool Circular

J. S. WOODHOUSE, 191 and 195 Water Street, New York

Flowers and Roses
are the best. *Always on hand in stock.* Plants mailed to any point in the United States. Cash orders guaranteed. Over 20 years' experience. **Flower and Vegetable Seeds a specialty.** A premium with every order.

NEW GUIDE TO ROSE CULTURE
for 1906, including new varieties of America. 115 pages. Mailed FREE. Describes over 1,000 varieties. Tells how to grow them and all their details. **THE BINGEE & OSWARD CO., West Grove, Pa.**

STARK FRUIT BOOK
shows in NATURAL COLORS and accurately describes 245 varieties of fruit. Send for our liberal terms of distribution to planters—**Stark Bros., Louisiana, Mo.**

Seedcutters for SEEDS, BULBS, PLANTS, CACTUS
Everbearing Crimson Turkey Rhubarb. **Special** 30 varieties Cactus and Succulents for \$1.00. 12 plants of Crimson Winter Rhubarb for \$1.50. Mail Order: packet seeds: Shasta Pansy, 1 packet Good Luck, 1 packet Hagan's Seed and Vegetable, 1 packet Rare Stocks for 25c. *Send for our Catalog and Special Crimson Turkey Rhubarb Catalog.* Mention this Magazine. **THEOROS & SHEPHERD CO., Ventura, Cal.**

QUAKER HILL NURSERIES
All kinds of Trees, Shrubs, Roses, etc., from grower to planter. **Free Book, 62 pages,** gives prices, describes 525 varieties, tells how to plant and care for them.

Rhodes Double Cut Pruning Shear
Cuts from both sides of limb and does not bruise the bark. We pay extra charges on all orders. Write for circular for price. **RHODES MFG. CO., 431 West Bridge St., Grand Rapids, Mich.**

Early Crops Mean Big Prices

The sooner your early vegetables are on the market, the higher the prices they command. You know this and you know also that our

Hardy Northern Crown Seeds grow fastest, mature earliest, and make largest crops. You know why. The Northern growing season is shorter, plants grow quicker and mature sooner. This makes them strong and sturdy. Their vitality is greater. Their seeds sprout very quickly, grow very rapidly and mature in the shortest possible time. This means early crops. Early crops mean first markets, and first markets mean fancy prices. Try it yourself and see.

TAKE POTATOES! We grow all the popular varieties, but **Our Extra Early Petoskey** is the fastest grower—the quickest to mature—the biggest producer. You can get them on the market from two to three weeks ahead of all other varieties. And the potatoes are big, tempting beauties—snow white, mostly and delicious eating.

FOR 25 CENTS (stamps or coin) we will send you a big Petoskey Potato and our complete catalog of **Hardy Northern Crown Seeds**. Catalog alone FREE. Write to-day and get your seed in the ground early. You won't be sorry. Remember you can prove all we say if you act promptly and send at once.

DARLING & BEAHAN, 402 Michigan Street, PETOSKEY, MICH.

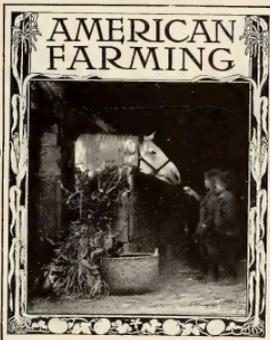
The Garden Magazine

FEBRUARY, 1906

CONTENTS

COVER DESIGN—CATTLEYA HARDYANA	PAGE
<i>Clement Moore</i>	
THE GARDENER'S REMINDER	9
A PICTORIAL DIARY OF A BEGINNER'S GARDEN	10
<i>M. T. R.</i> Photographs by the Author	
ORCHARD FRUITS IN A RENTED GARDEN	12
<i>William C. McCollom</i> Photographs by the Author and by E. M. Bault	
TWO INGENUOUS WINDOW GARDENS	15
<i>I. E. R. Johnson</i> <i>H. E. A. Eames</i> Photographs by the Authors	
MARCH FLOWERS WITHOUT A GREENHOUSE	18
<i>I. Laura French Mordant</i> <i>H. Gertrude L. Whitlock</i> Photographs by the Authors	19
LITTLE-KNOWN VEGETABLES WORTH GROWING	20
<i>I. M. Angell</i> Photographs by the Author	
THE BUILDING OF A HOTBED	22
<i>E. L. Fullerton</i> Photographs by H. B. Fullerton	
HOME-MADE STRAW MATS FOR THE HOTBEDS	23
<i>N. W. Robinson</i> Photographs by the Author	
ROCK-LOVING FERNS IN THE GARDEN	24
<i>G. A. Woolson</i> Photographs by H. H. Swift and others	
THE CHILD'S GARDEN	27
<i>Walter R. Beavis</i> Photographs by the Author	
LILIES THE WORLD REALLY NEEDS	29
<i>Wilhelm Müller</i> Photographs by the Vermont Experiment Station and U. S. Dept. of Agriculture	
AN EIGHT-BY-THIRTY VEGETABLE GARDEN	32
<i>A. Mason</i> Photographs by the Author	
THE STRIP BETWEEN FENCE AND SIDEWALK	34
<i>H. R. Mosnat</i> Photograph by the Author	
APPLE-TREE PESTS	36
<i>E. P. Felt</i> Photograph by the Author	
HOW I BECAME AN ORCHID GROWER	42
<i>Clement Moore</i> Photograph by the Author	
<i>WILHELM MILLER, Editor</i>	

THE GARDEN MAGAZINE
COUNTRY LIFE IN AMERICA
THE WORLD'S WORK
DOUBLEDAY PAGE & CO NEW YORK



A NEW kind of magazine for the Farmer of to-day, beautifully illustrated, telling interestingly and simply what every farmer should know.

American Farming

An Illustrated Home Magazine Devoted to the Living and Growing Things on the Farm

THE BEST WE ARE CONVINCED IS NOT "TOO GOOD FOR THE FARMER."

WHY YOU NEED "AMERICAN FARMING"

- (1) It will lay special emphasis on the farm home. It will not only help to show how to make a living, but how to get the most satisfaction and happiness from farm life.
- (2) It will be especially strong on domestic animals: horses, sheep, swine, poultry, and so on.
- (3) It will describe men in every section who have succeeded, and will show just how they did it.
- (4) Farming as practiced throughout the States will be adequately treated.
- (5) While thoroughly up-to-date in theory, and using to the full the knowledge gained by the scientists, it will be eminently practical.
- (6) Schools, roads, irrigation, systems of storing and marketing, telephones, etc., will be covered elaborately.
- (7) In a word, with the broadest field and the most inspiring subject there is in America, AMERICAN FARMING will combine beauty and practical helpfulness as does its most successful forerunner, THE GARDEN MAGAZINE.

SPECIAL NOTICE

AMERICAN FARMING will be the fourth magazine Doubleday, Page & Company have started. Invariably the first numbers have gone "out of print," and the early issues have sold at a high premium. Begin with Number One and send your \$1.00 NOW. Here is a subscription blank.

-----CUT OFF HERE-----

DOUBLEDAY PAGE & COMPANY,
133-137 East 16th St., New York City.

Enclosed find \$1.00, for which send AMERICAN FARMING for one year to

Name.....

Address.....

The Garden of Hardy Flowers

THE almost entire exclusion of the great wealth of hardy plants from American gardens in favor of a few—hardly a score—of tender ones has so impoverished them of all real beauty as to make them monotonous. In almost every garden are seen the same stereotyped carpet and ribbon beds, mere lines of color, that are as unchanging during their season of four months as the patterns of carpet, and that perish entirely with the first frost. The entire labor and expense is renewed the next season, and the annual outlay is limited only by one's willingness or ability to pay. Hardy flowers have all the artistic advantages and all the practical ones as well. Their first cost being their only cost, and their greatly increasing in size and beauty year after year, makes an investment in them yield an annual dividend of loveliness not to be computed in any ordinary way.

We have seen a garden where early spring is ushered in with myriads of snowdrops, crocuses and violets peeping through the grass, with yellow daffodils and scarlet tulips, with rarest blue of scillas, and with odor of hyacinths; and later with Lies-of-the-valley, and lilac, and hawthorns, and numerous flowering shrubs. June—the month of flowers—finds our garden fairly aglow with floral beauty, roses everywhere, in groups, on fences, sprawling on the grass with their wreaths of loveliness, clambering over bushes, and here and there covering even the tops of the trees with flowers of pink or white bloom. Not only roses, but monarch poppies, peonies, columbines, early-flowering clematises and irises in a multitude, and Easter lilies in all their purity, and the grand rhododendrons, second only to roses, and with them later, the glorious Auratum lilies showing stately above their rich greens.

With this grand June overture to summer, our garden follows quickly with a succession of lovely and changing scenes—of day lilies, hardy pinks, exquisite Japan irises, and a procession of stately lilies, commencing with June and ending only with frost; of phloxes, hollyhocks—single and double—and clematises with their wreaths and garlands of purples, pinks and whites; of foxgloves, larkspurs and evening primroses; and our garden, daily, until frost, will have new attraction.

Arranged with some judgment at first, this garden might be left to take care of itself; time would but add to its attractions, and the happy owner might go away for years and find it beautiful on his return.

We have gathered together the best collection of hardy plants and bulbs in America, and will send catalogue and information about hardy gardens on request.

"A Plea for Hardy Plants," by J. Wilkinson Elliott, gives much information about hardy gardens, with plans for their arrangement. We have made arrangements with the publishers of this book to furnish it to our customers at a very low price. Particulars will be sent on request.



ELLIOTT
NURSERY CO.
PITTSBURG, PA.

The Garden Magazine

VOL. II.—No. 1
PUBLISHED MONTHLY

FEBRUARY, 1906

ONE DOLLAR A YEAR
TEN CENTS A COPY



[NOTE.—For Table of Contents of this month's number see page 7.]

The Wonderful Things You Can Do With a Hotbed

A HOTBED is a device that will enable you to get fresh vegetables a month earlier than usual this spring.

It costs \$3.00 plus a little elbow grease.

March is plenty soon enough to sow the seeds, but the time to get a hotbed is now.

There are seventeen desirable kinds of vegetables you can grow in hotbeds, but it is worth while to have one of these structures simply to grow tomatoes.

Every day you gain on tomatoes before August 1st is clear profit, because no matter when a tomato plant begins to bear it will continue to do so until killed by frost.

You can have tomatoes all through July and possibly even in June, if you have a hotbed.

You can also have in July the heat-loving relatives of the tomato, viz., the eggplant and pepper—a month ahead of time.

YOU CAN GAIN A MONTH

On the whole cabbage outfit: Cauliflower, kohlrabi and cabbage in July; Brussels sprouts in August and the Englishman's frequent substitute for cauliflower—broccoli.

On that delicious home vegetable—celery—you can make a notable saving.

On vines of the gourd family: Fancy slicing cucumbers in June; luscious muskmelons in July.

As to the short-season crops, like lettuce and radishes, which only need a month or so, you can reel them off any time in the year. With three or four hotbeds you can enjoy these two all winter.

The things that require two months of growth are beans, beets and parsley.

FRESH VEGETABLES THIS MARCH

In fact, if you had a hotbed right now you could taste home-grown lettuce and radishes in March; beans, beets and parsley in April.

Figure it out for yourself. A hotbed is three feet by six. It will hold twenty-eight heads of lettuce—two heads a day.

That means enough to last a family of six for a fortnight.

At forty cents a pound or ten cents a head (midwinter prices) a single crop of lettuce would cost you, if bought from the grocer, \$2.80, nearly as much as you paid for the sash. A hundred per cent. in two months!

Has your boy ever earned any pocket money? I wonder if he wouldn't like to raise a lot of young tomato plants to sell this spring?

DOES IT REALLY PAY?

Perhaps not, if you charge up your time, cost of the manure, the old boards you pick up around the place, doctor's bills in case you catch cold, etc.

But it's fun. And you get better varieties. The tomato plants you buy of the local grocer are "any old kind," with fruit that is too big perhaps, or wrinkled, or an unattractive pink instead of an honest red. In short not suitable for dainty slices.

YOU NEED A COLDFRAME TOO

A coldframe differs from a hotbed in not having any artificial heat. It has seven reasons for existence.

1. It can supply lettuce, radishes and spinach all winter.

2. You can winter cabbages and cauliflower in one and thereby gain a month because you can set out good big plants in April.

3. If tea roses are not hardy in your climate you can store them in a frame all winter.

4. The very choicest foxgloves and larkspurs can be raised only with the aid of coldframes.

5. You can have no end of pansies, violets, English daisies and polyanthus primroses in a coldframe. They will bloom for a month or more between February and April.

6. When your vegetable plants this spring are too large for your hotbed, you want to put them in a coldframe where they can "harden off" before you set them out in the garden.

7. Last, but not least, with a coldframe alone you can gain a week or two on the vegetable season this spring.

HOW TO GET THEM

If you are not handy with tools and don't want the bother, you can buy ready-made sash locally or have them made by a carpenter. Or you can order them from the seedsmen or makers of greenhouses.

If you want to save money you can buy the glazed sash and do the rest with hammer and saw.

For "The Making of a Hotbed," see THE GARDEN MAGAZINE for March, 1905, page 58.

For "What Coldframes are Good For and How to Make Them," see February, 1905, page 30.

The bound volumes of THE GARDEN MAGAZINE are a fund of information like that.

Do you bind your volumes?

Better do so now, or it will be too late.



Early vegetables are the most pleasing returns from a hotbed



May. The first charm of the garden from plans made the previous fall. All ablaze with yellow tulips

A Pictorial Diary of a Beginner's Garden—By M. T. R. Cleveland, Ohio

SHOWING WHAT A BEGINNER CAN ACCOMPLISH WITH NO HELP EXCEPT FROM BOOKS AND MAGAZINES—THE FUN OF MAKING YOUR OWN MISTAKES IN YOUR OWN WAY—SOMETHING SURE TO SUCCEED

Photographs by the author

MY SURPRISE and delight knew no bounds when I was able to gather a few flowers from my first gardening attempt, which consisted of some roses and shrubs purchased at random from a "floral agent."

They had been hurriedly planted in promiscuous beds made by simply turning the soil, which had lost all of its vigor by having grown grapes for years.

I knew enough to put them on the south side of the house, but had a hard time convincing the old German gardener that the prospective lawn would not be improved by having flower beds scattered upon it.

Realizing that, after all, gardening was not a mystery, and that one need not be a genius to raise flowers, I became absorbed in the next summer's plans, which resulted in this little garden.

After reading every readily obtainable book on the subject, I was ready by the middle of September with my design, and the work began.

Where the former beds had seemed to be an ideal place for a little formal garden, and the helpful old gardener entered into my plans with zest. Together we staked and

planned, the borders and beds were dug out a foot in depth, the ground removed, and good light soil with plenty of well-rotted manure put in.

My various readings had put one idea uppermost in my mind—that "manure is the boss of the garden," as an old gardener once said to me, so my quest was for old manure. One day, after bargaining for a fine lot, I was called into the house to receive a book agent. She looked the horror she felt when I assured her that I would far rather buy manure than books. She probably thinks me too degraded to ever visit me again. My own experience has proved that one of *THE GARDEN MAGAZINE* contributors was right when he said that "with five dollars for a garden, three of it should go for manure."

Mrs. Ely's "A Woman's Hardy Garden" has been invaluable to me, and my gratitude has prompted me to thank Mrs. Ely, but I fear she must be burdened with letters from grateful beginners. I stood in the garden directing the planting from her book, which, until the advent of *THE GARDEN MAGAZINE*, was our text-book on all gardening subjects. From her directions I started a seed bed

which, although not put in until the latter part of July, was quite successful, and the plants were as large as those one buys at a nursery. There were sixty Sweet Williams, innumerable foxgloves and Canterbury bells (called by the old gardener "the williams," "the gloves" and "the bells"), thirty chrysanthemums, three dozen hardy pinks and two dozen hollyhocks. My other perennials I chose while in bloom from a nearby nursery which guarantees all plants. The few that were winter-killed were replaced in the early spring, proving to me the wisdom of fall planting for they were much larger and ahead of the spring-planted ones.

Annals I had in profusion, and I tucked them in everywhere. Four of the long centre beds which my friends try to tease me by calling "graves" I filled with seedlings started in the house March 1st, and owing to my inexperience many were my trials over them. Up to this time I had not seen *THE GARDEN MAGAZINE*, or I should never have made the mistake of planting my seeds in such heavy soil, in which the poor things could not grow. The seedlings appeared, were transplanted, but seedlings they re-



June. The herbaceous plants take up the succession. Columbines, iris, poppies, Sweet William and Canterbury bells in evidence



JULY AND AUGUST—THE SUMMER RIOT OF COLOR

The three upper views were taken in July. In August gladioli, phloxes and hydrangeas were in full bloom



By planting dwarf trained trees the amateur can grow a collection of several varieties on a space that would support only one large orchard tree

wire. Build the trellis four to five feet high with wires nine inches apart, the lowest being one foot from the ground. It may be objected that this seems a lot of expense to go to for fruit trees, but I venture to say no amateur who goes to this expense will regret it, for the fruit grown in this manner is far better in quality than that grown in the regulation way. And surely that is what we want—quality, the best in the world. Besides, don't forget the quick returns.



Pears and apples screening the vegetable garden

The dealers in dwarf fruit trees offer them in various forms, such as pyramid, globe and standard and it is important when ordering from the nursery to state which shape you desire. The forms just named are not adapted for growing on a trellis, of course, but are for open ground culture. For trellis work they come in palmetto, cordon and espalier forms. I like espaliers best as they are kept in shape more easily than the others.

Planting should be done in the spring.



Showing method of training an apple tree. The branches are tied to the wires of the trellis

When the trees arrive from the nursery plant them close to the trellis and about eight to ten feet apart. As soon as the trees are planted give a heavy mulch of loose stable litter to prevent evaporation of the soil moisture. Take all possible care you can of the trees because the loss of one in a row makes an unsightly gap.

After mulching go over the trees with pruning shears, cut out all damaged and undesirable wood and tie the best shoots in position. The two strongest shoots at the bottom should be tied to the lowest wire and allowed to grow until they meet the shoots from the next tree and there stopped. Strict attention to pruning is absolutely necessary. The principle to follow is to leave just enough wood to cover the trellis, removing all the thin, weak shoots. Never leave more than eight inches of the previous season's growth and be careful to retain branches that have fruit buds.

In June further attention to pruning must be given and the number of shoots reduced. This tends to strengthen those that are left and hastens the bearing time. They will need attention again about the latter part of August or the first part of September, when you must tie the shoots to the trellis in the position you wish them to grow. This must not be done too early or the shoot will break off at the bottom, but it should not be left until the wood hardens as it is apt to crack when you are tying down the branches. If at this time you notice a branch carrying a large number of fruit buds, cut it back slightly to throw some strength into those buds.

If you have been careful of the trees and they have not suffered much in the transplanting, you may get a little fruit the first season. Of course you cannot expect much but the few you may have will be a revelation in quality.

These trained fruit trees are mostly imported and as they are not used to our severe winters, must be helped through the first season at least. Don't run any risk. A little fall pruning will help. Go over the trees just before the leaves fall and remove a few inches of wood from each of the branches; after the ground is slightly frozen mulch heavily. This attention is not really necessary after the first season, but it will be a great help

until the trees become acclimated, and should if possible, be followed up for two or three years at least.

If there are any signs of rust or other fungi on the foliage during the summer, spray with Bordeaux mixture.

THE SECOND YEAR'S NEEDS

In the second year pruning should be done in the spring, and do not be afraid to cut back hard, as it is this cutting that induces



Apricots are planted to the right, pears to the left

the development of good, clean heavy wood with which comes fruit spurs. Look over the trees when the fruit starts to swell and after all fear of dropping is passed, and if you notice a small tree with an excessive quantity of fruit, remove some. Strive rather for quality than for quantity and the life of the tree will then not be endangered.

For varieties of dwarf trees for the garden I should advise the following: In apples,



A common complaint is that dwarf trained trees do not live long. These are eight years old



The dwarf trees are more easily sprayed and a high quality of fruit is assured

Bismarck you will find a good, short, heavy grower, a good cropper, and the fruit of good quality.

Alexander is a good second to Bismarck. The fruit is large but not as attractive.

Oldenburg is the best early apple.

Beauty of Kent is early and good. The fruit is as large as Bismarck but it is a short cropper.

Last, but not least, I should recommend the Baldwin, which is too well known to need mention here.

In pears, I should recommend Williams' Duchesse d'Angoulême, a good early one; Nouveau Taitéau, a much better pear except that it winter kills in the latitude of Long Island. I think it would be hardy as far north as Philadelphia.

Bartlett is very good for this work—a little rapid in growth—but the fruit repays the extra labor.

Banjo is also an excellent pear.

Among late pears I have found the following the best: Howell, Worden Seckel, Duchesse d'Angoulême, Beurré d'Anjou and Fertility.

Peaches, plums, apricots and other small fruit require treatment of much the same kind as the larger, except that their rapid growth requires more tying. On account of early flowering the peach crop is often injured by late frost; this can be eliminated by throwing frost-proof blankets over the wires and letting them hang down over the trees.

One of the best features of these trees is the economy of space. If you have a stable or an outhouse which you wish to cover, you can plant a trained fruit tree against it. If you are contemplating planting a hedge to shut off something unsightly, put in a row of trained fruit trees instead, and you will have something that not only answers the purpose but will give you some return for your money.



Planted two years, this tree bore a good crop of fruit last year. It is full of fruit spurs for next season

People who do not wish to go to the expense of buying high-class trees, can have good results by buying young stock from the nursery, "whips" as they are called.

Get good short-jointed growers and plant them about eight feet apart. After planting cut the top off just above the bottom wire, and when they start to grow train them to the other wires in the position you want. You will find by this method that you will have a nice little fruit tree in three years. In fact, I have fruited this class of trees in the third season from the time of planting.



Fruit crops on useless walls. One advantage of the trained tree is that it can be planted against a wall and if the soil is properly enriched a crop of fruit is harvested. No waste space about the base of the tree. The shoots are tied to a wire trellis, as if trained against the wall they would be too hot in summer

Two Ingenious Window Gardens

EASY SOLUTIONS OF THE PROBLEM OF WINTER PLANTS IN THE HOUSE—SUGGESTIVE HEATING SCHEMES, AND FORCING BULBS FOR FLOWERS ALL WINTER

A Small Conservatory Heated from the Living Room

By E. R. JOHNSON, Pennsylvania

MY WINDOW garden may not be the most perfect garden there is, but it has given me a great deal of pleasure. It is a small structure, only seven feet long, five feet wide and ten feet high, composed entirely of glass and wood. The cost of erecting it was about \$30. Situated on the south side of the house, it receives all the morning sun, which keeps the flowers constantly blooming.

The worst difficulty I had to overcome at the outset was to keep the garden properly

heated; I found upon experimenting that the best results could be obtained by watering the plants frequently and keeping the adjoining library at an even temperature of 70°.

About the first of October every year I fill it with chrysanthemums. It holds about four dozen of these, and a pretty and artistic effect can be had by using several varieties and many colors. These flowers last till the end of November, when I replace them with the real winter flowers. First among these are the geraniums, which are hardy, do not require much care and will remain in flower throughout the entire winter. Heliotropes also do very well. Candytufts in boxes do much better than if placed singly in pots, and

make a better showing. Nasturtiums with plenty of room and strings to climb on will remain in flower all winter. Mignonette and begonias can also be grown with advantage, and do not require much care. In fact any flower of a hardy nature will flourish in one of these gardens.

CONTROL OF TEMPERATURE

Never forget one thing—the temperature of the room. Never let the cold, frosty air strike your plants for any length of time, for it will kill them; nor do not let the temperature of the room vary between two wide limits. If at one time the plants are overheated, and the next moment chilled, their growth is stunted and their bloom killed. Strive at all times to maintain an even temperature. With little care these plants will live for years, and by using slips and cuttings you will not need to buy new plants.

Although intended for winter, these gardens also have their summer uses. When spring arrives I move all my plants out into the open air, where they thrive till it is again time to place them under cover. During the hot summer months I hang the sides of my window garden with curtains. It forms a cool, shady retreat in which I place palms and ferns. Later on in the summer I place in it boxes containing my spring seeds, pansies, canterbury bells, English daisies, etc. By the time these are large enough to transplant in hotbeds, it is again time to fill my window garden with chrysanthemums.

A Portable Window Forcing Box Heated by Gas

By E. A. EAMES, Buffalo, N. Y.

EACH fall my wife and I force all kinds of bulbs. Our success has led us to pot a constantly increasing number and variety until last year the problem of where to put them while coming into blossom became really serious. Our windows were crowded; up stairs, down stairs and even the cellar windows were made use of. We needed a green house—a forcing house, but could not afford one. Something we had to have for our precious bulbs were over-running us and throwing them away could not be thought of for a moment.

It was early in October when I had a happy thought. While overhauling the storm windows preparatory for winter, I came across two tall, narrow ones which had been made useless by remodeling our sitting room the summer previous. It occurred to me that perhaps here was a start toward the little conservatory of which we were in so much need. Careful measurement showed that they were of exactly the same height as the storm sash of the south dining-room window. Here, then, were three sides of a window



This miscellaneous collection of plants—geraniums, callas, candytuft, heliotropes—gives flowers all winter. The only heat is from the adjoining living-room. The little conservatory is built in a doorway



The growing plants give a touch of welcome life in the depth of winter

green house; moreover, they exactly fitted each other and the window in question, so the problem was practically solved.

By means of four long screws on a side I fastened the two narrow sashes to the window frame at the exact places where the vertical edges of the regular storm sash belonged—only they were at right angles to the wall of the house, projecting into space. The regular storm sash was now screwed to the outer edges of the two sashes already in place and behold, without any cutting or fitting of any kind I had three glass walls enclosing my window—forming a generous space, ideally lighted, requiring only a top and bottom to make a splendid window conservatory.

For a bottom I simply nailed half-inch boards to the bottom of the three sashes and held it in place by two oak brackets (made from old bed slats). For the top I cut two tapering boards and fitted them to the top edges of the side sashes so that when the half-inch boards were nailed across them for a roof it had a shed and overhanging eaves sufficient to shed any kind of weather.

Before moving in, I made both the roof and the floor waterproof, and warmer, too, by tacking some old rubber floor matting to the half-inch boards. On the roof I easily made a tight joint with the house by continuing the rubber back and up under the bottom of the first clapboard.

Three six-inch shelves were placed across both side sashes by means of five-inch brackets. When still more room was necessary, additional 6-inch shelves were laid across the front with their ends resting on the first set. This provided three complete tiers of shelves running around the three sides of the conservatory.

Without crowding we could manage about seventy-five pots and pans of various sizes. We were able to have a continuous series of bloom from mid November until spring weather lured us out to our garden again. Our tulips, crocuses, hyacinths, freesias, etc.,

were a continuous delight to us and the envy of our friends.

Until really severe weather we were easily able to regulate the temperature by partially opening or closing the window—which formed the fourth wall of the conservatory. However, as zero weather approached, the warmth from the dining room proved inadequate and other means of maintaining the requisite temperature to keep the plants growing were found to be necessary.

A MINIATURE FURNACE

I ran a three-eighth-inch pipe from the natural gas main in the cellar through the cellar window and up through the bottom of the conservatory, ending in an ordinary gas burner. This gave plenty of heat but the fumes from the gas proved objectionable. Various kinds of burners were tried in succession, but all had to be discarded for the same reason.

After considerable thought I hit upon the following scheme, which served the purpose admirably:

For \$2.25 I purchased a tiny gas stove which I placed on the cellar floor directly below the cellar window under the conserva-

tory; I ran a short smoke pipe to the nearest chimney-opening in order to dispose of the fumes. A nearby tinsmith made to my dimensions a galvanized iron hood which fitted down over and completely enclosed the stove. It had a number of one-inch holes along its bottom edges for circulation, and a sliding door for access to the stove. Its top was drawn up to form a collar about eight inches in diameter. From this collar I ran an eight-inch flue straight up, then slanting up, out through the cellar window (from which a pane had been removed), then up again to where it ended at a 5 x 7 inch register set into the floor of the conservatory. Of course the flue was enclosed in a wooden box or outer flue for insulation throughout its entire length outdoors.

This formed virtually a miniature hot-air furnace. The tiniest flame warmed the stove, which in turn warmed the air enclosed in the galvanized hood. This warm air flowed up the pipe through the register and gave our plants just what they needed—pure, moist, warm air. The apparatus worked perfectly from the first, the supply of heat was easily regulated and the furnace gave off neither odors nor dirt.



The conservatory is built on the outside of an unused doorway and acts also as an efficient storm box. It is ten feet high, seven feet long and five feet wide. Cost complete \$30



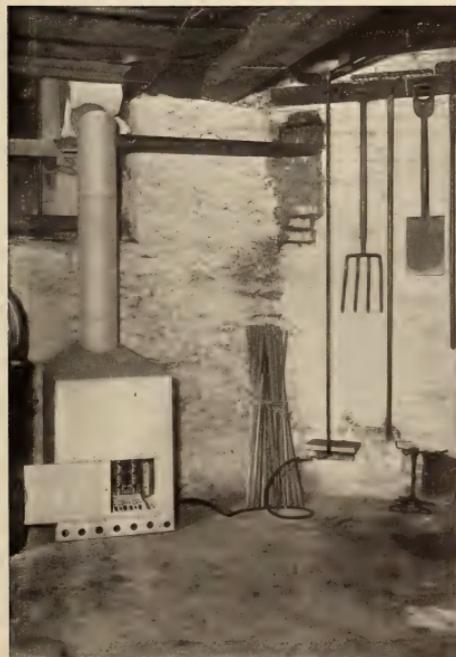
These lines of shelves carry seventy-five pots—



which give flowers from November till spring



Heated from the cellar by a shaft



A white-flame stove costing \$2.25 was built into an iron jacket, making a miniature heating furnace



The heated air entered the forcing box through an ordinary register where it could be controlled

March Flowers Without a Greenhouse

FLOWERING SHRUBS AND TREES THAT WILL BLOOM IN MARCH FROM TWIGS CUT IN FEBRUARY AND PUT IN WATER—AN INDOOR FESTIVAL OF CHERRY BLOSSOMS WHEN THE TREES OUTDOORS ARE BARE—A NEW IDEA IN HOUSE DECORATION: SIX-FOOT BRANCHES LADEN WITH FLOWERS

I. Forcing Twigs in the Home Window Sill

Laura French Mordaunt, Michigan

IN FEBRUARY in a city flat, when one is weary of winter and spring seems drearily far off, a bunch of glowing red



A vaseful of aspens in flower

maples in full bloom is a pleasant, comforting and reassuring sight.

It is surprising how much can be learned about the ways of growing things from one twig. Shade trees in city parks and streets are usually pruned so high that most of us get only a general impression of color and outline, and miss the beauty of the indi-

vidual flower. Some do not even realize that the flush of color high in a tree is from flowers rather than leaves.

If you wish to know a few trees and shrubs intimately and personally there is no better way to accomplish it than to cut a few twigs, put them in a vase of water in a sunny window, and watch the development of the tightly closed and frozen buds from the first indication of their awakening to the opening of the flower and unfolding of the leaves.

If window space is limited a few twigs, not more than a foot or two in length, will be less likely to shut out needed light from the room and to be in the way generally. For a few short twigs ordinary vases are all that is required.

For larger twigs and branches large jars are better than vases. If one is careful to keep vases and jars perfectly clean and the water fresh by frequent changing—once in three or four days, or less frequently if a small piece of charcoal is placed in each jar—the window nursery need never become objectionable to the housekeeper.

The twigs, too, must be kept free from dust by occasional spraying or dipping into a pan of cool water.

No doubt many varieties of trees and shrubs could be forced into bloom early, perhaps any time after the first severe frost, but I have never cared to do so with any except forsythia.

One seems to need and to enjoy young leaves and buds more when winter is far advanced than in the early months.

Whether the twigs are long or short, few in number or many, it is always a mistake to crowd them, and I enjoy having each kind by itself, at least until the flowers are almost or quite open. All twigs are better for a soaking in slightly warm water when first brought into the house. Those which are cut from trees in dusty, smoky city yards especially need cleansing.

Beech buds have an exciting story to tell. Poplars are waiting to scatter the gold of their pollen, and are ready to open their white stars in the warmth of a living room.

If woods and roadsides are out of reach, the old fruit trees in the city backyard are not to be despised, although cuttings from vigorous young wood are always desirable.

Your friends in the South or California can send you twigs of sub-tropical shrubs through the mails. Last winter a small branch of rhodora which traveled half way across the country before reaching me was an object of interest from the beginning and a revelation of beauty when in its perfection. An English filbert showered pollen from its graceful catkins and opened its quaint little reddish-purple pistillate flowers a few days after its journey.

All twigs must be cut carefully—a clean, slanting cut, with no rough edges to harbor impurities. Large or partly opened buds are easily injured by a careless touch.

All the early blossoming shrubs are desirable for forcing, especially those which bloom before the leaves. Forsythia is the earliest and easiest; it will flower in two weeks.



The fertile or pistillate flowers of the aspen (*Populus tremuloides*)



The sterile or staminate flowers of the aspen boast out a wealth of golden pollen



Pussy willows. Many species of *Salix* can be utilized in this manner



These cherry branches reached a ten-foot ceiling and spread six feet on either side. They were in bloom for six weeks when the ground outdoors was covered with snow.

For those who love old-fashioned, common things, nothing will give more pleasure than the flowering currant with its spicy yellow flowers. Even the garden currants—especially the black—are interesting.

Magnolia buds are fascinating in their gray-green velvet calyx, even if never more than a glimpse of pink is seen.

Wonderful things are done with lilacs by some people, but I am content with the spring-suggestive delicate fragrance of the tender young leaves though the buds fail time after time.

Peach, plum and cherry buds are usually the first to open. Pears and apples are more delicate.

In cutting twigs from fruit trees, select the full, round buds. They are the flower buds; the slender, more pointed ones being leaf buds.

Anything is worth trying, but here are some of the most satisfactory:



Most people fail to make as small a branch of lilac as this bloom indoors. Miss Whitlock has had great success with whole plants cut off at the base

FOR FLOWERS

Magnolia	Pear
Rhododendron	Cherry
English fibret	Plum
Forsythia	Quince
Almond, pink and white	Apple
Japanese quince	Crab apple
Currants of all varieties	Maple
Lilac	Alder
Dogwood	Willow
Rhodora	Lin

FOR LEAVES

Horse-chestnut	Poplar
Beech	Rose and sweet brier

II. Forcing Large Branches—A New Idea

GERTRUDE L. WHITLOCK, Long Island

I HAVE had five kinds of shrubs in flower during the Christmas holidays by bringing branches indoors the first of December—cherry, forsythia, lilac, quince and Japan quince. It is not practicable to cut them earlier in the vicinity of New York City, but it is easy to provide a succession until spring.

It makes a wonderful difference if you can cut limbs six to twelve feet long instead of mere twigs. These big branches make gorgeous decorative effects. The quality of the flowers is better and they last for several weeks.

It is utterly useless to cut small sprays from the lilac and expect them to bloom. They will start out bravely but will soon droop. With the lilac I always cut off a whole bush at the ground, and have yet to fail in having a wealth of exquisite bloom.

To avoid the uneven and weak development of your flowers put the pails of water containing the branches in a semi-dark, cool (not cold) place for a week or two. All the flowers will then be lighter in color and more ethereal in texture than if left to bloom outside. Especially is this change noticeable with the lilacs. Bushes that wear the purple out of doors will, when forced in the house, bear sprays pure white or faintly tinged. Without direct sunlight there is no pronounced color.

The most satisfactory plan I have yet tried is to devote a room to the branches. We had a small, unused room on the top floor, out of harm's way, where the average temperature was but fifty degrees, which seemed to be just right. Into this room I brought on the third of December, boughs of apple, quince, pear, crab apple and cherry, forsythia, lilac, weigela and Japan quince. I keep each variety by itself, and put a large piece of charcoal in each pail to keep the water fresh. I refill the pails once a week. It is not necessary to change the water entirely oftener than once a month. Do not remove the branches from the pails, as this will break off the buds and flowers.

The forsythia was the first to blossom in four weeks. A week later the Japan quince had begun to unfold its graceful angularity of brown, thorny branches and flame-colored blossoms. From this time until the first of



First of the trees to flower outdoors is the red made. Staminate flowers on the left, pistillate on the right

April we were never without quantities of flowers.

One learns more and gets more real enjoyment from a single twig opening under one's closest scrutiny than from a whole armful of full-bloom branches when cut out of doors.

It is not possible to count with absolute certainty upon any sort of flower to develop within a given time, but boughs that have been well frozen and then put into an ordinarily heated room should be in full bloom in a month or six weeks.

The only distinct failure I have to record of the many varieties I have tried is with the magnolia, which has baffled all my coaxings. Bridal-wreath, dogwood, honeysuckle, snowballs, wisteria and weigela all bloomed, but not freely, which failure I attribute to the short stems. But apples, crab apples, cherries, wild cherries, pears, quinces, forsythias, lilacs and Japan quinces bloomed with glorious abandon.



The luxuriance with which the cherry blossoms

Little Known Vegetables Worth Growing—By I. M. Angell New York

SOME GOOD THINGS THAT THE ORDINARY GARDEN DOES NOT HAVE, BUT WHICH ARE EASILY GROWN AND ADD VARIETY TO THE HOME TABLE—SUGGESTIONS FOR COOKING AND SERVING

Photographs by the author

THESE never was an amateur gardener who could resist the temptation to experiment with some of the odd, unusual vegetables offered in the catalogues. Among many sorts tried in our own garden there are something less than a dozen kinds that we should wish to have again. We have found the following to be worth adding to our list, in company with the more common vegetables: Swiss Chard, Kohlrabi, Edible Podded



Swiss chard, a sort of beet of which the leaves are eaten as asparagus. Gives continuous crops

Peas, Black Mexican Corn, Large Yellow Tomatoes, Lemon Cucumber and Edible Cow Pea. These are seldom seen in small gardens, at least in our section of the country, but they possess many good points that make them suitable for such use.

SWISS CHARD

Chard is so much liked by two members of our family that if it does not appear on the table at frequent intervals there are inquiries as to the cause. This is one of the good things for a small garden, because it combines two kinds of vegetables in one—the young leaves to use as greens and the stalks to cook like asparagus. A well-known cook book asserts that chard “makes one of the most delicate and delicious of dishes.”

There are several points in its favor—it can be planted very early because of its hardness; the young leaves will be of suitable size for greens in about two months from sowing; from the time it is eight inches high until full size it is in usable condition for one dish or the other. The plants may be left to stand in the garden all summer, to be used as wanted, but, as they have a tendency to become tough as the season advances, the wisest way is to sow for early use only, and clear off the ground for some latter planting when they have lost their tenderness. We have found chard useful as a fall-planted vegetable. Some sowed at the end of October showed considerable gain on the April 1st planting; the latter gave us greens June 6th and fair-sized stalks about ten days later. The plant in the photograph measured two feet. Although pulled after the middle of August it retained its tenderness, and was so brittle that the stalks broke in the handling. Chard demands the same cultivation as do

beets, except that it is not necessary to dig the ground so deeply. Seeds can be sown in April or May in rows a half yard apart and the plants thinned to a foot apart. A good supply of water and occasional cultivation are recommended by the seedsman. The outer leaves should be cut from the plant, which will continue to produce throughout the season.

In cooking, the chard leaves and stalks can be used either separately or together. One rule directs that the young and tender leaves and midribs be made into bundles and boiled and treated like asparagus on toast, then served with Hollandaise sauce or English drawn butter. Even with older stalks we have had success when carefully cooked. We cut them into inch lengths, then put them into boiling water with a little vinegar; after a few minutes we changed to fresh boiling water containing a pinch of baking soda. When cooked till very tender, properly salted and covered with thick cream sauce, this dish makes an acceptable addition to the bill of fare.

KOHLRABI

Kohlrabi is another vegetable with good points to recommend it for the small garden. This is one of the best vegetables for any family that likes the turnip-flavored tribe.



One way of preparing Swiss chard for cooking. Old leaves are chopped, young ones are cooked whole

It is a cabbage-cauliflower-turnip combination. The stem-bulbs mature successively during a period of about a month, an advantage over a crop that ripens all at once. One of its valuable qualities is that it can be used in June, when so few vegetables are in bearing. Our April 1st sowing was ready the third week in June. It is a remarkably clean and healthy plant, and free from disease so far as our experience goes. It is economical of space; enough to make a good dishful can be gathered from a yard of row, which cannot be said of many of our vegetables. It is remarkably hardy, and is well fitted for extra early sowing or midsummer sowing for fall use, on account of its ability to endure the cold. On the other hand it stands a drought well. None need be wasted, for if not all used for the table it is valuable for feeding horses or cows. Our row was about thirty feet long and every seed must have ger-

minated, for, beside the plants left to mature, we had seventy-two for transplanting as well as several dozen to give to a neighbor. These latter flourished in spite of being set out in a very dry time, and were ready for use in about a month after transplanting. They should always be pulled young, for they are much more sweet and tender than when they reach full size. Our investment gave good returns: we used only a fraction of a five-cent package of seed, yet the yield was nearly a hundred fair, sound bulbs. Kohlrabi is a good succession vegetable, and for this it can be sowed every two weeks from May 1st. to July 1st. The plants should be thinned to stand several inches apart and should be cultivated in the same way as cabbage. They are good, cooked in any of the ways that turnips are used, or sliced and eaten raw like radishes. Our favorite rule is to peel and cut them into half-inch dice, boil thirty minutes in salted boiling water and cover with thick cream sauce.

EDIBLE PODDED PEAS

Edible podded peas, cut in short pieces and cooked according to the rule given for kohlrabi, make another good dish. The flavor is like both peas and asparagus. Cultivation is the same as for common peas and the vines are identical in appearance. The pods should be picked when the peas are just beginning to form, never left on the vines till tough and yellow. Their season is short, as they all mature in two or three weeks and are too old to use, it is best not to sow too many at a time. Our April 22d planting was ready for use on June 20th and past its usefulness by the Fourth of July.

LARGE YELLOW TOMATOES

Large yellow tomatoes, stewed, sliced or canned, we have never seen on any table but our own, neither have we seen them in the stores. This state of things we do not understand, for they are so satisfactory that we do not consider our garden complete without them. They make a very attractive dish served with the red ones. For stewing they are as good as the common tomatoes. Doubt-



Shelled and unshelled edible cow-peas. Growing they look like beans. Cooked their flavor is intermedial



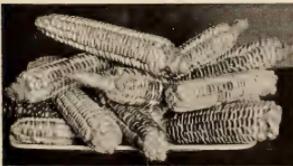
Edible podded peas are ready to pick when the peas are just beginning to form; about eight weeks from planting. They are very sugary.

less any rule for cooking red ones would be equally satisfactory for yellow tomatoes. Ours have always been particularly fair, large and sound.

BLACK MEXICAN SWEET CORN

Black corn is a striking sight to anyone who has not seen it before. Ours caused considerable comment among our friends. It is suitable for a small garden, because it is very productive but does not take up much space. The stalks are short and slim and can be planted close together. Good returns will be obtained in a spot where corn of a ranker growth could not be accommodated. It is one of the sweetest kinds, and bears a good-sized ear for a small growing sort. On May 8th we sowed a row thirty feet long. Although it was a very dry season the seed sprouted so thickly that we had to thin out to keep it from growing too close. We transplanted enough to make eight hills. In spite of the fact that this was done more than five weeks after sowing, when some of the corn was a half yard high, it did not appear to be injured by its removal, and came into bearing only a week later than that in the original row. The result would not have been so satisfactory if we had not taken precautions, such as transplanting when the soil was damp from recent heavy rain, and also shielding the plants for several days from the sun. The black corn in the original row was in tassel just two months from the date of sowing, and three weeks afterward, July 28th, we picked the first ears. The bearing season lasted a month, and the yield from the thirty-foot row was seventy ears. We picked as many as twenty ears in a day, and that after the corn had been in bearing for two weeks. The stalks stood six or eight inches apart in the row.

Corn is hungry for both food and cultivation. A handful of commercial fertilizer rich in nitrogen is a good addition to the



A good sort of sweet corn for the small garden is Black Mexican, because it does not make a rank growth, and is productive. Some people object to its color.

hill when planting. Our black corn was slightly troubled with "smut." Knowing there was "no remedy that will not kill the plant also," we broke off the parts of the stalks affected and burned them, and also burned the whole planting after the season was over, for fear of spreading the disease another season. The crows also troubled us until we covered the corn with old chicken wire so they could not scratch it up. Another way to circumvent these pests is to put the corn in coal tar and then give it a dusting of plaster.

LEMON CUCUMBER

The lemon cucumber was a suspicious novelty until we tasted it. Now it has a permanent place on our lists. Of all the many varieties of cucumbers raised in our garden none have had a finer flavor than the lemon cucumber. There is a strong resemblance to its namesake in its size, shape and color. It has a thin skin, the crispness, tenderness and sweetness are all that could be



The lemon cucumber, round and pale yellow, can be cheerfully recommended for the small garden. It is tender, sweet and of a desirable flavor.

desired, and it seems to lack the bitterness of the common cucumber. We made two sowings, the second week in June and the second week in July. Doubtless earlier sowings would have done equally well. It is attractive in appearance for using sliced, whole or as pickles. The best time for picking is just as it turns yellow. It requires rich mellow soil and good cultivation. All cucumbers grow best in cool, moist weather, but a touch of frost kills them. The vines always make a good growth at the end of the summer; in order to take advantage of this it is well to make a sowing late in June for fall bearing. Earlier sowings will do well if they can be shaded by planting between corn or similar crops. The vines are very sensitive and will not bear bruising, so that the fruit should be cut with a sharp knife, not pulled or twisted from the stem. They will produce longer if none is allowed to ripen. Those for the table should be picked early in the morn-



Kohlrabi, a deep rooted cabbage is one of the most useful vegetables for the amateur; it matures early, is hardy, and economical of space. Best when used young and tender.

ing, because they are superior in quality to those gathered under the heat of the sun and will keep much longer. The first month after sowing is the time to watch for cucumber enemies, after that the vine can take care of itself better. Frames of wire netting or old window screens are a help in keeping off the bugs; tobacco stems are also good for this purpose. Ashes finely sifted will discourage the black fly; this must be applied when the plants are wet with dew, or radishes sowed in the same hill will attract the flies from the cucumbers.

EDIBLE COW PEA

Another queer vegetable that was good eating was the edible cow pea. It was almost impossible to tell, from the looks and taste of the shelled and cooked peas, whether they resembled peas or beans the more closely. The vine and pods were decidedly like beans, while the blossom was like that of a pea vine, only larger and gayer in color, being both purple and yellow. A bunch of the flowers would be taken for some new and attractive sort of sweet pea. The pods are long and thick-set, some containing as many as twenty good-sized pea beans. The vine makes a slighter growth than the ordinary pole bean, so that a three-foot trellis made of chicken wire gave them sufficient room for climbing. We sowed them April 22d, but did not try to use them young; they were full-sized early in September. A part of the crop is to be used dry as a winter vegetable. Be sure not to sow until the ground is warm; the cultivation is the same as for any ordinary garden crop.

A vegetable that resembles the cow pea in every particular except that the pod is on a larger scale is the asparagus bean. Those on our vines grew to ten inches in length and a quarter of an inch in width.



The yellow-fruited tomatoes are as prolific as the commoner red ones, are less acid and more sugary. They do not look as rich however.

The Building of a Hotbed—By E. L. Fullerton Long Island

COMPLETE DIRECTIONS, INCLUDING THE BUILDING OF THE FRAME, PROTECTION FROM SEVERE COLD AND HEAVY WINDS, AND THE PREPARATION OF THE HEATING MATERIAL. USING UP OLD ARTICLES ABOUT THE GARDEN

A HOTBED is a necessity to the amateur who raises his own seedlings of tomato, cauliflower, lettuce, celery and early cabbage instead of buying them in the spring from the seed stores. The great advantage of knowing exactly what varieties one has is obvious. There is no mystery about the making of one, yet many people, just because they never understood how to make one, are content to go on year after year in the old way. The warmest and most sheltered spot on the place is the one situation for the hotbed. Of course the ideal corner in our garden was that which had been selected for the young chicks. So they had to give way.

There was room for seven sash, each 3 x 6

feet. For the frame 2 x 3 joists and some 1 x 10 cypress planks were bought. On the ground where the hotbeds were to stand a space about 20 x 5 1/2 feet was dug to a sufficient depth so that when the frame work of the planks was set up and leveled the interior space was four feet deep.

Locust posts set firmly at each of the four corners and others at equal intervals on each side furnished support for the planks.

The south front of the frame was made by one plank, the back being formed by two planks. This gave the "slope to the south" at an angle of about 30 degrees, which means catching the most of the sun's heat and light.

Six 1 x 3 joists running from back to front (north to south) support the sash. No grooves were made, as the sash was plain and without the tongues formed on more elaborately finished sash frames.

Three feet of fresh stable manure, well drenched with water from the garden hose, made the heating material. The frame was then closed up, and two days later the soil for making the bed was thrown in. Earth was banked firmly around the frame, then an outer fence of old boards was built about two feet from it on the north side, and the intervening space filled with manure, more of which was tightly banked around the ends and on the south side to prevent frost from entering.

It is no use making a hotbed and allowing all the heat to escape, so the glass of the sash must have some covering, otherwise it will radiate to an excessive degree. There are various possibilities of course—straw mats, covered with old matting or carpet, boards, burlap, oiled or paraffined cloth, etc.

Our preference was for salt hay, and, as this is too short to braid or weave, we made a thin mattress-like affair about four inches deep of unbleached muslin sheeting. It takes five yards of unbleached muslin two and a quarter yards wide, a couple of wheelbarrow loads of salt hay, a small quantity of twine and about four hours time to make the mattress mat. The regular six-foot straw mat made on a frame takes four sheaves of rye straw, a ball of twine and two and a half hours' time.

The whole is covered with a waterproof covering of some sort, to prevent snow or rain from soaking through. This can be accomplished by having the waterproof cover long enough to fasten down on the ground at each end of the frame. If attached to a wooden roller, it will facilitate the uncovering.

The fun of a hotbed comes in when you are gathering lettuce and radishes from it before the regular outdoor seeding time. The small ones of the family can be provided for, too, if given a small section for sweet violets. They will derive great joy in the thought of sending the flowers to brighten

the desk of some city friend who loves nature as they do.

Last November was so mild that I had pansies still in bloom, so I lifted some roots to the hotbed, cutting them back severely. Of course I know I should have sown seed in August, and had planned to do so, but best intentions sometimes fail, and, although I had vowed terrible and awful things in regard to the various seeds I would plant in August, they still remain unsown.

It is in making up for lost opportunity, as well as in forestalling the spring advent, that the home gardener will find abundant satisfaction in owning a hotbed.



The frame made from 2 x 3 joists and 1 x 10 cypress planks. The ground dug to give a four-foot depth



Pieces of 2 x 3 lumber brace the sides and form slides for the sash



Select a site sheltered on the north side



All ready. The sash is closed and heating begins



Mats of straw or mattresses of salt hay are serviceable covers for retaining heat



The foundation of success—plenty of green manure

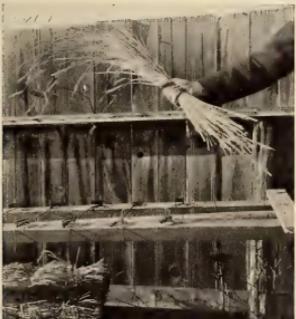
Home-Made Straw Mats for the Hotbeds—By N. W. Robinson Massachusetts

UNABLE to find in the stores mats thick enough for warmth in the earlier part of the season, I decided to make some myself.

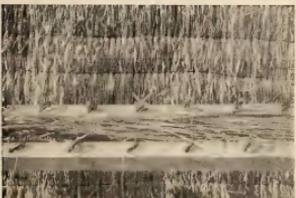
I took two pieces of 2 x 4 inch spruce timber about ten feet long, laid them on the floor, parallel and about eight inches apart, joining the ends with pieces of $\frac{3}{4}$ -inch stock, four inches wide.



The frame. Two pieces of 2 x 4 inch spruce ten feet long and eight inches apart. The central piece, or rod, pulls the mat down during the making process.



Take a handful of rye straw



Lay it across the strings, heads toward the centre making sure that the straws lie close and parallel

Starting about 18 inches from one of the ends of this frame and about an inch from the edge, I drove in six-penny wire nails at intervals of seven inches. Back of these rows and a little to one side, I drove two other rows of wire nails, making rows of cleats on both.

Among the odds and ends of lumber about the place I found a pole such as rugs are wrapped around, which I placed between the outer pieces of the frame.

My first outlay of cash was for tarred marlin, known to the trade as No. 4 $\frac{1}{2}$. A ball usually contains about 300 feet.

Having decided on the size for the mat, mark off the necessary number of cleats for the width of the mat, allowing for three or four inches of the straw to extend beyond the outside strings of marlin. For example, for a mat to cover a 6 x 6 foot sash, eleven cleats will be used, giving ten seven-inch spaces. The straw when trimmed should extend beyond the outside strings of marlin three inches on each side.

To begin operations, cut the tarred marlin into lengths $\frac{3}{4}$ times the length of the mat. Fold the marlin, to get the centre of the length, and with the centre over the pole fasten it to two opposite cleats. Repeat until you have a sufficient number of strands fastened on the frame. This is the warp in the weaving process. For convenience shorten up the lengths of marlin by making loops on the ends.

With staples, tack the marlin to the pole. Support the frame at a convenient distance from the floor or suspend from a beam overhead. Take a handful of rye straw—the larger the handful, the thicker the mat—and lay it across the strings of marlin, heads toward the middle of the frame; add enough straw to cross over all the strings, and extend beyond the ends about a foot. Distribute the straw so that the strand is of uniform thickness (a $1\frac{1}{4}$ -inch diameter gives a good, heavy mat). Unfasten a length of the marlin—the centre one is the best to start with—cross over the ends, pull taut and fasten again. Repeat, working toward the ends, smoothing out the straw and don't forget that putting out the heads and loose ends inside the strand makes a neater piece of work. The weight of the mat as it hangs in the frame will cause it to stretch, and therefore allow three or four extra strands of straw.



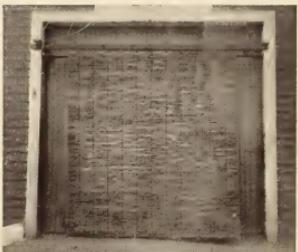
Use straw sufficient to extend beyond the size of the finished mat, to allow for trimming

When you have woven in sufficient strands finish off by tying with a square knot the pieces of marlin as you weave the last time.

With a pair of shears cut the projecting strands of straw, to give the sides of the mat a straight edge, leaving a margin of at least three inches beyond the outside strings of marlin. Trim off loose ends and heads all over the mat, and the work is done.



Tighten each string, working from centre to the ends



Finish off by tying each string with a square knot and trimming the sides of the mat



A mat like this—a little larger than the frame—will keep all quite snug

Rock-Loving Ferns in the Garden—By G. A. Woolson Var- mont

HOW TO INTRODUCE INTO OUR HOME GARDENS THE CHOICEST FERNS OF THE WOODS AND ROCKS, AND MAKE THEM FEEL AT HOME—A PRACTICAL WAY OF GROWING THE WALKING-LEAF AND OTHER DAINTY SPECIES THAT REQUIRE EXCEPTIONAL CONDITIONS

Photographs by the author and H. H. SWIFT

THE association of rock and fern is not accidental, but a simple device of Nature for inducing a lower temperature, moisture for the fern roots, and the needful supply of disintegrating limestone or other mineral matter.

The owners of large estates may be fortunate enough to possess naturally shaded dells or at least ravines which can, with little expense and trouble, be converted into charming glades full of nooks and corners, where hardy ferns from all parts of the earth may be naturalised.

Rockwork plays an important part in the landscape gardener's art. But great undertakings which require skilled artisans, an endless amount of stone and much expense are confined chiefly to public parks and gardens. Boulders artistically arranged about a fountain, with a leafy canopy overhead, are for the favoured few; but a few stones judiciously placed are within the reach of the majority and will afford more pleasure in proportion to the time consumed in the making and in space occupied than could be obtained in any other way.

A shady nook is of course the ideal location, but is not always available. Partial shade, however, is imperative. Pines and spruces make an artistic background and soften the abrupt transition from smooth lawn to ragged rocks. The color effect of rock and fern against a screen of Virginia creeper (*Ampelopsis quinquefolia*) is particularly fine, and within the reach of all.

In the selection of rocks most people have to take what they can get; but, given a choice,

sandstone and calcareous rocks are the most desirable. Much of the so-called artificial rockwork is composed of tufa, a soft, porous volcanic stone of light weight.

Nothing, however, can surpass the pic-

turesque quality of a bit of old limestone in process of decay. Freshly quarried stones of any kind should never be used; the more rugged and weather-beaten they are the better for the place assigned.



The foundation of a practical rockery where plants will grow. Every crevice connects with the ground. No water-light pockets to swamp and then dry up. Weathered and porous rocks used

turesque quality of a bit of old limestone in process of decay. Freshly quarried stones of any kind should never be used; the more rugged and weather-beaten they are the better for the place assigned.

Rock plants in general require light, sandy soil mixed with old mortar, if decomposed limestone is not at hand; brick rubbish also makes a satisfactory mixture. Certain spe-

cies require a richer and lighter compost in which leaf-mould predominates.

In building rockeries on our lawns we may follow general principles but may not imitate Nature in detail of construction, for too much

confusion is out of place on a well-ordered lawn; therefore we have recourse to something "twixt art and Nature." Happily the stone-wall abominations, with dry, cramped pockets in which no respectable fern would attempt to grow, are things of the past.

The more exposed the position however, the greater the need of something approaching regularity, in outline at least, for proper deference must be paid to the lawn mower.

Whatever form of architecture is adopted, see to it that there is a soil connection through every pocket and crevice with the earth beneath, and that the top soil is firm down to that which is underneath, otherwise capillary attraction will have no more chance of keeping the earth damp than in an imperfectly drained flower pot. This is the fundamental principle on which depends successful garden rockwork or rockeries, whether for ferns or anything else.

Environments usually suggest the proper style, which should always be simple and unpretentious.

THE CIRCULAR ROCKERY A CONVENIENCE

As a matter of convenience, I have a circular rockery on my lawn. Careful selection of stones gives a varied outline; a curved slab of calcareous rock is highly valued, as it is so advanced in decay that layers are easily sprung and ferns inserted as fancy dictates. Regularity ceases with the marginal tier of stones. Four good-sized rocks artistically irregular in shape are placed at right angles slightly inclined toward the centre; the space between



A fern that will grow almost anywhere. The maidenhair spleenwort (*Asplenium Trichomanes*) does well in either sun or shade. When planting make the earth firm and tight

the big stones is walled up to a height of two or more feet, with a six-inch wall across the open front. This gives four large receptacles below the central pocket, with a twelve-inch border and no end of tiny nooks.

A BAD MISTAKE TO BUILD HIGH

Unless a rockery is in a sheltered nook the height should be limited to two and a half feet. No great expectations need be indulged in even at this low point, for none of our regal beauties that would answer for a centrepiece can endure the winds if thus elevated and isolated.

I had in my mind's eye an elegant vase-like ostrich fern (*Matteuccia*), which should crown my rockery with dignity and grace. My aspirations, however, were blown away, for no sooner did a frond unroll its curly tips than a wind promptly snapped the brittle stalk, and an enormous and untidy "study in ferns" marred an otherwise successful creation. The plant was eventually removed but stolons had penetrated in all directions and a fringe of young ostrich ferns appeared.

MAKING AND SHADING THE ROCKERY

In building rockwork it matters little what sort of earth is used for the foundation; but if taken from a rubbish heap it must be freed from vegetable matter, which may decompose and eventually cause the earth to settle away from the stonework.

In the construction of small rockeries of the style described, part of the ground tier of stones may be laid and the filling piled high in the centre, and either tamped or thoroughly wet down with the hose before the inside stones are placed.

A shady corner allures the fern grower, and affords scope for bewildering confusion of rocks and ferns or an artistic sectional arrangement, as fancy dictates. The latter is much more satisfactory in every way and may be as picturesque and informal as the material will admit or the ingenuity of the builder suggests.

An odd lot of calcareous sand-rock and pudding stone compose the larger part of my rockwork. These stones look as if they might wash away, but, having withstood the elements for some fifteen years, they are not likely to vanish in the near future.

They are, however, sufficiently disintegrated to make the limestone with which they are impregnated available for the cliff dwellers to be grown thereon. A few other conglomerates, chiefly limestone and quartz, are in the foreground.

INSURING PLENTY OF MOISTURE

Mine has an especially dry corner, as the trees and shrubbery absorbed the natural moisture from the soil. For this reason, after the ground was cleared the hose was turned on and the water allowed to play for many hours before any filling was piled on. This in turn was wet down in instalments. Evaporation was thus checked and the soil thoroughly settled.

To insure a good slope of the side slabs, which diverge from a beautiful central up-



The bladder ferns are ideal for dry and exposed rocks. *Filix fragilis* above, *Filix bulbifera* below. They grow freely and will overgrow others if not restricted. May be lifted in spring and brought indoors

right, the earth was piled much higher in the rear and sloped toward the open front.

Some foundation stones were laid beneath the main divisions and cement used in a few of the joints. This was immediately dusted over with coarse sand and pebbles inserted to match the conglomerates.

Experienced handling is imperative, as the stones, so replete in tufts and turrets, are easily injured by small breakages, which



The Walking Fern (*Campocarpus rhizophyllus*) is indispensable for the rockery. The ends of its curious fronds penetrate into fissures of rock and take root

lessen their artistic value. Careful selection and grouping of material are also necessary, for there is great difference in color and wave of sandstone; a beautiful stone may look like a new patch on an old garment and spoil an otherwise harmonious whole.

Nature is so lavish of material that it is not difficult to blend one neutral tint into another, thus avoiding abrupt transitions which are so detrimental to any color scheme.

Space should be left for massing tall ferns outside the walls. The large pockets are of course designed for vigorous growers.

Even though it is designed to make your rock garden a repository for a botanical collection, no attempt should be made toward grouping genera and species, since artistic value is not a secondary consideration. Only single specimens of the larger ferns should be omitted, but the lesser growths may be largely in evidence.

Leave space outside the walls for massing the common bracken or brake (*Pteridium aquilinum*), ostrich fern (*Matteuccia Struthiopteris*) and the interrupted fern (*Osmunda Claytoniana*). The tall fronds arching over the fawn-colored stones will exquisitely frame the picture in the near future.

The royal fern (*Osmunda spectabilis*) is an admirable queen for the central pocket.

Rocks are so unique and beautiful in themselves that special care should be taken not to overload them in stocking and to prevent ultimate growth from hiding their formation.

THE BEST FERNS FOR ROCKERIES

Large clumps of osmundas and Goldie's fern (*Dryopteris Goldieana*) were literally built into the four sections described. Lower down in the border are specimens of maidenhair. The dark, glossy fronds of the Christmas fern (*Polystichum acrostichoides*) are largely in evidence, contrasting well with the reliable marginal shield fern (*Dryopteris marginalis*); both in turn foil the more delicately cut and colored spinulose shield fern (*D. spinulosa*), with its varieties. The most distinguished member of the polystichum group is Braun's holly fern (*P. Braunii*).

Fine clumps of the purple cliff brake (*Pelaea atropurpurea*) are apparently as much at home as they are among the outcropping ledges at the base of scraggy cliffs. They are not only beautiful in design but unique in color, a dark blue-green emphasizing all the varying tints about it. They begin to unfold their fronds late in comparison with others, a desirable habit, for the oak fern (*Phegopteris Dryopteris*) is so intensely brilliant earlier in the season that nobody looks at anything else.

The beech fern (*Phegopteris polypodioides*), on the contrary, appears late in the season and keeps so fresh and looks so cool long after other deciduous ferns are fading that no rockery can afford to be without it.

The common polypody is perhaps equally to be desired and should be lavishly used in rockwork. Of the smaller spleenworts, the ebony spleenwort (*A. platyneuron*) stands here as elsewhere like a small sentinel. Pretty rosettes of the maidenhair spleenwort (*A. Trichomanes*) are cropping out here and

there, and tucked down in a shady corner is the green spleenwort (*Asplenium viride*). To the casual observer these two are much alike. The former likes the sun, but the latter thrives only in the shade.

Very unlike any other of its genus is the wall rue (*Asplenium ruta-muraria*), the shy cliff dweller with sea-green fronds, which is as much at home in a rockery on the lawn as the walking leaf (*Camposorus rhizophyllus*), which fastens its tapering points on every side.

The pretty little rusty woodsia (*W. Ilvensis*) is excellent for rockwork, requiring little soil and thriving best in the sunniest corner. There is no mistaking this, for rusty indeed it is in dry weather, but it freshens up in a shower. The obtuse woodsia (*Woodsia obtusa*) requires more shade. Nearly all of the genus are cultivable.

The bulbiferous bladder fern (*Filix bulbifera*), graceful and fragile looking, is the first to fling a mantle of green over rock and stone, and, as a natural sequence, the first to pass. The only remedy for this is to break away the old fronds in midsummer. This species reproduces itself in two ways, by spores, and by bulblets located on the under side of the fronds; the latter start to grow so quickly after they fall that the species may become a nuisance, crowding out others equally desirable. The aftermath, however, is a compensation, for a second fragile mantle of green covers the trail of Jack Frost with fresh promise of the coming spring.

The hairy lip fern (*Cheilanthes lanosa*), an attractive little Southerner which superficially resembles the rusty woodsia (*W. Ilvensis*), is one of the very best ferns for the lawn rockery. Growing naturally on the crest of rocks, it accepts trying situations with a better grace than many transplanted Northern species. In my own experience it is perfectly hardy, looking remarkably fresh after the severest Vermont winter on record. A light covering, however, is to be recommended for exposed situations.



The commonest of all rock-loving ferns. The Wall-rue (*Asplenium ruta-muraria*) like the two ferns on the preceding page, needs a cranny in the rocks. It grows with a minimum of soil

No rockery is complete without the hart's tongue (*Phyllitis Scolopendrium*). It is easily cultivated, but also needs light protection through the winter in northern New England.

FLOWERS ON THE ROCKS

It is a profanation of Nature to force ferns to live in the midst of gorgeous geraniums or other cultivated plants blazing with color. But where nature has the selection of the floral accompaniments of ferns, her touch will be light and delicate. Wild flowers are the only permissible adjuncts of the fern rockery, whether as invited guests or as chance comers. Beauty of design is often greater than that of color, hence variety of foliage is often desirable. Orchids of any kind are especially fitting. A trillium here and there, or a jack-in-the-pulpit, may preach the gospel of good effect by contrast. Solomon's seal droops gracefully beneath the interrupted fern (*Osmunda Claytoniana*), and is nearly as interesting in its unfolding and development. The ever present Herb Robert

spreads itself about and *Clintonia borealis* carpets space well. This wildling is not as well known as it should be. There is an aristocratic exclusiveness about it which does not appeal to those who wish for something gayer than the graceful umbel of greenish-yellow bells; however, with its orchid-like foliage, it is highly decorative. The wild strawberry gives an ideal finish to our June picture. A mass of the foam flower (*Tiarella cordifolia*) is especially pleasing. Once established, it takes the situation in hand and the ferns literally rise out of the spray of bloom in self-defense. But the daintiest conception which Nature has dropped among the ferns is the bishop's cap (*Miella diphylla*). This exquisite bit of floral conservatism is in perfect harmony with the "feathery fern, whether it groweth wild and free" or as a willing captive.

Hepaticas, violets, white and blue, may bloom among the ferns; even the rock-loving columbine loses none of its loveliness in its adopted home; but the ideal accessories of ferns in the rock garden are harebells. Such strength and delicacy are not elsewhere found in the floral world. Like a rare trait in a rough character, they grace the rugged rocks on which they grow. Just a foothold and a chance to swing and sway as the breezes do, are all that this flower of the air demands.

Once established, the care of ferns is practically nothing. My ferns are rarely watered, and never with the hose, unless a small stream is turned on and the hose allowed to lie on the ground for the purpose of soaking the roots in extremely dry weather.

One application of the full spray is as disastrous as a tornado. I have had the beauty of many choice ferns spoiled for the season by the veering of the wind which blew the spray from a hose, supposed to be out of reach, upon them. Even the maidenhair, that so-called voucher for the purity of waters near which it grows, turns brown and withers.



The ferns do not obliterate the rock-forms, which are merely clothed and complemented by the plants



Keep careful watch that the Lady Fern (*Asplenium Filix-foemina*) does not oust its companions. It is hardy, aggressive, imperinent, springing up even where it was not planted



A Backyard Play-Garden With a Japanesque Idea.

By WALTER R. BEAVIS.

Photographs by the AUTHOR and W. P. COOGAN.

[EDITOR'S NOTE. Here is a garden designed to amuse the children, which should not be judged by conventional standards. It has the essential idea of the Japanese garden—a landscape in miniature. In this respect it is a truer translation of the Japanese idea than a mere jumbling of their materials (e. g., stone lanterns, and dwarf trees in pots), without relation to anything else. Anyone who criticizes this from an adult standpoint will miss enjoying its imaginative quality and its effectiveness for its own purpose, viz., that of amusing the children.]

THE backyard garden of which I write is on a lot 40 x 80 feet. As the time that I can devote to its care is limited, I have planted freely of permanent shrubs, as these require but little care when once set out, and increase in beauty with each succeeding season.

For instance, I have near the spiraea (No. 35 on the plan) a very large plant of *Begonia gigantea rosea*, and near the hydrangea (No. 37) is a specimen of the curious *Saxonomatum venosum*, with its peculiarly-shaped leaves. In the corner formed by the arbor (No. 24) is a fuchsia four feet high, trained on a trellis, and which is in constant bloom throughout the summer.

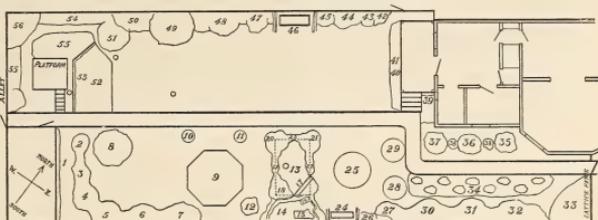
My iris bed shows a wonderful combination of form and coloring, and is a particular favorite of mine, as I can get such great results with the simplest culture.

In bed No. 34 are some representatives of the principal varieties of English and German iris, with their richly marked and mottled flowers, and the Japanese *I. lavigata*, having

gorgeous blossoms measuring eight to ten inches across. The several types, and even different colors of the one type of iris, come into bloom at different and overlapping periods, and thereby give a succession of bloom.

The clumps of iris are planted with spaces four or five feet between them and in these spaces are various plants which come into bloom after the iris season is over. These include such flowers as balsams, asters, Shirley poppies, Sweet Williams, Japanese bell

of *Clematis paniculata*, hyacinth bean, morning glory, and grapes. The playhouse I built myself. The uprights are 2 x 4½-inch pine, set on posts sunk in the ground. The rafters and half rafters are cut out of inch stuff a foot wide, to allow for the curves of the roof. The roof is shingled, the shingles being nailed on three-inch strips fastened to rafters. The sides are latticed with ¼-inch stuff, one and a half inches wide, and the strips are placed about four inches apart, giving good open work for the vines to cling to. The platform



Planting plan for the 40 x 80 city garden

- | | | | |
|--------------------------------|-----------------------------------------------------|---------------------------------|----------------------------------------------------------|
| 1. Virginia creeper vines | 16. Hill | 30. Chaldion | 44. Sweet pea shrub |
| 2. Furze blue | 17. Bridge | 31. Iron greece | 45. Salmon peony |
| 3. Dahlias | 18. Umbrella plant (<i>Cyperus alternifolius</i>) | 32. Wiegela | 46. Arbor over seat. Vines of <i>Clematis paniculata</i> |
| 4. Spiraea | 19. Portulaca | 33. White lilac | 47. Lilac |
| 5. Lilac common | 20. Catulida | 34. Ferns | 48. Golden elder |
| 6. Iron greece | 21. Elephant's ear (<i>Caladium bicolor</i>) | 35. Iris | 49. Black orange |
| 7. Arbolescent | 22. Iris, wild and cultivated | 36. <i>Spiraea Pen. Henster</i> | 50. Violets, etc. |
| 8. Zanthar castor bean | 23. Forget-me-not | 37. Bush honeysuckle | 51. Elder |
| 9. Children's play house | 24. Seat, and arbor of honeysuckle | 38. Kiosc | 52. Arbutus |
| 10. Fuchsia, white | 25. Geranium and tuberosa bogwinkle | 39. Madiera vine | 53. Back of nasturtium |
| 11. <i>Spiraea Pen Henster</i> | 26. border of silver leaf geranium | 40. Iguis honeysuckle | 54. Blush |
| 12. Waterily pond | 27. Eriopogon | 41. Sweet Mary and Columbine | 55. Tomatou |
| 13. Hill | 28. Tuberoses | 42. Spiderwort | 56. Compost heap |
| 14. Hill | | 43. Red pony | 57. O. Trees |

flower (Platycodon), hardy phlox, blue lily of the Nile, (*Agapanthus*), mignonette and verben.

On the opposite side of the walk, and between the bay windows are climbing roses, Baltimore Belle and Prairie Queen, and in the bed, besides the clumps of shrubs indicated on the plan are early and late flowering cosmos, tobacco (*Nicotiana glata* and *N. decurrens*), salvia, fuchsia, alcaasia, salpiglossis, sauramatum, spiderwort, and funkia. In this bed, and also across the walk are planted tulips, hyacinths, and some crocuses.

Around the children's playhouse are vines

is 6 x 6 feet and six feet high, and made of 2-inch pine, and is intended for a toboggan slide in winter, the incline coming down into the lawn and the slide continuing to the house.

The seats under the arbors are made of two-inch sidewalk plank of narrow widths; that on No. 46 is five feet long and about twenty inches wide, the one at No. 24 is four feet long and fifteen inches wide. Both are painted light stone color, so as to maintain a pleasing contrast to the dark shadows of the arbor recesses.

One of the most interesting features of the garden is formed by the water-lily pond.



A Japanesque landscape idea in a city backyard. Umbrella plant and cat-tails form bold masses of scenery. A delight to the children



The hill of slag is covered with Othonna and a forest of "old man" shelters the castle. The lake is planted with water-lilies and irises, etc.



Showing the steps leading up the hill to the castle over which cypress vine is growing. Elephant's ear in the foreground. Water-lilies in flower



A lawn for croquet and other games. The arbor is covered with Japan clematis and abundance of flowers are in the border. Fruit trees in the background

From whatever position this little pond is viewed, a most charming picture is obtained, the clear water reflecting on its surface the lights and shadows of its surroundings and enhancing the beauty of the plants growing on its banks, and just enough formal lines are presented in castle, mill and bridge to contrast with and render still more beautiful the natural grace of plant forms.

To construct it, I had a plumber make and sink a galvanized-iron pan, ten feet long, six feet wide and one foot deep, the pan shown by dotted lines on plan.

The excavation was made deep enough and large enough to allow a depth of eight to ten inches of ashes and cinders to be placed under and around the pan, to prevent any lifting by frost.

The pan is connected with the sewer drain, and the outlet pipe is so arranged as to prevent the water overflowing in summer. It can be removed after the first heavy frosts, and the pond is kept entirely drained during

the winter. The pan, sunk and connected with sewer drain, cost \$8.

The earth from the excavation was thrown up near the fence (and here I made an inner wall of inverted tomato cans to keep the dirt from rotting the fence) and this hill covered with slag from iron works.

This was covered with low-trailing plants and a few miniature buildings and topped with a "forest," and the whole forms a very pleasing background to the "lake."

The "castle" is cut out of half-inch pine and painted a light stone color.

The "mill" with its old-fashioned over-shot wheel is made of half-inch stuff, and little boughs halved and nailed on the sides give it the appearance of being constructed of logs. The bridge is cut out of inch pine, painted stone color and makes a very pretty effect where placed; particularly pleasing is the reflection of its arch in the water of the pond.

To construct the waterfall troughs were made and so placed that when water was turned on it would be carried from a pipe

back of the castle, over the waterfall, through a little stream down over the wheel of the mill; then the troughs were built up with stones, slag and earth and planted with trailing plants and moss, the whole to simulate a natural waterfall and stream.

In the corners of the pan I piled up earth to three or four inches above the water line, and continued it outside of the pan, to form beds. These are planted with various moisture-loving plants. In one corner is the umbrella plant (*Cyperus alternifolius*) and Jacob's-ladder (*Polemonium ceruleum*); in another corner is a huge mass of cat-tails.

Plants of elephant's-ears thrive wonderfully in the moist soil adjoining the pond; here also some iris, both wild and cultivated, find themselves in their natural home and show their appreciation by a profusion of bloom.

Last but not least, all weeds pulled up, leaves and grass clippings and some manure go to make up a compost heap, which is dug into the soil the following spring.



Entrance to the backyard. Annuals give a mass of gorgeous color all summer



Luxuriant growth of the Zanzibar castor bean. Largest leaf measures 42 inches across



The complete landscape in the backyard is a great delight to the children



Lilies the World Really Needs

By WILHELM MILLER

LILIES well illustrate the most important fact in plant breeding, viz., that at least half the battle is to find out what the world wants. You and I could walk through a ten-acre cauliflower patch on Long Island and never know whether there was a single plant in the whole outfit that ought to be saved for seed. Professor W. W. Tracy, the veteran seedsman, could tell. He could tell us the points of a cauliflower just as you may know the points of a St. Bernard dog. But you and I do not know what kind of a cauliflower the market demands, nor what one, most important quality the existent varieties lack. If we did, we could seize upon the slightest advance along that particular line.

Without such knowledge, you and I would not be plant breeders—merely gamblers, with the chances a thousand to one against us. Yet the one thing that amateurs almost never do is to study the market end of a problem. America is full of dilettante inventors, who pin their faith on "inspiration" and never try to find out what value the world puts upon a thing. The patent office is full of inventions by country mechanics, who work alone and never get their ideas corrected by commerce with other people in the same line of work. And, sad to say, there is a regularly organized system of "bleeding" these good people by preying upon their vanity. So, too, there are, or have been, thousands of varieties of potatoes, dahlias, chrysanthemums, etc., raised by amateurs which are utterly and justly forgotten, simply because they were not along the main line of development. They were side issues. Nobody wanted them. They were not enough better.

There is no short and easy way to find out what the world needs in lilies or in anything else, but there is one method which is generally pursued by the masters of invention—the method of comparative study. Your trained inventor, like Edison or Elihu Thompson, does not work by chance or by "inspiration"; he painfully finds out something the world lacks—not a little want, but a big one. Then he sends for all the patents along that line. He gets a whole "sub-class" for \$10 or \$15. In a week's study of previous inventions he can find out what is the matter with them all, what they lack, and the line of effort is then clear. So, too, with lilies. You must grow them all and talk with other

growers before you can create varieties worth while.

There are only two lilies, in my opinion, that the world really needs—a better Easter lily and a hardy white lily that will live outdoors all winter in the North. As nearly as I can make out, there are more dollars spent for Easter lilies than for any other kind. The dollar sign is usually a safe guide, but not always. In this case the true cause lies deeper. The lily at Easter appeals, not merely to a sense of beauty but to a fundamental religious instinct. You find white lilies in some of the oldest pictures of the Resurrection. Easter is the greatest flower festival of the year; white is the favorite color then; lilies have been an Easter symbol for many centuries. No wonder we spend a quarter of a million annually for Easter lilies.

I presume that the people of southern Europe do not have to force lilies for Easter as we do. Their lily—the lily of history—used to be forced by American florists until the Bermuda lily took its place. The old Annunciation or Madonna lily (*Lilium candidum*) has a bell-shaped flower, the Bermuda lily (*Lilium longiflorum*, var. *eximium*) has a large trumpet-shaped flower. These are the only two lilies that have ever taken kindly to forcing, and the main reason why the Bermuda lily displaced the Annunciation lily is that the florists could make it flower with greater ease and certainty than the other.

The Bermuda lily really a native of Japan, and it has been injured by the slovenly methods of "get-rich-quick" bulb growers in Bermuda. It has at least seven important insect enemies and diseases. Bermudan greed has nearly, if not quite, killed the goose

that laid the golden egg. The only sure way to get rid of the troubles which cause such heavy losses to our florists seems to be the revolutionary method proposed by the United States Department of Agriculture, viz., to grow the bulbs ourselves from seed. Mr. George W. Oliver, of the Bureau of Plant Industry, has grown salable bulbs from seed in ten months—a feat which everybody supposed would require three or four years. He has even grown lilies from seed in six months and thirteen days.

The problem of the Easter lily, therefore, is in good hands. Meanwhile the best thing the amateur and the florist can do is to pay a high price for Bermuda-grown bulbs for Christmas forcing and get the Japan-grown bulbs in November for Easter forcing. It may be years before the Department distributes the new stock. The regular course is to send novelties to commercial growers who are interested, and let them multiply the stock for the people; the public would only waste such things. I wouldn't write the Secretary now for bulbs. He will tell us all at the proper time. We cannot get them any sooner.

However, if you can't wait you can grow Easter lilies yourself from seed. You can send for the Department bulletin, which tells you just how to do it. You can read "The Easter Lily—a Romance of Horticulture" in *Country Life in America* for April, 1904. After this, if no clear-cut plan of action suggests itself you will never be a second Burbank. You will only "putter."

It is more than likely that the problem of the hardy white lily will be solved, as a by-product of the Easter lily study, because *Lilium longiflorum* is said to come from a part of Japan whence we get other things



The Annunciation, or Madonna lily (*L. candidum*) is the best white hardy lily we have, but it is not good enough. There is a fortune awaiting the man who can give us a better one

that are hardy in the northern United States. How could a man get bulbs of *Lilium longiflorum* from the northernmost spot in Japan, where they grow wild, I wonder? Who has grown *Lilium longiflorum* the farthest north of any one in America?

Why isn't *Lilium candidum* good enough for a hardy white lily? Because it is more susceptible to disease than any other; because no one knows whether to plant it deep or shallow, give manure or not, divide frequently or leave alone. Plenty of people have succeeded temporarily by opposite methods; no one is sure of permanent success and knows why. Can the facts be discovered and proved? Can the difficulties be overcome? There is a small fortune waiting for the man who will first give us a hardy white lily; possibly, also, a GARDEN MAGAZINE Achievement Medal.

While there is no quick way of finding out what the world wants there is an excellent way of clarifying your ideas as to what the market does and does not get. Make a chart like the one on this page, which shows at a glance the kinds of lilies we do not have.

In order to do this consider what are the two most valuable characteristics of the group of plants in which you are interested. In this case, the shape and color of the flowers are clearly the most important items. Therefore, range your important colors across the page and the shapes down one side. Try to fill each space with the name of the best variety of that shape and color. In this case there were so many good varieties in certain squares that I have made two tables, one for the spotted lilies and one for the lilies without spots.

Now see what interesting flashlights such a chart throws upon our problem. Consider the spotted lilies. Practically all of them are turban-shaped, and it is evident that in this class there is room for a yellow tiger lily. The tiger lily is the commonest and cheapest of all lilies, the easiest to grow and one of the most permanent. Why should we not have this type in all colors, with and without spots? Evidently the tiger lily should be the basis of the plant breeder's work, because it has every desirable quality except a wide range of colors.

The other spotted lily of supreme importance is *Lilium speciosum*. It is one of the most informal-growing lilies; the tiger lily one of the most formal. The rosy pink form of *Lilium speciosum* is the commonest, and the best for general purposes. The white variety, I fear, is neither so robust nor attractive. We have two series of colors in lilies—the strong ones red, orange, yellow, and the delicate ones white and pink. No species has been known to cross the color line. But why should we not have white and pink tiger lilies? Or *Lilium speciosum* in red, orange and yellow? I should think it would be worth \$100 to create any of these varieties. I don't want a blue lily or a green or purple one; and I believe the world does not, any more than it wants such monstrosities as blue roses, carnations, chrysanthemums or peonies.

As to the unspotted lilies, the chart shows



The best Easter lily we have is the so-called "Bermuda" lily (*L. longiflorum*, var. *eximium*), but the getting of healthy bulbs is too much of a lottery. Something radical must be done

that we have no funnel-shaped flowers in red or orange; no cup-shaped flowers in white or pink; and no turban-shaped flowers in the latter colors. All these combinations would seem to be attractive, and the chart suggests how to go at them, e. g., the first by crossing *L. longiflorum* and *L. tigrinum*; the second,

L. elegans and *L. candidum*; the third, *L. tigrinum* and *L. speciosum*, var. *album*.

All this sounds delightfully simple. The trouble is it doesn't work. Nothing is easier than to cross lilies, because the flowers are so large, but nothing ever comes of the crosses. You get seeds and they grow and look wonderfully unlike in their young stages, but when they come into flower they are the same old thing. Peter Barr once told me that he had about an acre of lily seedlings. He spent no end of time hybridizing lilies, collecting seed, sowing it, and gloating over his thousands of young plants, no two of which were alike, but when they bloomed did he get anything new? Not one solitary lily. "I saved P—," exclaimed Mr. Barr, naming a famous American botanical explorer. "I saved him from wasting his life trying to grow lily hybrids. He had started into the business and I warned him in time."

It is a singular thing that no lily hybrids of importance have ever been produced. True, the nankeen lily (*Lilium testaceum*) looks like a hybrid, and its native country is unknown.

Who will solve this mystery for us? Why is it so easy to cross lilies and so hard to "break the type." Who will give us lilies the world really needs—not a trifling lot of varieties which are just a little different from those mentioned in this table? And who can tell us varieties that are better than any that are named in this connection? The columns of THE GARDEN MAGAZINE are open to anyone who can carry our knowledge of the subject beyond this point.

THE BEST SPOTTED LILIES

	WHITE	PINK	RED	ORANGE	YELLOW	PRIMROSE
Funnel.....						
Bell.....						
Cup.....						
Turban.....	<i>speciosum</i> var. <i>album</i>	<i>speciosum</i>	<i>tigrinum</i> <i>speciosum</i> var. <i>Melpomene</i>	<i>superbum</i> Henry <i>pardalinum</i> <i>puberulum</i>		Leichtlinii

THE BEST UNSPOTTED LILIES

	WHITE	PINK	RED	ORANGE	YELLOW	PRIMROSE
Funnel.....	<i>longiflorum</i>	<i>Japonicum</i> var. <i>roseum</i>			Parryi	
Bell.....	<i>candidum</i>	<i>rubellum</i>	Canadense	Canadense	Canadense	
Cup.....			<i>elegans</i> , var. Best Red	<i>elegans</i> , var. fulgens	<i>elegans</i> , var.	<i>elegans</i> , var. <i>alutaceum</i>
Turban.....			<i>tenuifolium</i> Chalcedonicum		<i>parthenion</i> <i>monadelphum</i>	<i>testaceum</i>

A chart showing the best lilies of every shape and color. The blanks show which types have no hardy representatives in cultivation. A method of indicating opportunities for the plant breeder which can be adapted to any group of plants. The Pacific Coast species are *L. pardalinum*, *puberulum* and *Parryi*.

GIANT PANSIES

VAUGHAN'S INTERNATIONAL The World's Best. This mixture has been made up and sold by us for fifteen years. It contains the most varied colors, types, blendings and unique kinds that can be found in all the world. During the past three or four years we have added only the Giant strains which have been produced by French and German growers. Enormous in size, many with ruffled edges, with extremely thick velvety petals. This is the best general mixture in existence, and is the most widely known and popular. The worth of our Pansy Seed is best known to professional florists. Probably more than half of the American florists use our seeds.

Price, Pkt. (250 seeds) 25 cts.; 5 Pkts. (1,250 seeds) \$1.00

NEW ORCHID-FLOWERED PANSIES

A mixture of the most surprising, novel, unique and beautiful color combinations, entirely new among Pansies. The ground color of nearly all the flowers is in light shades; the petals are marked with large brown or golden yellow blotches which diffuse into rays and veins toward the edge. The upper petals are upright and sort of plaited, which gives the flowers their resemblance to orchids. The colors range in the terra-cotta shadings as well as in the flesh, orange, rose, pink and lilac.

Pkt. 15 cts.

Vaughan's "Elite" Mixture of Pansies

This is not a complete mixture like our International; it does not contain any pure white, yellow or any self colors, nor any other of the well-known kinds. It is comprised of the Cream of four Pansy specialists' choicest and most expensive mixtures and such new and novel kinds as listed above. It is a mixture that will please everybody who likes Pansies and can appreciate quality in color, shape, size and substance—in fact everything that makes a perfect Pansy.

Pkt. (250 seeds) 50 cts.

A GREAT RECORD—Vaughan's International Pansy Mixture

Was awarded a Medal at the World's Fair in Chicago in 1893, a Medal at the Trans-Mississippi Exposition in Omaha in 1896, a Medal at the Pan-American Exposition in Buffalo in 1901.

Parks and cemeteries East and West have used our International Pansy Mixture. Among these we may mention Oakwoods, Rose Hill and Mt. Greenwood Cemeteries and Lincoln Park and Washington Park, Chicago; The Public Garden, Boston; Prospect Park, Brooklyn, N. Y.



"VAUGHAN'S BEST" LARGE-FLOWERING SINGLE PETUNIA

For freedom of bloom, variety of colors, ease of culture and effectiveness Petunias take rank with Asters, Phlox and Verbenas. If only a little care is bestowed upon them Petunias will produce their handsome, sweet-scented flowers in their delicate and gorgeous colors throughout the whole Summer.

"Vaughan's Best" Mixture of Large Flowering Petunias

This mixture is made up by ourselves and includes all the best sorts and colors of the Large Flowering and Fringed sorts, and the unsurpassed Superbissima varieties, with their delicately ruffled throats in various colors and their truly mammoth flowers. It is positive that no other Petunia Mixture can produce flowers with as wide a range of colors as our Vaughan's Best. Packet, 25c.; 3 packets for 60c.

ALL THE ABOVE SHOULD BE SOWN SOON

For 1906 our 150-page Catalogue, covering the MOST COMPLETE LIST of FLOWER SEEDS OFFERED IN THIS COUNTRY, FREE on request. Please mention GARDEN MAGAZINE

Address **VAUGHAN'S SEED STORE** 84 and 86 Randolph Street, Chicago
14 Barclay Street, NEW YORK

TESTIMONIALS.

Hendley Beach, South Australia.
I had not intended growing any Pansies next season, but your "Elite Mixture" is so good everybody who sees the flowers will want some.

Your "International" and "Giant" Pansy Mixtures are also splendid, in fact the very best I've seen.

I am pleased to be able to say that all seeds I have had from you have been fresh and good, and in every way just as you represent them to be.

If the seeds I am now ordering are equal to the previous lots I have had I shall be more than satisfied.

J. ERNEST PADMAN.

Honolulu, H. T., Oct. 4th, 1905.
Your International Pansies were grand. People who have traveled extensively in America and Europe said they had never seen my Pansies equalled.

Eli Snyder.
Tekamah, Neb., Feb. 10th, 1905.
I wish to say that I had the largest Pansies from the seeds I got of you that I ever saw. Everyone that saw them said that they had never seen such lovely Pansies.

JENNIE CLARK.



THREE SPLENDID SALVIA

NEW SALVIA SPLENDENS, DROOPING SPIKES

This new, large flowering Salvia (Scarlet Sage) has three times the flowering capacity on each spike of the ordinary Salvia Splendens. The flowers are produced in great numbers, causing the spikes to droop by their weight. It is the flower of the most brilliant, dazzling scarlet, produced in endless profusion and until late in the Fall. Pkt. (75 seeds) 10c., 3 for 25c., 1/2 oz. 40c.

SALVIA SPLENDENS "SILVERSPOT"

The leaves are rich soft dark green with cream-colored spots. Pkt. 10c.

GOLDEN-LEAVED SALVIA

Foliage of a fine yellow shade, hardly a trace of green about it. The scarlet flowers are of exceptional brilliancy, far more brilliant than the common Salvia Splendens. The color of the foliage is constant, and its color is perhaps intensified by heat. Pkt. (100 seeds) 10c., 3 for 25c.

THREE NEW SALVIA MIXED, Pkt. (50 seeds) 15c.



Hundreds of Interesting Plant Offers

And hundreds of valuable suggestions. You will like our good, readable catalogue entitled "**HARDY ORNAMENTAL PLANTS OF THE BETTER CLASS.**"

We have cause to be proud of it—you will be proud of it, be glad to own a copy and to profit by the useful, interesting information it plainly gives. The chapters it contains are shorn of the usual confusing technicalities and are lacking in dryness.

This catalogue tells just what you want to know about one of the greatest and most valuable collections of hardy ornamental trees in the world—and tells you in a way you will enjoy.

LOW RATES. Our stock is low-priced, far lower than you could expect in plants of such high quality. Then, too, the assortment is so complete that you can often obtain from one source all the plants you would otherwise find necessary to buy from two or three places. You save both ways when dealing with us—you save the several shipping expenses and you get the advantage of very attractive rates that we make on quantities. Every item in the immense stock that we offer is in perfect condition.

Here are but three samples of our many exceptionally attractive offers:

HARDY GARDEN NUMBER SEVEN—\$5.00

A grand assortment of beautiful and most desirable Hardy Plants for an Old-fashioned Garden; choicest Philo, Paeonies, Larkspurs, Irises, etc. Will give a glorious display and make the garden gay with color from early spring until late fall. Will plant about 30 square feet of space. Lives forever. Will furnish plenty of bouquets for house decoration, and will be one never-ending source of pleasure.

(Read all about it on page 56 of our catalogue.)

HARDY GARDEN NUMBER EIGHT—\$10.00

Contains over double the quantity in Hardy Garden Number Seven, which allows us to make even a more attractive combination of pretty, hardy plants. Hundreds of garden

lovers will be delighted with this assortment and with the charming effects it will create.

(Read all about it on page 58 of our catalogue.)

JAPANESE BLOOD-LEAVED MAPLE

One of the most ornamental plants in American cultivation. This is the beautiful little tree, dwarf and compact, which has leaves of a bright, blood-red color. It takes little room and makes a great showing for the space it does take. Ours are directly opposite in character to the common, mean, little stunted things which are usually sold. **OURS ARE GROWN ON THEIR OWN ROOTS** and are not sickly or puny. Our plants will grow into magnificent specimens. Two feet high, bushy, grown on their own roots. \$2.50 each, five for \$10.00.

(Read all about Japanese Maples on page 65 of our catalogue.)

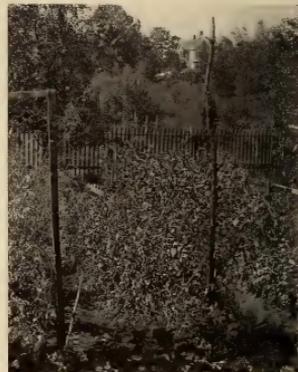
Send ten cents in postage and we will place your name on our mailing list; then you will receive our catalogue and also our interesting booklets, folders, special offers, etc., issued from time to time. You will also have the full benefit of our "**Special Information Department,**" a service which may save you dollars, as it annually saves thousands for our friends. Tell us something about your property, its size, location, surroundings, and give us some idea of your needs and your plans.

THOMAS MEEHAN & SONS, Inc., Box R, Germantown, Philadelphia, Pa.

An 8x30 Vegetable Garden

IT WAS only a small patch, 8 x 30 feet, but we gathered five dollars' worth of vegetables from it. Our success was due to planting succession crops and never allowing the ground to be idle.

The first crop was three rows of peas, four feet apart, planted April 11th and 28th.



The patch July 20th when the peas were past their height and the corn still small

Between these we sowed two rows of corn on June 26th and July 6th. One of the rows of peas was on a trellis, on the other side of which we planted Limas that gave us nearly another dollar's worth. The peas were all



The patch August 7th when the peas had been removed and the corn had begun to spread itself

finished and out by August 1st, just as the corn was getting high enough to need the space, and by the first of September it needed all the ground. The corn was sowed about a foot to one side of the peas instead of



HELP THE PLANTS

Spraying for insects and dust, it reaches every part of the plant over and under the leaves, where insects breed. Spraying with tobacco water will surely kill these enemies. Had we the space, we could tell you many things about your plants, how essential it is to spray them while in the house, on the under side of the leaves.

How much Mother would like one, for her plants!

Sent complete with a cake of tobacco soap free. Make a suds and spray. Your plants will surprise you.

THE LENOX MFG. CO., 1292 Broadway, New York



SPRAYING UNDER THE LEAVES

50cts. Post-paid

If you wish an Up-to-date Flower or Vegetable Garden the Coming Season YOU MUST HAVE



Maule's
SEED BOOK
FOR 1906

Because it contains the *Most Complete List of Flowers and Vegetables* known to Horticulture, together with many Striking Novelties that can be obtained nowhere else, among which I might mention:

A Hothouse Cucumber that can be grown in the open ground.

A Delicious Corn the Fourth of July.

A variety of Onion that will keep in good condition a year.

Absolutely the earliest Tomato in cultivation.

A Green Pod Bean that is at all times without strings.

Together with hundreds of other things that will insure you without question *the finest garden* in your neighborhood and the prizes at your fair next fall.

This Seed Book costs me this year very close to fifteen cents per copy, but I will be pleased to send one free to every reader of THE GARDEN MAGAZINE who will take

the trouble to send me their address on a postal card.

WM. HENRY MAULE, 1701 FILBERT STREET
PHILADELPHIA, PENN.

TO KNOW THIS BEAUTIFUL SWEET DAPHNE IS TO SURELY LOVE IT



DAPHNE CNEORUM

WE have succeeded in getting up a large stock of this rare evergreen hardy Daphne, which excels the arbutus for fragrance. It is a most beautiful evergreen, low-growing, spreading shrub, and in June, when in the glory of its first blooming (see illustration), it would be hard to find its rival for beauty or fragrance. It blooms freely at intervals all summer, even late into the fall, and will grow almost anywhere, thriving best in full sunlight. Splendid for foreground work and rockeries, where good generous masses can be made to produce charming effects. Blooms freely the first season planted.

Prices: Very bushy plants, each \$1.00; per 10, \$9.00. Strong plants, each 50c; per 10, \$4.00

OUR 1906 CATALOGUE If you anticipate purchasing choice hardy trees, shrubs, roses, and other hardy plants, both fruit and ornamental, and appreciate quality, our stock is sure to meet with your approval. This, our new 1906 catalogue, is a priced index to our stock, and a copy of it is yours for the asking.

THE ELM CITY NURSERY COMPANY, NEW HAVEN, CONN.

VISITORS ALWAYS WELCOME AT THE NURSERY

SAVE YOUR TREES "SCALECID," WATER, and a good SPRAY PUMP

Mr. A. N. BROWN, of Wyoming, DEL., writes: "You have conferred a boon on the American Fruit Grower."

Simply—more effective and cheaper than Lime, Sulphur and Salt. For sample, testimonials and price delivered at your railroad station address B. G. PRATT CO., 11 BROADWAY, NEW YORK, N. Y.

RAWSON'S NEW HOTHOUSE CUCUMBER

A variety of sterling merit—not by experiment but practical use—for we grow this variety in our twenty greenhouses at Arlington. Its origin is at Arlington. The seed is

grown at Arlington on our own farms. We know what it is: the best for growing in greenhouses or hotbeds.

BEEF, CROSBY IMP. EGYPTIAN. The smallest top, the quickest growing, the best for forcing or early planting.

FLOWER SEEDS. Our strain of Giant Ten Weeks' Stocks is in every way superior; larger flowers, ninety per cent. double.

This and many other specialties in flower and vegetable seeds are found in our catalogue of 1906, "Arlington Tested Seeds." It has been compiled with great

care as to description and illustration of a complete collection of Flower and Vegetable Seed. We want you to receive this catalogue. Write us; we will mail it free.



W. W. RAWSON & COMPANY SEEDSMEN

12 and 13 Faneuil Hall Square

BOSTON, MASS.

through the middle of the space. This had several advantages. It was near enough to the peas so that they could be picked by reaching over it, and yet far enough away to be cultivated. If it had been sowed half way between the pea rows, the space would have been too crowded and the corn trampled in trying to get at the peas. The first photograph was taken on July 20th, when the peas were past the height of their season and the corn less than a foot high. The second photograph was taken on August 7th, after the peas were pulled out, when the corn had begun to spread its leaves and the Limas on the trellis were beginning to fill the place occupied by the peas. The first sowing of peas yielded a crop worth \$2, as did the corn.

New York.

A. MASON.

The Strip Between Fence and Sidewalk

LIVING in a town which is not fenceless, it was found that the foot-wide strip of sod outside the fence between it and the cement sidewalk was hard to keep looking presentable. It was impossible to cut that grass with a lawn mower and hand-clipping



A solution of "the unmowable grass by the fence" problem. Plant flowers

120 feet of frontage is something of a task. The difficulty was finally met in the manner shown in the accompanying picture. The sod was turned under, and a row of portulacca, mignonette and sweet alyssum seed planted.

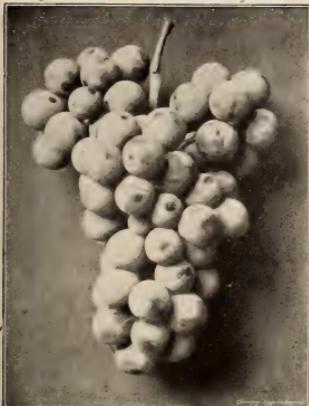
The second season enough self-sown "volunteers" appeared to make re-seeding unnecessary. In the two seasons there has been no instance of a blossom or plant being disturbed, although many people, including school children, pass daily.

One of the greatest pleasures of this idea is that it is being copied by others in this town, and, if the plan is new, it is hoped that this mention of it will "pass it on."

Nearly any low-growing plant suitable for borders will do nicely for this purpose. Pansies, dwarf nasturtiums or bush sweet peas may be used where soil, moisture and other conditions are suitable.

Iowa.

H. R. MOSNAT.



Grape Vines

NO garden is complete without a sufficient number of grape vines to supply an abundance of this delicious fruit. For nearly 40 years we have been furnishing high-grade vines for this purpose.

Q We will send you large vines of the best table varieties, including three red, three white and four black, for \$1.00, delivered free. Send for our elegant *Illustrated Descriptive Catalogue and Prospectus*. It will tell you how to plant, cultivate and train them.

T. S. HUBBARD CO.

Grape Vine Specialists FREDONIA, N. Y.



Lambert's Pure Culture Mushroom Spawn,

Produced by new grafting process from selected and public specimens, thoroughly acclimatized, has never failed to run. Sold by Leading Seedsmen. Practical Instructions on "Mushroom Culture" mailed free on application.

MINNESOTA SPAWN CO., St. Paul.

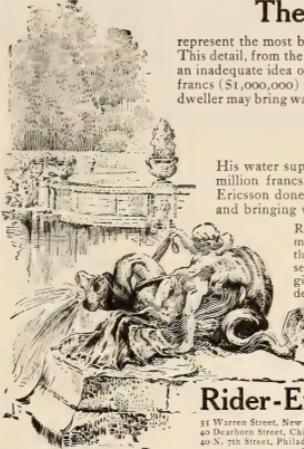
The Evergreen Hedge and Specimen Trees

shown below were bought of us and cost less than \$10



Six Million Evergreens and other trees in Nursery. If interested in fine Evergreens, write us. SPRUCE and PINE for re-foresting in any quantity. 30 years' experience growing Evergreens.

Evergreen Nursery Company
STURGEON BAY, WIS.



The Fountains of Paris

represent the most beautiful and artistic works of their kind in the world. This detail, from the Grand Basin of Neptune at Versailles, gives, of course, an inadequate idea of its surpassing beauty. Louis XIV spent five million francs (\$1,000,000) in bringing water to Versailles; yet to-day any country dweller may bring water and have a fountain in his own door-yard by using a

Hot-air Pump

His water supply will cost him about five hundred instead of five million francs. So much this wonderful invention of Captain Ericsson done for mankind in cheapening its domestic water supply and bringing water within the reach of the humblest cottager.

Remember that these pumps are not steam-engines, but machines of low-power, operated solely by hot air, automatic in their action, requiring no skilled attention, so simple that any servant or farmer's boy can start and stop the little flame that gives them life. The cost of operation is almost nil, while the delivery of water is absolutely reliable at all times and seasons.

Capacity 100 to 100,000 gallons of water per diem. One of these pumps, representing a permanent investment which will outlast a generation, can now be bought at the very low price of \$108. Descriptive catalogue "U" sent free on application.



Rider-Ericsson Engine Co.

31 Warren Street, New York. 250 Franklin Street, Boston.
40 Dearborn Street, Chicago. 214 Craig Street West, Montreal, P. Q.
40 N. 7th Street, Philadelphia. 14 Pitt Street, Sydney, N. S. W.
Teleinte-Rev 71, Havana, Cuba.

Everybody Likes the Coloring Effects Cabot's Shingle Stains

They are deep and soft, like velvet, and show the beauty of the wood. They wear as long as the best paint, and wear better; cost half as much, and are the only Stains made of Croseto, "the best wood preservative known."

Send for Samples of Stained Wood and Chart of Harmonious Combinations.

SAMUEL CABOT, Sole Manufacturer,
1 Oliver Street, Boston, Mass.

Agents at all Central Points.

SHEATHING "QUILT" - makes warm houses.



Libb, Brown & Moore, and Woodruff Leaning, Architects.

If you want to make the most of your chances, you want

STEVENS FIRE ARMS

You put yourself at a disadvantage if you attempt to do without them. "Stevens" accuracy is noted the world over.

Stevens Single Barrel Shotgun, No. 107, \$ 8.50
Stevens Double Barrel Hammer Shotgun, No. 250, 20.00
Stevens Double Barrel Hammerless Shotgun, No. 350, 25.00

Every sportsman should have the 140-page catalogue of "Stevens" rifles, shotguns and pistols, showing all sorts of styles, the various parts, different cartridges, the selection and care of firearms, notes on ammunition, sights, targets, etc. Send 4 cents in stamps and we will send it free. Insist on "Stevens"; no other is as good. If your dealer tries to pass off something else, order from us direct. Any "Stevens" firearms sent, express prepaid, on receipt of catalogue price.

RIFLES FOR BOYS:
"Stevens-Maynard, Jr." #2 \$ 4
"Crack Shot" \$ 4
"Little Krag" \$ 5
"Favorite, No. 12" \$ 6

J. STEVENS ARMS AND TOOL COMPANY
420 High Street, - - - CHICOPEE FALLS, MASS., U. S. A.





Residence of E. L. Atkins,
Paducah, Ky.

Equipped with Kewanee Water Supply Unit

WATER in Your Country Home

A KEWANEE PNEUMATIC TANK

in the cellar, or buried in the ground, delivers water to all hydrants and plumbing connections by air pressure. Every comfort and convenience of a city water supply. Fresh, pure water at any moment of the day or night—just turn on the faucet. *Special fire protection.* No elevated tank to freeze or blow over. No leaky attic tank. Will last a lifetime without additional expense. \$400 in operation. Satisfaction guaranteed. Read what a few users say:

E. T. Crawford, Augusta, O. "Equal to any city water works."
Rev. J. Wilbur Chapman, New York. "Perfectly delighted."
H. I. Spafford, N. Bennington, Vt. "Does all you claim, and more too."
U. R. Finkel, Hope, Ind. "My Kewanee System is giving splendid results."

Write for names of users in your state and illustrated catalogue No. 16, free if you mention The Garden Magazine.

**KEWANEE
WATER SUPPLY CO.**
Drawer S. KEWANEE, ILL.



Sure To Please You

Send us the names of five Garden Enthusiasts and one dime for postage, and receive our new catalogue of choice seeds and

ONE PACKET SPARK'S EARLIANA TOMATO	} VALUE
ONE " DANISH BALL-HEAD CABBAGE	
ONE " WHITE ICICLE RADISH	} 50
ONE " FINEST MIXED ASTERS	
ONE " CHOICE NAMED SWEET PEAS	

CENTS

Mailed in a coupon envelope which we will accept as 25 cents when returned to us with an order for our superior Seeds amounting to \$1.00 or more.

STANDARD SEED CO.

210 EAST STREET, VALPARAISO, INDIANA



Apple Tree Pests

A NUMBER of destructive enemies, aside from scale insects, attack the apple tree or its fruit in early spring. The presence of the common apple borer may be detected by extruded fresh chips or borings hanging from the wound. The grubs may be cut out or killed by inserting a hooked wire in the burrow. Egg laying and consequent infestation may be warded off largely by banding the base of the tree from the middle of May through August with tarred paper, or even newspaper, wrapped tightly around the trunk.

Several leaf feeders are quite destructive to the apple foliage and blossoms in early spring, the most important being the bud moth or bud worm, the cigar and pistol case-bearers, and the tent caterpillar. The bud worm is about half an inch long, with a brown body and dark brown head. It occurs among the webbed-together, unfolding leaves or opening blossoms. The two case-bearers are easily recognized because of the peculiar shelters they carry around. The cigar case-bearer has a long, slender, cigar-shaped, brownish case one-quarter inch long, while that of the pistol case-bearer is stouter and curled at the extremity much like the handle of a revolver. The bud moth winters in a minute brownish cocoon spun beside some projection on the twigs, while the case-bearers live in their peculiar retreats then firmly attached to the bark.

All are checked considerably by spraying with the lime-sulphur wash employed against scale insects. They can be easily controlled by an early poison application, preferably arsenate of lead, just as the leaves unfold and where they are at all abundant, the treatment should be as early as possible. The common tent caterpillar is too well known to require description. The brown egg-belts are easily detected and cut off or the young pests removed from the tree, though neither is necessary where spraying is practised.

THE COMMONEST WORM PEST

The codling moth or apple worm is altogether too abundant in most orchards. The moths fly about a week after the trees blossom, deposit eggs from which young caterpillars emerge in seven to ten days, and then after feeding a little on the foliage, usually enter the fruit at the blossom end. The pest is amenable to poison sprays. The first application should be made soon after the blossoms fall, and this may be supplemented

STANDARD
OF
QUALITY

Snyder's

CANDIES,
COCOA AND
CHOCOLATES.

QUALITY
VS.
QUANTITY

ONE REASON WHY *Snyder's* PRODUCTS
MAINTAIN THEIR POPULARITY WITH THOSE
WHO DEMAND THE BEST GOODS IS THAT
Snyder's STANDARD OF QUALITY
IS NEVER LOWERED
IN ORDER TO JOIN THE RACE FOR QUANTITY.

**X-RAY
Stove Polish**

TRADE-MARK

Is Guaranteed to go twice as far as paste or liquid polishes. X-Ray gives a quick, brilliant shine and DOES NOT BURN OFF.

FREE Sample sent to you address Dept. G.
LAMONT, COLLIER & CO., Agents, 75 Boston St., New York

Ack dealer for it.

COMPLETE
ELECTRIC LIGHT PLANTS
RICHARDSON ENGINEERING CO.
HARTFORD, CONN.

WORKING GLOVES FOR WOMEN
AUTOMOBILE GLOVES FOR MEN

VERMONT

Used in all kinds of housework, sweeping, clothes-hanging, teaching, etc. Durable and ROOMY. Protect hands and wrists. 25 cents per pair. 5 pairs \$1.00. Sent prepaid. Guaranteed satisfactory.

VERMONT MITTEN & GLOVE CO., 82 Wood St., Vermont, Ohio

HORSFORD'S HARDY PLANTS AND FLOWER SEEDS

have a reputation of their own. If you want plants that will last from year to year, get them from a hardy climate like Vermont. New catalogue for 1906 offers all the most desirable kinds for the decoration of summer homes, without confusing the purchaser with the names of so many plants of doubtful hardiness and durability. It includes hardy bushes, wild flowers and ferns, shrubs, trees, vines, bulbs, etc., for wet or dry ground, sun or shade, and all for outdoor culture. Ask for it.

FRED'K H. HORSFORD,
Charlotte, Vermont.



A Special Lot of Imported Roses at Special Prices

For Immediate Acceptance Only

Hardy Perpetual Roses

(dormant plants) grafted on the Manetti Stock, in excellent condition. \$7.00 per 100, or 75 cents a bundle of 10, one variety in each lot, no bundles assorted. These are the varieties—no C. O. D's.

This lot represents a surplus importation and is offered for prompt clearance.

- Baroness Rothschild, light pink.
- Anna de Diesbach, lively carmine.
- Charles Lamb, carmine crimson.
- Princess Camille de Rohan, deep velvety crimson.
- Madame Charles Wood, reddish crimson—very free.
- General Washington, red, shaded crimson.
- Reine Marie Henriette, dark red.
- Pier des Blancnes, pure white.
- Madame Isaac Pereire, bright cerise.
- Crimson Rambler.
- Amalia, velvety red.
- Monsieur Boucenne, crimson.
- Jules Margottin, glossy pink.
- Pias IX, pink.
- Madame Gabriel Luliet, satiny rose.
- Duke of Edinburgh, bright crimson.
- Frau Karl Druschki, pure white, waxy foliage.
- General Jacqueminot, brilliant crimson.
- La France, silvery rose.
- Madame Plantier, pure white.
- Magna Charta, pink, suffused carmine.
- Paul Neyron, dark rose.
- Faon's, large rose red.
- Mrs. John Laing, soft pink, extra.
- Countess Jules de Schaenbourg, dark crimson red.
- Madame Joseph Combet, soft pink.
- Baron Bonst-ten, velvety maroon.
- Abel Carriere, purplish crimson.
- Duke of Feck, bright crimson.
- La France, like (climbing).

TREE OR STANDARD—STRONG STEMS AND IN EXCELLENT CONDITION, FIVE OF ONE VARIETY IN EACH BUNDLE

- Madame Gabriel Luliet, satiny pink.
- Mrs. John Laing, deep crimson.
- Pier des Blancnes, snow white.
- Crimson Rambler, crimson cluster.
- Ulrich Brunner, cherry red.
- Gloire de Dijon, salmon and yellow.

WM. ELLIOTT & SONS,

Seedsmen and Horticultural Auctioneers
201 FULTON STREET, NEW YORK CITY

Our 1906 illustrated catalog is now ready for mailing. Would you like us to mail it?

Rex Flintkote ROOFING

Resists Fire

Samples Sent Free
to any one who asks.

Make This Red-Hot Coal Test

It is a true test. The spread of fire is generally due to flying sparks, white-hot embers or blazing brands falling on shingle or tar roofs which quickly catch. On Rex Flintkote they smolder and die—try it and see for yourself.

We do not claim that Rex Flintkote is fire proof—light it on the cut edge and it will slowly burn—but there are no cut edges on a roof—the method of laying avoids this. The surface only is exposed.

Rex Flintkote is Good Fire Insurance

It fulfills its purpose. Quality is not sacrificed, and never will be, to meet or undersell cheap competition. Rex Flintkote is an honest roofing in conception and execution. It resists fire; it resists rain, snow, heat, cold and wear. It is a perfect roofing for public buildings, factories, railroad buildings, residences, barns and poultry houses. Two hundred thousand square feet cover the new Atlanta Railroad Terminal. Any workman can apply it. Complete laying outfit with directions in every roll. Style as A-B-C.

Our Handsome Booklet on roofing is sent with the samples, also photos of Rex Flintkote buildings of all kinds. We answer routine questions of every nature. For your own protection do not accept cheap imitations. "Look for the Boy" in the X-shaped octagon on every roll. Send us your name to-day.

J. A. & W. BIRD & CO.
29 India St., Boston, Mass.
Agents everywhere.

"LOOK FOR THE BOY"

TRADE MARK

REX ROOFING

Flintkote

After 50 Years
we still keep up the old habit of giving special directions, when asked, in addition to those for raising each variety of vegetable and flower contained in our catalogue—sent free.

J. J. H. GREGORY & SON,
Market Street, Mass.

A Well Painted House

not only looks more valuable but is more valuable than a house on which painting is neglected. Good paint is the most profitable investment on earth. "Good paint" means always a high-grade ready-mixed paint based on Oxide of Zinc.

An Interesting Pamphlet:
"Paint: Why, How and When."
Free.

It's do not grind zinc in oil. A list of Manufacturers of High-Grade Zinc Paints sent on application.

THE NEW JERSEY ZINC CO.
71 BROADWAY
NEW YORK

FEBRUARY

S-M-T-W-T-F-S

* * * 1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 * * * *

* * * * *

GARDEN CALENDAR

Start these bulbs in the house in FEBRUARY to have fine young plants for the garden in spring:

ALL BULBS DELIVERED—EXPRESS OR MAIL
PREPAID—BY US

SPECIAL THIS MONTH:

Tuberous Rooted Begonias

Single white, rose, crimson, scarlet, salmon, yellow, orange, in separate colors: each, 7c.; doz., 75c.; 100, \$3.75. All colors mixed: each, 6c.; doz., 65c.; 100, \$3.25.

Cannas

Red, yellow, tigered, white, rose, vermillion; separate named sorts: each, 10c.; doz., \$1.00, 100, \$6.50. Cannas in fine mixture: each, 8c.; doz., 85c.; 100, \$5.50.

Caladium (Elephant's Ears)

Large bulbs: each, 15c.; doz., \$1.50; 100, \$7.00

Caladium's, Fancy Leaved

Superb coloring, named sorts: each, 15c.; doz., \$1.50.

Sow SEEDS in the house now to set out plants when spring comes

Ageratum	5c.	Dahlias, Burbank's single fancy	10c.	Salvia Splendens	Pkt.
Sweet Alyssum	5c.	Daisies, Burbank's Shasta sorts	10c.	Snapdragons, brilliant colors	5c.
Alyssum, compacta, perfect little		Heliotropes, in mixture	10c.	Nicotiana 'Sandert'	10c.
ball of bloom	5c.	Lobelia, finest border and ribbon		Pansies, 'Ziegler's Venus Fall',	10c.
Asters, in choicest sorts	10c.	plant	5c.	superb collection	10c.
Ceroplastis, large flowered	5c.	Sweet Mignonette, giant spikes	5c.	Verbena, mammoth mixture of	
Candytuft, Giant Hyacinth	5c.	Petunia, single frilled and ruffled	10c.	superb sorts	10c.
Cyanthemum, hardy garden sorts	10c.	Petunia, double fringed	10c.	Wallflower, mixed	5c.

These 30 packets of TESTED PRIME FLOWER SEEDS for \$1.00

NOTICE:

For \$1.00 you can select \$1.15 worth from above lists

For \$2.00 you can select \$2.15 worth from above lists

For \$3.00 you can select \$3.50 worth from above lists

OUR SPRING CATALOGUE READY FEBRUARY 1st.

H. H. BERGER & CO., 47 Barclay St., New York Estab. 1878



VICK'S GARDEN AND FLORAL GUIDE FREE FOR THE ASKING

Ten cents will bring you a packet of Vick's Branching Aster, mixed colors, our top Catalogue, and a coupon good for 50 cents on purchase of \$1.00 from it. The Guide describes Vick's Violet King and Mikado Asters, two absolutely new ones of our own production—good specimens of Vick Quality. Send for the Catalogue anyway, it's free.

JAMES VICK'S SONS,
362 Main St. Rochester, N. Y.

RED CEDAR CHESTS

A Piedmont Red Cedar Chest protects furniture and clothing against moths. No insect can endure the delicious fragrance of the real Southern Red Cedar. A lasting, useful present for weddings or birthdays. Shipped direct from the factory to your home on approval, freight prepaid. Write for booklet and factory price.

PIEDMONT FURNITURE CO., Dept. G, Statesville, N. C.

Awarded **TWO GRAND PRIZES** at the St. Louis Exposition, one for Seeds and another for Vegetables, also a **SILVER MEDAL** for Hyacinths and Cracrus.

Thorburn's
Seeds

OUR 1906 CATALOGUE—Now Ready—

contains a wealth of information invaluable to all interested in horticulture. The half-tones and illustrations are superb, and the cultural directions are reliable and complete.

No seed annual published can in any respect approach this, **OUR 105th SUCCESSIVE** annual edition.

Mail **FREE** on application.

J. M. THORBURN & CO., 36 Cortlandt Street, New York

Over a Century in business in New York City

by another a week or ten days later. The spray should be coarse and thrown upon the trees so that it will drop in the upturned open blossom ends of the young fruit. The idea is to put the poison where the young caterpillars must eat it when entering the apple.

There is sometimes a somewhat destructive second brood, which can be checked with difficulty owing to the large amount of foliage at the time the caterpillars hatch—the latter part of July or early in August. Not



The fine white "saw-dust" a few inches up the trunk of the apple tree is the borer's tell-tale. The only effective means of attack is to poke a wire in the hole and so kill the creature

all care to resort to arsenical poisons, and in that event advantage may be taken of the insects' habits by banding the trees with either burlap or straw in June. Large numbers of the caterpillars assemble under such shelters, and should be destroyed at ten-day intervals till the latter part of August and again in late fall. Control in this manner is more effective if the bark of the trees is kept smooth. Fallen, infested fruit should be destroyed by feeding or otherwise before the worms therein escape. Winter birds are valuable allies of the fruit growers as they empty many cocoons, and therefore they should be attracted to orchards and gardens as much as possible.

E. P. FELT,
New York State Entomologist.

EVERYTHING FOR THE GARDEN

1906
IS THE TITLE OF
HENDERSON'S CATALOGUE
OF SEEDS, PLANTS, BULBS, TOOLS, BOOKS, Etc.,
For the Garden, Greenhouse, Lawn and Farm.
BEAUTIFUL — INSTRUCTIVE — ELABORATE.

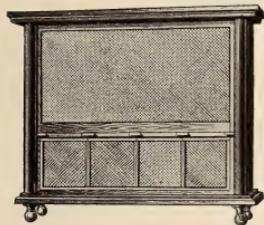
188 large pages, richly illustrated with photographs from nature;
8 colored and 6 duotone plates, and art cover. It weighs 1 pound.

TO GIVE
Henderson's Catalogue "Everything for the Garden"
the largest possible distribution, we make the following liberal offer:
EVERY EMPTY ENVELOPE
COUNTS AS CASH

To every one who will state where this advertisement was seen and who encloses Ten Cents (in stamps or coin), we will mail the catalogue and also send free of charge Our famous 50c. "HENDERSON'S" COLLECTION OF SEEDS containing one packet each of *Giant Mixed Sweet Peas; Giant Fancy Fannies, Mixed; Giant Victoria Asparagus, Mixed; New York Lettuce; Early Ruby Tomato and White-tipped Scarlet Radish* in a coupon envelope, which, when emptied and returned, will be accepted as a 25-cent cash payment on any order amounting to \$1.00 and upward.

PETER HENDERSON & Co. 35 AND 37 CORTLAND ST., New York.

THE OBSERVATORY BEE HIVE



One of the best educators for beginners in Bee Keeping is the Observatory Hive

Books are good, but what you read is easily forgotten, and nothing will impress facts upon your mind as readily as witnessing them. We manufacture the most complete line of bee-keepers' supplies in the world.

Write for Catalog and for little bee books—All Free.

A. I. ROOT CO. Main Office, Medina, Ohio
BRANCHES
New York City, 44 Vesey Street Philadelphia, 10 Vine Street
Chicago, 144 E. Erie St. Washington, D. C., 1100 Maryland Ave., S. W.



"Saved Twenty Times Its Cost"

"I am writing this," says F. C. Parmelee, Highlands, N. J., "by the light of one of your Angle Lamps. In fact I would not think of using any other light. They are the lamps. Everyone who has seen mine is impressed with them. Why, I have saved at least twenty times their cost in oil, burners, chimneys and 'cuss-words'."

The Angle Lamp is not an improvement on the old style lamp but an entirely new principle of oil lighting which has made common kerosene (or coal oil) the most satisfactory of all lighting methods. Safer and more reliable than gasoline, or acetylene, yet as convenient to operate as gas or electricity.

The ANGLE LAMP

is lighted and extinguished like gas. May be turned high or low without odor. No smoke, no danger. Filled while lighted and without moving. Requires filling but once or twice a week. It floods a room with its beautiful, soft, mellow light that has no equal. Write for our catalog "41" and our proposition for a

30 DAYS' FREE TRIAL

Write for our catalog at listing thirty-two varieties of The Angle Lamp from \$1.50 up, now—before you forget it—before you turn this leaf—for it gives you the benefit of our ten years of experience with all lighting methods.

THE ANGLE MFG. CO., 78-80 Murray St., New York

DO YOU KNOW WHAT

Trees, Shrubs and Plants

are hardy in

CANADA?

If not

write for our beautifully illustrated book, "WHAT TO PLANT IN CANADA." A particular feature of this book is a map of the Dominion showing the hardiness of ornamental plants in any locality. If you live in Montreal, Toronto or Winnipeg, or if your summer home is at Murray Bay, The Thousand Islands, Muskoka, etc., you can avoid disappointment by obtaining this book.

Send free to anyone intending to do planting, on receipt of 12 cts. to cover cost of mailing.

CANADIAN NURSERY COMPANY
(LIMITED)

2210 St. Catherine Street, Montreal, Canada



Woolens
FLANNELS, YARNS,
WORSTEDS, SERGES,
LAINES, HARKOSES,
MERCER and all materials
requiring
ANIMAL WOOL
must be carefully washed
to keep them SOFT,
PLUMP and PRE-
VENT SHRINKING.
It is necessary to send
these materials to the
cleaner if you will use

Pearline
MODERN SOAP

DIRECTIONS FOR WASHING WOOLENS & FLANNELS

Wool, woadens and flannels by hand in lukewarm PEARLINE suds, rinse thoroughly in WARM water, wring dry; pull and shake well and they will keep soft without shrinking. Dry in WARM temperature.

Pearline keeps woolens Soft



1906
BOOK
FREE

Worth its
Weight in
GOLD

The Book that beats them all because it tells how big crops of big fancy strawberries can be grown every year and how to pick and pack them for big prices. It keeps Experienced Growers posted on new discoveries in plant breeding and latest cultural methods. It takes beginners through a complete course of instruction; tells just when and how to do everything to get Big Raspberries, and how to start a Profitable Berry Farm with little capital. Beautifully illustrated with photo-engravings. Don't order your plants until you read this book. It is free.

R. M. KELLOGG CO., Box 690, THREE RIVERS, MICH.

The Best Fruit Paper

is the Fruit-Grower, published monthly at St. Joseph, Mo. The regular subscription price is a dollar a year, but if you will write for free sample copy and mention this paper, you will receive a proposition whereby you may secure it one year WITHOUT COST. Every one who has a few fruit trees of a garden, should read.

THE FRUIT-GROWER
ST. JOSEPH, MISSOURI

Every issue is handsomely illustrated and runs up to 48 pages a month and is filled with interesting matter pertaining to fruit-growing and gardening. The first four issues of 1906 will be handsome special numbers devoted to the following subjects: January, The Horticultural Scientist; February, Spraying; March, Gardening; April, Small Fruits. Any one of these numbers will be worth a dollar to you. We publish the "Brother Jonathan" series of fruit books. Send your name and learn how to secure these books free.

TRADE MARK
BIRD, JONATHAN

Fruit-Grower Co., 104 S. 7th St., St. Joseph, Mo.

GRAPES draw large quantities of POTASH from the soil. This must be replaced in the fertilizer, else the vine cannot thrive.

Interesting pictures of grape vines, grown with and without POTASH, are shown in "Plant Food," one of a number of valuable books for the farmer, which we send free for the asking. Send name and address.

Address, GERMAN KALI WORKS,
93 Nassau Street, New York.

TREES

FRUIT AND ORNAMENTAL

Evergreens
Shrubs Roses
Hardy Plants

All the Best and Hardest Varieties
Largest and Most Varied Collections in America

ELLWANGER & BARRY

Nurserymen—Horticulturists

MOUNT HOPE NURSERIES

Established 1840

ROCHESTER NEW YORK

Illustrated Descriptive Catalogue 164 pages,
also Descriptive List of Novelties and Special-
ties with beautiful colored plate of the New
Hardy White Elm Frau Druschki, mailed FREE
on request.

WHEN YOU WANT
A STAR
SHOOTER



WRITE FOR COMPLETE CATALOG
HARRINGTON & RICHARDSON ARMS CO.
373 PARK AVE.,
WORCESTER, MASS.



Pruning Shears

Will Snip a Broom Handle

This gives you an idea of the strength and quality of the pruner. Wiss Pruning Shears will snip a dozen ordinary ones. They will cut loose paper. This shows how steady they are adjusted.

Surely men and growers of fine trees use them in preference to all other shears—they will cut clean the thickest twigs or the most delicate twigs without tearing.

Wiss dealers will replace free of charge any shears returned defective or unsatisfactory.

All parts are interchangeable. If any part (say the blade) becomes worn, it can be replaced, thus making the shears as good as new at a slight cost.

Made in two sizes—9 inch, \$2.25; 10 inch, \$2.50

Extra blades, 25 cents each. For sale by all dealers.

J. WISS & SONS CO., 15-33 Littleton Ave., Newark, N. J.

SPECIAL PREMIUM OFFER

To all readers of the GARDEN MAGAZINE we are offering special inducements on SEEDS. Our 64-page Descriptive, Illustrated Catalogue will give you full particulars.

Don't miss this grand opportunity. Write to-day.

Tailor Free. A postal will bring it.

W. E. MARSHALL & CO., 146 W. 23d St., New York



VICK'S
GARDEN AND FLORAL
GUIDE FOR 1906
FREE FOR THE ASKING!
JAMES VICK'S SONS
860 MAIN ST., ROCHESTER, N. Y.

SEWAGE AND GARBAGE DISPOSAL
problems are solved for Country homes and summer camps by

INTERNATIONAL INCINERATORS

Sanitary, odorless, thoroughly practical. Illustrated booklet and prices on request. Special proposition to agents.
INTERNATIONAL INCINERATOR CO., 648 Prudential Bldg., Buffalo, N. Y.



Bush of Frau Karl Druschki, fourteen months from planting.

Why not have the Best Roses

Since they require no more space or care (except to cut the extra blooms)?

OUR OFFER for 1906 includes: 12 Best Garden Roses, 12 Best Everblooming Hybrid Teas, 22 New Roses, and the cream of the old.

Our Roses were awarded a Gold Medal at St. Louis.

Killarney, Baby Rambler, Frau Karl Druschki, Franz Deegan, Gruss an Teplitz, etc., etc.

Choice Shrubs and Trees of all kinds.

CATALOGUE FREE.

S. G. HARRIS, = Tarrytown, N. Y.



The Garden Magazine

WINDBREAKER AND SCREEN PLANTING AT WESTBURY NURSERIES

Evergreens for Winter Comfort

Evergreens are often considered as expensive, isolated ornaments for the lawn. There is a work they will do if planted in quantity. Plant them as windbreaks, shelter belts, screens, for ornament, and increase the beauty, comfort and value of your property. Retest your barren lands and make them profitable. The foresight and skill of the WESTBURY NURSERIES make this possible. We have evergreens by the 100,000 grown on Long Island, from Long Island seed, to fit Long Island conditions.

Send for price list of transplanted and seedling evergreens—the white, Austrian, Scotch and densiflora pines, the spruces, at low rates in quantity. Order now for Spring planting.

Cedars, pines, firs, spruces, 15 to 45 feet high. 400 feet of old sheared Hemlock hedge, 8 by 8 feet, moved at any season by the HICKS' TREEMOVERS, built for various types of tree and soil.

ISAAC HICKS & SON, Nurserymen and Scientific Treemovers
WESTBURY STATION, LONG ISLAND, N. Y.

HOME STUDY COURSES



JOHN CRAIG

Professor of Horticulture in Cornell University

EVERYONE interested in farming or gardening, everyone who owns or who expects to own a suburban or a country home, should know about The Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture, which we offer under Prof. Wm. P. Brooks of the Massachusetts Agricultural College and Prof. John Craig of Cornell University.

There is money and pleasure, too, in farming and gardening, in the growing of fruit and of flowers, for those who understand the ways how and the reasons why of modern agriculture. A knowledge of landscape gardening and floriculture is indispensable to those

who would have the pleasantest homes.

Every reader of THE GARDEN MAGAZINE who is interested in these matters is invited to send for a free copy of our eighty-page catalogue and full information in regard to our home study courses.

THE HOME CORRESPONDENCE SCHOOL

Dept. 8, SPRINGFIELD, MASS.

MAKE YOUR GROUNDS BEAUTIFUL



- WEeping BLUE SPRUCE. This most wonderful weeping conifer is the most distinct weeping tree in existence. No lawn is complete without one. Ask price.
- ROSES, 50 varieties.
- QUINIFERs and EVERGREENS, 100 varieties.
- EPHODORONDS, 25 varieties.
- EVERGREENS SHEDDING, 25 varieties.
- FLOWERING SHRUBS, 350 varieties.
- JAPANESE MAPLES, 25 varieties.
- ORNAMENTAL DECIDUOUS SHADE TREES, 125 varieties.
- WEeping and STANDARD DECIDUOUS TREES, 20 varieties.
- BEGONIA PLANTS, 25 kinds.
- HARDY VINES and CLIMBERS, 30 varieties.
- PLANTS and TRAILING VINES, 25 varieties.
- SPRING and SUMMER FLOWERING BULBS, 300 varieties.
- DECORATIVE and FLOWERING PLANTS, 50 varieties.
- TRAINED and OTHER FRUIT TREES. We can supply in any quantity and in all varieties. Raspberries, Peaches, Plums, Apricots, Cherries, Pears, Apples, etc.
- SMALL FRUITS, 75 varieties.
- BUT TREES, 25 varieties.
- MINIATURES NEW and RARE PLANTS and VINES, 25 varieties.
- NEW and RARE TREES, SHRUBS and EVERGREENS, 25 varieties.
- HARDY HERACLIUM PLANTS (Old Fashioned), 25 varieties.
- NEW and RARE CHOICE HARDY PERENNIALS, 25 varieties.
- ORNAMENTAL GRASSES, 25 varieties.
- HARDY FERNS, 25 varieties.

All of the above and many others now growing in our Nurseries are enumerated and described in our New Illustrated General Catalogue, which we will mail free to parties desiring to beautify their grounds. We will be glad to have intending purchasers visit our Nurseries, where they will find the most complete collection of stock to make their grounds beautiful.

BOBBINK & ATKINS (NURSERYMEN and FLORISTS) RUTHERFORD, N. J.



GROWING ORCHIDS

FROM the common yellow Moccasin found in our woods to the exquisite purple-garbed Cattleyas from the jungles of South America, the Orchid is the most beautiful, mysterious and lasting of all flowers.

Contrary to general impression, the growing of Orchids is not a difficult task. In fact they can be grown in any of our greenhouses in connection with other plants, the Orchid demanding but little care and comparatively small expense. One plant costs but the price of a single bloom and yields abundant flowers for three months. The cut flowers will remain fresh for two weeks.

In the interior view shown, the Orchids in their attractive wooden-framed baskets hang from the rafters, while in the beds below are growing ferns, potted plants and other flowers and vegetables.

The Burnham-Hitchings-Pierson Company's houses are designed to meet every requirement of the amateur. These houses yield you all the year around joys in flowers for the home and out-of-season vegetables for the table.

Send for U-A collection of cuts showing a number of these houses.



BURNHAM-HITCHINGS-PIERSON COMPANY

Boston Branch: 819 Tremont Bldg. Greenhouse Designers and Manufacturers. 1133 BROADWAY, NEW YORK CITY

HORICUM KILLS SAN JOSE SCALE

Made by HAMMOND'S SLUG SHOT WORKS, Fishkill-on-Hudson, N. Y.

SOLD BY SEED DEALERS OF AMERICA. SEND FOR PAMPHLET

John Nolen offers his services as landscape architect to owners of private places; park commissioners; board proprietors; owners of factories; and estate companies and voluntary improvement associations. He will be glad to cooperate with anyone who desires assistance in developing property for use, having due regard to the beauty and appropriateness of its appearance, size, location and general plan showing the best locations for buildings, paths, roads and other accessories; also planting plans. Correspondence is invited. For further information address

JOHN NOLEN, Landscape Architect,
Harvard Square, Cambridge,
Massachusetts.

The Agricultural Experts Association

GEORGE T. POWELL, President
120 Broadway - - - NEW YORK

EXAMINATION of soils to determine condition and methods for improvement. Laying out of country estates, including architect's services, residences, greenhouses and other buildings. Building and landscape gardening. Problems relating to engineering and sanitation. Selection and purchase of blooded stock. Consultation on all land problems. Correspondence invited.

How I Became an Orchid Grower

I WAS attracted to the orchids that have now become my hobby by seeing a few miscellaneous blooms displayed, ten years ago, outside Rolker's old auction rooms in Liberty Street, New York. Wandering down past that spot, I was curiously attracted by the fantastic forms and the superb colorings of the flowers. A moment's hesitation and I stepped inside to satisfy my curiosity, for, though I had a natural love of flowers, my experience and acquaintance so far had been with the commoner carnations, roses, and such like—the every-day flowers that everyone knows—but which to-day I must confess appeal to me no longer.

Once inside the auction rooms I soon engaged in conversation with the consignee's representative, who, in answer to the questions as to cultivation, said: "They are as easy to grow as geraniums." You may smile somewhat at that idea, and after I had made only a few fitful attempts to grow a mixed lot



The giant orchid *Cattleya labata*, var. *Samoensis*, which flowers in midsummer. Its gorgeous coloring has shades of purple with two yellow spots.

of stove, intermediate and cool members of the orchid family, I too was ready to disbelieve.

To-day, however, I am free to assert that Mr. Dimmock was right—quite right—and in this way. If you would really grow good geraniums—grow them in such a way as to get out of them the best that they are capable of—you must give them special attention, they must be studied. Of course a geranium will grow to a certain degree under almost any condition, but the plant will not be a specimen—a thing of beauty, growing better year by year. And so it is with orchids.

You cannot grow orchids as you would grow geraniums; each kind has its peculiar needs, which must be supplied.

"Try a few," he said to me, and I did. I bought a half-dozen plants, and so absorbed the germs of the orchid fever.

One learns best by experience. My first plants were consigned to a pit, which was heated by an oil stove. It would not do for orchids. It was impossible to give them a proper supply of buoyant fresh air. That is the one point in orchid growing on which beginners are usually wrecked at the outset. Orchids must have fresh air and abundant

TIMELY PRUNING

OF

Fruit, Forest and Ornamental Trees may be done now

We send out experts whose work will save the trees which are suffering from neglect.

Write for Estimates

Catalogue of Shrubs and Herbaceous Plants sent on application.

Shatemic Nurseries, BARRYTOWN, DUTCHESS CO., N. Y.



The Best and Hardest Known
RHODO DENDRON
is **Catawbiense**

True Caroli Grown only in the high 3,800 ft. ele plant or car and beautiful clusively Na
na Mountain Species. by Highlands Nursery Carolina Mountains, vation. By the single lots. The most unique Catalog published (ex-tive Plants).

HARLAN P. KELSEY
6 Beacon St., Boston

"A Little Book About Roses"
IT LEADS THEM ALL

Washburn College, Topeka, Kansas, Feb. 11, 1905.
"After reading the big padded catalogues in which the most common things, even trash, are described in the superlative, it is a tonic to take up your little book, which dares to tell the truth."

(Prof.) W. A. Harshbarger.

Tufts College, Mass., Feb. 6, 1905.
"Your modest catalogue, just received, is worth some whole volumes on account of its concise and complete directions on the culture of the Rose, and I own a good many works on floriculture."

G. W. Sullard.

Easton, Md., Oct. 8, 1905.
"I admire your frankness, and if there were more such catalogues floriculture would be brought to a higher plane."
C. D. Lee.

1906 edition ready Feb. 1st. May I send you a copy? It's free to intending planters.
G. H. PETERSON, Rose and Peony Specialist
FAIR LAWN, NEW JERSEY

If it isn't an Eastman, it isn't a Kodak.

There's a world of delight in

KODAK

Home Portraiture, and it is simpler than most people think. Beautiful results are obtainable by the light of an ordinary window, or by flashlight. A portrait attachment, at fifty cents, adapts the small Kodak to the making of good sized bust photographs. The simple methods are made clear in:

"Amateur Portraiture by Flashlight," by Wm. S. Rich, \$.10
"Home Portraiture," by F. M. Steadman, \$.25
"Modern Way of Picture Making" contains full text of both of above, and special articles by the leading authorities, including Stieglitz, Eickemeyer, Dagmore, Demachy, etc., 200 pages, beautifully illustrated. Bound in cloth. The most clear, concise and comprehensive book ever published for the amateur, 1.00

All Kodak dealers or by mail.
EASTMAN KODAK CO.
Rochester, N. Y., The Kodak City.

The FERRIS Trademark
is never put on a Ham or Bacon that has not been cured and smoked under our personal supervision!

Therefore, "A little higher in price—but!"

INDEX YOUR GARDEN!

The Iron Age Horticultural Label and Row Index is only one of the famous Iron Age Garden Implementations. A full line of these Iron, Bill and Britt Garden, Cultivators, etc., are illustrated and described in our new **Iron Age Handbook**. Bound free on request.

BATEMAN MFG. CO. Box C, Greenock, N. J.

Garden - Seed Wisdom

Can we persuade you to plan your vegetable garden at once? Your keen enjoyment will amply compensate you for the little time and effort necessary in the early spring.

Study the seed catalogue, as so much of your later success depends upon the varieties ordered. You get results from your garden that money cannot buy—better than anything in the market, and fresh every day.

Our **Garden & Farm Manual** For 1906 describes all choicest varieties of vegetables and flowers.

Our Two New Tomatoes

JUNE PINK and STRAIN NO. 10 SPARKS' EARLIANA are without peers in their respective classes. The earliest of all, one in pink and the other in red sorts; perfectly smooth. Two weeks ahead of any other varieties. Round, solid, fleshy and of fine flavor.

Price: **JUNE PINK**—Pkt. 20c; 3 pkts., 50c; 7 pkts., \$1.
STRAIN NO. 10 SPARKS' EARLIANA—Pkt., 15c; 5 pkts., 60c; 60c., \$1.

Put the seed in NOW. Transplant into pots or berry baskets and keep them in warm light until danger of frost is over. Then transplant outside and have choice fruit the latter part of June.

JOHNSON & STOKES 217-219 Market St. Philadelphia

Seeds, Plants, Roses,
Bulbs, Vines, Shrubs, Fruit and Ornamental Trees

The time has come when you can, for less than 40¢ in ordinary roses, now better grown, at greenhouse prices, buy **Ferns, Ferns, Ferns, Geraniums, Everblooming Roses** and other things too numerous to mention. **Seeds, Plants, Roses,** etc., by mail guaranteed safe arrival and satisfaction guaranteed. **Free** by express or freight. You will be interested in our extraordinary cheap offers of over half a hundred choice collections in **Seeds, Plants, Roses, Trees,** etc. **Elegant 168-page Catalogue FREE.** Send for it today and see what values we give for a little money.

THE STORRS & HARRISON CO.
Box 180, PAINEVILLE, OHIO

For Liquor and Drug Using

A scientific remedy which has been skillfully and successfully administered by medical specialists for the past 25 years

AT THE FOLLOWING KEELEY INSTITUTES:

Birmingham, Ala.	Washington, D. C.	Des Moines, Ia.	Rosario, N. Y.
Hot Springs, Ark.	211 N. Capitol St.	Levington, Mass.	Wine Plains, N. Y.
San Francisco, Cal.	Durham, Ill.	Portland, Me.	Columbus, O.
1190 Market St.	Marion, Ind.	St. Louis, Mo.	2416 Fifth Ave.
West Haven, Conn.	Plainfield, Ind.	2803 Locust St.	Philadelphia, Pa.
		North Conway, N. H.	812 N. Broad St.
			Harrisburg, Pa.
			Pittsburg, Pa.
			2416 Fifth Ave.
			Providence, R. I.
			salt Lake City, Utah



KELLERS' IRIS GORGEOUS

Hardy Garden Flowers Number 1.

"Little wonder that a plant so boldly decorative in outline and bearing a flower of exquisite coloring so marvellously formed should make its strongest appeal to the arctic Japanese. From these foremost gardeners of the world has come a strain of iris that neither orchids nor lilies can rival in beauty of form, texture coloring, markings and general effectiveness. Yet the *Iris Kaempferi* may be as easily grown as the potato. Moreover, it is perfectly hardy. High, dry lands do not suit its moisture-loving roots, but good garden soil, enriched with thoroughly decayed manure, deeply dug in and well watered during May and June—the blossom months in the northeastern United States—will produce flowers of wonderful size. Do not select a shady place for your irises. They thrive under full exposure to the sun, but moisture they must have to bloom their best, and sometimes their roots will penetrate two feet deep to get it. Naturalized in the water garden, they are ideally situated; but let no one forego the delight of growing Japanese irises, merely because he has not a pond or stream on his place. Some exceedingly fine specimens have been produced in a city backyard."

—*Nelly Blausen in the Garden Magazine.*

The Japanese Iris is one of the many beautiful perennials that make up a hardy garden, a garden of charm that gives continuous bloom from frost to frost, year after year, with practically no other expense than that incurred the first season. We are specialists on hardy perennials, growing them exclusively, having in our nurseries all the best varieties.

We shall be glad to send you our 1906 catalogue and advise in the planning and selection of stock for the hardy garden. Write us to-day.

J. B. KELLER SONS
1023 SOUTH AVE., ROCHESTER, N. Y.

light. My oil stove would smoke at times—the orchids resented it. It soon became clear that either the pit or the orchids must be given up. The latter won, and a small greenhouse measuring 18 x 20 feet was built, and success of a sort came. The plants did not die, and I succeeded in producing some of the most gorgeous of flowers.

The collection was still a mixed one, and it was soon evident that all kinds could not be grown together to perfection. My fancy ran to cattleyas, as they seemed to yield the greatest return in the way of large and superbly colored flowers. As the newer additions to the collection came into flower, they were compared with the older ones, and the best only were kept for future cultivation. This is the exciting and attractive feature of orchid growing. It must be remembered that practically no two imported plants are alike. Herein lies the overwhelming difference between these plants and the ordinary run of the more popular flowers, which duplicate one another to the limits of multiplication. All orchids have an individuality. The glorious uncertainty of not knowing exactly what blending of coloring will develop, and the always present possibility of something very fine or rare being flowered in your collection removes the orchid cult from that of the other greenhouse plants.

By rapid strides the addition of finer types crowded the space in my greenhouse, and larger quarters were planned. By successive stages more glass was provided, until to-day I have my choicest plants, numbering into the thousands, in a structure of 25 x 125 feet. Unflowered imported plants are added from time to time, and the surplus finds its way back to the auction rooms to sell for what it may.

If one can successfully grow the cattleya it is quite possible to have blooms all the year round. The best types for cut flowers are these:

Name	Season of Bloom
<i>Cattleya labiata</i> , var. <i>Sanderiana</i> . (<i>C. gigas</i>), and <i>G. Har-</i> <i>domei</i>	June-August
var. <i>Deciana</i>	September-November
" <i>Percicalliana</i>	November-December
" <i>Traine</i>	December-February
" <i>Schubleriana</i>	March-April
" <i>Mastus</i>	May-June
" <i>Mendellii</i>	May-July

The first named is the most gorgeously beautiful, and the most difficult to manage—it wants all the light possible, and a peculiarly cool buoyancy of the air that can be learned only by experience. Hardy's cattleya, which flowers with it, is easier to grow, and to many people is even more pleasing in its coloring. It is a natural hybrid of *C. gigas* and *C. aurea*, and is remarkable for the large size of the flowers and the beautiful mottled or honey-comb effect on the purple-mauve petals.

The easiest of all to grow is *C. labiata*, which will thrive in an ordinary greenhouse. It is preëminently the amateur's orchid, and can be purchased at very moderate prices.

Orchids are not necessarily expensive. Some of those I have named can even be bought for one dollar each, but the man who pays more for well-selected plants will get more than the extra money's worth.

New Jersey.

CLEMENT MOORE.

THE GARDEN UNIT PACKET SEEDS

A NEW IDEA FOR THE GARDEN

EVERY LOVER of the garden will be pleased to hear of my new and original method of putting up all garden seeds. Every packet that I now send out is guaranteed to contain just enough seeds to fully plant one 10-foot row; two packets will fully plant 20 feet; three packets 30 feet, etc. This method eliminates all guesswork and enables you to estimate exactly the cost of your garden. You pay for just the exact amount you want—not for more than you want.

MY SEEDS

have been for years recognized as the standard.

NASTURTIUMS

are my specialty. My Flowerlover's Mixtures are unquestionably the finest ever offered. They are especially mixed from selected named varieties by my own formulae, insuring giant flowers of the most beautiful colors, and so carefully proportioned as to give the greatest variety in every package. I also make a specialty of Acorn Shirley Poppies.

MY SPECIAL OFFER

is good for a limited period only and entitles you to all the following privileges:

- Membership in the Flowerlover's Club.
- My Little Green Book for the Garden for 1906.
- The Flowerlover's Bulletin for one year.
- My Little Brown Book of Dutch Bulbs.

Hints by Peter the Gardener.

The biggest and best investment you can make for your garden this year.

10 cents . . . COVERS ALL . . . 10 cents

Write to-day for pamphlets and full particulars.
HENRY SAXTON ADAMS
WELLESLEY, MASS.

TRY THE NEW

Majestic Tomato



The greatest vegetable novelty of the season. By all odds the largest, finest flavored and most productive in existence. The testimonials of our customers have written us that it surpassed all other sorts and produced 10 lbs. to 15 lbs. of fruit to the plant. Many reported single tomatoes weighing 3 lbs. to 6½ lbs. each. Just think what this kind of crop would mean on an acre of ground! The fruits are not coarse-grained and poor like other large sorts, but are smooth, solid, have few seeds, and are unsurpassed in quality. Of fine shape and beautiful color. The first season the seed sold at 2c. a packet of 100 seeds, but this season we have reduced price to 15 cents, and in addition to this we are offering

\$100.00 in Cash

prices this year on them.

Our large illustrated catalog describing the above and many other choice novelties will be sent free if you mention this page.

IOWA SEED CO.
Des Moines, Iowa



SUN-DIALS

with or without PEDESTALS

Send for Illustrated Price List H.

Hartmann Bros. Mfg. Co.

New York Office, 1123 Broadway. Mt. Vernon, N. Y.

SPRING IS COMING

Arouse to the necessity of ordering EARLY

Hardy Perennials May Soon be Planted

We offer a Choice Collection, also the

BEST OF CHRYSANTHEMUMS, CARNATIONS, CANNAS, GERANIUMS AND OTHER TENDER STOCK

Send for Illustrated Catalogue

**NATHAN SMITH & SON, 22 West Main Street
Arlison, N.C.**



PLANTS FOR DARK SHADY PLACES

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Pinks, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the **HARDY WILD IRIS AND FLOWERS** of New England. These we have been studying and growing for 25 years, and can help you in your selections. They are adapted for a great many places, and selections can be made for beautifying the dark corner by the porch, the shaded wall of hedges, dairy cottages for planting by brooklets. Before purchasing send for my illustrated descriptive catalogue of over 50 pages, which tells about this class of plants.

EDW. GILLET, Southwick, Mass.



No. 6 swing seed.

Multiply the Joys of Gardening

The home gardener who uses the Iron Age Garden Implements gets far the greatest returns of pleasure and profit from the occupation. The wonderful adaptability of these tools to every need of the garden and wish of the gardener is a pleasure in itself. The delightful ease of operation is another source of satisfaction, and gives the user all the enjoyment of gardening with the work left out.



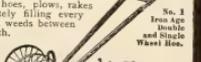
No. 1 in operation.

IRON AGE GARDEN IMPLEMENTS

Strong and durable in construction, yet light enough to be easily operated by a woman. With the No. 6 Iron Age Combined Double and Single Wheel Hoe, Hill and Drill Seeder and its interchangeable attachments, you can prepare the ground and distribute the fertilizer. At a single operation it will open the ground, plant and cover seeds, in either rows, hills or drills. A slight change of attachments, enables you to plow, hoe, rake, roll, weed or cultivate the garden. The No. 1 Iron Age Double and Single Wheel Hoe is fully equipped with hoes, plows, rakes and cultivating teeth. Adjustable in a moment, it completely filting every desire in handling the soil. Makes it easy to keep down weeds between the showers, or to conserve the moisture in time of drought.



No. 6 Iron Age Combined Double and Single Wheel Hoe, Hill and Drill Seeder.



No. 1 Iron Age Double and Single Wheel Hoe.

There are many other labor-saving Iron Age Implements fully described in our **New Iron Age Book**. Contains many valuable garden hints, and is mailed free on request.

BATEMAN MFG. CO., Box C, Grenloch, N.J.

OLD-FASHIONED FLOWER GARDEN

The sweet old-fashioned flowers Grandmother used to plant are again coming into prominence. Nothing so sweet and pretty for cut flowers as those of olden times. A corner of your garden devoted to them will be a delight the whole season through. For 20c (cash or 2c stamps) we will mail you postpaid our "Grandmother's Flower Garden," with full cultural directions. Consists of 10 full-size packets of seed of these beautiful flowers. Don't miss this opportunity for securing hours of enjoyment.

Send-to-day before our supply of collections is exhausted

MONADNOCK GREENHOUSES KEENE, N. H.



GENUINE PERUVIAN GUANO FOR THE FRUIT ORCHARD

Experienced fruit growers are learning that they should not use adulterated fertilizing materials in their fruit orchards.

NOTE HOW THEORY AND PRACTICE AGREE

THEORY Prof. F. A. Wagh, of the Department of Agriculture of the Massachusetts Agricultural College, writes us concerning Peruvian Guano: "Theoretically, I have a notion that it (Peruvian Guano) is one of the best forms in which to use Nitrogen on fruit trees."

PRACTICE Mr. David L. Fiske, of the Massachusetts State Fruit Growers' Association, with large orchards in Worcester Co., Mass., writes us under date of August 21, 1905: "I will say that I have been growing peaches for market for the past thirty years, and though the summer has been unusually dry in this section we've had more vigorous foliage or finer fruit. In the spring of this year for the first time PERUVIAN GUANO over all my orchard ground; this in connection with Sulphate of Potash seems to be just right. Hope to use more next year."

Nitrate of Soda, Sulphate of Potash, Muriate of Potash, at very low prices

Our beautifully illustrated 80-page book is sent free if you mention THE GARDEN MAGAZINE. Our agricultural expert will tell you soil free of charge and advise you how to fertilize it properly.

COE-MORTIMER COMPANY, 116 FRONT STREET, NEW YORK CITY

STRAWBERRY PLANTS

Virginia and Chesapeake, winners of 1900 GOLD PRIZE offer; also Canadian, Commonwealth, North Shore's Early, New York, Cies Mary, Stevens, Champion, and so others; best list, good stock, reasonable prices. Desires: Luccetta and Austria, Cabbage, New Veiga and so other **SEEDS Cucumbers?** Favorites.

Allen's Pride of the Market, Arlington Spine, Shamrock, etc. Catalogues: Allen's First Choice, True Rocky Ford, Tomatoes; Livingston's Goose, Allen's Best, Chalk Jewel, Maudie's Earlies, Earlies, etc.; Kansas King, Eight Day Yellow, True Maryland Queen Field Corn. Best new and standard Garden, Field and Flower seeds. Always ready. Special Agricultural Implants, etc. **60 PAGE CATALOGUE FREE.** Send address on postal NOW. It tells about all of good things for the farm and garden and where to get them.

W. F. ALLEN, Dept. 42, Salisbury, Md.



Reproduction of a sketch submitted by us for a proposed garden to be planted this spring at Oyster Bay, L. I. The garden in the foreground was sketched on a photograph of the grounds so that the effect is accurately portrayed

LET US MAKE ONE FOR YOU

Then you will know before planting what the finished effect will be. If you are thinking of fixing up the old homestead or have just started a new home and desire immediate effect you will require some of our large trees and shrubs. We are prepared with our new tree-moving machine to move trees up to 16 inches in diameter at a reasonable cost. Our collection of evergreens is very choice. They were awarded a silver medal last November by the American Institute in New York City. A complete assortment of the most satisfactory herbaceous plants are grown at our Nursery, as well as our famous gold medal peonies.

Write to-day before the busy season opens up for suggestions and plans for your grounds. Price list of nursery stock sent on request.

COTTAGE GARDENS COMPANY, QUEENS, LONG ISLAND



RED RIVER VALLEY EARLY OHIO

GROWN in the cold Northwest are unsurpassed for vigor and early maturity. Old's first selected seed is the best that can be obtained. Prices reasonable.

Send postal for 80-Page Catalog Postpaid. Corn, Oats, Barley, Clover Seed, Grass Seed, Garden Seeds, etc.

L. L. Olds Seed Co., Drawer 17, Clinton, Wis.

BODDINGTON'S

SEEDS

WHEN YOU BUY A
DIAMOND

you look for **quality** first—before any other point of excellence—it must be **pure** and without **flaw**.

WHEN YOU BUY SEEDS

you naturally expect them to **germinate**—this is an **absolute necessity**. But the most important point is the **quality** of the **flower** or **vegetable** produced.

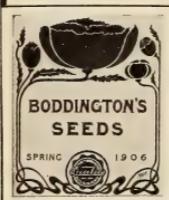
MY **QUALITY SEEDS** cover all these points—because I go to **acknowledged specialists** for **individual varieties**, and I spare no expense in procuring the best and finest seeds of germination and productiveness.

MY **ILLUSTRATED CATALOGUE**, containing premiums, **sixty-four** pages and nearly one **hundred** full-page and other photo-engravings, **seed, plant and bulb** information and cultural directions.

This superb catalogue MAILED FREE if you say where you saw this advertisement. Send for it to-day.

ARTHUR T. BODDINGTON
SEEDSMAN

342 West 14th Street, New York City, N. Y.



The Glen Steel Folding Mat

Private Home Treatment For New and Old Hemorrhoids
One scrape of the foot in any direction across a Glen Steel Mat takes off all those balls of mud and snow which cling so tenaciously and result in the ordinary mat. The Glen Mat is neat and attractive, is easily cleaned, does not curl up. Its wonderful construction and durability will make it wear a lifetime. Unavailable for residences and accessories to all public and private buildings. All first class dealers handle the Glen, if yours don't, write today for catalog and particulars. We make here an 1/2 cent-ounce mat measure.

Glen Mfg. Co., 149 Mill St., Ellwood City, Pa.
Also Mfr. Hartman Steel Picket Fence, Hartman Flexible Wire Rails and Hartman Stokade Wares Wire Ware.

HOW TO GROW ROSES

Growing Roses successfully and abundantly is easy when you have learned a few simple facts and have good rose bushes to start with.

Our handsome, helpful book "How to Grow Roses" tells you these facts; how to select the best Roses for your locality; how to plant, prune and protect them; and how to grow the finest blossoms. Beautifully illustrated with photographs. Free to readers of this Magazine.

So is our new 136-page catalogue, describing the choicest Roses.

We are the pioneer Rose Growers of America. Our plants have a reputation. From our complete assortment you can be sure of getting the kinds that do best in your locality. We pack carefully and guarantee each plant to reach you in perfect growing condition. For roses next summer begin planning now. It will pay to get our two books. Write for them to-day.

"Helen Gould"

One of our many choice varieties, noted for its rich color, beautiful shape and delightful fragrance. A great rose to make a showy bed or a magnificent bouquet. Shades to a rich crimson. Grows luxuriantly.

Strong Plants \$5 a Dozen.

The
Conard &
Jones Co.,
Box P
West Grove, Pa.

"Grows in the Best Roses in America."



Seeds for Early Sowing

The varieties of flower seed offered below can be sown in pots or flats in the house during February and March and will be ready for transplanting in the garden during the latter part of April and early May, thus saving from a month to six weeks.

Alyssum, Little Gem	PKT. .05	Penny Giant mixed	PKT. .10
Aster, Queen of the Market	.05	Phlox, Dwarf mixed	.10
Balsam, Simple Branching	.10	Petunia, large flowering	.10
Balsam, Camellia flowered	.10	mixed	.10
Carnation, Giant Marguerite	.10	Stock, large flowering	.10
Lotus, double mixed	.10	Salvia, Redfire	.10
Lobelia, Crystal Palace	.10	Verbena, Mammoth mixed	.10
Martagon, African mixed	.05	Limna, large-flowering	.05

One packet each of the above collection of 15 packets mailed with our **free 1906 catalogue** for .05.

STUMPP & WALTER CO.
50 BARCLAY STREET, NEW YORK

Everything for the Fruit Garden,
Flower Garden, Lawns and Avenues

A full stock of fine trees. Please send in orders early to ensure the best stock. Send for our free catalogue. Address

THE STEPHEN HOYT'S SONS CO.
NEW CANAAN, CONN.

Telephone 148-2 South Norwalk

Bridgeman's



HIGH GRADE
Vegetable, Farm
and Flower Seeds
GARDEN TOOLS
and HORTICUL-
TURAL BOOKS

Descriptive illustrated catalogue mailed free on application

BRIDGEMAN'S SEED WAREHOUSE
37 East 19th Street, New York City

FAIRFAX ROSES
CANNOT BE EQUALLED

Catalogue for 1906 now ready, describing hundreds of varieties.
BABY RAMBLER
and all the new ones. Mailing size and strong two-year dormant plants. Also all greenhouse and bedding plants. New dahlias a specialty.

W. R. GRAY, BOX 6, OAKTON,
FAIRFAX CO., VA.

The Burpee-Quality in Seeds!

Burpee's Seeds

and New Jersey, as well as in the gardens of Planters everywhere,—BURPEE'S SEEDS are proved by test to be the BEST SEEDS THAT GROW. Consequently, we hold the largest mail-order seed trade in the world.

With a view to serving our customers even better and to provide for further increase in business, we purchased—a year ago and have equipped—an additional building on Fifth Street and a double warehouse on York Avenue, south of the BURPEE BUILDING, erected in 1893. We also bought a farm in New Jersey, to supplement the work of our Pennsylvania FORDHOOK FARMS, so long famous as the most complete trial grounds in America.



WHERE WE BEGAN
IN 1876

We began in the Centennial year of American Independence. The little building that first saw our declaration of independence is shown herewith. We do more business now in a *week* than in the two years (1876 and 1877) that we occupied this little building. And yet our great organization to-day is the wholesome growth from the seeds then sown. As a leading horticulturist once wrote, "It is because BURPEE'S SEEDS GROW—that the Burpee Business Grows!"

Cost but little more than do usual commercial grades,—and yet are *worth* much more. At our own farms in Pennsylvania



FIFTH STREET FRONTAGE OF THE
BURPEE BUILDING, PHILADELPHIA

OUR "SILENT SALESMAN"

neatly dressed in "a coat of many colors," and telling the plain truth, with photographic pictures of the superior products of BURPEE'S "SEEDS THAT GROW," will be sent by return mail,—if You will write a postal card for

1876

1906

Burpee's

Thirtieth
Anniversary
Edition

FARM ANNUAL

"The Leading American Seed Catalogue."

This is a HANDSOME BOOK of 168 PAGES, carefully edited and neatly printed, bound in cover lithographed in nine colors. With the COLORED PLATES, also in nine colors, it shows, *painted from nature*, Seven Superb Specialties in VEGETABLES of unequalled merit and Six Novelties in FLOWERS,—including LUTHER BURBANK'S *New Floral Wonder for 1906*.

This Invitation to write for OUR NEW COMPLETE CATALOGUE and then participate in the *Special Celebration of OUR THIRTIETH ANNIVERSARY*, is given FREE to all who will appreciate the BURPEE QUALITY IN SEEDS.

If you intend to garden this spring, you will want time to lay your plans, and therefore we urge you to write a postal card TO-DAY!—the very day you read this advertisement. Name *this Magazine* and address

W. ATLEE BURPEE & CO., Seed Growers
BURPEE BUILDING, PHILADELPHIA, PA., U. S. A.

4c—Please remember, if you should forget our full firm name, that it is sufficient to address simply,—either letter, telegram, or cable message—

Burpee, Philadelphia

Korrespondenzen in deutscher und französischer Sprache erhalten die sorgfältigste Aufmerksamkeits.

BURBANK SPECIALTIES

Many of which are for the first time offered for sale

Australian Star Flower (seed)	Verbena Mayflower (seed)	Burbank Dahlia Seed
New Yellowish Calla (bulbs)	"Burbank" Canna (plants)	Potato Seed, new varieties
New Hybrid Amaryllis (bulbs)	Shasta Daisy (seeds and plants)	Cream Cup (seed)
"Burbank" Rose	Crimson Winter Rhubarb (seeds and plants)	Hybrid Crinum (bulbs)

These are all fully described in Vaughan's 1906 Catalogue

Vaughan's Flower Seeds

are different from those of most dealers. We sell to 7,000 greenhouse gardeners—most critical buyers.

Vaughan's seeds have high vitality, are true to name, and produce flowers ideal in size, form and color.

VAUGHAN SPECIALTIES

Gladiolus Princeps—the new giant flowered. Gladiolus America—shell pink. Five new Pansies. A new Giant Primrose. Chicago Giant self-blanching Celery. New Sweet Peas. Five new Giant Petunias. New Stock Beauty of Nice. Baby Rambler Rose—New Everblooming Rose which blooms all summer without stopping. New Beans, New Peas, New Lettuce, Cucumbers and Turnips.

VAUGHAN'S SEED STORE

(INCORPORATED)

NEW YORK, 14 Barclay Street

84-86 Randolph Street, CHICAGO

Greenhouses, Trial Grounds and Nurseries, WESTERN SPRINGS, ILL.



PLANTS VAUGHAN'S SEEDS

This is a reproduction of the cover of Vaughan's 1906 Catalogue. The complete 150-page edition will be MAILED FREE to all who mention *The Garden Magazine*.

Vaughan's Vegetable Seeds

have for thirty years been staple with the best market gardeners and critical private planters.

For convenience we have made up the three following collections:

Collection A.

For the City Garden
Twenty varieties, \$1.25

Collection B.

For the Suburban Garden
Thirty-two varieties, \$2.50

Collection C.

For the Farm Garden
Forty-seven varieties, \$5.35

March
1906

STARTING THE SPRING WORK

Gaining Time with Hotbeds and Coldframes
Making a Water Garden

Fertilizing the Soil
Finding a Lost Orchid

10c.
\$1.00 per Year

THE GARDEN MAGAZINE



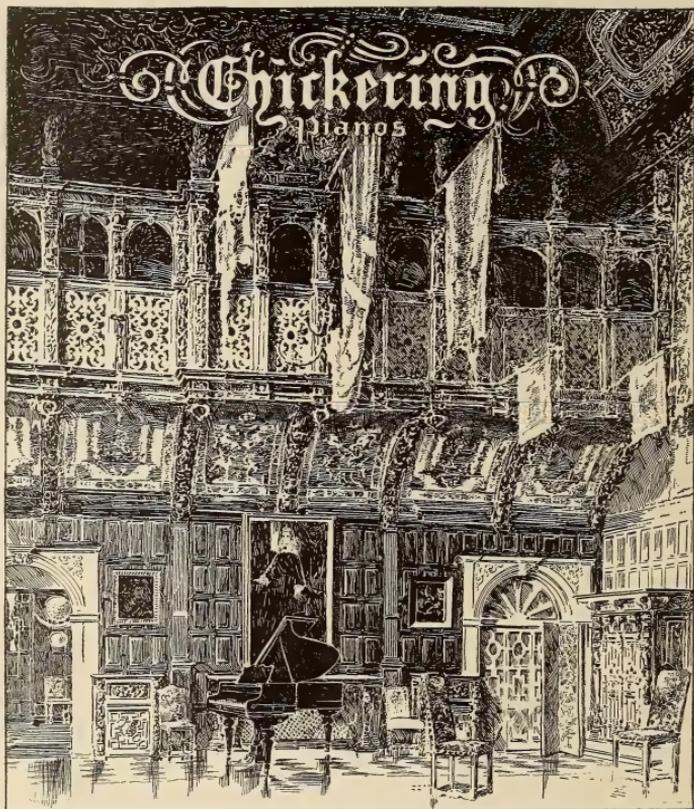
COUNTRY LIFE
• IN AMERICA •



DOUBLEDAY, PAGE & CO
133-135 & 137 EAST 16TH ST. NEW YORK



THE WORLD'S
• WORK •



IT is the beautiful tone of these instruments that has given them world-wide celebrity. ¶ This, with durability, insured by the highest quality of workmanship and finish, leads the purchaser to pay cheerfully the somewhat higher price asked for them. ¶ Catalogue free.

CHICKERING & SONS, 827 Tremont Street, Fenway Station, BOSTON

Established 1823

TIFFANY & Co.

DIAMOND AND GEM MERCHANTS
GOLD AND SILVERSMITHS

The Price of Silver

Notwithstanding the increasing cost of silver bullion, Tiffany & Co. will continue, until further notice, to offer Sterling Silver Forks and Spoons of their current copyrighted patterns at

\$1.00 per ounce

Upon this basis, the prices per dozen range as follows

Tea Spoons, - - - -	dozen, \$11. upward
Dessert Spoons, - - - -	" \$18. "
Soup or Table Spoons, - - - -	" \$25. "
Breakfast, Entrée or Dessert Forks, "	" \$17. "
Dinner or Table Forks, - - - -	" \$23. "

Cuts of Patterns Sent Upon Request

This method of marking prices furnishes patrons with exact information as to weights and enables them to more readily compare values with articles for similar uses sold elsewhere

Silverware on Approval

Upon receipt of satisfactory references from any National Bank or responsible business house, Tiffany & Co. will send on approval selections from their stock to any part of the United States

Fifth Avenue New York

and 37th Street

Formerly at Union Square

Tiffany & Co.

always welcome a
comparison of prices

All of Tiffany & Co.'s silverware is of English Sterling quality, 925/1000 fine. All their patterns are copyrighted, and as Tiffany & Co. are strictly retailers, these designs never lose their individuality by overproduction or promiscuous sale through other dealers

Tiffany & Co. 1906 Blue Book

will be sent to intending purchasers without charge. This catalogue contains

no

illustrations

It is a compact little volume of 530 pages and over 6,000 suggestions of jewelry, silverware and choice artistic objects suitable for wedding or other gifts, with the range of prices at which they may be purchased

GARDEN BOOKS

For any information concerning publications on gardening, the improvement of the home grounds, and allied subjects, address

GARDEN BOOK DIRECTORY, THE GARDEN MAGAZINE NOS. 111-117 EAST SIXTEENTH STREET, NEW YORK CITY :: :: ::

OUT OF DOOR BOOKS

FIELD BOOK OF AMERICAN WILD FLOWERS

By F. SCHUYLER MATHEWS.

4 1/4 x 7 1/4 in. 525 pp. 350 Illustrations (24 Colored). 850 plants described. Net, \$1.75; Limp leather, net, \$2.25.

"A triumph in presenting scientific facts in the most agreeable manner. . . . Indispensable to all flower lovers."—*N. Y. Tribune*.

FIELD BOOK OF WILD BIRDS AND THEIR MUSIC

By F. SCHUYLER MATHEWS.

4 1/4 x 7 1/4 in. 38 Colored and 15 other Full page Illustrations and numerous Musical Diagrams. Net, \$2.00; Limp leather, net, \$2.50.

A description of the songs and the coloring of wild birds which will enable any one to identify the species common in the Eastern United States. The book fills a place never before occupied by any volume devoted to bird study.

LANDSCAPE GARDENING

Notes and Suggestions on Lawns and Lawn Planting, Laying out and Arrangement of Country Places, etc., etc.

By SAMUEL PARSONS, JR., Ex-Superintendent of Parks, N. Y. City.

Large 8vo. 200 Illustrations. \$3.50.

"We commend it highly to all landowners."—*Country Gentleman*.

Send for Full Descriptive Circulars

At all
Booksellers

G. P. PUTNAM'S SONS

27 West 23rd St.

New York
and London

100 HOUSE PLANS FOR \$1.



If you are thinking about building don't fail to buy the book, FALLISER'S MODERN BUILDINGS, containing 100 plans, 12 x 14 inches in size, consisting of large 6 x 12 plate pages, giving plans, elevations, perspective views, descriptions, actual cost of construction (no excess work), and instructions how to build 100 cottages, villas, double houses, brick block houses, suitable for city, suburbs, town, and country, costing from \$500 to \$7,000, together with specifications and form of contract. Sent in paper cover by mail, postpaid, on receipt of \$1.

200 OLD-TIME SONGS.

This volume contains the words and music of choicest gems of the old and familiar songs we used to sing when we were young. It has been arranged with great care and is the best book of the kind published. The book contains 200 songs, and would cost \$50 in sheet-music form. All the popular old-timers are in this book. Buy it and sing the songs, and make believe you are young again. It contains 176 pages, and will be sent in paper cover by mail, postpaid for 25 cents; bound in cloth, 47 cents.

Either of the above books will be sent by mail, postpaid, on receipt of price. Address all orders to

J. S. Ogilvie Publishing Company,

67 ROSE STREET, NEW YORK.



SUN-DIALS

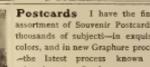
with or without PEDESTALS

Send for Illustrated Price List

Hartmann Bros. Mfg. Co.

New York Office, 1123 Broadway

Mt. Vernon, N. Y.



of any line of oil and water color pictures—suitable for every purpose (framing, oil and water color painting and china decoration)—I will send to any address for only 38 cents, the four lovely pictures shown in this ad.—Violet by Mary E. Hart, Roses by Paul de Louvre, and Top of War (Kittens and Puppies) each to 1 1/2 inches. Any two for 25 cents. These three studies alone will for \$1.50. My new postage catalogue illustrates hundreds of subjects, and will be sent anywhere on request. Send now. All orders filled same day as received. W. A. OERTEL, Art Publisher, P. O. Box 90, Branch O, NEW YORK.

"The Best for American Photographers"

PHOTOGRAPHY FOR PROFIT

A COMPREHENSIVE survey of the many ways by which the amateur or professional photographer can make his camera work add to his income. Plain and practical information on easily cultivated lines of work, such as Picture Post Cards; Prints on Fabrics; Carbon Prints on Metals; Portraiture at Home and Outdoors; Interiors; Groups; Copying Paintings, Legal Documents, Daguerreotypes; Specialist Photography in Machine Shops; Nature Photography; Photographic Souvenirs on Watch Dials, Caps, etc., as well as Photography for Newspapers, Magazines, Booklets, and so on. This volume is one of a practical series covering the whole field of Photography for American amateurs and professionals.

Beautifully Illustrated, 5 x 8 Inches.

PRICE, 25 CENTS, POSTPAID.

The coupon below will introduce you to THE PHOTO-MINIATURE SERIES—the most comprehensive library of photographic information available in the English language—including such books as "Photography in Advertising," "Photographing Flowers and Trees," "Landscapes," "Clouds," "The Dark Room," "Enlarging Negatives," "Decorative Photography," "Coloring Photographs," and fifty other subjects.

Send 25 cents additional and secure the volume on "Vacation Photography," a practical book on outfits and methods to make the vacation trip with the camera successful.

TENNANT & WARD, Publishers

87 Fourth Avenue, New York

Enclosed find 25 CENTS for "PHOTOGRAPHY FOR PROFIT," postpaid.

Address _____

Two New Indispensable Volumes Comprising

The American Horticultural Manual

In Two Volumes

By PROFESSORS N. E. HAUSER & J. L. BUDD

Volume I. How to Grow.—The Leading Principles and Practices connected with the Propagation, Culture and Improvement of Fruits, Nuts, Ornamental Trees, Shrubs and Plants in the United States and Canada. 417 pages, 107 figures. Price, Cloth, \$1.50, prepaid.

Volume II. Systematic Pomology.—Containing Descriptions of the Leading Varieties of the Orchard Fruits, Grapes, Small Fruits, Subtropical Fruits, and the Nuts of the United States and Canada, together with those of special promise in local parts. 491 pages, over 100 illustrations. Price, Cloth, \$1.50, prepaid.

FRUITS AND FRUIT TREES OF AMERICA—By A. T. Downing
The great authoritative work in this country. Price, cloth, \$5.00

Send for catalogue and circulars of many of the best books in Horticultural Science. Free on application

JOHN WILEY & SONS, Publishers
43 and 45 East 19th Street, New York

Are You Interested in Photography?

THEN YOU SHOULD READ

THE PHOTOGRAPHIC TIMES

America's Oldest Photographic Magazine

THIS publication furnishes a greater variety of interesting photographic matter for a dollar than any other magazine in its class.

Nicely printed, finely illustrated, and valuable to any one who follows the many phases of photography.



ONE DOLLAR A YEAR

TEN CENTS A COPY

Send 10 cents for the current issue

Subscribe now through your nearest photo supply man, newsdealer, bookseller, or send direct to the publishers.

THE PHOTOGRAPHIC TIMES
PUBLISHING ASSOCIATION

39-G. Union Square

NEW YORK



Prevent Mislaying numbers of The Garden Magazine

The New Temporary Binder

Is very convenient and will hold copies until volume is complete and ready for permanent binding. It is worth its cost several times over each year. You will have the copies together when you need them, and it will last for years for succeeding volumes. Black cloth neatly stamped in gold. Made on an improved pattern.

Price, \$1.00 prepaid

Doubleday, Page & Company,
133-137 East 16th Street, New York.

Practical Books for the Garden

Ferns and How to Grow Them

By G. A. WOOLSON.

An authoritative little hand-book, dealing with the growing of hardy ferns both in the garden and indoors. Profusely illustrated. Net, \$1.10. (Postage 10c.)

Roses and How to Grow Them

A very practical volume, uniform with the above. Profusely illustrated. Net, \$1.10. (Postage 10c.)

How to Make a Vegetable Garden

By EDITH L. FULLERTON.

A real necessity for a suburban or a country home. 250 beautiful photographic illustrations. Net \$2.00. (Postage 20c.)

How To Make a Flower Garden

A charming and practical book by experts on every branch of the subject. 219 beautiful photographic illustrations. Net, \$1.60. (Postage 10c.)

How To Make School Gardens

By H. D. HEMENWAY.

Illustrated. \$1.10 postpaid.

How To Plan the Home Grounds

By SAMUEL PARSONS, JR.

Illustrated. \$1.10 postpaid.

A Plea for Hardy Plants

By J. W. ELLIOTT.

Beautifully illustrated. \$1.76 postpaid.

THE GARDEN
MAGAZINE



COUNTRY LIFE
IN AMERICA



THE WORLD'S
WORK

DOUBLEDAY PAGE & CO NEW YORK

A TIMELY BOOK

We will send it *free, postpaid*, to each reader of *The Garden Magazine* who sends us *two* yearly subscriptions at one dollar each (one of them should be new, not a renewal; the other subscription may be your own paid for another year.)

REMEMBER THE DOUBLE SPRING PLANTING NUMBER and THE GREAT FALL PLANTING NUMBER are two of the most important gardening publications issued during the year in this country. They are indispensable. When purchased separately they cost twenty-five cents each. Altogether regular subscribers for one dollar get twelve numbers that would otherwise cost \$1.50. Some friends of yours cannot afford to miss the April Planting Number.

This is
the Book

HOW TO PLAN THE HOME GROUNDS.

Samuel Parsons, Jr., the author, is a Fellow of the Society of American Landscape Architects, and was for years Superintendent of the New York Parks. He gives practical directions not only for laying out the home grounds, selection of site, the care and making of roads and paths, lawns, woodlands, hedges, gardens, selection of plants and trees, etc., but also in a second section he treats of the village improvements, designed to elevate public taste, as it concerns the highways, the schoolhouses, the stations, and the village outdoor life generally.

Size, 5 x 7½; pages, 249; illustrations, 56;
binding, cloth; price, net, \$1.00.

DOUBLEDAY, PAGE & COMPANY,

133 EAST SIXTEENTH STREET, NEW YORK





IMPLEMENTS

For any information concerning the purchase or use of any garden or farm implement, etc., address

IMPLEMENT DEPARTMENT, THE GARDEN MAGAZINE
NOS. 133-137 EAST SIXTEENTH STREET, NEW YORK CITY



The Dollars that Grow in the Garden

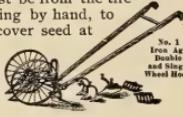
The time has passed when old-fashioned methods of garden planting and cultivation can be made to pay. Planting by hand and cultivation by hoe is too slow and too expensive to be possible with profit.

Get our **New Iron Age Book** and see what wonderful economy in time, labor, seed and fertilizer is accomplished by the **Iron Age Farm and Garden Implements**. Think what a change it must be from the tire-

No. 6
Iron Age
Combined
Double
and Single
Wheel
Hoe,
Hill
and
Drill
Seeder.



some labor of old-fashioned garden planting by hand, to be able to open the ground, plant and cover seed at any desirable depth or spacing at a single operation and at an easy walking gait. Yet this is just what is made possible by the



No. 1
Iron Age
Double
and Single
Wheel
Hoe.

IRON AGE Implements

No. 15
Iron Age
Combined
Hoe, Hill
and
Drill
Seeder.



The same tool, the No. 6 Combined, has interchangeable parts that will weed, hoe, plow, rake, level or cultivate with half the work and twice the speed of hand methods.



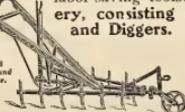
No. 20
Iron Age
Single Wheel
Hoe.

The No. 1 and No. 20 Wheel Hoes, which are forms of the No. 6 and No. 15 Combined tools, may be equipped with fertilizer attachment for sowing in furrow or applying as side dressing to growing crops.

The No. 1 Combined Harrow and the No. 6 Horse Hoe shown have a range of adjustment and adaptability that make them earn their cost, time and again in the garden, field or truck farm.

Get our **New Iron Age Book**, which fully describes these and other labor-saving tools. Also a full line of **Potato Machinery, consisting of Planters, Sprayers, Cultivators and Diggers**. FREE on application.

No. 3
Iron Age
Combined
Harrow and
Cultivator.



BATEMAN MFG. CO.,
Box C,
Grenloch, N. J.



No. 4
Iron Age
Horse Hoe
and
Cultivator.



A Reading Course on Pruning

Don't let your shrubs be ruined by alleged "experts" who treat all things alike.

Study the subject yourself. It is fascinating. You cannot read the articles mentioned below without wanting to buy a pair of pruning shears. You are missing one of the keenest pleasures in gardening if you let anyone else do your pruning.

March is the great pruning month. You can cut out dead limbs any time of the year, but that is not pruning. Pruning is the removal of live wood, and the ideal time to do most of it is just before the sap rises, because the wounds will heal more quickly then.

Now is the appointed time for pruning fruit trees and grapes.

For fruit trees, see Vol. I., pages 64 to 66. For grapes, see Vol. I., pages 18, 19.

The proper time for pruning berry bushes is directly after their fruiting season. There will be a long article on this subject before August in THE GARDEN MAGAZINE. Unless you have a good fruit book, or the advice of an experienced grower, you would better not touch your currant and gooseberry bushes now if they have been neglected.

However, if your brier patches are overgrown it is perfectly safe to trim and train them anyway at all, so that you can get through without tearing your clothes. Better still, cut out all the canes that are three years old or more. You can easily distinguish the one-, two- and three-year-old wood.

For the training of berry bushes, see Vol. I., page 88.

Don't prune your flowering shrubs before June unless you have read Vol. I., pages 225, 226. Otherwise you are likely to cut off a lot of lilac and other flower buds that were formed last fall. For the pruning of roses, see Vol. I., pages 84 and 126.

"Nothing Venture Nothing Have"

The very first day you can find a patch of ground 5 x 20 feet that is fit to work sow extra early peas and Golden Bantam corn. This can often be done in the latitude of New York by March 15th.

In this way you may gain three or four weeks over your neighbors, who usually sow peas on April 15th and corn on May 1st.

Be prepared to cover the young plants on frosty nights with old newspapers. The Fullertons have beaten their neighbors for five years without having to cover a single plant.

Total loss if you fail—ten cents.



Champion Duster

The Problem of Spraying

SEND for Leggett's *Spray Calendar*, illustrated, a free booklet to those interested, showing the whole subject at a glance: what to apply and when to do it. This concise information will be of the greatest value to any grower. A postal card will bring you the booklet. The

DUST SPRAYERS

are the most effective, easiest and swiftest for all vegetables and fruits. Two acres of potatoes per hour; no barrel of water to haul; does the work of a power machine; dusts two rows as fast as a man can walk; adjustable. Will not get out of order and will last for years.

LEGGETT & BRO., 303 Pearl Street, New York City



SOLID STEEL

Pruning Shears

Will Snip a Broom Handle

That gives you an idea of the strength and quality of the pruner. Wiss Pruning Shears will cut a broom ordinary ones. They will cut tissue paper. This shows how nicely they are adjusted.

Nurserymen and growers of fine trees use them in preference to all other shears—they will cut clean the thickest twigs on the most delicate tendrils without tearing.

Wiss dealers will replace free of charge any shears returned defective or unsatisfactory.

All parts are interchangeable. If any part (say the blade) becomes worn, it can be replaced, thus making the shears as good as new at a slight cost.

Made in two sizes—9 inch, \$2.25; 10 inch, \$2.50

Extra blades, 50 cents each. For sale by all dealers.

J. WISS & SONS CO., 15-33 Littleton Ave., Newark, N. J.

The Necessary Implements

Purchased from the New York headquarters for all garden and farm implements of the latest improved manufacture, may be shipped by freight *new* with a saving of time, expense and worry to you. The gardener who possesses a satisfactory collection of tools only knows the pleasures of gardening, and the profits as well.

Lawn or Golf Green Roller

This new pattern Roller is made with our Improved Wheel Hubs strongly braced, having counterpoise balance weights on shaft for holding the handle up when roller is not in use.

The best roller made. These special prices are for this month only.



Size A,
100 lbs.,
\$7.95

Size B,
125 lbs.,
\$11.10

Also larger sizes up to 500 lbs.

Indispensable for successful lawn and garden work next month, and tennis courts, drive ways, walks and paths.

\$5.00 COLLECTION

An indispensable garden outfit! All implements of the best makes; offered this month at the above liberally discounted price. This outfit includes the following:

- Steel Spade
- " Spading Fork
- " Rake (12 Teeth)
- " Draw Hoe
- " Trowel
- " Shears
- " Pruning Shears
- Wood Lawn Rake, 24 Teeth
- Wheel and 100 ft. braided line
- Hand Weeder
- Turf Edger

Order it now, and it will reach you safely in ample time.

Gardening Without Backache

"The wheel hoe is the most important garden tool ever invented within a century." (See Garden Magazine, March, 1905).

This Wheel Hoe

and Cultivator is a new and attractive implement, with five attachments, including one



large garden plow. The other sweeps range from 6 to 18 inches. This is a most effective and economical tool for large or small garden operations.

PRICE, COMPLETE (if ordered this month) \$3.25

Our new Catalogue "N," containing over 600 illustrations of Tools and Implements for the Field, Farm and Garden, mailed free, if you mention *The Garden Magazine*.

J. S. WOODHOUSE, 191-195 Water Street, NEW YORK

A THRIFTY GARDENER

whether large or small, needs proper tools for seeding and cultivating. We make garden implements of all kinds, a tool for every purpose.

MATTHEWS' NEW UNIVERSAL HAND SEEDERS AND CULTIVATORS

Used singly or combined with Hoes, Plows, Rakes, Markers, etc. Over 20 styles. Free Booklet giving description, prices and valuable information mailed to any address. Send for it now.

Garden Tools for Every Purpose

AMES PLOW CO., 20 Market Street, Boston, Mass.

SPRAY It Is Worth While

Buy a machine that does the work right—that cleans its station automatically with a brush, mixes liquid mechanically so that foliage is never burned, but gets its due proportion.



Empire King, and Orchard Monarch

do these things. They throw finest spray, are easiest to work and they never clog. You ought to know more about them. Write for instruction, price, and formulae, etc. Mailed free.

FIELD FORCE PUMP CO.

No. 115 Street, Elaine, N. Y.

Rhodes Double Cut Pruning Shear



RHODES MFG. CO.
421 West Bridge St., Grand Rapids, Mich.

Cuts from both sides of limb and does not bruise the bark.

We pay Express charges on all orders. Write for circular and prices.

CUT THIS OUT, Worth 25c.

We will accept this adv. for as cents on all seed orders amounting to \$1.00 or over. The **BEST SEEDS** at the **LOWEST PRICES**. Catalog sent free. Send for it. If you enclose 5 two-cent stamps with your request, we will send you five packets choice seeds free.

STANDARD SEED CO.
210 East St. Valparaiso, Ind.

Strawberry Plants That Grow BEST STANDARD VARIETIES

Also Raspberry, Blackberry, Currant and Grape Plants, Asparagus Roots and Seed Potatoes in assortment. All stock warranted high grade and true to name. Forty-page Catalogue with cultural instructions, Free.

C. E. WHITTEN, Box 10, BRIDGMAN, MICH.



EVERGREENS

Largest Stock in America including

Colorado Blue Spruce and Douglas Spruce of Colorado.

Also Ornamental, Shade and Forest Trees, Tree Seeds, etc.

R. DOUGLAS'S SONS
Waukegan, Ill.

Save Half Your Time

using the **Planet Jr. Line** of farm and garden tools. They do the work faster, easier and better than it can be done in any other way.

Our No. 8 Horse Hoe is a perfect one horse cultivator for corn, potatoes, cotton—indeed

all crops planted in rows. Our Planet Jr. No. 25, is a Hill and Drill

Seeder, Wheel Hoe, Cultivator and Plow combined. Sows all garden

seeds in continuous rows or drops in hills, 4, 6, 8, 12 or 24 inches

apart. Works astride or between the rows throwing

the earth to or from as desired.



No. 8 Combined Seeder



No. 6 Horse Hoe

THE Lou Dillon TANDEM GARDEN CULTIVATOR

Suits the practical gardener because it cultivates either between or astride the rows, and he can go along at an easy, continuous walk. One simple movement without the use of wrench or tool of any kind makes it possible to always furrow the soil at just the desired depth. You must not put this cultivator on a par with the common hit and miss garden cultivator. It works so easily and accurately that it is the greatest help to amateur gardeners, women, truck farmers, and, in fact, anyone who wants to save time and do good accurate work.

The Lou Dillon cultivator works as easily as a lawn mower. It is, in fact, the only garden cultivator that is practical for a woman or child, as it is the only one made that they can push. We will take the cultivator back and give back your money if it don't do your work better and in less time than any garden cultivator you ever used. Write for free descriptive catalogue and prices.

SCHAIBLE MANUFACTURING CO., Albion, Michigan

SPRAYING INDOOR PLANTS

For spraying plants indoors and out, the **LENOX IMPROVED SPRAYER** is the most serviceable for the house and garden. House plants generally suffer from lack of moisture, such as rain or the morning dew give them. This produces a misty shower that supplies the plant most naturally and completely, as absolutely necessary to real success with house plants.

HELP THE PLANTS

Spraying for insects and dust, it reaches every part of the plant over and under the leaves, where insects breed. Spraying with tobacco water will surely kill these enemies. Had we the space, we could tell you many things about your plants, how essential it is to spray them while in the house, on the under side of the leaves.

Sent complete with a cake of tobacco soap free. Make a suds and spray. Your plants will surprise you.

50c. Post-paid

THE LENOX MFG. CO., 1292 Broadway, New York

THE GARDEN
MAGAZINE

COUNTRY LIFE
IN AMERICA

THE WORLD'S
WORK

DOVBLEDEY PAGE & CO NEW YORK



A NEW kind of magazine for the Farmer of to-day, beautifully illustrated, telling interestingly and simply what every farmer should know.

FARMING

An Illustrated Home Magazine Devoted to the Living and Growing Things on the Farm

THE BEST WE ARE CONVINCED IS NOT "TOO GOOD FOR THE FARMER."

WHY YOU NEED "FARMING"

- (1) It lays special emphasis on the farm home. It not only helps to show how to make a living, but how to get the most satisfaction and happiness from farm life.
- (2) It is especially strong on domestic animals: horses, sheep, swine, poultry, and so on.
- (3) It describes men in every section who have succeeded, and shows just how they did it.
- (4) Farming as practised throughout the States treated regularly.
- (5) While thoroughly up-to-date in theory, and using to the full the knowledge gained by the scientists, it is eminently practical.
- (6) Schools, roads, irrigation, systems of storing and marketing, telephones, etc., are covered elaborately.
- (7) In a word, with the broadest field and the most inspiring subject there is in America, FARMING combines beauty and practical helpfulness as does its most successful forerunner, THE GARDEN MAGAZINE.

SPECIAL NOTICE

FARMING is the fourth magazine Doubleday, Page & Company have started. Invariably the first numbers have gone "out of print," and the early issues have sold at a high premium. Begin now and send your \$7.00 for a year's subscription. A blank is appended for your convenience.

-----CUT OFF HERE-----
DOUBLEDAY PAGE & COMPANY,
133-137 East 16th St., New York City.

Enclosed find \$7.00, for which send FARMING for one year

Name.....

Address.....

[G. M. 3, '06]

POULTRY, KENNEL AND LIVESTOCK DIRECTORY—Continued on opposite page.



Scottish Terriers

Offered as companions. Not given to fighting or roaming—Best for children's pets.

NEWCASTLE KENNELS
Brookline, Mass.



U. S. REGISTER- AND STUD BOOK

400 addresses, 510 descriptions,
67 illustrations, \$7.00 cloth; \$3.00
leather. Gilt top.

THE CATTARIAN

100. a copy, \$1 a year.
1113 O St., N. W. Washington.

Cairnsmuir Fox Terriers

MAYOR G. M. CALDWELL'S
NEW CITY, ROCKLAND CO. NEW
YORK ON 7th floor at New St., offers
young puppies, either wire or smooth
haired to be shipped at once at season.
BONES \$13. BIRTHS \$10. This is an
excellent opportunity to obtain the
Cairnsmuir blood at very reasonable
prices. Purchaser should send cheque
with order, stating sex and variety.
Green dogs and collar puppies for sale
at all times.



A Percheron or French
Coach Stallion will pay for
himself at your place. Write
now to

E. S. AKIN, Auburn, N. Y.



Eight Varieties of Apples on One Tree

MY apple trees were about fifteen years old. Two of them were quite useless because they bore no fruit and the third bore quantities of small crab-apples of little value. This latter tree I arranged to serve a double purpose. The lower limbs drooped, forming a canopy which the children used for a play-house, and into the upper branches I grafted scions of good winter varieties, inserting a few each year to avoid giving the tree a shock. I have done away with all the old bearing wood of the original trees.

I have eight varieties on the tree shown in the photograph: Golden Sweet, Fall Pippin, Winter Pippin, Baldwin, King, McIntosh, Wealthy and Hubbardston.

From the three trees I gathered two bar-



The tree which bore useless apples now yields eight good varieties by grafting. A saw and a heavy jack-knife are the necessary tools

rels of fruit last season, where a couple of years before there was none.

Most of my grafts came into bearing the third year and I can see no difference in the growth or bearing between the sweet and sour varieties on the same trees.

I spray my trees three times during the season, once before the leaves appear and twice during the growth of the fruit.

My methods are simple. I take care to choose healthy, stocky growth, rather short than otherwise. For a stump I choose a healthy branch an inch and a half to two inches in diameter, and set one scion at each end of the cleft, so that it sets flush with the outer bark. Then cover the wound and stump-end evenly with wax and occasionally look at it to see that it does not split or scale off, thus admitting moisture.

When the shoots are far enough advanced to make a choice, cut out the weaker one, to allow all the nutriment to go into the most promising scion.

Connecticut F. H. POND

WM. COOK & SONS

Originators of all the Orpington Fowls

Box 33, SCOTCH PLAINS, N. J.

If you want to keep the best fowls you must keep Orpingtons, and if you want the best of these you must select your originators, who naturally have the best. By far the largest winners wherever we exhibit.

Illustrated catalogue, 70 pages, 10 cents, to cover postage. OREGONIAN POULTRY JOURNAL, 5 cts., yearly, 50 cts. Inspection of farms cordially invited. Trains met. Address free.

Are you willing to give four pair of our PURE-BLOOD HOMER SQUAB BREEDERS (trial) if you send us a brooder and we will forward four pair of A match Homers. This trial offer will cover you of the quality of our stock. As it will be impossible to fill orders at the present low prices when the spring season opens, we will ship now, or book for shipment, all orders received before April 1st at the following low prices: 12 pair, \$18; 24 pair, \$30; 36 pair, \$42; 100 pair, \$110; 200 pair, \$200. Those that are looking for a security of stock, or one of our extra good shape or producing qualities, we can assure that we can take care of their orders and give absolute satisfaction, at a price very below the regular.

Our White Wyandottes have again been certified during our show season just closed. Should you perhaps be in need of a good trio, Male, and a few Hens or Pullets, we can serve you. Eggs for hatching packed in strong shipping boxes \$2.00 per setting; 4 settings, \$8.00. Let us know your wants and we shall be pleased to furnish all information desired. SPECIAL—A FEW CHOICE, WELL MARKED SCOTCH COLLIE PUPS FOR SALE. THREE WHITE POLLY YARDS IN NEWARK, N. J. L. H. GREIDER, 22 RHEEMS, PA. Office, 1927 Walnut Street, Milwaukee, Wis.

Greider's Fine Catalog of Prize-Winning Poultry for sale.

This book is printed in several beautiful colors and is larger than ever. Contains a FINE CHRONIC of Lickitee levels. It illustrates and describes to varieties of poultry, ducks, geese, pigeons, etc. Shows best equipped poultry yards and houses—how to build houses; cure for diseases, and all kinds of information indispensable to poultry keepers. Send so much money for your copy. COLUMBIA SCHOOL OF POULTRY CULTURE, 178 Harvard Bldg., Waterville, N. Y.

LEARN POULTRY CULTURE

We can teach you thoroughly, scientifically. Our original personal correspondence course of instruction is interesting, practical, concise and safe. A safe guide to beginners, invaluable to all poultry raisers. We teach you how to make any kind of poultry, large or small, pay a size dividend of from 25 to 50 per cent on the investment. We invite special attention given each student. Write for free booklet telling how to learn. COLUMBIA SCHOOL OF POULTRY CULTURE, 178 Harvard Bldg., Waterville, N. Y.

POULTRY SUPPLIES

We sell everything the poultryman needs. Incubators, Brooders, Feeds, Tools, Poultry. Write today for a free copy of our Poultry Supply Catalogue. You will be surprised how much you can save by buying all your supplies from one place. JOSIAH YOUNG, 23 Grand Street, Troy, N. Y.

SQUABS PAY

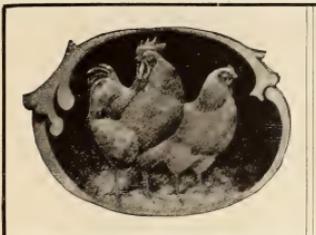
If you have the best HOMER PIGEONS, we can supply a limited number of very choice breeders at right prices. NEWARK SQUAB CO. NEWARK NEW YORK

BEES

If you have not been successful with fruit, flowers, or vegetables, your trouble is probably lack of fertilization. The past severe winters have nearly exterminated many kinds of insects. Bees are the best insects for fertilizing blossoms and are profitable as well. A booklet on managing bees for profit, 10 cents. Catalogue free. Colonies of Italian bees in chaff hives, \$9.50. I. J. STRINGHAM, 105 Park Place, N. Y. Apiaries: Glen Cove, L. I.

Poultry, Kennel and Live Stock Directory

Information about the selection or care of dogs, poultry and live stock will be gladly given. Address INFORMATION DEPARTMENT, THE GARDEN MAGAZINE, 133 E. 16th St., New York



EGGS FOR SALE

As an inducement to secure new customers, I will sell eggs this spring at half price, as follows:

Per setting.		Per setting.	
Buff P. Rocks.....	13 \$1 00	R. C. B. Leghorns.....	13 \$1 00
Barred P. Rocks.....	13 1 00	Black Minorcas.....	13 1 00
White P. Rocks.....	13 1 00	Partridge W's.....	13 1 50
Light Brahmas.....	13 1 00	S. C. B. Orpingtons.....	13 1 50
B. Wyandottes.....	13 1 00	S. C. W. Orpingtons.....	13 2 00
S. Wyandottes.....	13 1 00	R. C. B. Orpingtons.....	13 3 00
W. Wyandottes.....	13 1 00	S. C. W. Orpingtons.....	13 3 00
Buff Leghorns.....	13 1 00	R. C. W. Orpingtons.....	13 3 00
S. C. W. & B. Lfns 13 1 00	R. C. B. Orpingtons.....	13 3 00	S. C. Buff Orpington eggs, \$4. per set, for set, R. C. Buff, Black and White Orpington eggs, \$4. per set, for set, 60.

All other eggs \$6. per set, 40 years among poultry and now have the largest and best equipped poultry establishments in America. Circular free. LEWIS C. BEATTY, Box 174, Washington, N. J.

GEDNEY FARM POULTRY YARDS

S. C. Buff Orpingtons
S. C. Black Minorcas
Cornish Indian Games
White Wyandottes

We breed our prize winners and can sell you the birds that will enable you to do the same. At Madison Square Garden we won first and Club special on S. C. Buff Orpington pen—14 pens competing. Also third pullet—39 pullets in the class. At Albany, N. Y., we made a clean sweep. Our Buff Orpingtons won every regular prize offered, except one third—64 Buys competing. Also eight specials, including silver cup for best display—all varieties competing. On C. I. Games we won two 1st, four 2d and three 3d at the same show. Our Black Minorcas are bred for egg production and shown for exhibition only. Stock and eggs for sale at right prices. Satisfaction guaranteed. Frank W. Gaylor, Mgr., White Plains, N. Y.

Catalogue Free—Exhibition Barred, White and Buff Plymouth Rock Eggs \$1.00 also \$2.00 per 12. Grand Pekin Duck Eggs \$2.00 also \$1.00 per 12. Information by the room. Stock for sale. Plymouth Poultry Farm Co. Route 22, York, Pa.

SHOEMAKER'S BOOK ON POULTRY

Our Almanac for 1906 contains my papers with many fine colored plates of fowls true to life. It tells all about chickens, their care, diseases and remedies. All about turkeys and how to operate them. All about poultry houses and how to build them. It's really an encyclopedia of chickendom. You need it. Price only 14 cents. C. C. SHOEMAKER, Box 457, Freeport, Ill.

RAISE EVERY CHICK

you hatch. CHICK MANNA makes your chicks grow up strong and healthy. Nothing is nearly so good. Plenty of other helpful supplies, and Cyphers' Incubators and Brooders. Read all about them in our Illustrated Poultry Supply Book—mailed free. JOHNSON & STOKES, 217-219 Market St., Philadelphia.

METAL MOTHERS

Complete fire-proof hatching and brooding plant for \$75.00, a qe. oil hatches 50 eggs and raises chicks. Catalogue free. CYCLE BATTERY CO., Box 229 Salten, New York.

TURN Green Bone INTO Greenbacks

by feeding your hens green bone cut with the new **Stearns Bone Cutter**

Cuts hard or soft bones, meat, vegetables—quicker, better, easier than any other. Our 30 days free trial offer will prove interesting booklet free. E. C. Stearns & Co., Box 2, Syracuse, N. Y.

BRED TO LAY BRED TO WIN
The Triumph Strain of White Wyandottes
LINE-BRED the fifth of a century. For heavy BROWN EGG production and SHOW ROOM HONORS this STRAIN is to-day recognized as the leader. Choice cockerets and pullets yet to spare. Finely illustrated catalogue free. Write your wants to HARRY W. BRITTON, Moorestown, N. J.

"The Breed that Lays is the Breed that Pays"

Single Comb White Leghorns

are the greatest layers known. We are the largest breeders in the world of this universally popular variety. A pen of these fowls will make big money for you. A customer in 1904 bought two settings from our special mailing list raised from them six chicks that won at the Great Chicago Show in 1905. Our stock will win prizes for you in the hottest competition. Our mailing list for 1906 gives many pictures of our new birds. We want you to have a copy of this book. Send for it today. 12 1/2 free. WHITE LEGHORN'S POULTRY YARDS, 61, Rockaway, N. Y.

Why--Gentlewoman's Hen ?

So profitable
So tame
Eggs best cake & complexion
write free booklet. Mary Ray, Dedham, Mass.

KEYSTONE INCUBATOR

has "success" stamped all over it. You'll know when you see them. Now it's built and operates. New catalog tells you and show. Free trial offer for it today. THE DIEHL-SCHILLING CO. Box 610, Easton, Pa.

YOUR LUCKY STAR

never brought you greater success than will STAR Incubators and Brooders. They make poultry raising profitable, easy and certain. Sold on a guarantee that makes you safe. Free catalog tells why. Write STAR INCUBATOR CO. 682 Church Street, Bound Brook, N. J.

The Tree Book

BY
JULIA E. ROGERS

"This is the most valuable, accurate and elaborate book ever published in America on our native trees."
—*New York Herald.*



Opening shoots of a beech tree in May

THIS book has many features that no other work on trees approaches. It tells how to know the trees; the uses and value of trees; the care of trees; how to grow trees; the preservation of forests.

The 350 beautiful photographic illustrations, by A. R. DUGMORE, show bud, blossoms, full leaf, fruit and the wood of all the important species.

Sixteen plates in color.

Net, \$4.00.

(Postage, 34 cents.)

It is extraordinary how little known, comparatively, are the blossoms of the beech tree. The Tree Book reveals some interesting facts here—as well as for all the other important American trees.



THE GARDEN MAGAZINE  COUNTRY LIFE IN AMERICA  THE WORLD'S WORK
DOUBLEDAY PAGE & CO NEW YORK

WANT DEPARTMENT

A special low rate is made in this department for the convenience of readers to advertise for a gardener, or for gardeners to offer their services.

GARDENER wishes position, thoroughly experienced in all branches of gardening, capable to take charge of gentleman's country place; nine years in present position, best of references; Scotch, age 35, married, 3 children, disengaged March 1st. Address: A. WATSON, South Kortright, N. Y.

WANTED RELIABLE SALESMEN

to sell our hardy Nursery Stock. We pay liberal salaries and commissions. Write to-day for terms.

KALAMAZOO NURSERIES,
KALAMAZOO, MICH.

Position Wanted as Head Gardener or Superintendent by practical experienced man to take charge of first class country estate. Aged 44, married, no children. Refer by permission to last employer. Address Henry, 572 Park Ave., New York City.

Gardeners' Register

High-class men, with good records, can be obtained at VAUGHAN'S SEED STORE, 14 Barclay Street, New York City. No fee. 84 Randolph Street, Chicago.

All About Dogs

THE tremendous increase of interest in dogs and canine matters was never more truly evinced than this year. "Every dog has his day"—and these are the days for exhibition dogs. All kinds of dogs are treated adequately, for, the first time in America, in **The Dog Book**, by JAMES WATSON. To be in ten parts. I. to VI. now ready. Well illustrated.

(\$1.10 each, subscription)

All About Poultry

YOU can learn all that is known about the raising, breeding, care and sale of every kind of feathered product in **The Poultry Book**. It is the most complete and authoritative book on the subject ever printed in America. Superbly illustrated in color and black-and-white, by HARRISON WEIR.

(\$13.60, sold by subscription)

THE GARDEN MAGAZINE  COUNTRY LIFE IN AMERICA  THE WORLD'S WORK
DOUBLEDAY PAGE & CO NEW YORK

MAULE'S SEEDS LEAD ALL

Illustrated Catalogue free
W. M. HENRY MAULE
3701 Filbert Street, Philadelphia, Pa.

JAPANESE GARDENS

and plants. Extensive nurseries in Japan and America.

Send for Catalogue.
HINOE FLORIST COMPANY, Whitestone, Long Island

ORCHIDS

Largest importers and growers of ORCHIDS in the United States

LAGER & HURRELL
Orchid Growers and Importers SUMMIT, N. J.

COUNTRY LIFE IN AMERICA

The Famous MARCH Double Number A COMPLETE GARDENING MANUAL

This sumptuously illustrated magazine is a practical guide book in itself that will prove of great usefulness to every GARDEN MAGAZINE subscriber. It contains many definite outlines for laying out various types of gardens in different localities and situations, all fully illustrated by photographs and plans. It is brimful of practical suggestions—besides being beautiful and interesting.

PARTIAL CONTENTS

How to Make a Lawn

BY LEONARD BARKON

Relation of the greensward to the country place—preparing the soil—the best kinds of grass, etc.

A New Kind of Wall Garden

BY H. E. FENDELTON

A unique story of a house in Pittsburg which was bought "sight unseen" by a gentleman who liked the looks of the vines on the wall.

A Garden By Hand

BY MARTIA LEONARD

Saving the good features of a deserted home. Transforming a brook into a pond and rock garden. Why early design was a moral failure, and how a tornado suggested a new view.

The Country Home Reminder

Duties and activities made necessary by March weather. Early garden planting. The best time to prune trees. An active month for the poultry man.

Planning Your Own Place

BY I. G. TARDOR

The fundamental principles of gardening reduced to a few simple rules, with the reasons therefor.

Sun Dials in Modern Gardens

BY WALTER A. DYER

A charming garden ornament which is becoming more and more popular. The various styles and how to select.

Wild Gardening by a Wooded Lake

BY WILHELM MILLER

Showing how anyone who can afford a New England farm at \$10 an acre can dam a woodland stream and create a charming wild garden, such as Mr. Griscom, of Havertford, Pa., and others have done.

Flowers from Frost to Frost

BY HENRY MAXWELL

A garden that is famous for its uninterrupted succession of flowers. Some of the best combinations that may be produced in any garden.

Dwarf Fruit Trees for Suburban Gardens

BY F. A. WAUGH

Good fruit in one or two years. Dwarfing the trees and training them in special forms. Ornamental treatment for pears, apples, peaches, plums and cherries, that help, not hinder, bearing.

An Insect That Makes Us "Do or Die"

The San José Scale—the worst insect pest of modern times; new ways of fighting it.



MARCH COVER

YOUR SUBSCRIPTION

sent to us now for a year will include this special 50c. number without extra charge. Not only is every issue of COUNTRY LIFE IN AMERICA of gardening value to you, but will interest you in many ways, as each regular number sweeps the whole field of outdoor activities. Some regular subjects:

Landscape Gardening	Sailing, Fishing, Automobiling	Country Home Making
Cheap Lands for Successful Farming	Horses, Dogs, Cattle, Poultry, etc.	Furnishing and Decorating Inside the Country House
The Planter's Guide	Walter J. Travis on Golf	The Country Home Reminder
Wild Foods	Discoveries and News of Outdoor Interest	Masterpieces of Nature Poetry

The March issue is one of the three special 50-cent numbers (Christmas Annual, Housebuilding Number, Gardening Manual) but all three are included in the regular subscription, \$4.00, without extra cost.

Send \$4.00 at once and we will enter your subscription beginning with the Gardening Manual.

THE GARDEN MAGAZINE  COUNTRY LIFE IN AMERICA  THE WORLD'S WORK
DOUBLEDAY PAGE & CO NEW YORK

From Top to Bottom

THE NATURE LIBRARY

Mrs.
HELEN
R. WELLS,
Akron, Ohio,
says:

"I can hardly say enough in praise of THE NATURE LIBRARY. The whole family, from the grandmother to the youngest child, are delighted with them. My boys hang over them like butterflies and anticipate the greatest pleasure in their use. The elder one, who is sixteen, will soon have studies in which they will be most helpful, and the ten-year-old will get much from them. He says: 'Oh, I feel as if we're just rich to have these books.' While the father, who is quite an enthusiastic on mushrooms, is particularly interested in that book."

¶ You will want to know more about this great work.

¶ We have prepared an elaborate booklet that gives some idea of the beauty and authoritative character of the books. It shows how this library, most valuable for reference, is, above all, readable and interesting. It contains striking specimens of the wonderful three-color photography and some of the full-page black-and-white plates. This book is too costly to be mailed indiscriminately, but the return of the coupon opposite, with your name, will bring one to you promptly, with details of a particularly attractive offer we make for a limited time.

Better Do It Now

Doubleday, Page & Co.

Publishers

Country Life in America . . . The World's Work

133 East 16th Street
New York City

is filled with live interest and all the charms of the outdoors. It forms the only complete American library of the open air. The value and comprehensiveness of the set is well evidenced by the titles of these

Ten Superb Large Volumes

4,000 pages, 10½ x 7½ inches
300 plates in full colors
450 half-tone photographs
1,500 other illustrations, and

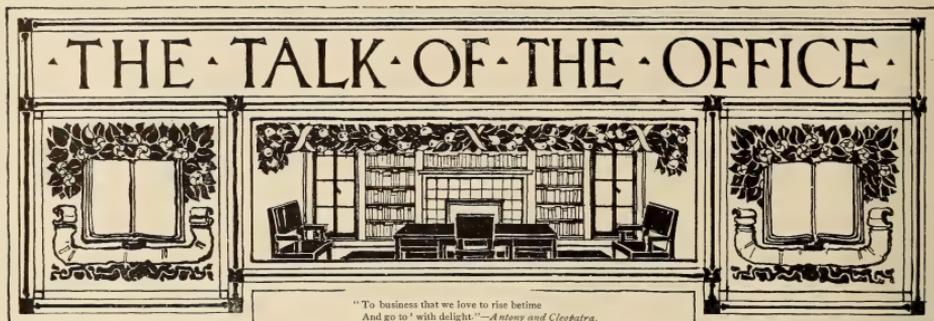
*A General Introduction by
John Burroughs*

Miss LETTA BERNICE BURNS,
Supervisor Nature Study, State Normal
School, Jamaica, N. Y., says:

"I esteem it a pleasure to say a word of appreciation concerning THE NATURE Library. The subject matter is well chosen, the presentation clear and concise; the illustrations excellent and abundant. These books meet a real demand and will be of great service to teachers and students of nature study."

WE SHOULD LIKE TO MAIL YOU
a copy of our *Nature Library* booklet with our compliments. Please
write very plainly, your name in full,
cut along this line
Your mail address (street and number),
and your city and State.

A-370-0A



"To business that we love to rise betime
And go to ' with delight."—*Antony and Cleopatra.*

THE NEW MAGAZINE

Farming appeared during the last week in January. At first it seemed as if, with the printers' strike on hand, we would occupy our work-rooms to their fullest capacity for the first month in the year, but when we found that things were going well we decided to bring out the first number at once. It is by no means a perfect specimen of what we design the magazine to be, but it does show the general line on which we are trying to work, and the cordial reception of it by readers and advertisers alike astishes us quite as much as it encourages us. We realize our obligations and shall try to live up to them. The March number, which is now nearly ready, contains a good many interesting articles. Here are a few of them:

The Possibilities of Swine Breeding, How to Make the Farm Pay, How Cowpeas Made a Profit of \$6,000 in a Year from an Unsalable Farm, Farm Buildings with a Typical Plan, The Jersey Cow, A Novel Chicken Brooder from a Piano Box, Plowing and Harrowing; besides the monthly departments of the magazine on the subjects in which the farmer is most interested, including Dairy Notes, Horses, Cattle and Sheep, Grain Notes, Irrigation, Farm Law, Good Roads, Farm Implements, etc., etc. Always *Farming* will bear in mind the great subject Farmers as Business Men, a topic of unvarying interest, and, if properly treated, of lasting helpfulness.

THE SUBSCRIPTION SEASON

The two months of December and January are the publisher's harvest time so far as subscriptions go, and every one of our magazines shows a most splendid increase for which we now express our gratitude. *The World's Work*, *Country Life in America* and *THE GARDEN MAGAZINE* have received from twenty per cent. to forty per cent. more subscribers than ever before, and last year's increase was a good one, which makes this year's record still more satisfactory.

REPRESENTATIVES WANTED

We need a few good people to represent our magazines and to secure subscriptions for us. We do not want many representa-

tives, and we only wish to have connected with us people on whom we can absolutely rely—people in character as good, or better than the magazines. Those who have acted for us have made good incomes, and we shall be glad to advise with you on the subject if you will send us your name and address with the request for some account of our agency plans. The spring-time, which is now upon us, is particularly favorable for the work on *THE GARDEN MAGAZINE*, *Farming*, and *Country Life in America*.

THE COUNTRY HOUSE

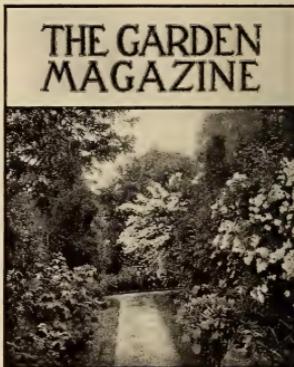
To anyone who is planning to build a house, this volume, by Chas. Edw. Hooper is worth its price many times over. Will be sent to you on approval. Now is a good time to buy:

- "Ferns and How to Grow Them," \$1.10 net.
- "How to Make a Flower Garden," \$1.76 net.
- "How to Make a Vegetable Garden," \$2.20 net.
- "Roses and How to Grow Them," \$1.10 net.
- "The Tree Book," \$4.40 net.
- "The First Book of Farming," \$1.10 net.

THE GARDEN MAGAZINE

For April will be the special double Planting Number, for which we charge twenty-five cents on the news-stands, but it is furnished in the yearly subscription to subscribers. An special feature is the Planting Tables for annuals, vegetables, and perennials that bloom the first year from seed. These are extensions and great improvements upon the very successful tables of last year, carrying the information a point or two further than was then done. A unique article, the first of its kind that has been published in a horticultural magazine, tells you exactly how to use a planting plan; it explains exactly how to transfer the plan from the paper to the garden. A suburban garden which is full of flowers from the first days of spring until frost is described, with planting lists. Following out the scheme of last year, there are three pages of beautiful pictures of suggestive gardens. The whole subject of spring planting is entertainingly discussed and copiously illustrated, including special articles on the

treating of edgings and rock gardens. The first of a series of articles on quality in vegetables appears in this number, and is devoted to potatoes, the ultimate test of table quality being applied.



Beautiful three-color cover for April

THE GARDEN ANNUAL OF COUNTRY LIFE IN AMERICA

This month we issue the Double Number of *Country Life in America* devoted to the garden. It sells for fifty cents on the news-stands, but is included in a yearly subscription for \$4.00.

Here are some of the features:

- How to Make a Lawn.
- A New Kind of Wall Garden.
- A Vagabond Garden Reclaimed.
- A Japanese Garden on a Village Lot.
- Sun-Dials in Modern Gardens.
- A Garden Hidden by Informal Planting.
- Wild Gardening beside a Wooded Lake.
- Flowers from Frost to Frost.
- The Country Home Reminder.
- Planting the Home Grounds.
- An Insect that Makes Us Do or Die.
- Dwarf Fruit Trees for Suburban Gardens.
- Quality Vegetables and Fruits for the Home Garden.

AGENTS who represent THE GARDEN MAGAZINE

receive large special inducements for work done during the early subscription season of 1906. Write for samples and particulars. You will probably wish to represent THE GARDEN MAGAZINE regularly in your locality. It Pays: Good agents find THE GARDEN MAGAZINE the most profitable one to work for. Address:

Circulation Dept., THE GARDEN MAGAZINE, 133 East 16th St., N. Y. City.

NOW IS THE TIME TO BIND VOLUME TWO

of The Garden Magazine

August, 1905 to January, 1906, inclusive

Price, Bound, Complete, ^{Postage, (32 cents extra)} \$1.35
OR WE WILL BIND YOUR OWN COPIES FOR 75c.

It is not too late also to purchase Volume One (February, 1905, to July, inclusive) and thus own the set of beautiful, practical and interesting books, from the beginning: It is the best way to preserve the copies.

We have the attractive permanent cloth bindings for Volume I. and Volume II., gold stamped, for your local binder to stitch on. Price, 50 cents each (Postage 12 cents each volume, if mailed.)

Or, if the six copies of either volume are returned to us by express, prepaid, we will return the volume neatly bound. Our charge for the binder and the work is 75 cents for each volume. Postage 32 cents.

Back numbers 10 cents each, prepaid, excepting October, which is 25 cents, prepaid, and February, 1905, which is out of print.

Any copies of incomplete files which are returned to us prepaid (with no duplicate numbers) will be credited on this bill for bound volumes at 10 cents each.

Indexes for Volume I. and Volume II. sent free on request to those who bind their own volumes.

In returning copies mark your name and address plainly on the package.

Cut out coupon along this line

DOUBLEDAY, PAGE & Co., 133-137 East 16th St., New York

(C. 14-March, '06)

Enclosed find \$_____ (note credit for copies returned), for which please fill my order as follows:

Please credit me 10 cents each for copies for

- One Permanent Cloth Cover for Volume II. \$0.50
- One Volume Two, bound, complete 1.35
- One Volume Two, bound with copies returned to you to-day75
- One Volume One, bound complete 1.35

returned-to-day and apply on \$1.35 order.

Yours truly _____

Address _____

Cross out lines not needed

If you wish us to mail volumes add 32c. each for postage, or 12c. each for mailing the covers.

The Garden Magazine

CONTENTS - - - MARCH, 1906

	PAGE
COVER DESIGN—DAFFODILS <i>Herbert T. Angell</i>	
THE GARDENER'S REMINDER - - -	61
THE ROMANCE OF A LOST ORCHID - - - <i>Leonard Barron</i>	62
Photographs by courtesy of A. Dimmock and H. Graves	
SPRAYING THE HOME GARDEN - - - <i>E. Dwight Sanderson</i>	64
Photographs by the Author and C. M. Weed	
FERTILIZING THE HOME FRUIT GARDEN <i>S. W. Fletcher</i>	68
A TEN-MINUTES-A-DAY GARDEN - - - <i>I. M. Angell</i>	71
Photographs by the Author	
POTATOES IN EIGHT WEEKS - - - <i>Samuel Fraser</i>	75
Photographs by courtesy of the Cornell Expt. Station	
THE CHEAPEST KIND OF HOTBED - - - <i>Nathan R. Graves</i>	76
Photographs by the Author	
THE MAKING OF A WATER GARDEN - 78 <i>Henry S. Conard</i>	78
Photographs by Henry Troth and H. C. Tibbets	
EARLIER AND BETTER ANNUAL FLOWERS - - - <i>Edward J. Canning</i>	82
Photographs by the Author	
HOUSE PLANTS FROM SEEDS - - - <i>Hattie L. Knight</i>	84
DOMESTICATING FRINGED GENTIANAS AND CARDINAL FLOWERS - - - <i>Abbie S. Nickerson</i>	86
GATHERING NASTURTIUM PODS FOR SEEDS OR PICKLING - - - <i>Caroline M. Brown</i>	88
A NEW REMEDY FOR THE CHICKEN NUISANCE - - - - - <i>Wood-Ward</i>	90
THE DISGRACEFUL ANNUAL CLEANING	92
THE WILD LADY'S-SLIPPER TAMED - 94 <i>Florence Beckwith</i>	94
FIFTY-TWO LILY BLOOMS FROM A HOPELESS BULB - - - - - <i>H. H. H.</i>	96
THE INVESTIGATORS' CLUB - - -	98
HOW TO GET PENNY PACKETS OF SEED - - - - - <i>Louise Klein Miller</i>	100
IMPORTANT INDOOR JOBS - - -	104
SEVEN DELIGHTS OF MARCH - - -	104
CALIFORNIA REMINDER - - - <i>Ernest Brauntton</i>	104
ROLLERS MADE FROM DRAIN-PIPE - 106 <i>Frank E. Channon.</i>	106
A DEVICE FOR REACHING OVER THE BORDER - - - - -	110

WILHELM MILLER, Editor

Copyright, 1905, by DOUBLEDAY, PAGE & COMPANY. Entered as second-class matter January 12, 1905, at the post-office at New York, N. Y., under the Act of Congress, March 3, 1879.

Superb English Delphiniums

FOR twenty-five years we have been urging the many advantages of gardening with Hardy Plants, and now that these advantages are pretty generally recognized we wish to call attention to some of the better varieties which are not well known. Everybody knows about the good qualities of Peonies, Phloxes, and Hollyhocks, but there are scores of plants equally as good which are comparatively unknown. Among the best of these are the superb English Delphiniums. Tall, stately and picturesque in habit, they produce immense spikes of flowers of every imaginable shade of blue for a very long season during the summer. The colors are often combined with various shades of bronze, sometimes with white eyes, and the range of colors includes plums, purples, white, and primrose yellow. The flower spikes are sometimes two feet in length, and the variety and combination coloring is lovely beyond description. The plants range from three to seven feet in height and will thrive in any soil except in a very light and sandy one, and even in this it is liberally enriched with well-rotted cow manure. We have the best and the only good collection of English Delphiniums in America. They are grown from the finest collections in England.

Special Offer of Improved English Delphiniums

Fine mixed English,		\$1.50 per dozen,	\$10.00 per 100
English, in separate colors,		2.00	13.00 "
Selected varieties, selected from thousands of seedlings grown from a famous named collection,	-	3.00	" 20.00 "
Extra selected varieties,		.50 each,	5.00
White varieties,		1.00	" "

We have the largest, finest and most comprehensive stock of Hardy Plants in America, including three hundred varieties of the choicest Peonies, one hundred varieties of Japanese and European Tree Peonies, including extra large specimens, and also the largest collection of Japanese Iri in the world and an unsurpassed collection of named Phloxes. Our illustrated catalogue describing these and hundreds of other Hardy Plants, Trees, and Shrubs will be sent on request.

"A Plea for Hardy Plants," by J. Wilkinson Elliott, contains much information about Hardy Gardens, with plans for their arrangement. We have made arrangements with the publishers of this book to furnish it to customers at a very low price. Particulars on request.

ELLIOTT NURSERY CO.

PITTSBURG, PA.

The Garden Magazine

VOL. III.—No. 2
PUBLISHED MONTHLY

MARCH, 1906

(ONE DOLLAR A YEAR
TEN CENTS A COPY)



[NOTE.—For Table of Contents of this month's number see page 39.]

The Truth About "Early Orders"

EVER since I can remember, the seedsmen have been urging the public to order early.

I used to wonder whether they had any selfish motive, and whether the amateur had anything to lose by delay.

Now that I have had a peep behind the scenes, I doubt if the seedsmen get any more orders by pressing this point.

Their sole idea is to avoid killing themselves by overwork in April and May and having nothing to do the rest of the year.

On the other hand, there are four important reasons why it is to the advantage of the purchaser to order in March rather than in April.

1. You have more time to plan a better garden and, therefore, a better chance of discovering the quality varieties.

2. You run no danger of "substitution"—an odious disappointment. No other variety is as good as the one you want.

3. You avoid the spring rush on your own place. The extra help can be hired before everybody else wants it. And you will have time to see that the right things are planted in the right way at the right time.

4. You get your trees and plants as soon as it is safe to ship them. Thousands of plants are ruined every April and May by delays in transit, which cause the roots to dry out or decay.

In spite of these advantages the public is just as late as ever, and the same volume of complaint goes up every year about "substitution," "plants ruined in transit," and "a whole year lost."

I cannot see that the thousands of dollars spent by the seedsmen have made any impression upon the public.

It is only the few who have the best gardens who have sufficient foresight to order in March. The others have commonplace uninteresting gardens—gardens without imagi-

nation, without new vegetables, without fruit enough to last all winter.

WHAT IF PLANTS SHOULD FREEZE?

No decent seedsman or nurseryman will send you anything in March that is likely to be ruined in transit by cold weather.

The best thing is to tell your nurseryman when to deliver the plants, but if you don't know what the dangers may be, say so, and put your dealer on his honor.

The leading firms always take care not to ship tender things before it is safe, whether you caution them or not.

Many people now order roses in January for April delivery. It pays.

Order your seeds, trees, plants, tools, fertilizers and spraying outfit, in March rather than April, if you want to avoid the spring rush and get better goods for the same money.

OUTDOOR WORK FOR PLEASANT DAYS

Rake, fertilize and roll the lawn. Dig out perennial weeds (plantains, docks, dandelions) and sow grass-seed in the bare spots. Sprinkle bonemeal on the lawn. Have you any sodding to do?

Walks and drives need new gravel and to be thoroughly rolled. You will be too busy to attend to grading and draining in April.

Remove from the garden bricks, stones, and other rubbish that will not decay.

Have you any shrubs out of place? Move them to positions where they will look better.

Is your shrubbery too crowded? Remove enough to let the others have full room to develop. Cut back and tie up vines on porch and trellis.

Uncover bulb beds and the hardy border March 15th, or earlier. Leave the mulching material handy, so that you can replace it at nightfall if a freeze threatens. Uncover early and do all you can to harden the young growths.

Rearrange hardy border and rock garden for better mass and color effects, and plan to fill the gaps left by winter.

Unless you live by the seashore sprinkle salt on your asparagus bed. Scatter half a pound over a square yard.

Manure beds of asparagus, rhubarb and sea-kale. In default of manure use nitrate of soda. Apply one ounce to the square yard and rake it in. Repeat three weeks later. Or, use one ounce of nitrate to three gallons of water and apply in liquid form.

Graft old trees of worthless varieties of fruit with scions of good varieties and they will bear well in three years.

Cut off strawberry runners, if you failed to do so last season. Manure the bed.

Preserve wood ashes for April use in the garden. The pile must be kept dry.

THE EDITOR



"Daffodils
That come before the Swallow dares, and take
The winds of March with beauty"

The Romance of a Lost Orchid—By Leonard Barron New York

THE STORY OF A MUCH-PRIZED LADY'S-SLIPPER, LOST FOR HALF A CENTURY, ALTHOUGH THE PARENT OF MANY CHOICE HYBRIDS NOW IN CULTIVATION—ITS REDISCOVERY ON COLONEL YOUNGHUSBAND'S INVASION OF MYSTERIOUS TIBET—WORTH \$500 ONE MONTH, \$25 THE NEXT

NOTHING within recent years has created so much excitement among plant connoisseurs as the rediscovery in the mountains of Tibet of the long-lost lady's-slipper



Like digging gold! Opening the boxes containing the first two hundred plants of Fairie's *Cypripedium*

orchid, Fairie's cypriped (*Cypripedium Fairieanum*).

Orchid lovers have been watching for years for the rediscovery of this plant, the actual source of which was unknown. They wanted it, not merely because it had been utterly lost to cultivation, but because it was the parent of many of the most beautiful hybrids we have. It had remarkable prepotency, imparting to its descendants its beautiful purple venation.

Fifty years ago a Wardian case full of orchids was offered for sale in the celebrated Stevens's plant auction rooms in London. They were sold, and not considered of very much account at the time, and pieces of the plants were fairly generally distributed among the orchid collections of the world. This was the original importation of *Cypripedium Fairieanum*, and from that time to this no other plant has ever been seen. All these original plants died. Undoubtedly, like many others introduced in the early days of orchid cultivation, they were cooked to death. Now we grow orchids cooler.

A few plants lingered on in collections around New York, and some interesting hybrids have been raised from them, which were all that remained to remind orchid lovers of the existence of this species.

So great had been the desire to rediscover the plant that one large firm of English orchid dealers had a standing offer of \$5,000

in the Indian papers for a consignment of the plants. There was a belief that this lost plant was native to Assam, but all that was positively known about the source of the original importation of a half century ago was that the case in which they arrived had come from Calcutta. It often happens that the exact source of a new orchid is kept secret (and, indeed, there have been instances of deliberate misrepresentation). This is one of the unfortunate exigencies of trade. The importer wants to make as much money as possible from a new find.



Among the hybrids of American origin, *Cypripedium Edwardi* is one of the most remarkable. The downward droop of the petals is a characteristic of the *Fairieanum* hybrid. Color white shaded green, purple veinings

That Fairie's orchid has eventually been rediscovered and reintroduced is the direct result of the British Government's mission to Tibet. A Government officer engaged on the mission discovered certain plants in the mountains of Tibet, and shipped a few to a friend in Calcutta, under the suspicion that they were something new and valuable. Other plants were sent to Kew, England, and were immediately identified as being the long-lost lady's-slipper.

Naturally, the news of the rediscovery spread quickly. Here was an opportunity Cable dispatches were hurried off. Collec-

ors were sent into the region of the orchid, and within a very short time after the identity of the orchid had been announced, a well-known firm of orchid importers in England had a special consignment on the seas, en route for London. Plants of the original rediscovery were coming along slowly from Calcutta. It was a race, and the second dispatch arrived first! They were rushed to the auction rooms, and so keen was the excitement in the orchid world that plants of two or three growths sold at prices ranging from \$300 to \$500. The secret of another shipment being on the seas had been well kept, but it arrived in due time and to-day the lady's-slipper, lost for half a century, can be purchased in good specimens for \$25. Already American collectors are in possession of the rarity, and it has even flowered in the collection of Mr. Brown at St. Louis, Missouri.

Cypripedium Fairieanum transmits its high coloring and its peculiar droop of the petals to all its hybrids.

The flower of Fairie's orchid, which is borne on a stalk about six inches long, has a remarkably attractive combination of bright colors. The upper standard is white, yellowish green at the base and is veined with rich purple. The same colors appear in the petals, and the slipper or pouch is reddish green, veined with purple.



At first, plants like this sold for \$300 and \$500 each on arrival. Within a month a second arrival reduced the value to \$25

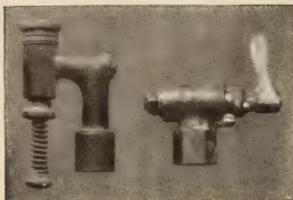


After an interval of fifty years, a member of the Government mission to Tibet re-introduced the long-lost *Cypripedium Fairbianum*. This photograph, showing the first flowers of the rediscovery, was made at Kow, England. A plant has since flowered at St. Louis, Mo.

Spraying the Home Garden—By E. Dwight Sanderson New Hampshire

PRACTICAL WAYS OF SAVING THE HOME FRUITS FROM INSECTS AND DISEASES
—THE RECIPES, METHODS AND APPLIANCES THAT ARE ADAPTED SOLELY FOR THE
AMATEUR, NOT THE COSTLY METHODS USED BY PROFESSIONALS ON A LARGE SCALE

[EDITORIAL NOTE.—The great trouble with the mass of bulletins and articles on spraying is that they are of no use to the amateur who has half a dozen trees and a vegetable garden. They are written for the professional fruit grower, who uses apparatus that costs too much for the home garden. Moreover the recipes for use on a large scale are quite different from the ones that should be used at home. In this article Professor Sanderson, who is the entomologist at the New Hampshire experiment station, and has had a wide experience in various parts of the country, has boldly turned his back upon the commercial methods which only serve to confuse and discourage the amateur, and tells just what kind of tools to get, the best recipes, the main enemies to look for, and how to spray, powder or otherwise destroy them.]



Bordeaux and Vermorel nozzles, the ones recommended by Professor Sanderson for home use

“FOUR years ago when we bought this place we set out several fruit trees, which have been well cared for and have made a good growth, having some fruit this year, but late in the summer they showed signs of disease. We are unable to determine the trouble. Will you not come and examine them, or send a man to do so, when in this section?”

This is the message an experiment station often receives from amateurs who have a few trees. We examine the trees and find them covered with the San José scale—the most dreaded of orchard pests. “What can we do for it?” is not easy of answer, for the home gardener with a few trees can ill afford the expensive apparatus used by the commercial orchardist.

Well protected, the San José scale insect safely passes the winter under its scale-like armor. To slay it we must apply a substance that will eat through the scale and



A handy spraying rig for the home garden. An outfit like this will last for many years and guarantee good fruits and vegetables

destroy the insect beneath. The insecticide must be applied so thoroughly that every particle of the tree is covered, else the few scales missed may by the next August be the great-great-grandmothers of thousands of lusty progeny which will require further treatment.

The first thing to do is to cut back the tips of the limbs or “head in” rather severely, for many of the scales are just under the leaf buds where it is hard to reach them. We have seen peach trees excessively scaly cut back to mere stumps, from which grew out healthy trees in a few seasons.

REMEDIES FOR THE SCALE

If you have but two or three trees, probably whale-oil or fish-oil soap can be most easily secured and applied. Dissolve two pounds in a gallon of hot water and apply hot.

Kerosene and crude petroleum have been extensively used, both in emulsions with soap and in mechanical mixtures with water, with varying success, but altogether they can hardly be indorsed for general use. Recently preparations of crude oil which have been treated chemically so that they mix with water without emulsifying have been placed on the market. They promise to be among the best of remedies for the scale and are much the easiest to prepare, but they have hardly been tested sufficiently to be recommended unreservedly.

Most popular and generally efficient of all the winter washes now used in the East is the lime-sulphur mixture. This wash is deservedly popular, for not only does it kill the scale but it has great value in destroying many of the fungous diseases of fruit trees, as well as several other insect pests which pass the winter upon them. Thus it has proved an efficient remedy for the pear blister mite which makes the black spots on pear leaves, making them drop prematurely and thus stunting the growth of the tree. Also it checks the ravages of the precocious bud worm and case-bearers upon the buds and opening foliage of the apple. As a fungicide it will control the peach leaf curl, so that for scale on peach trees it is preferred over all other washes. Upon the apple lime-sulphur has been shown to equal the first application of Bordeaux mixture, or copper sulphate applied before the foliage opens for the scab and some other diseases.

Spraying against the scale seems to be more effective when done in late fall, or early spring just as life is starting in the tree, rather than in dead of winter when the insects seem to be more resistant. It is best to spray on a still day, but if wind is unavoidable



Atomizer and hand-bellows, the cheapest appliance for dusting bushes. No good for trees

spray with the wind and on a later day when it has changed, from the opposite direction. A tree should be sprayed from four sides, for every bit of bark must be covered, and spraying from two or sometimes even three sides will leave places untouched. The same treatment will apply to currants and other bush fruits or shrubs affected with the San José scale.

OTHER SCALE INSECTS

But there are other scales that affect the apple and pear, such as the oyster-shell scale and the scurfy scale, and on raspberry canes frequently the rose scale, which cannot be successfully combated in winter. For they differ from the San José scale in that they



The compressed-air sprayer designed for the amateur who doesn't like hard work. It saves a lot of pumping. Trees of this size can be sprayed by using an extension rod

mother insect dies in late fall and leaves only the eggs to pass the winter beneath the covering scale. Insect eggs are not easily killed by most washes which will not injure a tree. Hence we must wait until the young hatch in May or June, the exact time depending upon the latitude of the locality. Watch the trees carefully, examining with a hand lens if possible, and as soon as the small, mite-like, yellowish young are found crawling abundantly spray the trees thoroughly with kerosene emulsion or whale-oil soap. These applications will also be effective against any plant lice or aphids, such as the bright-green aphid which curls up the young foliage of the apple or its blackish cousin which forms a disgusting mass upon the young peach shoots. Whale-oil soap may be used on trees in foliage at rate of one pound in five or six gallons of water.

RECIPE FOR KEROSENE EMULSION

Dissolve a half pound of hard soap in a gallon of hot water and then, away from fire, add two gallons of kerosene. Churn the mixture briskly for five minutes or more until the whole mass has a uniform creamy consistency. This may be readily done with a bucket pump by taking the nozzle from the hose and pumping the stream back into the mixture. Then dilute with fifteen to twenty gallons of water. The cottony maple scale, which often becomes a serious pest on city shade trees, is protected by the cottony mass from these sprays, but may be readily controlled by a stiff stream of cold water from a garden hose, which will wash it from the tree.

ANYONE MAY SAVE HIS APPLES

"We have an old Baldwin apple tree in our yard," says a friend, "but the apples all drop off and are full of worms, so that we get but a few for pies and the chickens get the rest." How common an experience,

"And did you ever spray them?" I ask. Of course he had not, but, as usual, I learn that it wouldn't pay to bother spraying them. As a matter of fact, that old tree might have furnished a half dozen barrels of good apples, sufficient for the winter in many families, and saved buying at three dollars a barrel. What would it cost? Possibly twenty-five cents each where but one or two trees are sprayed, but where many are treated not over fifteen cents for the three sprayings usually necessary.

The first spraying should be made with copper sulphate or bluestone solution, used at the rate of one pound to twenty-five gallons of water before the buds have begun to expand in early spring. This is wholly for diseases such as rust, scab and rot, which exist over winter as small dormant spores on the tree and start to grow with the foliage if not checked by the fatal copper compound. Pure copper sulphate cannot be applied after the leaves appear.

The next spraying is usually made just as the petals fall. This time use Bordeaux mixture for the diseases and with it mix arsenate of lead or Paris green for the insect pests, particularly the codling moth or common apple worm.

Similar application should be made a week



Churning kerosene emulsion with a bucket pump

or ten days later, before the blossom end or calyx of the young apple has completely closed and the apple has begun to turn over.

It is of the utmost importance that the spraying be done at exactly the right time,



Bordeaux mixture. Pour the dilute lime and dilute copper sulphate together into a third vessel

and the reason for spraying at this exact season is interesting. The codling moth lays her eggs on the apple and leaves some little time after the blossoms drop. When the young caterpillar hatches in June, it crawls over the apple and enters at the most inviting point, which is the calyx or blossom end. The great majority enter there. In spraying just after the blossoms drop and again before the calyx is closed the calyx cavity is given a good coating of poison, so that usually the first meal of young codling moth is his last. If spraying be delayed the calyx closes, it is impossible to spray inside it, and the poison on the surface of the apple is not efficient.

It is also essential that the spraying be done from above the tree or so that the spray will fall into the cavity. For small trees this can be done by means of an extension rod of light gas pipe threaded to fit the nozzle and hose, or by tying a light hose to a long pole. With a knapsack or compressed-air sprayer effective work may be done on a few small trees with a step-ladder. Where a number of large trees are to be sprayed a platform made to set in an ordinary one-horse express wagon will be found a time-saver, and with it a barrel pump will be better, though a bucket pump mounted on a half barrel may be used. Such a platform can be made out of rough boards and bolted on to the wagon in a few hours, at slight cost, and is easily removed. A rig like this is satisfactory for any orchard up to several hundred trees. With it an "extension rod," made of bamboo or gas pipe, as sold by the spray pump dealers, should be used.

Where disease has been specially prevalent, or where bud worms or other insects attacking the buds and young fruit have been particularly troublesome, another spraying, similar to the second, applied just before the blossoms open will be profitable. Never spray a tree in blossom. It will kill your best friends, the bees, without whose aid you need not expect a good crop.

RECIPE FOR BORDEAUX MIXTURE

To make Bordeaux mixture for a few trees, dissolve one pound of copper sulphate (bluestone or blue vitriol) in a gallon of hot water, by hanging in a bag. In another gallon of water slake one pound of fresh stone lime. Now add three pints of the copper solution to a bucket of water and four and a half pints of the lime wash to another bucket of water. Pour the buckets of dilute copper sulphate and dilute lime together into a third vessel—a large kettle, butter or lard tub will do—stirring thoroughly, and add enough water, if necessary, to make five gallons. The remainder of the gallon of lime and bluestone can be similarly diluted and mixed when needed for later sprayings.

For larger amounts proceed in the same way, using four pounds or gallons of the copper sulphate solution and six pounds or gallons of the lime to a barrel of water, diluting each first in a half barrel and then pouring together. Bordeaux mixture may be bought ready made. Some brands are good, many are poor. Secure the advice of someone familiar with them before buying.



Never spray a tree in bloom. You will kill the bees and get less fruit

With the Bordeaux mixture an arsenical poison must be used to kill the codling moth and other insects. Arsenate of lead has been found much the best, as it is remarkably adhesive, so that it remains on the apple through the summer after the hardest rains and is much more effective, both for the second brood of the codling moth and leaf-eating insects. It should be used at the rate of one pound to a barrel of the Bordeaux, or say two ounces to five gallons. In New England, where it is often advisable to make the same spraying do for the gypsy and brown-tail moths, ten pounds to the barrel must be used, or a pound to five gallons. Paris green or several of the substitutes for it which are somewhat cheaper and in many ways better, and which are sold under trade names, should be used at the rate of four ounces to the barrel of Bordeaux. It should be made into a paste with water before putting in the mixture or it will not mix well. There is absolutely no danger to health from eating apples poisoned in May or June.

PROFIT \$1 TO \$5 A TREE

Will it pay? Try it and see. Our experience shows that instead of three-fourths of the fruit dropping and half of the rest being wormy we keep three-fourths on the tree and but 5 per cent. are wormy. In the most carefully conducted tests we have shown that with apples at \$3 a barrel there has been a difference in value of fruit on twenty-year old trees of \$7 on unsprayed trees against \$20 on sprayed trees. Proper spraying will show a net profit of from \$1 to \$5 a tree in value of picked fruit on full bearing trees, if the average of the years be taken.

SPRAYING PEARS

The sprayings outlined above for the codling moth will also control most of the leaf-eating caterpillars attacking the apple, such as the tent caterpillar, canker-worms, etc., and the sprayings before blossoming will have considerable influence in controlling the curculio whose crescent-shaped scars blemish the fruit. Pear trees should be sprayed in the same manner and at the same season as apples, for the same pests attack them.

Somewhat later the foliage of the pear and

cherry often looks as if scorched by fire as the result of the work of the pear slugs, small larvæ of sawflies, which eat off the surface of the leaves, thus turning them brown. They will succumb readily to an arsenical spray, or may be killed by a thorough dusting with hellebore or even air-slaked lime, for they are easily killed by clogging the breathing pores. For dusting trees or vegetables the portable powder guns now sold are by far the most desirable apparatus. They may also be used for dusting a few apple trees with dry Bordeaux mixture and Paris green, as is now advocated by many in Missouri and elsewhere.

SPRAYING PEACHES AND PLUMS

Peach and plum trees should be sprayed thoroughly with Bordeaux mixture before the buds open for the leaf curl, rot, and other diseases affecting them. Where there has been considerable rot the previous season, all the dried-up fruit, or "mummies" hang-



Just before the buds open you want to spray your home fruit trees

ing on the tree should be picked off and destroyed in the winter. Then spray with dilute Bordeaux as soon as the fruit is set and every two weeks through the season, as experience proves necessary, as these diseases are much worse in some localities and in wet seasons. Dilute Bordeaux is made exactly as previously described, except that just one half as much copper sulphate and lime are used to the same amount of water. Bordeaux should always be used in the dilute form on peach and plum in foliage, and care must be taken to have it well mixed and properly made.

BUSH FRUITS AND GRAPES

The diseases of bush fruits may also be controlled with Bordeaux. Spray the raspberries when the new canes are six to twelve inches high and currants and gooseberries as soon as they are in foliage, adding Paris green for the caterpillars attacking the latter, the same as on apple. Further applications of Paris green or other arsenical poison will

be necessary through the season, which may better be made with Bordeaux added. The cost of spraying is in the labor, not for the materials, and while doing it one may as well seek to prevent all the maladies possible.

The black rot and mildews of the grape are also controlled by thorough spraying with Bordeaux mixture, commencing before blossoming and continuing every ten days or two weeks after fruit has set until it is nearly ripe. Add an arsenical poison for the insects. For spraying a few bush fruits or grapevines a knapsack or compressed-air sprayer is the most convenient, and either of them are also best for tomatoes and other close-growing vegetables.

APPARATUS FOR HOME USE

The question of apparatus is a serious one to the man with a small garden. Expensive apparatus is impossible; the cheap kind is equally expensive for it fails to do the work and is soon broken.

Simplest of all are the hand atomizer and powder bellows. These have their places for spraying and dusting flowers and small bushes, but it is poor economy to attempt to spray a tree with either as we have often seen tried. A good atomizer with tank of copper or glass can now be bought for fifty or seventy-five cents, and every gardener should have one, for small jobs are constantly arising for which they are just the thing.

Where more force is required to produce a larger volume of spray, and where the pump does not need to be carried far, a good bucket is most useful and is the cheapest of those really reliable. A good bucket pump should have an air cylinder so as to keep up pressure, a foot extending over the bucket with which to steady it while pumping, and four feet of light hose. Such a pump costs from \$3 to \$5, according to the make and accessories.

Where it is necessary to carry the pump around much, as for bush fruits, most vegetables and small trees, a knapsack carried on the back or compressed air sprayer



Just as soon as the petals fall you want to spray your fruit trees again

slung under one arm is the best. Of these the home gardener will probably prefer the latter. The compressed air sprayer is deservedly popular. It is lighter than the knapsack, holding about three or four gallons, and with it both hands are free to direct the stream, for, after pumping up the air pressure, a spray may be thrown for several minutes. It is also considerably cheaper than the knapsack. The main objection is that there is no means of agitation of the liquid except by shaking the whole tank. This is important, for Paris green being much heavier than water settles rapidly, and unless stirred constantly the poison will be unevenly applied and consequently more or less ineffective. A knapsack sprayer should have a good pump; those working with rubber bulbs or by gravity are of no value.

Galvanized-iron tanks should not be purchased for either of these types for using Bordeaux mixture, as the copper will quickly eat through them.

The small air sprayers holding only two quarts or a gallon are usually but toys and hardly as good as a first-class atomizer.

A GUIDE IN BUYING

A good rule in the purchase of both pumps and insecticides is to see that the name of a well-known and reliable manufacturer, in addition to that of the dealer if that occurs, appears on the pump or package. A product which the manufacturer does not place his name upon is of doubtful value. The main requisite of either of these pumps is that they have sufficient force to throw a fine mist from a standard nozzle for three or four feet, with a steady spray. A spray which will carry ten feet or so by its own force is too coarse for good work.

Where there are many bearing orchard trees a barrel pump may be found economical in the end. One costs from \$10 to \$25, with hose and nozzles. A good barrel pump should have as little of the working parts above the head of the barrel as possible, to avoid breakage; should have the cylinder, plunger, valves, etc., of brass (no leather or iron); should have the valve seats readily removable; a good agitator or paddle attached to the handle so that it moves with each

stroke; an air chamber inside the barrel, so that a constant high pressure may be maintained; and the parts outside the barrel, such as the handle, should be of malleable or galvanized iron, for castings will break.

THE TWO BEST NOZZLES

With a pump that will give sufficient pressure the main thing is the nozzle, for the nozzle produces the spray and it is the fineness of the spray that determines its efficiency. Probably more amateurs fail in spraying through using cheap nozzles than through any other cause. For general use



Plenty good enough for a few bushes in the home yard—a mere whisk broom. No excuse for not spraying. Everybody spray!

there are but two types which can be recommended, the Vermorel and Bordeaux. The former produces the finer spray in a cone-shaped form, is the favorite for fruit-tree spraying, and with some for all purposes. The Bordeaux nozzle makes a flat, fan-shaped spray and is preferred by many for vegetables, potatoes, and even for tree foliage where it is desired to cover a large surface quickly, as in fighting caterpillars, which must be checked at once. Either will do good work. The Bordeaux should be regulated to produce the finest mist possible, and has the advantage that it is quickly and easily cleaned of any



If you have twenty trees in your suburban or country home orchard, it will pay to use a platform on a one-horse wagon.

clogging, while the Vermorel, though furnished with a pin for cleaning, is sometimes annoying in this respect. The Bordeaux is preferred for lime-sulphur washes on this account.

Nozzles which make a spray by hitting on wire netting, of the rose-nozzle type, or which give a fan-shaped spray from a solid stream playing on a flat lip are to be avoided; they are usually sold with cheap apparatus by hardware dealers unfamiliar with the use to which they are to be put. The finer the spray a nozzle will make the better, and the less material used. The foliage is to be covered with the thinnest possible film of the spray, and as soon as it drips spraying should stop at once; drenching should be avoided.

With these points in mind, suitable apparatus may be purchased from any reliable seeds man or agricultural warehouse or direct from the manufacturers, according to the size of the orchard and garden.

A PROMISING BUSINESS OPPORTUNITY

In many cases, however, where it is possible to hire the work done by someone making a business of spraying, that will be more satisfactory and cheaper. Unfortunately, this is impossible in most communities at present. Here is a good opening for an energetic young man in every suburban community to secure considerable profitable work, if the business be rightly managed, for the demand for such work is not being met in many a locality.

But in case no one can be secured to do the work buy an outfit and see that the spraying is done, for fruit cannot be grown in this age without spraying. Five or ten dollars should buy the necessary apparatus and materials for the average home garden, and if cared for—washing thoroughly after use and keeping well oiled—a pump should last several years. The benefit derived in a single season will usually more than repay the cost. There is some pleasure in gardening besides that of the product secured, is there not? But if the fruits are few, small and diseased, and the trees sickly, one is soon disgusted and is inclined to blame Dame Nature for such conditions when he alone is responsible through his lack of care. We grow fruits and vegetables under artificial conditions and expect an abnormal product.



Tall fruit trees can be sprayed from a step-ladder. The compressed-air sprayer again.

Fertilizing the Home Fruit Garden—By S. W. Fletcher

Michigan
Agricultural College

ECONOMICAL WAYS OF ENRICHING THE LAND—WHEN TO FEED AND WHAT TO GIVE—WHY YOUR ORCHARD IS UNFRUITFUL, AND CLEAR-CUT GUIDES TO THE PROPER USE OF BARNYARD MANURE, CHEMICAL FERTILIZERS AND COVER CROPS

Photographs by the Author

WE should disillusionize ourselves of the popular notion that fruit trees are less exhaustive to the soil than other crops, as the grains, grasses, and vegetables. For many years the trees occupy the same site, making a unremitting drain upon the soil of the same kinds of plant food and in about the same proportions.

Fertilizers are expensive. The first consideration of the fruit gardener should be to utilize home sources of fertility as much as possible. The soil itself is the nearest and largest source of fertility. It is a common saying among farmers' institute speakers that good tillage may be equivalent to fertilizing. Many soils that are considered poor and produce indifferent crops are found to be really quite rich when subjected to analysis; the trouble is, much of the plant food in them

terms stand for an old idea and an ancient practice—the enrichment of a soil by growing plants in it and returning them to it. This is Nature's method of keeping up the fertility of the soil.

The home fruit garden, however small, profits by this practice as much as the field or the commercial orchard.

Usually it is wise to cease the tillage of fruit trees from the last of July to the middle of August, depending upon the season, the soil, and the crops, so that wood and buds may mature before winter. Thus the ground is idle for eight or nine months during the year. This opportunity is eagerly seized upon by a host of ambitious weeds, which have been quietly lying in wait for this time. Weeds enrich the soil when plowed under just like other plants, but only a shiftless man grows weeds to turn under.

During this idle period, which lasts in the latitude of New York from about the first of August until the first of April, the soil is losing fertility and losing it rapidly, up to the time when the ground freezes. Plant food—especially nitrogen—is being leached out and washed away, or carried down into the soil beyond the roots of ordinary plants. Winter brings sudden thaws and freezes that heave the ground and expose it to erosion. If the land is sloping, this loss may far exceed the value of all the fertilizer that has been applied to the orchard. If, after tillage has ceased, a crop is sown that will occupy the ground from late summer to early spring, these several advantages are gained, wholly aside from the fertilizing value of the crop when plowed under:

The weeds are kept from getting a foothold, so that the land is cleaner the next year.

The leaching plant food is saved, being used by the cover crop in its growth, and turned back into the soil the following spring.

The ground is protected from heaving. The soil is held by the roots and by the tops of the cover crop so that it does not wash as badly.

A cover crop blankets the tree roots, and may save them from winter injury.

These benefits alone are sufficient to justify the use of a cover crop in the home orchard in many cases, even without its additional value as fertilizing material.

HOW TO GROW FERTILITY

is "locked up," "unavailable," "unpalatable." Every time a tillage tool is run through the soil it helps to make available this unavailable plant food. Tillage lets in the air, the sunshine, and promotes the activity of many other agencies that change this unpalatable food into palatable form, so that plants can feed upon it. The man who keeps his orchard permanently in sod must expect to be obliged to fertilize it more often and more liberally than if it were stirred with cultivator teeth. It must not be understood, however, that even the best of tillage will entirely replace fertilizing, but the amount of fertilizer that it is necessary to apply to the fruit garden for best results may be quite materially reduced by excellent tillage. The comparative advantages of tillage and sod for fruit trees were pointed out in THE GARDEN MAGAZINE for June.

We hear much in these days about "cover crops," and "green manures." These new

velvet bean, alfalfa. The especial value of leguminous plants for green manuring lies in their ability, peculiar to leguminous plants alone, to gather nitrogen from the air. Hence when a leguminous crop is plowed under, it enriches the soil not only with the plant food that it has drawn from the soil, but also with the nitrogen that it has drawn from the air. Nitrogen is the most expensive of plant foods; it costs three times as much as potash or phosphoric acid when bought in fertilizer bags. Therefore, if nitrogen is needed, this is by all odds the cheapest and simplest way of getting it.

If the orchard soil does not need nitrogen but does need more humus to hold moisture and improve its texture, and needs a crop to catch washing fertility and to prevent washing, then a non-leguminous crop should be used. Rye, oats, rape, buckwheat, barley, and wheat are commonly used for this purpose. When the orchard soil is so hard and lumpy that a good stand of clover cannot be secured, rye or oats may be used to advantage for a few years, or until the soil has been brought into better heart.

GREEN MANURE MUST NOT GET WOODY

It is a common mistake to let the green manuring crop get large before plowing it under. The cover crop need be but a few inches high in order to accomplish all the good results during late fall, winter, and early spring that we expect from it. The green manuring crop, in the orchard at least, always should be plowed under as soon as the soil is dry enough to work up mellow. Furthermore, herbage decays in the soil much quicker when it is young and succulent. In early spring the soil is more moist than it is in late spring, and herbage decays in it more quickly. For green manuring in the orchard, a few inches of herbage is better



Buying fertility in sacks. Be sure you know what your soil needs and what the fertilizer contains. Look at the analysis tag on the bag, and make a fertilizer test on your soil



These peach trees need a stimulant. An unthrifty sod orchard is usually benefited most by a top-dressing of manure. The nitrogen in it stimulates the growth and the humus mulches the soil



The right way to manure trees. The feeding roots are at some distance from the trunk

from a few feet. Even though the crop comes out of the winter as a mere mat over the surface, it has served its purpose and may be plowed under with profit.

Green manuring is fundamental to the most economical fertilizing of most orchards, whether home or commercial. But not every orchard would be benefited by green manuring; not every orchard that needs green manuring should have it every year. The guide in every case is the need of the soil as expressed in the growth of the trees.

BARNYARD MANURE IN THE ORCHARD

The home orchardist may reduce his fertilizer bill by a judicious use of animal manures in addition to tillage and the use of green manures. Farm manures are richer in nitrogen than in the other essential plant foods that may be needed—potash and phosphoric acid. Usually nitrogen can be supplied to fruit trees cheaper by excellent tillage and by green manuring than by the use of farm manures. I feel perfectly safe in saying that, as a general rule, farm manures can be used to much better advantage in garden, field, and meadow than in the orchard. This is because they tend to promote a very vigorous growth, which is usually very desirable for vegetables, grains and grasses, but generally very undesirable for fruit trees. One frequently sees trees that have become "intoxicated with nitrogen," as I have heard it put. The owners, with well meant zeal, have lavishly manured them from year to year, thinking, no doubt, that the more food the trees have, the more fruitful they should be. But many of these petted and overfed trees are ungrateful; they grow a large crop of wood—not fruit.

MANURING FRUIT TREES IN SOD

Farm manures, then, should be used with caution in the orchard, because they are rich in nitrogen. Nitrogen is a plant stimulant as well as a plant food. Only listless trees, those that are making an unsatisfactory growth, or young trees that need bracing up, need a stimulant. Young trees, especially if tilled, usually make enough growth without

a nitrogen fertilizer. It is the business of young trees to grow; they have nothing else to absorb their energies. Hence it is well to manure young trees sparingly, if at all. When trees come into bearing, however, their vitality is subjected to a severe drain, and their growth checked. I have seen the annual growth of an apple tree reduced from twenty inches to six inches by one heavy crop of fruit. In later years, as the strain on the trees increases, they may show, by feeble growth, that a nitrogen stimulant is needed. Then is the opportunity to use farm manure.

Barnyard manure is commonly considered, and rightly so, an excellent fertilizer for sod orchards. Sod trees usually need just such a bracer as the nitrogen in manure supplies, and the soil also needs the humus of the manure to partially offset the drying out effect of the sod. But top dressing an orchard with manure usually introduces weeds, and it is a question if better results cannot be secured and the weeds avoided by pasturing with swine or sheep. The latter especially



The wrong way to manure trees. This method of application is a very common mistake among amateurs

may be depended upon to distribute their droppings fairly uniformly, but particularly on the knolls, and also to keep down both grass and weeds. Pasturing the orchard was discussed in *THE GARDEN MAGAZINE* for July. Manuring alone usually works wonders in a sod orchard, especially if it has been neglected; but it is well to remember that the trees need the mineral plant foods also, and if the fruit is ill-colored and keeps poorly, manuring may be supplemented to advantage with bone, superphosphates, muriate of potash or other mineral fertilizers.

The best time to apply manures to fruit trees, and the amount to use, depends upon many things. The very best way, if it can be made expedient, is to spread the manure in the orchard as soon as it is made, both in summer and in winter. On steep land some of the virtue of manure spread in winter will be washed away before spring, but usually not nearly as much as would have

been lost by ordinary methods of storing manure. The amount that it is best to apply depends upon the character of the soil, the needs of the fruit, and many other factors; from ten to twenty tons or two-horse loads per acre would be considered a light dressing, from twenty to thirty tons a heavy application.

COMMERCIAL FERTILIZERS IN THE ORCHARD

After the home resources in the enrichment of the soil have been exhausted it is time to turn to commercial fertilizers to supply deficiencies. It is a very simple matter to spread around the trees each year the contents of a few fertilizer bags. This is much easier than spreading several loads of manure or sowing and plowing under a green manure crop. It takes less time and less worry. Hence many people who own a few fruit trees come to rely upon commercial fertilizers alone, neglecting the other sources of fertility that have been mentioned. This is a great mistake. The home fruit grower should use commercial fertilizers to supplement—not to replace—tillage, green manures and barnyard manures. Some fruit gardens, like some farms, are fertilizer sick. They have been dosed with large quantities of high-grade fertilizers, but the humus content of the soil has not been kept up. If fertilizers are used, and usually they must be, let them be in conjunction with manuring.

The purchaser of commercial fertilizers is in the way of many pitfalls, for some fertilizers, like breakfast foods, are not as nourishing as the advertisement suggests. Furthermore, they are very frequently used without definite knowledge of what the soil needs or what they contain.

FERTILIZER TESTS

There is but one satisfactory way of finding out the first query, that is by making a fertilizer test upon the land. Sending a sample of the soil to a chemist for analysis will not answer it, although many people still appeal to this convenient but unreliable guide. The chemist can tell how much plant food the soil contains, but he cannot tell how much of it is in such shape that the trees can use it. Only the trees can tell this. A fertilizer test is not difficult to make, nor is it inexpedient for the home fruit grower.



Fertilizing by tilling the soil. Plowing and cultivating makes the plant food in the soil more available. Good tillage will reduce the fertilizer bill



How fertility is lost. The finest and richest soil is being washed away. A part can be saved by a cover crop in fall and winter



This cover crop of crimson clover was sown August 2, to be plowed under in April. It prevents leaching and enriches the soil when turned

It is a simple matter to fertilize two or three trees with a fertilizer containing nitrogen only (such as dried blood or nitrate of soda), two or three more with a fertilizer containing potash only (such as muriate of potash), and two or three with a fertilizer containing phosphoric acid only (such as superphosphate). Then watch results. Questioning the soil in this way usually reveals the fact that it does not need all three of these essential plant foods; possibly only one, perhaps two. It may show that applications of phosphoric acid, for example, are wasted; no increased vigor or fruitfulness results from applying it. Lime may be needed even more than fertilizer; barnyard manure may give better results than applications of commercial fertilizers costing many times more. All these things come to light in a fertilizer test.

If the results of a definite fertilizer test are not available as a guide to fertilizing, the fruit grower can hazard a guess as to what is needed by observing the nature of the soil, the growth of the trees and the appearance of the fruit. Clay soils are usually richer in potash than in the other plant foods. Sandy soils, as a class, need nitrogen. If the trees are making a poor growth, and it is not due to lack of tillage, disease, ungenial climate or soil, the conclusion is justified that the soil needs nitrogen.

When the trees grow late and luxuriantly, and the fruit ripens late, is poorly colored and lacks flavor, it is probable that there is an excess of nitrogen and a deficiency of potash in the soil. These and other indications should have more or less weight in deciding the question of fertilizers. Ask the advice of your nearest neighbor who has grown fruit successfully; his opinion is worth far more to you than mine is.

If a brand of fertilizer can be found that fits the need of your soil, by all means use it; but the safest (and usually the cheapest) method is to buy the

raw materials and mix them at home. There are certain materials, called "standard high-grade fertilizers," which are uniform in composition and can be bought in quantity of most fertilizer dealers. Thus, as sources of nitrogen, may be mentioned cotton-seed meal, sulphate of ammonia, nitrate of soda, high-grade dried blood. As sources of phosphoric acid the buyer may choose between South Carolina rock, or "floats," and high-grade superphosphate. If potash is desired, some of the standard unmixed fertilizing materials that may be bought are kainit, muriate of potash and high-grade sulphate of potash. These are a few of the more prominent raw materials used by the fertilizer manufacturer.

WHICH PLANT FOODS ARE MOST NEEDED?

No fruit tree can be well nourished and productive unless all the plant foods are present to some extent. But fruit growers have noticed that in general a liberal supply of potash is more essential for fruit than a liberal supply of phosphoric acid or nitrogen, because it is used most in the growth of the tree and the development of the fruit. Fifty per cent. of the solid part of fruit is potash, and this plant food is also the chief constituent of the fruit juices. Hence orchard fertilizers should usually contain a large proportion of potash, unless it has been found that the soil is already rich in it. Do not neglect, however, nitrogen or phosphoric acid, nor yet lime. An abundance of lime in the soil strengthens the trunk and the

branches, and has a very important influence in hastening the time of ripening. If the soil is deficient in lime or inclined to be sour, liming may be more profitable than any other treatment that could be given.

HOW MUCH FERTILIZER TO APPLY

If possible fertilize bearing trees by the deficiencies of the soil as determined by experiment, not by any general advice such as is here given, but a few suggestions may not come amiss. On poor soils it will usually pay to fertilize at the rate of about 600 to 800 pounds of high-grade fertilizer per acre every year. On moderately rich soils 300 to 500 pounds is usually sufficient. The amounts used would vary with the age, productiveness and vigor of the trees, the needs of the soil and the kind of fertilizer used. One of the very best orchard fertilizers for general purposes, especially if green or barnyard manures are used, is a mixture of equal parts ground bone and muriate of potash. Six hundred pounds of this per acre per year would be considered a very liberal application for bearing trees on soil of average fertility. If more nitrogen is needed, and the use of barnyard or green manures is not deemed expedient, nitrate of soda may be used at the rate of from 100 to 250 pounds per acre, or dried blood at the rate of from 300 to 500 pounds per acre. Another deservedly popular orchard fertilizer is unleached wood ashes. An average sample usually contains about 6 per cent. of potash, 2 per cent. of phosphoric acid and 32 per cent. of lime. The price paid for them should always be dependent upon analysis. Ashes like the above are likely to cost about ten to twelve dollars per ton, and may be used at the rate of about forty to sixty bushels per acre on rather poor soil. Ashes have a wide-spread popularity for fertilizing fruit, not only because they contain potash and phosphoric acid in about the right pro-



The roots of fruit trees forage widely. Those of this twelve-year-old apple tree are about 20 feet long. Therefore, put the fertilizer out between the rows, where the feeding roots can get

portions for fruit on average soils but also because the lime in them is often very beneficial in correcting sourness and improves the soil in several other ways. If potash can be bought about as cheaply in the form of ashes as it can be in the form of muriate by all means take the ashes. Were any such thing as "the best orchard fertilizer" possible, ashes would get a majority of votes.

These are all very liberal applications; in many cases half the amounts mentioned, or less, would be ample. Fertilize fruits with judgment, not by rule. It is as easy to over-fertilize as it is to over-prune. If there are but a few trees on the home grounds, the natural tendency is to give them more fertilizer than if there are many. If applying 300 pounds of muriate of potash per acre and the trees are twenty-four feet apart each way, each of the twenty-five trees gets four

pounds, which seems like a very small amount to the man who has only a few trees to fertilize, and would gladly multiply that amount several times if it were best. In a general way it may be said that from four to ten pounds of most high-grade fertilizers is sufficient for bearing fruit trees, except perhaps on very poor soil or for very large trees.

HOW AND WHEN TO APPLY COMMERCIAL FERTILIZERS

Usually the best way is to broadcast them, and plow, harrow or dig them into the soil. When the trees are young it is especially desirable to work the fertilizer into the soil deeply; if left on or near the surface the roots tend to become established there, where plant food is most abundant, thus making a shallow-rooted tree. After the trees come into bearing surface applications may be

made if necessary—as it would be if they are in sod—but it is always desirable to work the fertilizer into the soil whenever expedient. Put the fertilizer where most of the feeding roots are—at some distance from the trunk. In bearing trees they are mostly in the middle between the rows, not under the branches.

When to apply commercial fertilizer to fruit depends chiefly upon the solubility of the fertilizer. Nitrate of soda, blood, tankage, ashes, muriate and sulphate of potash, acid phosphate, and in fact most high-grade fertilizers, and most brand fertilizers also, are quickly dissolved in the soil water, and hence should be applied in the spring or summer. A few, as untreated South Carolina rock, and bone in various forms, become available slowly and may be applied in the fall.

A Ten-Minutes-a-Day Garden—By I. M. Angell ^{New York}

PHOTOGRAPHIC PROOF OF WHAT CAN BE ACCOMPLISHED ON A 15 X 30 FOOT PLOT IN RAISING SUMMER VEGETABLES FOR A FAMILY OF FIVE—A NOVEL SCHEME FOR UTILIZING EVERYTHING BY MEANS OF SUCCESSIVE THINNING OF THE LARGE PLANTS INSTEAD OF THE LITTLE ONES—DOUBLE CROPPING IN SAME ROW AND FIVE CROPS FROM ONE FOOT OF GROUND

Photographs by the author

MANY possessors of small pieces of ground never think of raising their own vegetables because they imagine that in order to make vegetable growing worth while, a half-acre plot and a man to work it are necessary. But we know differently. For on a garden spot, measuring fifteen by thirty feet, and with only ten minutes' work a day, we grew twelve dollars' worth of vegetables. There were twenty kinds and each planting yielded enough at a picking to supply a family of five grown persons. The seed cost less than a dollar. Except in cases where we knew the actual value, we have reckoned it as one cent, because the quantity necessary was only a small portion of a five- or ten-cent package. One week's picking alone would more than equal the entire cost of the seed, as the following table shows:

LARGEST PICKING FOR ONE WEEK		
<i>June 14th to 24th</i>		
Parsley.....	.....	\$ .20
Peas.....	.....	.25
Carrots.....	.....	.25
Chard.....	.....	.10
Lettuce.....	.....	.45
Beets.....	.....	.95
		\$1.30
LARGEST PICKING FOR ONE DAY		
<i>September 14th</i>		
2 quarts Lima.....	.....	\$ .10
1 " pole bean.....	.....	.10
2 " parsley.....	.....	.10
5 ears corn.....	.....	.05
9 carrots.....	.....	.05
8 cucumbers.....	.....	.20
9 tomatoes.....	.....	.65
		\$.60

The largest picking for a single day was on September 14th, when, at the regular market

value, the lowest income from seven different plots was worth sixty cents. And, of course, what we had was fresh and therefore far superior to the store goods.

Our first thought was to plant the rows north and south in order to get the full benefit of the sunshine. Next we arranged rows of three different lengths—thirty feet for those



The biggest single day's picking of vegetables was worth sixty cents. September 14

vegetables of which we wanted the largest possible quantity, twenty feet for others and ten feet for the sorts that would yield a sufficient amount from a small space. In every case where it was possible, a succession or doubling up was done. Sometimes two or even three crops grew on the same line. In the case of the potatoes and corn alternate hills of the former were promptly dug and the space replanted with a July-1st-sowing of corn.

The 30-foot row of early peas was followed by three crops that made use of the same trellis, each occupying one-third of the row.

As both onions and parsley are the better for transplanting, the young plants of each simply exchanged locations; the parsley went into the place vacated by the onions and seed

of a later crop of onions was sown in the parsley row. In instances where the ground was not to be vacated early enough for the later planting, the sowings of the successive crops were made in odd corners or in flower pots and the plantlets transplanted as soon as there was a vacancy; tomatoes, cucumbers, squash, bush Limas, kohlrabi and lettuce were treated in this way.

FIVE CROPS ON ONE FOOT

The trellises and adjacent ground were used for two, three, four or even five crops. One foot from the eastern boundary line the garden was an arched trellis, on the opposite sides of which peas and Lima beans grew. At the foot of the trellis were radishes, and as soon as they were harvested, lettuce plants (that had been started in another part of the garden) were moved in. A tomato plant occupied one of the uprights of this trellis, so that the one-foot strip of ground actually accommodated five crops.

The 12-foot trellis at the back of the garden had a similar history. It was sowed the entire length with pole beans. At each one of the five uprights there was a tomato plant. A lemon cucumber climbed on this trellis, also some asparagus beans, making four crops at the same time.

Sometimes a second crop was sown before the first one was off the ground. This was accomplished by planting a row a few inches away from the old one, and as soon as the latter was removed the young crop had all the room it required and yet had the advantage of several days' start. Double rows are another help to economy of space. Slow maturing crops can be either sowed or trans-



June 4. The earliest crops. Peas in flower on the trellis; potatoes almost ready. Corn well started



July 4. One month later—the last of the peas. Bush beans almost ready to pick



August 7. The height of the harvest. Vegetables in abundance. Picking corn, with another lot growing up

planted on each side of a row of small vegetables, such as onions, which will be cleared in time for the later crops to fill the space.

The garden provided for use outside of its own boundaries about three hundred carrot plants, nearly three dozen corn plants, about two dozen Lima beans, and several chard seedlings, all of which were successfully transplanted. It also provided parsley roots to supply three families for winter.

WHEAT THE GARDEN GREW

Potatoes.—Cost of seed, ten cents; length of row, twenty feet. This crop was produced from one pound of seed potatoes that made enough pieces to plant a dozen hills, half on March 31st and the rest two weeks later. We preferred earliness to size, and the variety was chosen accordingly, with the result that we were digging potatoes on June 24th, by which time they had attained the size of eggs. A week later we dug some that weighed a half pound. Each hill supplied a meal or more, and the last was dug on August 23d, so that during the two months we bought no potatoes at the store. We do not use many potatoes, of course, when we can get fresh summer vegetables, still the record was a good one for so small a garden.

Onions.—Cost of seed, one cent; length of row, ten feet. Sown on March 31st and transplanted May 26th. This gave a sufficient supply for seasoning, which was all that could be expected from a ten-foot row. The last of the crop was pulled the end of August and kept in the cellar until used, some time in October.

Parsley.—Cost of seed, one cent; length of row, ten feet. By a little management the parsley season was extended throughout the entire year. In March some roots were transplanted from the window garden, and some thriving young plants that had wintered outdoors were moved into place; between them seed was sown to give a succession crop when the year-old plants had run their course. Outdoor pickings were made from March 31st to November 18th, and by potting some of the young plants in November we had a house supply for all winter.

Peas.—Cost of seed, twenty-two cents; length of row, thirty feet for early; twenty-eight feet for late. In order to get the longest season of peas from the least outlay of ground, we sowed the earliest kind on March 31st and a late sort on April 28th. The former bore from June 8th to 24th, and the latter from July 3d to 28th.

Carrots.—Cost of seed, one cent; length of row, twenty feet. They had a very long season. Seed was sown on April 1st. By June 9th the roots were three inches or more long; the last was pulled on October 30th. As with the onions, these were planted for seasoning, but the thinnings gave us several dishes of tender, young carrots. The usual order of things was reversed. Thinning was delayed until the largest were of usable size, when they were pulled and successive thinnings continued as the remainder grew, until the plants stood six inches apart. These were left to mature. In this way we managed to

get nearly a hundred carrots to use young, that would otherwise have been destroyed, and all without trespassing on the permanent row. If you have never enjoyed the pleasure of eating very young carrots, do not fail to make the trial this year.

Chard.—Cost of seed, two cents; length of row, ten feet. A sowing on April 1st gave us greens by the middle of June and stalks a week later. At the end of August, after the crop was past, the roots were pulled out, as the room was more valuable than its company.

Lettuce.—Cost of seed, two cents; length of row, ten feet. This gave us more than a hundred plants. As soon as they reached transplantable size, we set out sixty plants along the Lima bean row, leaving forty in the original row. This was rather crowded for a 10-foot row, but as the first heads were gathered while still quite small there was space for the others to spread. Well-developed heads were ready by June 16th from the April 12th sowing. They were so tender that they fell apart in the handling, and the flavor and quality were excellent.

Beets.—Cost of seed, two cents; length of row, twenty feet. Sowed April 12th, and less than two months later we were pulling young roots the size of plums. These thinnings were good eating and they left space for the others to spread, as they attained full size, during the month following.

Corn.—Cost of seed, fifteen cents; length of row, thirty feet, early; seven hills, late. The first planting, May 8th, came up so thickly that we transplanted all that could be accommodated on another part of the grounds, and still had a quantity of thinnings to feed to the horse. The original row yielded seventy ears and the transplanted hills about fifty more. The bearing season lasted a month, from the end of July to the end of August. The late corn was sowed July 1st, where the potatoes had been taken out, and gave us two dozen ears about the middle of September.

Wax beans.—Cost of seed, five cents; length of rows, forty feet. The early planting was made May 20th, and was in bearing from July 8th till past the middle of August, and after that scattering till frost. The late planting was made August 10th and, as bad luck would have it, had just reached the pickable stage when frost destroyed it.

Bush Lima beans.—Cost of seed, one cent; length of rows twenty feet. The cost of this seed is not worth computing, as the plants were thinnings from another part of the garden and would have been destroyed had we not transplanted them.

Crawling beans.—Cost of seed, three cents; length of row, twelve feet. These did themselves credit. Sowed June 3d, they had reached the top of a 6-foot trellis by the middle of July and began to bear a week later. They did not yield any large pickings until the middle of August, but after that covered themselves with glory, and on September 6th a picking of three hundred pods—about four quarts—was made. After that time they bore in small quantities until frost.

Pole Lima beans.—Cost of seed eight cents;



September 6. Corn that was planted between the potato hills now in tassel. Tomatoes on the trellis



October 7. The garden on the wane. Remnants of crops still yielding until frost comes



November 13. The end of the season. The summer crops replaced by fall-sown seeds

length of row thirty feet. These were sowed on the east side of a trellis, the west side of which was covered with pea vines. The latter had a month's start and by the time they were out of the way the beans were ready to occupy the whole trellis. We sowed an early kind on May 25th, and they came up so thickly that we transplanted about two dozen young plants. Although it was done after they had several inches growth of vine, they flourished and more than paid for the risk. The Lima crop ripened August 1st and continued to yield till frost.

Cucumbers.—Cost of seed one cent; four hills. These replaced the early peas. They were started in another spot and transplanted when the ground was ready for them. Naturally they were somewhat late, but otherwise were all that could be desired. Two kinds were grown, the Japanese climbing, and the lemon.



The trellis on October 2. This was carrying peas in the early part of the season

Squash.—Cost of seed one cent; two hills. The history of the squash is the same as that of the cucumbers, as they were started and transplanted to fill another portion of the vacated pea trellis.

Tomatoes.—Cost of seed one cent; ten plants. The tomatoes were kept in flower pots until the pea ground was cleared when they were set out to fill the remaining third of the trellis. Five plants had already been transplanted to the pole bean trellis on June 2d, and these later ones, moved on June 20th, made the total eleven plants. There were four varieties: Freedom, Ponderosa, Golden Sunrise, and a solitary plant of Yellow Cherry on the trellis. All proved satisfactory and gave good yields. From the eleven plants we gathered more than two hundred large tomatoes and nearly two hundred of the Yellow Cherry. Green ones, used for pickles, are included in the number. The five tomatoes on the pea trellis bore almost forty pounds of fruit. We extended the season by keeping some plants under cover when frost threatened.

SOME FAILURES THAT MIGHT HAVE BEEN AVOIDED

Of course, there were some failures. I never knew of a garden that was all successes, still the misses were not as noticeable as the successes, but the latter might have been still greater had we used more ounces of prevention. Two plantings of radishes were lost. They were sowed so early that the cold weather checked their growth, and rapid growth is one of the essentials in radish culture. The second crop of radishes was lost because of the abnormally dry season. This could have been counteracted by thorough watering.

The late peas were the victims of an unfortunate combination of dry winds and a week of record-breaking hot weather, just as they were coming into bearing. The yield would have been larger and longer if this had not happened, or if we could have kept them supplied with water. Thirty heads of let-

tuce were lost simply because they were not gathered in time. Better pick them too young than wait and lose them by "bolting" to seed. Another sowing of lettuce was started during a very dry period. Wax beans were risked a little too late. If the sowing had been made on August 1st instead of on the 19th, we should have had (as we have had in other years), a supply of the best quality beans for three weeks before frost.

A SUMMARY

The exact return from our 15 x 30-foot garden will be better appreciated by stating in tabular form. We had the greatest value from the garden in August, naturally, and the returns before May and after October were nominal.

TOTAL YIELD, RECKONED BY MONTHS	
May.....	\$.20 Radishes.
June.....	2.95 Lettuce over a dollar, peas and carrots also plenty.
July.....	2.10 Peas, wax beans and lettuce the chief crops.
August.....	3.30 Corn, Limas and chard bring up this total.
September...	2.70 Cucumbers, corn and squash make over half this amount.
October.....	.80 Mostly tomatoes.
Before May and after October.....	.50 Parsley

\$12.55

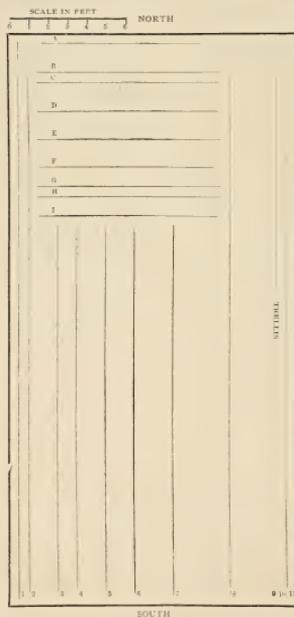
TOTAL YIELD RECKONED BY VEGETABLES	
Potatoes.....	\$.50
Onions.....	.10
Radishes.....	.20
Parsley.....	.80
Peas.....	1.10
Carrots.....	.75
Chard.....	.60
Lettuce.....	2.00
Beets.....	.50
Corn.....	2.00
Wax beans.....	.50
Bush Limas.....	.50
Pole string beans.....	.60
Pole Limas.....	.65
Cucumbers.....	.80
Squash.....	.30
Tomatoes.....	.85

\$12.15

The * shows the months in which the vegetables were in use.

Vegetable	Months											
	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
Potato												
Onion												
Radishes			*	*	*	*	*	*	*	*	*	*
Parsley			*	*	*	*	*	*	*	*	*	*
Peas (2 kinds)			*	*	*	*	*	*	*	*	*	*
Carrots			*	*	*	*	*	*	*	*	*	*
Chard			*	*	*	*	*	*	*	*	*	*
Lettuce			*	*	*	*	*	*	*	*	*	*
Beets			*	*	*	*	*	*	*	*	*	*
Corn (2 kinds)			*	*	*	*	*	*	*	*	*	*
Wax beans			*	*	*	*	*	*	*	*	*	*
Bush Limas			*	*	*	*	*	*	*	*	*	*
Pole string beans			*	*	*	*	*	*	*	*	*	*
Pole Limas			*	*	*	*	*	*	*	*	*	*
Cucumbers			*	*	*	*	*	*	*	*	*	*
(lemon and Japanese)			*	*	*	*	*	*	*	*	*	*
Squash			*	*	*	*	*	*	*	*	*	*
Tomatoes (4 varieties)			*	*	*	*	*	*	*	*	*	*

Parsley and carrots were housed for winter use, so we have given them credit for bearing during the winter months.



The space was closely planted and as soon as one crop was gathered another was put in. Details below:

A. Pole string beans and five tomato plants, planted June 2-B and C. Onion sets, March 31. Second crop, double row transplanted bush Lima beans, June 10-D. Swiss chard, April 1-E. Onion seed, March 31, sowed June 19. Second crop transplanted parsley, June 19-F. Transplanted onions, May 26-G and H. Lettuce, April 22, till out by June 19. Second crop double row transplanted bush Lima beans, June 10-I. Parsley, March 21, transplanted for second crop, kohlrabi.

1. Radishes, March 31, pulled May 10-15. Corn May 8, harvested August 20. Second crop transplanted kohlrabi-2. Beets April 12, pulled August 1. Second crop wax beans, August 10-4. Wax beans May 26, pulled October 10-5. Lettuce, a falling-6. Carrots April 1, pulled October 10-7. Potatoes March 31 and April 11; seven hills dug July 1. Second crop, seven hills corn, July 2, harvested September 21. Third crop, hardy squash, September 20-8. Peas March 31, picked June 22. Second crop, cucumbers, five tomato plants, Crochans squash, all transplanted-9. Peas, April 20-10. Lima beans, May 27-11. Radishes, April 22, pulled May 25. Second crop, transplanted-1 lemon, May 15.

Potatoes in Eight Weeks—By Samuel Fraser Cornell Experiment Station

SPROUT YOUR POTATOES BEFORE YOU PLANT THEM AND YOU WILL GET NOT ONLY AN EARLIER BUT A LARGER CROP—AN EXPERIMENT WORTH TRYING THIS YEAR

Photographs by courtesy of the Cornell Experiment Station

IN THE Northern states varieties of potatoes are frequently spoken of as being early, second early, or late. The usage of these words is not strictly literal, and refers to the length of time taken to reach maturity, and not to the time of planting.

Some early varieties of potatoes will produce a crop of tubers in from seventy to ninety days after planting. Second earliest or medium varieties require from ninety to one hundred and thirty days, while late varieties may continue to grow for two hundred days. In many places it is possible to reduce considerably the period of growth, and when the conditions are good some of the early varieties will produce a crop of tubers in from fifty to sixty days after planting.

From the practice developed in the Island of Jersey and used by the writer for several years, it would seem that some of the most important factors in the production of a successful crop of early potatoes are:

(a) To secure a good strain of seed of a suitable variety;

(b) To hold this seed during winter in such a manner that it will be in the best possible condition for planting;

(c) To plant the potatoes under favorable conditions.

The Eureka (medium) and Uncle Sam (late) tend to become coarse and rough when grown on heavy loam soils, but are good on light loams. The Early Ohio and Bovee (early) set so many tubers that they require a rich loam soil in order to give the best returns. One of our earliest potatoes, Bliss Triumph or Stray Beauty, is of rather poor quality and is undesirable on this account, although in some parts of the Southern states this character is not so marked. The Early Rose is a good quality potato and is not so fastidious as some others, being in fact one of the oldest and one of the most cosmopolitan varieties now grown. It seems to do equally well in Great Britain, South Africa, Australia and America and, on this account many strains have been developed

from it which are now on the market under other names.

Some of the best-known varieties are:

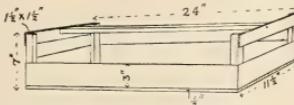
EXTRA EARLY	SECOND EARLY OR MEDIUM
Early Ohio	Burpee's Extra Early
Six Weeks Market	Eureka
Bliss Triumph or Stray Beauty	Beauty of Hebron
	Polaris
	Irish Cobbler
	Early Rose (some strains)
EARLY	LATE
Early Thoroughbred	Carmen No. 3
Bovee	Sir Walter Raleigh
Reliance	Rural New Yorker No. 2
Crown Jewel	Green Mountain
Early Rose (some strains)	Vermont Gold Coin
Noroton Beauty	State of Maine
	Uncle Sam

Anyone having seed potatoes of some good variety may grow as good seed potatoes as



Open trays are used for the sprouting. These can be piled in tiers and can be carried to the field without disturbing the tubers

can be purchased if he will select the best plants from year to year and use their produce for seed; but if seed is not on hand it should be secured as soon as convenient, care being



The sprouting tray is easily made

taken that it does not become frozen in transit.

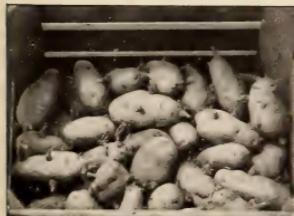
The tubers should be kept dormant and firm until sprouting is started, and should not be wilted when planted. Seed potatoes may be stored in the fall in shallow trays, which should not be piled more than two deep, in a cool cellar where there is good light and ventilation. If the temperature of the cellar can be maintained between 32° and 40° F. it would be advisable, but a few degrees higher will do no harm. If the temperature be much higher the tubers will wilt. In February, or two months before planting, the temperature may run to between 50° and 70° F., or the trays may be transferred to a coldframe or any other place of suitable temperature and provided with plenty of

light and good ventilation. This change in temperature will induce the tubers to sprout. The shoots will not grow longer than one-half to three-quarters of an inch, will appear thick and stocky, with a number of small roots emerging from their surface, and will carry a number of scale-like leaves. These characteristics indicate a healthy shoot. If the sprouts are long and thin and white in color, as is frequently seen when tubers are sprouted in the dark, they will not give as good results. The tubers should be planted within two months after the first appearance of the sprouts.

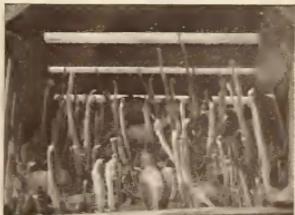
The most suitable soil is a light friable loam which has been manured the previous season and is in good condition. Prepare it as early as possible in spring and apply a dressing of acid phosphate at the rate of from one to one and a half pounds for every eight or ten square yards. In the writer's experience this fertilizer has always tended to hasten maturity. The potatoes should not be planted too deeply, preferably two to three inches, and, with good tillage and in some places a little protection from frost, should it occur, new potatoes may be secured early in June.

It is interesting to know that all the experiments reported in this country from various experiment stations show that not only does sprouting the tubers hasten the maturity of the crop, but it also increases the yield, so that for the gardener who desires to secure the heaviest possible yield, this method of starting tubers is of decided value.

A convenient tray may be made by using half-inch material for the bottom and sides with 1 1/2 x 1 1/2 inch corner pieces. The corner pieces should be 6 1/2 inches long, the side pieces 24 inches long, and the end pieces 10 1/2 inches long, 3 inches wide and 1/2 or 3/4 inch thick. The support for the handle should be 10 1/2 x 1 x 1/2 inches, and the handle 23 x 1 x 1/2 inches. Nail the end pieces and the support for handle to the corner pieces, letting them come flush, then nail the sides on, the bottom and handle across being put on last.



Potatoes can be grown in eight weeks if the seed is first allowed to sprout like this. The ideal length for the sprouts



Sprouts of this size result in a much lessened yield. Better not sprout the seed at all

The Cheapest Kind of Hotbed—By Nathan R. Graves Rochester New York

A SIMPLE DEVICE FOR GETTING VEGETABLES A MONTH EARLIER—CAN BE MADE AT HOME WITH NO EXPENSE, SAVE THE GLASS FRAME WHICH COSTS \$3.00—THOUGH TEMPORARY, IT IS THE BEST FOR MOST BEGINNERS AND WILL MORE THAN PAY FOR ITSELF IN ONE YEAR

Photographs by the Author

ENOUGH plants can be started in one small hotbed to stock a good-sized garden with vegetables and flowers.

There are three types of hotbed that are within the means of the ordinary amateur gardener.

The first is the temporary bed in which the manure is spread on the top of the ground to the required depth, and a portable frame placed over it.

The second differs only in having a shallow pit dug to hold the manure.

The third type is a permanent bed, the frame being made two and a half feet higher,

and built directly in a pit of that depth. In a bed of this kind the bottom should be tiledrained, and it is a good plan to cover it also with a layer of small cobblestones or plank. The outside should be well banked up with manure, earth or coal ashes. (Fig. No. 3.)

The last type can be used not only as a hotbed in the early spring, but also when the manure and earth are cleaned out, it can be used in the fall as a storage place for plants that are not quite hardy, such as tea roses or for bulbs that are to be forced for winter bloom.

Of the three forms above mentioned the first is the easiest and cheapest to make, and therefore the one best suited to most beginners. It is the making of such a hotbed that I shall try to explain.

The frame itself is best put together at odd moments during the winter. You are then sure to have it all painted, dried and ready for use when wanted in the spring.

For making the frame use cypress. It may be a bit more expensive at the start, but more than pays the difference in the long run.

The sash can be bought much cheaper than it can be made, and as the commercial sash are 3 x 6 feet, the frame should be built to conform with these dimensions.

I have found that a frame taking three of these sash is most convenient to work with and gives most satisfactory results. Such a structure is approximately 6 x 9 feet.

Figure 1 gives a good idea of the construction of a simple, easily made, practical hotbed frame. It is 9 feet 2 inches long, 5 feet 6 inches wide, 2 feet high at the rear and 18 inches high in front.

It is made of 1½-inch matched cypress, with the corners well braced by 2 x 4-inch pieces of the same material. The crosspieces are 2 x 4 inches and as long as the sash. These are set into the upper boards of the frame 34½ inches from the outside of each end, allowing the extra length to extend out over the lower side.

Along the centres of these crosspieces are nailed strips 1 inch wide and of the thickness of the sash. Grooves ¾ of an inch wide are run into the upper surface of the crosspiece and close to the edges of the strip. These serve to carry off the drip of the sash, preventing their freezing down, thus eliminating one of the serious obstacles in the way of properly ventilating and caring for the bed.

Pieces, 1 x 4 inches and 6 feet long, are now nailed along the outside ends of the frame, extending above the thickness of the sash. This completes the woodwork. (Fig. No. 2.)

Now putty all nail holes, give the woodwork two coats of paint, and you will have a hotbed frame which will serve for many years.

In preparing material for heating the bed,

the object is to get a slow, moist, lasting heat, not one that will give out before the crop is half grown.

The commonest material for this purpose is fresh horse manure, in which there is a fair quantity of straw or loose litter. If the manure is inclined to be fine, old leaves should be mixed with it.

Get the quantity of manure you require at one time; pile it in a place where it will be fairly well protected from snow or rain, and let it ferment for a few days.

If the manure is inclined to dryness, or if leaves have been used, this fermentation may



Detail of the end pieces and of the grooves which keep the lid from sticking



The best type of temporary frame



The permanent type of hotbed



The method of turning the manure to prevent the rapid escape of nitrogen or ammonia



Spreading the manure. The lower layer should be at least three feet wider than the frame



Preparing material for heating the bed

take place rather slowly. In such case, sprinkle lightly throughout with warm water, work over thoroughly, repile and let it stand until fermentation takes place again. This can be easily told from the vapor that passes off. Again work over thoroughly and repile. (Fig. No. 4.)

Usually two turnings of the manure are enough, but if one has time, it is well to let it stand and heat a third or even a fourth time.

We are now ready to put together the bed.

Choose a spot that has the southern exposure and is protected from north and north-west winds, and where the natural drainage is away from the bed. Start by spreading evenly a layer of manure, which is 3 feet larger each way than the frame and about 1 foot in depth. (Fig. No. 5.)

Pack this down well, especially around the outside edges, and put on a second and third layer until you have a well-trodden and



After placing the frame, sprinkle manure around the inside edges and corners and pack well



Banking up outside in order to protect the hotbed from cold. Windbreaks are still better



Now put on the sash and leave it for a few days until the heat steadies

compact bed of manure at least $2\frac{1}{2}$ feet in depth. (Fig. No. 6.)

Place the frame in the centre of this bed, and press it down well. Sprinkle a little manure around the sides and corners and pack down firmly. (Fig. No. 7.)

A 2-inch layer of decayed leaves spread over the manure in the frame and well packed down also serves to retain the heat in the bed.

Bank up the outside of the frame with manure or, if desired, build an open frame outside and 1 foot distant from the hotbed frame, and fill the space between with manure. (Fig. No. 8.)

The sash should now be put on, and the bed allowed to set for a few days, or until a thermometer sunk well into the manure, shows a temperature below 95° . (Fig. No. 9.)

During this time the bed should be well ventilated in the heat of the day, to allow the steam and ammonia fumes to pass off.

Now put in the soil. This should be equal parts of good, sifted garden loam and well-rotted barnyard manure. Tramp well the first layer of 3 inches. If you plan to sow your seed in shallow boxes, this depth will be sufficient, but if the seeds are to be planted directly in the soil of the hotbed, another layer of 2 or 3 inches should be added. (Fig. No. 10.)

When the seeds are sown do not drench the whole bed with cold water, but sprinkle lightly with lukewarm water only along the rows where the seeds have been put in. The commonest cause of failure is the use of too much water.

Take care that the plants do not become pale and spindling, as they certainly will do if they get too little light and air and too much water.

The heat of the bed is derived from two sources, that resulting from the fermentation of the manure, and that received from the sun's rays. The first source, if the bed has been properly made, will maintain a temperature of from 50° to 60° during ordinary weather. When it is very cold or stormy, the sash should be covered either with burlap, or a 4- to 6-inch layer of loose straw or manure to retain this heat. (Fig. No. 11.)

With sun heat the temperature may go up to 85° or higher; but it is better not to let it get above that point. On warm days, you must watch the bed closely to prevent overheating and burning. The best way to regulate the temperature is by raising and lowering the sash. Small blocks of wood, $2 \times 4 \times 8$ inches are convenient for this purpose. (Fig. No. 12.)

It will be necessary often to use some additional protection for the bed; especially when the sun's rays are too strong. For this purpose screens made of cotton cloth stretched on frames the size of the sash, or those made from laths, are the best, although one may get satisfactory results from spreading a light layer of straw over the glass.

A general rule to follow is: Open the sash on pleasant mornings about an hour after sunrise, and close it about an hour and a half or two hours before sundown. On cold, stormy days it is well to leave the bed alone

but when work is to be done, do it during the pleasant part of the day, being careful not to have the sash off the frames for too long a time.

In the summer after the young plants have been removed to their permanent quarters, the spent hotbed will prove a good place for caring for the plants which have been growing all winter in the window garden. It is also an admirable place in which to start and winter such plants as violets, pansies, English daisies, and the polyanthus. These though they are hardy outside, can be had in bloom a month earlier if started under cover in August or September.

Poxtoves and Canterbury bells, started in August and September from seed in the spent hotbed and wintered there will make much better plants than if grown and wintered in the open.



Putting in the soil. Pack the first four inches rather firmly; then if you wish to raise seed in the bed without flats, put in two inches more rather loosely



Protection for cold nights. Sprinkle four inches of loose straw over the glass



Ventilating. Lift the upper end of the frame and put in a block of wood of the dimensions given in the article

The Making of a Water Garden—By Henry S. Conard Baltimore, Maryland

WATER TIGHT CONSTRUCTION AND DRAINAGE—WHAT TO PLANT IN PONDS OF DIFFERENT SIZE—THE TREATMENT OF THE MARGINS AND IDEAS ON THE SELECTION OF THE SITE

Photographs by HENRY TROTCH and H. C. TIERRETT

MY FIRST water garden was half a kerosene barrel, sunk in the ground at the southwest corner of my father's house, where a rain pipe from the roof emptied into it. Here the water-hyacinth (*Eichhornia crassipes*) grew and flowered, to the delight of all the family. The tub was nearly full of earth in which the plants anchored themselves by their roots and were able to resist the tremen-

plant, except perhaps a cat-tail (*Typha*), could have stood the strain.

COMMON-SENSE PRINCIPLES

The real water garden will conform as nearly as possible to the conditions under which nature herself constructs one.

Place it at the foot of a terrace, not on top.

Let the ground slope down to it on all sides.

If it is to stand in a broad, sloping plain, grade down the upper side as much as is necessary to bring the lower side about on the natural level of the ground.

It is essentially artificial to find anything like a long dam or terrace descending from the margin of a pond.

OUTLINES IN RELATION TO SIZE

It does not offend if the small tank takes some conventional shape. A sunken tub is essentially round, and a wooden or iron box will unavoidably be square-cornered. A brick or concrete construction, if not over ten feet long, may be rectangular. But if possible avoid geometry in the garden. A bald circle with a gaping ring of cement between the sod and the water is not a thing of beauty, though ponds of geometrical figure edged with stone coping are effective in formal gardens.

I like best a narrow, curving pool, like the bed of some slow stream. Let it widen out here and there into broad, open stretches if you wish. At the ends, also, or in shallow pockets on the side, the water may give place to a bog garden. On the north side a thicket of trees and shrubs may come out to the water's edge. But keep the south side clear,

so as to admit every available ray from the sun.

It is in the treatment of the margin that we make or mar a pond's natural beauty. There is no one way in which native waters always meet the land, but there are some ways in which they never do. Nature never made broad borders of concrete or brick or hewn stone. Therefore avoid these in making a water garden. Rough stone walls are permissible at inlet and outlet only, and even here they may be avoided if clayey soil can be had. And in place of stones there will spring up beds of moisture-loving mosses, liverworts, and smooth sheets of *Pellaea*, whose delicate fruit-stalks shoot up in the first warm days of spring.

Beside the pond itself a path of gravel will enable us to come close to the water's edge. Now we must bend away from the water around the bog garden; now we cross it on a stone causeway or rustic bridge.

All around the grass and flowers run right out to the water's edge. This is the essential point, and perfectly easy to attain. The water-tight construction of the bottom of the pond only needs to come up to the height of the desired water level. From this point a grassy bank may be raised as steep and high as one desires. Four to six inches above mean water level is high enough. We can hide the junction of land and water completely by means of water-clover (*Marsilia*). This curious fern-like plant, with leaves like a four-leaved clover, grows equally well in the wet edge of the sod or in the pond to a depth of eighteen inches. In the former situation the leaves stand up three or four inches, in the latter they float.

The bed of the pond may be variously



A well planned and properly edged water garden, but too thickly planted; result, few scattering blooms, too solid foliage mass and loss of water effects

dous floods of water from the roof. All through the summer we had a succession of spikes of big azure flowers, each one with a yellow eye spot; and the glossy, heart-shaped leaves, with their stout, spongy petioles, were themselves an ornament and a curiosity. I thinned out more than a tubful of the plants during the season. The fault of this garden, aside from its smallness, was the irregularity and violence of the water supply. No other



This style of pond is proper near buildings. Frankly formal, but adequate for its surroundings, and perfectly fitted to the accompanying architecture. It is not overplanted



A California water garden. "Tender" and "hardy" water plants do equally well, and grow with an amazing strength. They have to be thinned out persistently



Informal basin in the hollow of a lawn. When the stone margin is hidden, such a pond is ideal. Don't overplant



The high rim of this basin is unnatural. It necessitates bold plantings around, to give it a semi-formal setting

made. It must be water-tight, not liable to injury by frost, and of a suitable size and depth. I knew one little garden which was made simply by scooping out the earth like the bowl of a spoon and laying in a thick coat of cement—no brick, no stone. Here grew the big red Devon water-lily (*Nymphaea Devonensis*), Sturtevant's massive pink (*Nymphaea Sturtevantii*), both tender; the white night lotus (*Nymphaea Lotus*), and several hardy varieties, and all with the greatest luxuriance. But, alas, one hard winter frost cracked the cement, the water ran out and all was lost. But, then, no artificial pond can last indefinitely without repairs.

Another friend had a gorgeous show of water-hyacinths, big yellow water-poppies, plumes of parrot-feather, and water-lilies in pink, yellow and white. This tank was built of a single course of brick carefully laid in cement. The place was excavated to a depth of sixteen inches, and the bottom and walls were covered with a coat of the best Portland cement. Its dimensions were four and a half by six and a half feet. It had a partition near one end coming up nearly to the water level. The larger part contained rich earth to a depth of about six inches for water-lilies and lotus, the smaller was filled

with earth and served for bog plants. Such delight as this garden furnished to the family and neighbors! And all summer there were flowers and roots to give away.

The safest construction, however, is that recommended by Mr. Tricker: "Dig down two feet six inches and lay a wall of brick eight inches thick below, tapering (if desired) to four inches at the top. The bottom is packed with broken stone, and this and the walls are heavily coated with the best cement." In winter the margins should be protected with litter or leaves. Indeed, it is a good thing to draw off all the water and pack the tank tightly with dead leaves, piling them several inches deep over the whole. Hardy plants will survive perfectly so long as the water does not freeze to the bottom. As to depth, twelve to eighteen inches is all that is absolutely necessary for water-lilies, and eighteen to twenty-four will do for Victoria. The additional depth for Victoria is best arranged by making a pit in the bottom of the pond in which to place its tub. Thus room is given for the development of its gigantic leaves and flowers without greatly increasing either the work of excavation or the volume of water required. It is very desirable to have the water shallow enough

for the gardener to walk through it with hip boots, though with ponds of twelve feet width or less a plank can be laid across and access to the plants is easy.

Another method of construction, which has marked advantages, is called "puddling." Here an excavation is dug out as before, but the sides are made sloping (about 45 degrees) instead of vertical. The whole interior is now covered three or four inches thick with firm, tough brick clay, well packed and beaten down. The clay is fairly impervious to water and is not injured by freezing. The margins, from mean water level to a depth of twelve inches, are lined with stones pounded into the clay. This prevents washing away by ripples or by moving ice. It is advised to cover the clay bottom with a few inches of sand so that the puddling may be protected and the mud not so easily stirred up.

It is doubtful whether it is easier to build a pond in a natural water way, or to make it from the foundation up. Unless the natural water course can be easily diverted I prefer not to use it. For every stream at a distance of a hundred feet or more from its spring head is subject to flooding from heavy rains.

Should a violent current sweep over and



An excellent arrangement. The margin is low and unobtrusive. Plenty of sunlight on the water, with heavy background



A puddled garden, where open water effects are not expected. It resembles a slack water of a meadow, where plants grow thickly

among our aquatics it would destroy all the tender plants, break down our lotus, papyrus, and the like, and cover everything around with a thick layer of mud. The season's hopes would be gone. We shall do best, therefore, to secure a more even supply of water. A good spring will suffice for anything except Victoria and the tender water-lilies. Indeed, south of Philadelphia spring water will materially help many of the hardy nymphæas to endure the summer heat. Lacking a spring, water may be drawn by a pipe or sluiceway from any near-by stream. The sluice will of course be so arranged by gates or by position of intake, as to avoid the flooding of the pond in case of freshets. But, after all, the easiest plan is to draw the water from a pipe with a spigot. It is not necessary to maintain a continuous flow and change of water. Just as a balanced aquarium will go for weeks or months without attention, so with the pond. It is only requisite to replace the water lost by evaporation and leakage. From a surface of sixteen square feet about a bucketful of water per day es-

capies by evaporation and transpiration of the plants. Stagnation is prevented by having a few fish and some submerged plants like cabomba or myriophyllum. It is therefore very easy to care for a garden up to six by twelve feet, even with only a bucket to supply water. On the other hand, a large pond fed by a natural stream will often be in danger from floods. Unless the stream be very small in proportion to the lake it will be necessary to have means of diverting it into a culvert or sluice on occasion.

Floating parts of plants have very remarkable powers of accommodation to the depth of the water. Water-lily leaves may be entirely submerged in the evening, and by next morning their stalks will have grown just enough to spread them on the surface again. But on all considerations, it is desirable that the water level should not vary more than four inches at the most; even this amount may bring into view ugly strips of mud or masonry. An outlet of ample size is as necessary as an inlet for the regulation of the water supply. Small ponds on level or gently slop-

ing ground may be allowed to overflow their sodded margins. If fed by a continuous open stream, it may be most artistically led away in a similar manner, either directly, or by a waterfall, or through a bog garden.

It is often very desirable to drain the pond, in order to repair its walls, to clean it out, or to replant or take in tender species. Provision should be made for this. Both outlet and drain may be provided as follows: Lead a large (4 or 6-inch) pipe from the deepest part of the pond to some lower outlet—sewer or stream. In the pond attach an elbow joint so as to let the pipe turn vertically upward. Screw into the joint a piece of pipe just long enough to reach up to the desired water level. Now when the tank is full any overflow may go down the pipe and out. To empty the tank it is only necessary to unscrew the upright piece from the elbow. The outlet should in any case be covered with a wire net to prevent clogging of the drain, to retain fish, and to keep floating plants from being lost. Should the regular outlet be over a waterfall or dam, a large pipe may be laid in the lower part of this wall. A wooden plug at its inner end will close it on ordinary occasions, and can be removed when the pond is to be emptied. From small ponds the water can be dipped or siphoned out.

WHEN TO PLANT

Hardy water-lilies may be planted at any time. If started in early spring they should bloom throughout the summer.

Tender water-lilies must not go out of doors until warm weather is established. A cold storm often occurs in the first ten days of June (in the latitude of Philadelphia), and if it does it will sadly damage or destroy anything tender. Lotus (*Nelumbo*) should be planted about the first of May.

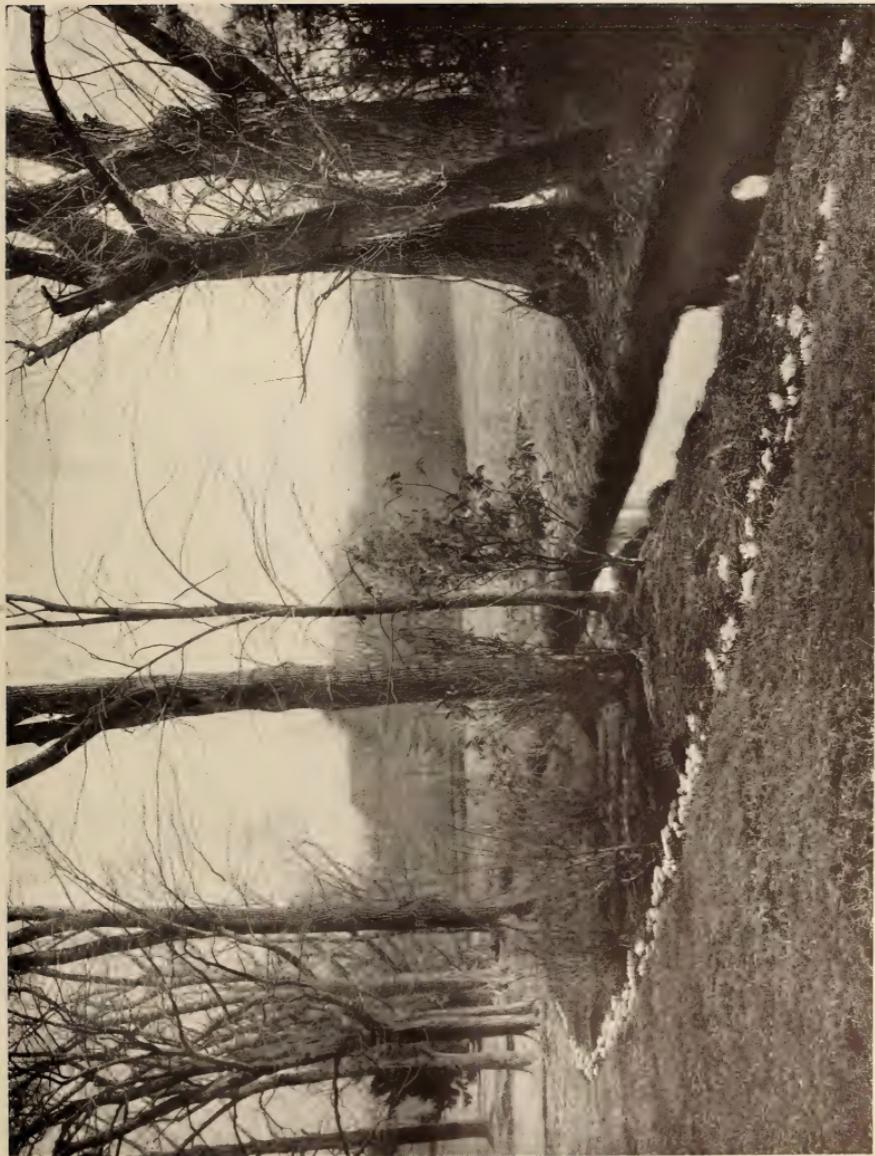
Where the pond is very large, or if but one variety of plant is to be grown, the roots may be allowed to run freely in the bottom of the pond. Ordinarily it is much preferable to plant in definite tubs or beds of wood or masonry, be they of whatever size or shape. If this is done the strong-growing kinds will not smother out the weak, and those which naturally spread rapidly will stay within proper limits. Lotus rhizomes may run thirty or forty feet in a season if not restricted. Floating plants, like water-hyacinth, must be kept in place by means of floating wooden pens made fast to stakes. The pen, which should be of inch-square or 1x2-inch lumber, will soon be hidden by vegetation.

THE BOG GARDEN

The bog garden consists merely of very wet ground in which a host of interesting plants flourish. It must, of course, be beside a pond or along a stream. In spring the brown woolly fronds of cinnamon fern will first show themselves, uncoiling as they rise. The marsh-mallow (*Hibiscus moscheutos*) will give a wealth of great white or pink flowers in mid-summer. In autumn blue mists of asters or a yellow glow of coreopsis and dazzling shafts of cardinal flower (*Lobelia cardinalis*) will brighten the spot.



Tender water lilies must be taken up and stored over winter. Set them out May 15 (latitude of Philadelphia). They are best planted in tubs



CROCUSES, THE FIRST SHOWY GARDEN FLOWERS OF SPRING

Plant about three inches deep in well worked and drained soil, free from clay and decaying manure. As the new corm forms on the top of the old one, the crocuses should be taken up and replanted (in the fall) every four years. The leaves, which develop after the flowers, must not be cut off, as they are essential to the formation of the new corm

Earlier and Better Annual Flowers—By Edward J. Canning

Massachusetts

STARTING SEEDS EARLIER THAN CAN BE DONE IN THE OPEN GROUND AND RAISING PLANTS OF EXTRA GOOD QUALITY—AN EASIER AND BETTER WAY THAN HANDLING FLATS IN THE GREENHOUSE

Photographs by the Author

NEW plants give larger returns on the small amount of money and labor invested than the common garden annuals, such as China asters, stocks, marigolds, verbenas, petunias, zinnias, etc. They are called annuals because they grow from the seed, flower, fruit and die within a year—most of them within a few months. Some are more persistent than others, that is, some

will blossom all summer until killed by the frost, while others flower but once and die—often early in the summer. I need hardly comment upon their value, either for filling in the hardy perennial border, for massing by themselves or for planting in lines for cut flowers for indoor decoration. Most people know how bright and attractive the flowers of these annuals are.



Seeds of annuals sown in a coldframe from April 1st to 10th will give strong plants much earlier and better than those sown later in the open ground. They do not suffer from storms



Six weeks after sowing the young plants are ready to be moved into the borders. Lift them by a trowel, taking a little soil with the roots. Water copiously when set out

Some, like the poppies, mignonette, and nasturtiums, which make but few roots and do not transplant as readily in consequence, are better sown in the garden just where they are wanted to blossom. For the great majority this would be too late to obtain the best returns from them, since we could not sow the seeds in the open ground till the first week in May at the earliest, and then heavy rain may wash them away, so I am going to tell the simple and easy way by which we raise annuals, and what we do on a large scale may be practiced in a small garden by the most inexperienced person. It involves the use of a coldframe, a structure which may cost about ten dollars—an expense which will be amply repaid by the better quality of flowers.

We prepare the soil in a coldframe by mixing leaf-mould, sand, well-rotted sod and manure. Put plenty of good drainage in the bottom, then the soil, the surface of which should be very fine and smooth.

Any time between April 1st and 10th we sow the seeds, quite thickly in shallow drills eight inches apart. The drills may be made by a marker which is made as follows: Take a piece of inch board as long as the frame and three or four inches wide, along the centre nail a strip three-eighth inch square. To make the drill press it into the soil.

The frame is kept close and moist until the seed-leaves appear above the soil, when air is gradually admitted more freely as the seedlings increase in size and vigor and as the days and nights grow warmer. (The first photograph shows the seeds being sown).

Choose a dull or moist day for transplanting the young plants to the garden where they are intended to flower, and they generally grow right along without the slightest check. This plan of raising seedlings is easier and better than the florists' method of sowing in flats in the greenhouse.

A two-sash frame which would be about 6 x 6 feet and made of two-inch chestnut plank would cost about ten dollars, and with ordinary care would last several years, besides which it can be used for other crops, as raising salads, wintering pansies, etc.

In a two-sash frame, nine seed drills may be drawn at eight inches apart or a total of about fifty feet of drill. Twenty-four seedlings may easily be raised in every foot, which would be a total of 1,200 plants.

The cost of the seed, even with a large variety would probably not exceed two dollars. Therefore, 1,200 annuals would cost—plus the little trouble in raising—about seventeen cents per 100 plants, and these figures I am sure are a very low estimate of the returns for the money invested. The aspect of such a frame is unimportant, though a southeastern one has some advantages.

This Book

Tells how to beautify
your home at little
expense



FREE

Don't Wait—write
for it now

Consult this book and
you'll save time, money
and worry

*Discriminating, home-loving
persons are enthusiastic in
their praise of this, the most
elaborate and practical book on
wood-finishing ever published*

*Contains ideas worth
\$25.00 or more to dis-
cerning persons who
enjoy and desire a
beautiful home*

Write us now for above book, "The Proper Treatment for Floors, Woodwork and Furniture," and learn how easily and inexpensively you can beautify your new or old home. Gives confidential information from skilled wood-finisher of 23 years' experience about all kinds of wood, wood-cleaning, finishing and polishing. Tells how soft pine can be made to look like beautiful hardwood. Don't delay—write to-day. It's sent FREE by the manufacturers of

Johnson's Prepared Wax

"A Complete Finish and Polish For All Wood"

Unequaled for Woodwork, Furniture and Floors

Applied with cloth to bare wood or over dye, filler, varnish or shellac, it produces a lasting, artistic sanitary finish to which dust and dirt will not adhere. It will not crack, blister, peel off, show laps, scratches or heel marks. Johnson's Wax is far superior to any other, one reason is that it contains the most polishing wax to the pound. Fine for preserving and polishing oilcloth and linoleum. Just try it.

Johnson's Polishing Mitt, our latest device for polishing furniture and woodwork with our wax. Made of sheepskin with wool on, is open across the back and slips on hand. Sent FREE for label from one pound or larger can of Johnson's Prepared Wax. Remove label by placing can in steam or hot water.

Johnson's Prepared Wax is **sold by all dealers in paint**— $\frac{1}{2}$ lb. can, 30 cents; 1 and 2 lb. cans, 60 cents per pound; 4, 5 and 8 lb. cans, 50 cents per pound.

Write to-day for book and mention edition G. M. 3. Don't forget the label either.

This Mitt
FREE



Read
Our
Offer

S. C. JOHNSON & SON
Racine, Wis.

"The Wood-Finishing Authorities"



Sy-CLO
TRADE MARK

The Latest Word In Sanitation

The name SY-CLO on a closet means health insurance for your home or any building in which the closet is placed; it means freedom from all those diseases which are usually traceable to noxious odors and poisonous gases arising from ordinary closets.

SY-CLO stands for more than mere flushing; it stands for a wonderful syphonic action of great power—an action which literally pulls the contents of the bowl into the drain, cleansing the non-reachable parts, instantly sealing the outlet channel with a water trap to an unusual depth, and absolutely preventing all danger of gas.

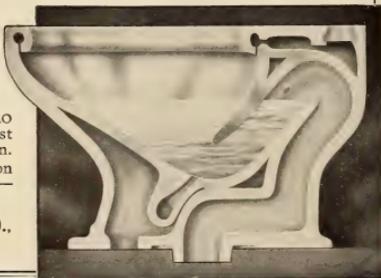
The SY-CLO Closet stands for an interior cleanliness and purity impossible in an iron closet, and unknown in any closet but one made of china—like the SY-CLO. Hand-moulded of china all into one solid piece like a vase, the SY-CLO is without crack, joint or rough surface to collect dirt or disease germs. It is as clean inside and out as a china pitcher, being made exactly the same way and of the same material.

The surface of the SY-CLO Closet cannot chip off, is not affected by acid, water or wear, and hence cannot rust or discolor as an iron closet does. The SY-CLO is strong, simple, durable; it cannot get out of order and, with ordinary care, will last as long as the house in which it is placed.

It costs but little more than the common closet, and when health and comfort are considered, it really costs less; in fact, *your doctor pays the bill*. Your plumber will tell you that SY-CLO is absolutely the latest word in perfect sanitation.

Send for booklet on "Household Health"—mailed free.

POTTERIES SELLING CO.,
Trenton, N. J.



House Plants From Seed

I HAVE successfully grown greenhouse plants from seed in common living rooms, and have derived more pleasure from the experiment than from growing outdoor garden plants. Plants procured in this way are doubly valuable to me because of having raised them myself through every stage of their growth.

I do not hesitate to grow the most delicate sorts during the months of June and July, but the large-seeded sorts such as carnations, chrysanthemums, cyclamen, etc., may be sown earlier, as there is not so much danger of the young seedlings "damping off" during cold, cloudy weather, and they require no more careful treatment than a garden annual.

The seeds of some greenhouse plants do not germinate so quickly as garden annuals. Gloxinias are about three, and cyclamen four weeks in making their appearance above ground, while cineraria will germinate in three days. I find that it is sometimes necessary to bore through the shell of Swinsona seed near the point where the sprout starts, with the point of a small knife, and then soak them in water until the sprout starts, before sowing them in the soil.

I like to sow early in April or May, in order that I may have plants of larger growth for winter than if I sowed them later. I sow chrysanthemums as early as the middle of March, but nothing else earlier than April.

I use soil composed of equal parts loam and leaf mold and heat it in a hot oven two or three hours, to destroy the earth-worms and weed seeds, and when it becomes cool sift it through a fine sieve. For very fine seed I put the soil in pots, as water can be applied to the soil in these by placing the pots in saucers of water, and thus prevent a crust forming upon the pot.

I sow as evenly as possible over the surface of the soil, by taking a pinch of the fine seeds between the thumb and forefinger and rubbing them around by a rotary motion, holding lightly that they may drop one or two at a time.

Place panes of glass over the pots and keep them in a sunny window until the seedlings begin to appear, after which remove the glass and keep the sun-loving sorts, like the heliotrope, in full sunshine, and those which like less sun, such as the begonia and fuchsia, in a partially shaded position. Put the sorts that require shade, such as the gloxinia, where no sun can strike them, but take care to give these a strong light.

Before the seedlings appear keep the soil

From Age Horticultural Label and Row Index

INDEX
YOUR
GARDEN

!

The Iron Age Horticultural Label and Row Index marks, pinse and ease of planting, shows name, variety, Sy. fertilizer needs and date of maturity. Can't remember price for only a rubber-plant, three, cori, and seed at present market. Form retains his record card of disease. Made of high quality of iron, galvanized, and will last a lifetime. For sale by all leading dealers and seedsmen or sent charges paid on receipt of 25 cents in advance.

IRON AGE Horticultural Label and Row Index

Is only one of the factors from Age Garden Enterprises. A full line of What-Flour, Blue and Shell-Brand, Cinnamon, etc., are manufactured and described in our New Iron Age Book. Mailed free on request.

BATEMAN MFG. CO., Box C, Greenwich, N. J.

For Years the
FERRIS
Hams and Bacon

have maintained their
unique position as the
leading brand for quality

Your dealer will supply
you if you insist
"A little higher
in price—
But!"



Rudan
&
Russell
Arch'ts.
Pittsburg

For all Picturesque Buildings

The soft, velvety coloring effects of

Cabot's Shingle Stains

are peculiarly adapted. They have no gloss, and the rich tones harmonize completely with nature. Made of the best pigments, linseed oil, and creosote; "the best wood preservative known."

Send for samples of stained wood and color-chart.

SAMUEL CABOT, Sole Agent.

1 Oliver Street, Boston, Mass.
Agents at all Central Points



The Most Satisfactory Light

The Angle Lamp is not the only method of lighting your home, but taken all in all, it is the most satisfactory.

For while it floods your room with the finest, softest and most restful light, making your home more cosy and inviting, it requires almost as little attention as gas or electric light, is as simple and convenient to operate as either and **actually costs less to burn** than the ordinary troublesome old style lamp.

Our Catalogue 41 (sent free on request) explains how this new principle applied to burning common kerosene has so completely done away with all the smoke, odor and bother of ordinary lamps that such people as ex-Pres. Cleveland, the Rockefellers, Carnegies, Cookes, etc., who wouldn't think of using ordinary lamps, have chosen

The Angle Lamp

for lighting their homes and estates in preference to gas or electricity, gasoline, acetylene, or any other method of lighting.

This catalogue tells how the special Angle burner and the shape of the glassware (see above illustration) give combustion so perfect that the Angle Lamp never smokes or smells whether burned at full height or turned low; why the lamp is lighted and extinguished like gas; the advantage of having the under-shadow of other lamps done away with completely, also why the Angle Lamp burns $\frac{1}{2}$ to $\frac{1}{3}$ less oil than any other for the same amount of light. And then offers you a **30 Days Trial** And it does more—gives you the benefit of our ten years experience with all lighting methods. Before you forget it—before you turn over this leaf—write for catalog 41 listing 33 varieties of The Angle Lamp from \$1.50 up.

THE ANGLE MFG. CO., 73-80 Murray St., New York

SEEDS, PLANTS, ROSES

Bulbs, Vines, Shrubs, Fruit and Ornamental Trees



The best by 52 years test; 1200 acres, 40 in hardy roses, none better grown; 12 greenhouses of Palms, Ferns, Ficus, Geraniums, Everblooming Roses, and other things too numerous to mention. Seeds, Plants, Roses, etc., by mail postpaid, safe arrival and satisfaction guaranteed; larger by express or freight. You will be interested in our extraordinary cheap offers of over half a hundred choice collections in Seeds, Plants, Roses, Trees, etc. Elegant 168-page Catalogue FREE. Send for it to-day and see what values we give for a little money.

THE STORRS & HARRISON CO.

Box 180 Painesville, Ohio

LIGHT-HOUSES on the coasts of the United States are all painted chiefly with **Oxide of Zinc (75%)**.

If such paint is the only kind that will stand sea-exposure in all climates, will it not still better stand the milder exposure on an ordinary dwelling? High grade prepared paints are all based largely on **Oxide of Zinc**, which makes them beautiful, durable, economical.

FREE—Our Practical Pamphlets: "The Paint Question," "Paints in Architecture," "Specifications for Architects," "Paint: Why, How and When," and "French Government Decrees."

THE NEW JERSEY ZINC CO., 71 Broadway, New York

We do not grind zinc in oil. A list of manufacturers of high grade zinc paints will be furnished on application.

The picture depends on the film, far more than on lens or on camera.

"KODAK" FILM

has 20 years of experience behind it—it's *not* in the experimental stage.

Look for Eastman on the box. Look for Kodak on the spool.

EASTMAN KODAK CO.

Ask your dealer or us to put your name on list for Spring catalogue "when ready." Rochester, N. Y. The Kodak City.

Here is a Poultry House Covered with Rex Flintkote

On request we will send you a book showing all kinds of structures from poultry houses to railroad terminals and public buildings covered with this same remarkable roofing.

There is only one reason for this wonderful range of uses.

Rex Flintkote ROOFING

has unmatched roofing qualities, and set is as easily laid as a carpet. Tin will rust in sixty days. Stangles warp, cracks, blow off, blaze at the touch of a spark. Both require expert labor. Any one can lay Rex Flintkote and be sure of a roof almost sure proof against all kinds of weather, chemical action and fires from sparks.

WE SEND SAMPLES FREE

Make your own tests. Read our Free Book on roofing. The best dealers keep Rex Flintkote. Of course, for the "big-spread" kinds, made to sell at bigger profits for the dealer, and less roofing, we have for some, but protection is the trade mark. "Look for the Boy" on every roll.

J. A. & W. BIRD & CO.
29 India Street, Boston, Mass.
We have agents Everywhere

OLD HICKORY SPINDLE BACK CHAIR

\$1.75

Guaranteed most serviceable, comfortable, attractive Chair for Porch and Lawn ever sold at this remarkably low price. Will stand all sorts of weather. Solidly constructed of genuine white hickory with bark on. Seat 18 inches long, 16 inches deep; height over all 40 inches. Price, \$1.75, freight prepaid east of Mississippi River. 120 other styles of Chairs, Settees, Tables, etc., \$1.50 up.

"I beg leave to acknowledge receipt of your favor of the 25th ult., and yesterday had the pleasure of unpacking the chairs which have been received. I highly appreciate your kindness in selecting these pieces of furniture for me, and can assure you that they are pre-eminently satisfactory. I shall take pleasure in recommending them and showing them to my friends, and trust that they may find favor with them even as they have with me."

E. W. MacFERRAN, Marquette, Mich.

"We are more than delighted with your furniture. Please send catalogue to my cousin, Mrs. Geo. Hull, Tuxedo Park, N. J."

F.M.S. HOWARD TRACY
Evansville, Ill.

"Chairs arrived O. K. We think they are fine and cannot be equalled anywhere."
J. W. STUART, Braddock, Pa.

Be sure to get the "Old Hickory" Furniture and see that our trade-mark is on every piece. If your dealer will not supply you, remit direct to us. Ask for new 48-page illustrated catalogue and our

Special Introductory Offer FREE.

THE OLD HICKORY CHAIR CO.,

123 Cherry Street, - - - - - Martinsville, Ind.

"The Original 'Old Hickory' Furniture Manufacturers."



Style No. 24

moist continually, but not wet. When the weather is cloudy and damp remove the glass to prevent too much moisture. Seedlings that like a dry soil, such as the geranium, must not be allowed to become as dry at any time as is best for large plants; and the sorts that like a moist soil, glloxinia, etc., must be kept moderately moist at all times.

When the second leaves appear prick off the seedlings into tiny pots, which can be made of heavy manila paper, fastening it together with pins in the form of pots. After this it is necessary to keep a careful watch that the soil may not dry out; if this occurs even once it greatly injures the plants. When the soil becomes filled with roots transplant into larger pots, which can be done without disturbing the roots, by unpinning the paper pots from around them. After this the seedlings will require the same treatment as small plants propagated from cuttings.

Maine.

HATTIE L. KNIGHT.

Domesticating Fringed Gentians And Cardinal Flowers

I HAVE raised cardinal flowers for years, and find them easy to domesticate. They do well on high, dry land and give very brilliant flowers. My only trouble with them is about the drainage of the young plants, for they easily mildew and "damp off" when small.

I plant the seed in the house about the middle of January in an eight-inch pot, putting about one inch of broken pottery and about one and a half inches of soil in the bottom. I insert a cork stopper in the hole in the bottom of a three-inch pot and stand it directly in the middle of the larger pot on the soil, fill in between it and the sides of the larger one with fine earth to within three-quarters of an inch of the top, and on this I sprinkle the seeds of cardinal flowers or of fringed gentians and press them down lightly. The small pot is then filled with water, covered with an inverted saucer and put in a warm place. In three days I uncover it, lay a sheet of glass on top and place in the sun. I watch it every day and lift off the glass, wiping it dry. In a day or two I discard the glass except at night, and in severe weather move the pot near the register at night and on cloudy days.

Fringed gentians are tender, but can be raised in this way. They are slow in growth for weeks. When the ground gets warm in June I have the cardinal flowers all transplanted and ready to go in; while the fringed gentians I move but once, letting them remain in the pot in which they were planted. I break the pot and cut the earth between the plants, not disturbing the tap root that runs to the bottom of the pot. They will flower the second year.

One thing I have learned is never to let any water get on the young plants except the moisture that filters through the pot in the centre. The cardinal flowers usually sprout in three days, and fringed gentians in three days to a week. If very long spikes of flowers are wanted I cut off all but one or two stalks from each crown.

Massachusetts. ABBIE S. NICKERSON.

EVERYONE WANTS A HOME And wants it to be as Beautiful Comfortable, Well Planned and Well Built as can be had for the money. Such Houses I show in my Books of Design, or specify *To Your Order and Satisfaction*. I have been called a Mind Reader in this line.

A Book of Bungalows, ready in March. Price by mail, \$5.
New Picturesque Cottages, Containing Original and Beautiful Designs for Suburban Homes, from \$2,500 to \$6,000. Price by mail, \$1.00.
Picturesque Summer Cottages, Vol. III, Designs for Stone, Shingle and Rustic Summer Cottages and Bungalows. Price by mail, \$1.00.
For Complete, Clear Drawings and Detailed Specifications, Original and Artistic Interior and Exterior Effects, *Buy My Plans*.

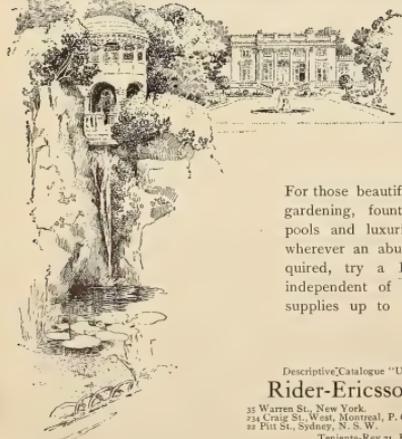
E. E. HOLMAN, Architect
Esplan Building, Philadelphia, Pa.



DOUBLE THE STRAWBERRY CROP

No extra expense for new plants or fertilizer. Full story in catalog—lifetime experience of largest fruit grower in America. To old friends and new wanting Berries, Peaches, Plums, Asparagus, Rhubarb, etc., it's free.

J. H. HALE, So. Glastonbury, Conn.



For those beautiful effects in landscape gardening, fountains, cascades, shady pools and luxuriant foliage, in short, wherever an abundance of water is required, try a Hot-Air Pump. It is independent of wind or weather, and supplies up to 100,000 gallons daily.

Descriptive Catalogue "U" sent free on application.

Rider-Ericsson Engine Co.

35 Warren St., New York.
225 Craig St., West, Montreal, P. Q.
22 Pitt St., Sydney, N. S. W.

232 Franklin St., Boston.
40 N. 7th St., Philadelphia.
40 Dearborn St., Chicago.

Teniente-Key 71, Havana, Cuba.



The Hot-Air Pump

THE GARDEN BEAUTIFUL.

EVERYTHING FOR THE GARDEN
...SIX...

THE GARDEN BOUNTIFUL.

GOOD THINGS

HENDERSON'S SEEDS

HENDERSON'S GIANT INVINCIBLE ASTERS

The highest achievement in China Asters. A superior type in every way massive, paeony-like flowers four to five inches across, double to the very centers, borne on long stems, unequalled as cut flowers and magnificent for garden beds. Our leader! Latest and best methods of Aster Culture free to every purchaser. Price of Seed: Rosepink, White, Crimson, Lavender, Blue, or Mixed Colors, per packet, 15c.

COUNTESS SPENCER SWEET PEA

The most beautiful Sweet Pea in the world. A healthy grower, producing abundantly long-stemmed flowers—three and often four flowers to a stem. The flowers are of gigantic size with open wavy standards. The coloring is an exquisite harmony in shell pinks; warm blush with deeper rose-pink tints and margins. As a cut flower it is usually preferred to all other sorts. Countess Spencer is the first sweet pea with an open keel, thus exposing the poisoning organs and facilitating natural hybridization, in consequence it sports somewhat—perhaps ten per cent—may produce flowers of deep rose, salmon-pink and bluish white, but all of the highly desirable Countess Spencer size and form. Price, per packet, 10c.

HENDERSON'S GIANT RAINBOW PANSIES

Our "Trial Ground Blend" Pansies are an important feature in our Flower Seed Department and in consequence we test the newer varieties of every Fancy Seed grower in the world that we know of. Every morning during the pansy season these trials are examined by our experts, and any plant of superlative merit or novelty is marked with a stake. The seed is then gathered from these "staked" plants, thus giving us a blend of only the best German, French, English, Scotch and American Pansies in grand mixture. Price, per packet, 10c.

HENDERSON'S "SUGAR SWEET" CORN "HIAWATHA"

Rarities, productiveness, and above all, delicious quality are the pronounced merits of this new Sweet Corn. The plant grows about five feet high, bearing two and often three ears to a stalk. The ears, about eight inches long, are compactly filled with long, nearly a white kernels that remain long "in the milk", lusciously tender and sweet, almost "melting in your mouth." A perfect corn for the home table. Price, mailed free, 20c, per packet (sufficient for 25 hills).

HENDERSON'S "TENDERHEART" LETTUCE

The finest large early head Lettuce. Every plant uniformly perfect, about ten inches across and nearly all head, compactly formed of waxy-cream heart leaves of splendid substance, tender, sweet and crisp. It is suited for both garden and cold frame culture and it also resists summer heat splendidly, standing fully two weeks after fully headed before it bolts to seed. Price, 15c, per packet.

HENDERSON'S "PONDEROSA" TOMATO

The Grandest Tomato on Earth. It has received more enthusiastic praise from users and taken more first premiums than any other six vegetables combined. Henderson's Ponderosa is in every way splendid, the handsomest and largest fruited tomato grown, frequently weighing two pounds each, and sometimes much more. It is almost as solid as beefsteak; nearly seedless, with firm, rich flesh of the finest quality; unequalled either sliced, cooked or canned. It is grown everywhere. Price, 10c, per packet.

To give, "Six Good Things" the greatest possible distribution we make the following liberal offer:

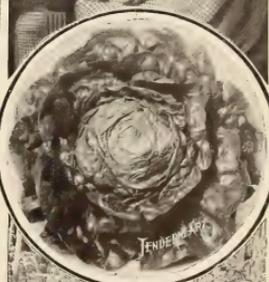
EVERY EMPTY ENVELOPE COUNTS AS CASH

To every purchaser who will state where this advertisement was seen, we will send each packet of the seed ordered enclosed in coupon envelope, any one of which, when emptied and returned it will be accepted, at the price paid for it as a cash payment on every dollar's worth purchased from our Catalogue. (One coupon envelope on a \$1.00 order, two on a \$2.00 order, etc.)

In addition we will send free of charge

HENDERSON'S 1906 CATALOGUE. "Everything for the Garden"

188 pages, beautifully illustrated from photographs, 8 colored and 6 duotone plates with much gardening information, besides descriptions of everything that is best in seeds, plants, bulbs and garden accessories.



PETER HENDERSON & Co. 35 AND 37 CORTLANDT ST., New York.



Residence of E. L. Atkins,
Paducah, Ky.

Equipped with Kewanee Water Supply Outfit

WATER in Your Country Home A KEWANEE PNEUMATIC TANK

in the cellar or buried in the ground, delivers water to all hydrants and plumbing connections by air pressure. Every comfort and convenience of a city water supply. Fresh, pure water at any moment of the day or night—just turn on the faucet. *Standard fire protection.* No elevated tank to freeze or blow over. No leaky attic tank. Will last a lifetime without additional expense. 1900 in operation. Satisfaction guaranteed. Read what a few users say.

E. T. Crawford, Augusta, O. "Equal to any city water works."
Rev. J. Wilbur Chapman, New York, "Perfectly delighful."
H. I. Spafford N. Bennington, Vt. "Does all you claim, and more too."

U. R. Fishel, Hope, Ind. "My Kewanee System is giving splendid results."
Write for names of users in your state and illustrated catalog No. 16, free if you mention *The Garden Magazine*.

**KEWANEE
WATER SUPPLY CO.**
Dra. W. S. KEWANEE, ILL.



NATIVE PERENNIALS—

FOR THE WILD GARDEN

*Fine Digitalis for Massing in the
Shrubbery*

*Hardy Herbaceous Perennials for the
Garden Border*

CHOICE IRISES

CATALOGUE ON APPLICATION

SHATEMUC NURSERIES,

BARRYTOWN, DUTCHESS CO., N. Y.

Gathering Nasturtium Pods for Seed or Pickling

AS SOON as the seeds get as large as peas go along the vines and with the thumb and the tips of the fingers feel the seeds to see if they fall off readily into your hand. Gather all that come off readily and spread them to dry in a cool, shady place. There they shrivel up and turn brown, in fact they look as if no life were left in them, and the inexperienced gardener will generally be tempted to throw them away as of no possible value. Don't do it. They are at their best and ready to grow next spring.

Nasturtium seeds are troublesome to gather, because you must go over the vines



Fruits of the nasturtium to be used for pickling must be gathered before the inner core has begun to harden; they must become properly ripened if they are to be kept as seed.

every two or three days and collect all that are loose and fall easily. If you do not look after them the seeds will fall to the ground and be lost.

AN OLD VIRGINIA RECIPE

For capers far better than any you can buy: Every morning pick the nasturtium seeds clinging fast to the stems they have grown on, and drop them into a glass jar half full of vinegar. Every day or two repeat the process until the seeds come up to the top of the vinegar. Then strain them out of that vinegar, and boil them lightly in some that is fresh. Then seal up as you do any pickle. Use in exactly the same manner as ordinary capers that are bought; and you will find them much more spicy and piquant. So say the women of my family, who have been using these pickles for years.

Care must be taken that the fruits are small when pickled. If large enough to grow they will have a hard centre, which is not so good for the purpose of pickles.

Virginia.

CAROLINE M. BROWN.



Servant Question

— you'll settle it so far as the WASHING and CLEANING are concerned by supplying your wash
PLYLE'S PEARLINE
The work will be done WELL—EASILY—SAFELY and YOU'LL HAVE A GRATEFUL SERVANT

For the Protection and
Adornment of **Lawns, Schools, Parks,
Cemeteries, Cemetery Lots** and public
and private places generally, no fence can
compare with the Hartman Steel Picket Fence.



for beauty and durability. The first fence we made was put up sixteen years ago and is in as good condition now as the day it was erected. The Hartman Fence protects and adorns a lawn without concealing it. It can be erected upon uneven as well as level surfaces—on stone walls or wooden bases as well as in the ground. No mechanical skill is required to erect it. All first-class dealers handle the Hartman Steel Picket Fence. If yours doesn't, write for illustrated catalogue and prices to
GLEN MFG. CO., 149 Mill St., Ellwood City, Pa.

PAEONIES A choice collection
of 200 varieties to
select from. *The best in the world.* Lists free.
E. J. SHAYLOR, Wellesley Hills, Mass.

COLLECTIONS



of Seeds

No. 1 of Vegetable Seeds

—Containing 25 Standard Varieties. Value \$1.50 for \$1.00. Postpaid \$1.25.

No. 2 of Vegetable Seeds

—Containing 15 Standard Varieties. Value \$1.50 for \$1.00. Postpaid \$1.20.

No. 3 of Flower Seeds—Containing 8 Choice Varieties. Annuals. Value 40 cts for 25 cents postpaid.

No. 4 of Flower Seeds—Containing 10 Choice Varieties. Annuals. Value 50 cts for 30 cts. postpaid.

Our Illustrated Catalogue and full particulars of these Collections mailed free for asking.

W. E. MARSHALL & CO., 146 W. 23d St. NEW YORK

Dreer's Old-Fashioned Hardy Garden Plants

This class of plants is one of our leading specialties. They have come into popular favor so rapidly as to astonish the most sanguine enthusiast of these gems of the garden. Their popularity is not at all surprising when we consider the many, varied and pleasant changes which take place throughout the entire growing season in a well arranged hardy border. Beginning in April, early-flowering varieties open up their flowers, often before snow has entirely disappeared, and continuing, with constantly changing variety throughout the Summer until late in Fall, when severe freezing only stop such persistent late bloomers as the Japanese Windflowers, Pompane Chrysanthemums, etc., etc. We are continually adding new, rare and desirable sorts to our list, which is admitted to be the most complete and up-to-date collection in the country.

For those who are not acquainted with the different varieties, we offer collections which when once planted will, with very little care, keep the garden gay with flowers from the time the frost leaves the ground until late in Autumn. These collections are supplied as under:

100 Distinct species and varieties, our selection,	\$9.00
50 " " " " " " " " " "	5.00
25 " " " " " " " " " "	2.75
12 " " " " " " " " " "	1.50

The above is but one of our many specialties; of others may be mentioned:

Vegetable Seeds in all the best and improved sorts.

Flower Seeds of every good sort, our collection consisting of over 1,000

species and varieties including many new and rare kinds obtainable only from us.

Garden and Greenhouse Plants such as Cannas, Dahlias, Roses, Palms and Ferns being grown by the million, requiring a large part of our 17 acres of greenhouses and frames and 200 acres of land for their production.

Water Lilies, Shrubs, Climbers and Garden Requisites of all kinds in almost unlimited quantity, all of which are described and many illustrated in our 224 page

GARDEN BOOK FOR 1906,

acknowledged to be the best, most complete, and comprehensive catalogue ever published. You should have a copy, which will be sent **FREE** on application if you mention this magazine.

HENRY A. DREER,

714 Chestnut Street,

Philadelphia, Pa.



Magnolia Stellata in full one of our many beautiful sorts.

Hardy Plants Worth Owning



AMONG the beauties in our extensive collection you will find many an old floral friend, for our great assortment includes all of the best of the old-fashioned hardy plants as well as the most worthy of the new introduction.

There's a world of interest in our useful catalogue. It is well written, nicely printed and finely illustrated. The very suggestions you need are doubtless contained in it—if not, we'll give them by mail—and the many hints it gives will interest you.

Our assortment is immense, yet we are specialists, growing only **HARDY ORNAMENTALS** and only the highest quality at that. Almost every hardy plant you may want which is worth owning is in stock, be it a hardy tree, shrub, vine, evergreen or perennial. The catalogue tells about these in a readable style and makes a good number of special offers—offers which save money for you.

Take advantage of the proposition we make and send for our catalogue and read these instructive chapters:

"The Only Kind of Rhododendrons to Plant."

"Most Interesting Tree in America."

"Magnolia Produce Great Displays."

"The Katsura Tree is of Great Beauty."

"Big Shrubs at a Big Bargain."

"Roses of Unusual Value."

"Fruits of the Right Kind."

"Most Satisfactory Hardy Perennials."

"Greatest of the Garden Flags."

"Great Bargains in Hardy Gardens."

"Magnificent Japanese Maples."

And Dozens of Others.

SPECIAL OFFER.—Send 10c and ask us to place your name on our Mailing List. We will then send you our catalogue and also the booklets, folders, special offers mailed from time to time. You will also receive the full benefits of our **SPECIAL INFORMATION DEPARTMENT**, a service which may save dollars for you, as it *Annually Saves Thousands for Our Friends.*

THOMAS MEEHAN & SONS, Inc.,

Box R, Germantown, Philadelphia, Pa.

GROWERS OF THE HIGHEST GRADE OF HARDY TREES AND PLANTS.



HIGH CLASS Flower and Vegetable Seeds

IT has been our aim to first look for quality in the selection of Plants for seed purposes. Our strains of Flowers and Vegetables show this care taken. We will mention a few most prominent:

ASTER, RAWSON'S MID-SUMMER ANTIRRHINUM, NEW GIANTS
AQUILEGIA, RAWSON'S LONG SPIRAEA
CYCLAMEN, RAWSON'S ROYAL STRAIN
PANSY, RAWSON'S ARLINGTON PRIZE
PRIMULA, RAWSON'S GOLD MEDAL STRAIN
STOCKS, RAWSON'S FLOWER MARKET

In Vegetables we have an exceptional large list. All will be found in our Catalogue of "Arlington Tested Seeds" for 1906. It has been compiled with the greatest care as to descriptions and illustrations of a complete collection of Flower and Vegetable Seeds.

☞ We want you to receive this catalogue.

☞ Write us; we will send it.

W. W. RAWSON & CO.

SEEDSMEN

12 and 13 Faneuil Hall Square, BOSTON, MASS.



HEALTHY NATIVE-GROWN FRUIT TREES

ORNAMENTAL TREES, VINES, SHRUBS, ETC.

It pays you many times over to take pains to get reliable and healthy stock. The well-known Dwyer stock can always be relied on, for it is all selected stock, grown on our home grounds and receiving constant expert inspection.

We guarantee that every specimen is true to name, free from disease, and sure to grow. We also do landscape gardening. Write now for our

FREE ILLUSTRATED CATALOGUE
T. J. DWYER & COMPANY, Box 4, Cornwall, N. Y.

GOOD, big "mealy" potatoes can not be produced without a liberal amount of POTASH in the fertilizer—not less than ten per cent. It must be in the form of Sulphate of POTASH of highest quality.

"Plant Food" and "Truck Farming" are two practical books which tell of the successful growing of potatoes and the other garden truck—sent free to those who write us for them.

Address, GERMAN KALI WORKS,
93 Nassau Street, New York.



A New Remedy for the Chicken Nuisance

THE garden I have in mind is open in every direction, except as hedges of lilacs and roses are disposed to give the sense of retirement but so as not to keep out the air or the sun. Though neighbors are near who have fowls in plenty, which might under ordinary circumstances be unendurably trying, no stray chicken or duck or turkey ever ventures into the sacred precinct. The cause of this lies in the presiding genius of the place in the shape of a big, ugly looking hawk chained to a pear tree in the very centre of the garden, so placed as to be seen from every direction. If a chicken ventures anywhere in sight he gets away alive as soon as the instinct of self-preservation will permit, and it is certain that the stolen visit will never be repeated.

The two questions that arise at once are: (1) How do you get the hawk? (2) How do you keep him alive and useful?

(1) In the nearby country hawks are plentiful. They feed largely upon field mice, and are seen skimming over the fields and pouncing now and again upon their victims. Often they select a tall stump or pole as a vantage point in their hunting trips. It is easy to take advantage of this fact, place a steel trap securely at the top of the pole, and catch the hawk. If the pole is not found in place, one can be erected at some convenient spot and the trap set. It is possible that a substitute could be had for a hawk in the shape of a crow, which can be more easily tamed. An owl would be even more effective than a hawk. It is probable that, in case of a local scarcity, an advertisement offering a reasonable sum for such a bird of prey would bring forth plenty of responses.

(2) As to feeding the hawk or owl there seems to be no serious trouble. Mice and rats would, of course, be eagerly devoured, as well as young woodchucks and other pest of the farm, such as English sparrows, moles, rabbits, etc. Much refuse from the table would also be edible. Fresh meat in any form is acceptable to either bird. But most important of all, a bowl of clear, fresh water must be kept near.

Experience shows that such an addition to the garden force makes a new object of interest to the whole household and comparatively little trouble. A tame crow can be easily wintered, but the hawk or owl would ordinarily be given up when the winter comes on, though many might like to keep it.

Maiane.

WOOD-WARD.

HOW TO BUY LIFE INSURANCE

By
"Q
P"

IN this book is given the information everyone needs who takes out or now owns an insurance policy. For years educated people have been buying insurance without even reading the policy; have been paying high prices for benefit that they can never receive. This book gives information which has never been available before in a simple form. A book that it is a duty to read.

One volume, 12mo, \$1.30 net, postpaid.

THE GARDEN
MAGAZINE

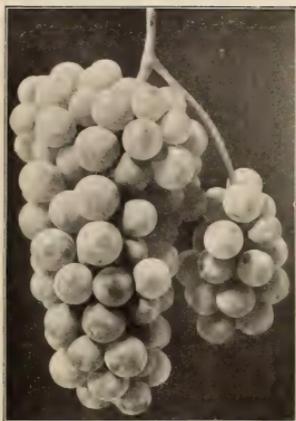


COUNTRY LIFE
IN AMERICA



THE WORLD'S
WORK

DOUBLEDAY PAGE & CO NEW YORK



GRAPE VINES

NO garden is complete without a sufficient number of grape vines to supply an abundance of this delicious fruit. For nearly 40 years we have been furnishing high-grade vines for this purpose.

We will send ten large vines of the best varieties, including three red, three white and four black, for \$4.00, delivered free. Send for our elegant illustrated Descriptive Catalogue and Price List. It will tell you how to plant, cultivate and train them.

T. S. HUBBARD CO.

Grape Vine Specialists FREDONIA, N. Y.

EVERY LOVER OF PALMS and HOUSE PLANTS

should have a copy of our book "The Care of Palms," and should also know why house plants thrive better in "Bombayreed" Jardinières than in the ordinary kind.



Upon receipt of your name and address, we will send you free a valuable booklet entitled "The Care of Palms." This booklet is an expert treatise on how to care for house plants, exhilarate their growth and preserve them in healthy and beautiful condition. We will also send you our handsome catalogue in colors, showing a variety of palms, ferns, etc., as they appear in "Bombayreed" Jardinières. Every woman who owns and appreciates house plants should have a copy of this book.

"Bombayreed" Jardinières are far more decorative in any room than the old-fashioned glazed article. They are practically indestructible, impervious to damp moisture, and will stand endless wear and usage. "Bombayreed" Jardinières are made in a great variety of colors—reds, greens, yellows in various shades, gold, etc. Special colors, all shades, to harmonize, are made to order at a small extra cost.

WRITE FOR OUR BOOKLET TODAY. You will be delighted with the pictures and the valuable information on the care of your house plants. A postal card will bring them. Address

Carolina Glass Co., Dept. D., Columbia, S. C.

Exclusive agents for "Bombayreed" Jardinières wanted in all cities.



STARK FRUIT BOOK shows in NATURAL COLORS and accurately describes 218 varieties of fruit. Send for our liberal terms of distribution to planters.—Stark Bro's, Louisiana, Mo.

\$25 REWARD

is hereby offered for the arrest, conviction and imprisonment of any person obtaining money under false pretenses for subscriptions to THE GARDEN MAGAZINE or to any other periodical published by the members of this Association. In view of the number of frauds now operating throughout the country, the public is hereby cautioned to subscribe for no periodical whatever, without first satisfying themselves that the one who solicits their subscription is duly authorized to receive same.

THE PERIODICAL PUBLISHERS' ASSOCIATION

Of America

Secretary: 32 Waverly Place, New York.



TOMATOES GROWING IN COLD FRAMES

TOMATOES FOUR WEEKS EARLY

Now is the time to plant tomato seeds direct in your hot beds, either to have good strong growthy plants to set out early in the garden, or by leaving them right in the frames (with no transplanting shock to set them back), a full month can be gained. The same thing can be done with corn, melons, cucumbers, egg plant, etc. Lettuce sown middle of February will mature last of April. Radishes a good bit quicker. Frames set over rhubarb and asparagus will give you a month's lead.

This charming little booklet on the "PLEASURE AND PROFIT OF COLD FRAMES" tells about the flowers and vegetables you can grow in frames; makes some suggestions on getting started; is freely illustrated, showing various growing methods, best situations, etc. A thoroughly practical and interesting bit of printing. Send for it.

Burnham-Hitchings-Pierson Co.

Greenhouse Designers and Manufacturers

1133 Broadway, Cor. 26th Street, New York

BOSTON BRANCH: 819 TR EMONT BUILDING

TUBEROSE BULBS

Filled Pearl, with greatest profusion of blossoms wanted. Offers with sample and prices per one thousand and ten thousand. HUGO FINK, NOCERA (PROV. SALERNO), ITALY

HORSFORD'S

HARDY PLANTS AND FLOWER SEEDS

have a reputation of their own. If you want plants that will last from year to year, get them from a hardy climate like Vermont. New catalogues for 1906 offers all the most desirable kinds for the decoration of summer homes, without confusing the purchaser with the names of so many plants of doubtful hardiness and durability. It includes herbaceous plants, wild flowers and ferns, shrubs, trees, vines, bulbs, etc., for wet or dry ground, sun or shade, and all for outdoor culture. Ask for it

FRED'K H. HORSFORD, Charlotte, Vermont.

THE GARDEN UNIT PACKET Adams Seeds

A NEW IDEA FOR YOUR GARDEN



EVERY LOVER of the garden should know of my new and original method of putting up garden seeds. Saves you

time, trouble and worry, cuts down your expenditure to the lowest possible figure and reduces your gardening to an exact science. Seeds are now put up in packets guaranteed to fully plant one 10-foot row of garden; 2 packets planting two 10-foot rows; 3 packets planting three 10-foot rows, etc. Write today for prices—3c.—up.

NASTURTIUMS

and Acorn Shirley Poppies are my specialties. My Flowerlover's Mixtures in both varieties are unsurpassed, being especially mixed by my own formula, insuring you giant flowers of the most rare and beautiful colors so highly prized by connoisseurs

MY SPECIAL OFFER

Send to cents today and become a member of the Flowerlover's Club, get my Little Green Book for the Garden for 1906, my Little Brown Book of Dutch Bulbs and the Flowerlover's Bulletin for one year with hints by Peter the Gardener.

10c Covers all 10c



Henry Saxton Adams
Jamaica Plain and Wellesley, Mass

SEEDS
BULBS
PLANTS

A WOMAN FLORIST 6 HARDY EVER-BLOOMING ROSES On their own roots. 25c

Send to any address post-paid; guaranteed to reach you in good growing condition.

GEM ROSE COLLECTION

Burbank, deep rose,
Cardinal, bright red,
Killarney, rosy pink,
General McArthur, deep red,
Snowflake, pure white,
Bosquet of Gold, golden

SPECIAL BARGAINS

4 Carnations, the "Bosque Flower," all colors, 5c.
8 Free-Wilting Chrysanthemums, . . . 5c.
4 Bouquet of Gold, . . . 5c.
4 Grand Duché Canada, . . . 5c.
4 Sweet Scented Tuberoses, . . . 5c.
6 Persian, all different, . . . 5c.
30 Lovely Gladioli, . . . 5c.
30 Superb Fanny Flanks, . . . 5c.
15 Pinks, Flower-beds, all different, 5c.

Any Five Collections for One Dollar, Post-Paid. Guarantee satisfaction. Once a customer, always one. Catalog Free. MISS ELLA V. BAINES, Box 95 Springfield, Ohio



FERRY'S SEEDS

Make sure a yield of quantity and quality. When your father planted Ferry's, they were the best on the market, but they have been improving ever since. We are experts in flower and vegetable seeds. 1906 Seed Annual, beautifully illustrated, free to all applicants.

D. M. FERRY & CO., Detroit, Mich.

The Disgraceful "Annual Cleaning"

Has it ever occurred to you that the old-fashioned spring cleaning orgy is not a thing to be proud of?

It is just as easy to keep the yard clean all the year round, as it is nicer and healthier.

It ought to be a criminal offense to let all the house refuse accumulate near the house in one undifferentiated heap.

Have a regular place for coal ashes, another for cans, glass and iron, another for inflammable material, such as paper, and a compost heap for leaves, manure, and even kitchen scraps, if covered.

The arrangement of these four heaps is the one thing you cannot trust to "hired help." Such matters are a part of landscape gardening. Their arrangement requires the constructive imagination of a statesman.

The ideal is an easily accessible place screened by evergreen planting.

Coal ashes are not supposed to have any plant food, but we occasionally hear of a garden that has been made more productive by using them. Spade them into your soil if you have no manure. They will improve the texture of clay or heavy soils.

Coal ashes mixed with broken glass are dangerous to handle; mixed with garbage they are an abomination.

If garbage is not gathered daily you can use it to your profit. Dig a hole five feet deep and sprinkle earth every day over the garbage, so that there will never be anything unpleasant to see or smell. After a year or so that spot will bring wonderful crops.

Make a compost heap of manure and earth and keep it under cover, if you can, so that the rains will not wash away the plant food.

Make another of autumn leaves and earth. You will find it invaluable for potting plants and making flower beds. Do not allow anyone to put stones or glass into such a heap.

Must we have a grand cleaning up this year? Let's do it, then, and never have another.

The Happy Owner of a Hotbed

If you have a range of hotbeds and coldframes you may now be enjoying pansies, violets, English daisies, primroses, polyanthus and auricula.

Also lettuce, radishes and spinach.

If you want fresh, home-grown vegetables in April sow lettuce and radish in March.

For May use you can have, besides those just named, spinach and mustard for greens, garden cress and endive for salads, and beets.

For June use you can have the following vegetables a month earlier than you could without the aid of a hotbed: cucumbers, cauliflower, tomatoes, and with very good management, a few eggplants and peppers.

Have you ever tried the "new onion culture"? The way to get large mild onions is to start the seed in a hotbed in March and transplant the young onions to the garden in April.

TREES

FRUIT AND ORNAMENTAL

Evergreens Shrubs Roses Hardy Plants

All the Best and Hardest Varieties
Largest and Most Varied Collections in America

ELLWANGER & BARRY

Nurserymen—Horticulturists

MOUNT HOPE NURSERIES

Established 1840

ROCHESTER NEW YORK

Illustrated Descriptive Catalogue (144 pages), also Descriptive List of Novelties and Special Offers, with beautiful colored plates of the New Hardy and Rare Fruit Trees, mailed FREE on request.

"GREENS"

Do you know Green?—

—Chas. A. Green, the man who, losing his fortune as Bank President in the panic of 1871, returned to a farm and succeeded as a fruit grower?

Well, Green is the head of GREEN'S NURSERY CO. Proprietor of "GREEN'S FRUIT GROWER," and an admitted authority the world over on fruits.

He has mastered his business by 30 years of good, hard digging, and what he knows he has put into a book, which you may get free. If you ask for it.

This book of GREEN'S is filled with big illustrations, and practical information about growing Apples, Pears, Peaches, Plums, Grapes, Berries, etc., and how to get the best results, whether you are growing for pleasure or profit.

It explains how you can secure bargains in Asparagus Plants, Popular and Apple Trees, new hardy roses, Blackberries, Grapes and other specialties for which Green is famous. So, if you want this valuable catalog and a copy of "GREEN'S FRUIT GROWER"—free—just say so on a postal card and they will come at once. Address,

GREEN'S NURSERY COMPANY, 39 Well St., ROCHESTER, N. Y.

CALIFORNIA SEEDS are the best. WHY?

Because California's superb growing climate and soils insure a plumper seed with more vitality, and hence having positive germination qualities. Be convinced of this fact by sending a trial order for just a few of these superb collections of

SURE-GROWING SEEDS

- | | | |
|---|--------------------------------------------------------------------------------|------|
| 6 | Pkts. California Nasturtiums, all named, three tall and three dwarf varieties. | 25c. |
| 6 | Pkts. California Sweet Peas, the finest named strains, full height. | 25c. |
| 6 | Pkts. California Wild Flowers, named as Escholtzia, Tidy-Tips, Cream Cup, etc. | 25c. |

The Three Collections only 50c.

Together with a copy of our monograph giving cultural instructions, descriptions and illustrations of California flowers and vegetables, together with our annual list of more than 5000 plants.

CALIFORNIA ROSES

F. GILMAN TAYLOR SEED CO.
Box 105 | GLENDALE, CAL.

HOME STUDY COURSES



JOHN CRAIG

Professor of Horticulture in Cornell University

who would ever have the pleasantest homes.

Every reader of the GARDEN MAGAZINE, who is interested in these matters is invited to send for a free copy of our eighty-page catalogue and full information in regard to our home study courses.

EVERYONE interested in farming or gardening, everyone who owns or who expects to own a suburban or a country home, should know about the Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture, which we offer under Prof. Wm. P. Brooks of the Massachusetts Agricultural College and Prof. John Craig of Cornell University.

There is money and pleasure, too, in farming and gardening, in the growing of fruit and of flowers, for those who understand the ways how and the reasons why of modern agriculture. A knowledge of landscape gardening and floriculture is indispensable to those

THE HOME CORRESPONDENCE SCHOOL

Dept. 8, SPRINGFIELD, MASS.

A Complete Manual of House Building in the Country

THE COUNTRY HOUSE

BY CHARLES EDW. HOOPER

THIS volume gives competently and in detail, yet without technicalities, all the information necessary in the building of a country house.

Its practical value is unlimited. Nearly 300 illustrations. Net, \$3.00. (Postage, 30 cents.)



THE GARDEN MAGAZINE  COUNTRY LIFE IN AMERICA  THE WORLD'S WORK
DOUBLEDAY PAGE & CO NEW YORK

Andorra's Peonies

Will Bloom This Spring



Reproduced from photo of Andorra's Peones

IF planted early our strong clumps will produce an immediate effect and give complete satisfaction. Our popular collection comprises over 200 selected varieties of double and single flowers.

SPRING OFFER

Twelve Named Sorts \$ 3.50 per doz,
14.00 per 50
27.50 per 100

Ask for Peony Booklet of New and Rare Varieties

ANDORRA NURSERIES

WM. WARNER HARPER, Prop.

Chestnut Hill

Philadelphia, Penna.

Baby Rambler

The new everblooming dwarf Crimson Rambler. Strong plants, by mail, with buds and bloom 20c each.

New Roses

Any of the following varieties by mail 15c each, or 2-year plants by express 40c each—Gen. McArthur, Franz Deegan, Sou De Pierre Notting, American Beauty, Coronet, Winnie Davis, Yellow Cochet.

Send for Catalogue which gives over 60 of the finest varieties of roses in cultivation at 8c each, by mail, including such as White and Pink Cochet, Kaiserine, Pres. Carnot, the La France Roses, and others of equal value.

The same in strong 2-year old plants, by express, for 25c each.

Also a list of over 100 of the best of the older varieties by mail at 5c each, and in strong 2-year-old plants by express at 15c each.

In Dahlias

We grow 50 of the finest Cactus, Show, Fancy, Quilled and Pompon Varieties. Also all varieties of Caracations, Chrysanthemums, Begonias, and all greenhouse and bedding plants.



The above represents one of our mailing size rose plants. Note the special pot it is grown in—it is 3 inches deep—which gives greater capacity for soil, better root formation, and helps us to grow the finest young rose plants in America.

W. R. GRAY,

BOX 6, OAKTON, FAIRFAX COUNTY, VIRGINIA

BODDINGTON'S

SEEDS

Were awarded the *First Prize Silver Medal* (the highest award) by the American Institute of the City of New York at the Annual Chrysanthemum Exhibition, held in New York City, Oct. 31st to Nov. 3d, 1905. **THE PRODUCT of Boddington's Seeds won 90 per cent. of all First Prizes for Vegetables and Annuals awarded in the year 1905 by the Lenox, Mass., Horticultural Society.**



Our new Catalogue, superbly illustrated from Nature, sent free on request. Write for it to-day.

ACTUALLY FREE WITH OUR CATALOGUE
VALUE, 70 CENTS

1 large Packet Hardy Larkspur (Delphinium)
1 " " " Columbine (Aquilegia)

For trial: These two 35¢ packets sent free to all who say where they saw this advertisement and enclose *five two-cent stamps*, to cover mailing.

SEEDS MAN
ARTHUR T. BODDINGTON, 342 W. 14th St. New York



Lambert's Pure Culture Mushroom Spawn,

Produced by new grafting process from selected and prolific specimens thoroughly acclimatized. **has never failed to run.** Sold by Leading Seedsmen. Practical Instructions on "Mushroom Culture" mailed free on application.

MINNESOTA SPAWN CO., St. Paul.

A beautiful colored plate of our
NEW EATON

Red Raspberry

and our strawberry catalog of valuable information about varieties with instructions for beginners. Free to all.
THE FLANSBURGH & POTTER CO.,
Leslie, Michigan.



The Wild Lady's-Slipper Tamed

LADY'S-SLIPPER, or *Cypripedium spectabile*, was found growing under such varying conditions that not all of them could be imitated. In bringing it under cultivation I found it growing in swamps, on sandy hillsides, and in moist but not wet woods. Apparently one necessary condition was that the ground should be moist. Whatever success I met with in cultivating this plant I am inclined to ascribe to the fact that I always kept this in mind and never allowed the soil to become hard and dry. All the plants of *Cypripedium spectabile* which I ever had were taken up when in bud or flower. In transplanting great care was exercised not to injure the roots, a ball of earth always being lifted with them and the plants so protected in carrying them home that they never became wilted.

Our wild flower garden was a narrow strip of ground on a city lot. It lay along the north side of a high, tight board fence and was further shadowed by closely built houses, so there was always partial shade. The soil was not naturally very good, so for the cypri-



Lady's-Slippers (*Cypripedium spectabile*) may be transplanted while in bud or bloom and suffer no ill effects. The soil must never become dry

Model Tomato and Plant Support

The best support for tomatoes and heavily flowered plants such as Dahlias, Peonies, Chrysanthemums, etc. Tomatoes grown with supports produce a much larger crop and of better quality. Constructed of heavy galvanized wire, they are light, strong, and easily applied. More than two million in use.

F. O. B. Harrison, N. J.
Per doz. 50 1-2 Gross 500
Prices \$1.75 \$7.00 \$10.00 \$18.00
Remit Cash With Order.

NOTICE

The various garden fixtures manufactured by the Parker-Bruen Mfg. Co. are so well known that comment as to the quality of the product is unnecessary. Only one of our most popular articles is here illustrated, and it is requested that you send for our price list and catalog.

PARKER-BRUEN MFG. CO., St. James Bldg.,

Factory: Harrison, N. J.



Screen Anchor, best adaptable for loose or plowed soil

New York City

pediums I dug out about a foot of this garden loam, mixed it with leaf mold and sand in about equal proportions, poured water in before I set the roots, and the plants went on growing and blossoming as if they had never been disturbed.

Every fall the bed was covered with leaves, and in the spring those were carefully dug in around the roots of the plants. This was all the care the cypripediums received, but for several years the clump continued to flourish and increase in size, bearing numerous blossoms and furnishing the crowning glory of our little wildwood garden. After five or six years, however, they gradually failed, and as the plants were becoming scarce no effort was made to renew our supply.

Now dealers are offering them for sale, and it is not necessary to rob the woods in order to procure plants. I think, too, that plants already accustomed to cultivation will succeed better in ordinary gardens than those transplanted from the woods. Plenty of moisture and partial shade ensure success.

New York.

FLORENCE BECKWITH.

**18
D. & C.
Roses
\$1.00**

For nearly fifty years we have made Rose growing a specialty. With the newest greenhouses and a stock of over one million plants, we may fairly claim to be the **Leading Rose-growers of America.** In this year we make this special offer of **Our Great Trial Collection of 18 D. & C. Roses for \$1.00.** Sent by mail postpaid to any part of the United States. Satisfaction and safe arrival guaranteed. Each variety labeled. Superb, strong, hardy eye-blooming kinds; for two alike. All on their own roots. Will bloom continuously this year. The collection includes the famous **Barb Humber** Rose that blooms every day in the year; **Keweenaw**, the only hardy eye-blooming yellow Climbing Rose; also **Pink Mamee Cochet**, the queen of all pink garden Roses. Orders looked for delivery when directed.

If you mention this magazine when ordering, we will send you a return check for 25 cents which we will accept as cash in a future order. **Free** to all who ask for it, whether ordering the above collection or not, the fifth annual edition of **Our New Guide to Rose Culture for 1906**—the **Leading Rose Catalogue of America.** 112 pages. Tells how to grow and describes our famous Roses and all other flowers worth growing. Offers at lowest prices a complete list of **Flower and Vegetable Seeds.**

**THE DINGEE & CONARD CO., West Grove, Pa.
70 Greenhouses. Established 1826.**



**“A Little Book
About Roses”**

Are You Interested
in Roses? I Am.

For thirteen years I have lived in an atmosphere of roses, thought of them, toiled among them and—yes—loved them.

With me rose growing was a hobby—passion—call it what you will.

And to-day my enthusiasm still increases.

Last year I launched this business—to-day it is in the front rank.

Why?

Twelve years of untiring, earnest effort taught me what roses to grow—how best to produce them—how to get them to you in Florida or Manitoba with every branch and bud full of freshness and vitality.

Did I do it?

Washburn College, Topeka, Kan., Feb. 21, 1905.
“After reading the big padded catalogue in which the most common things, even trash, are described in the superlative, it is a tonic to take up a little book like yours that dares to tell the truth.” (Prof.) W. A. Harshbarger.

MAILED to others on request

After a very busy shipping season, working day and night—not a single complaint—over forty absolutely unsolicited testimonials which a disinterested horticulturist says are the finest he ever saw.

Some day, by sheer force of merit, my roses will win a place in your garden and then—you will regret that you did not plant them before.

Why not try them the coming season?

Have you seen a copy of “A Little Book About Roses”?

It's different from most catalogues—very different. It appeals to intelligent, thinking people—it tells the truth.

Tufts College, Mass., Feb. 6, 1905.

“Your modest catalogue, just received, is worth some whole volumes on account of its concise and complete directions on the culture of the rose, and I own a good many works on floriculture.” G. W. Bullard

Strong Roses for greenhouse culture shipped at any time. Rose gardens designed, laid out and planted.

G. H. PETERSON, ROSE AND PEONY SPECIALIST
FAIR LAWN, N. J.

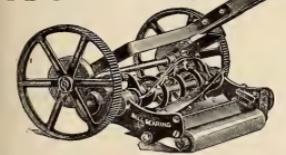
**STRAWBERRY
PLANTS**

Virginia and Chesapeake, winners of Best GOLD PRIZE offers; also Cardinal, Commonwealth, North Shore, Oaks Early, New York, Glen Mary, Stevens, Champion, and 50 others; best fruit, good stock, reasonable prices. Desiresires, Laurette and Austria. Cabbage? New Veiga and 20 other.

SEEDS Cucumbers? Pennsylvanias, **Allen's Pride of the Market**, Arlington Spine, Shamrock, etc. Catalogues? **Allen's First Choice**, **Yonkers**, **Yellow Bell**, **Tomatoes**, **Littleson's Globe**, **Allen's Best**, **Chick Jewel**, **Maid's Ear-liest**, **Earliest**, etc. **Kansas King**, **Eight Day Yellow Dent**, **Maryland Queen Field Corn**. Best new and standard Garden, Field and Flower seeds. **Illustrated FREE.** Send address on postal 30x7. Write about lists of good things for the lawn and garden and where to get them.

W. F. ALLEN, Dept. 42, Salisbury, Md.

**TOWNSEND
MOWERS**



**TOWNSEND GAVE TO THE WORLD
The Ball-Bearing Lawn Mower**

His mowers are more imitated than any others.

We make more high-grade mowers than any other firm and they are all ball-bearing.

We make the best Lawn Mower in the world.

We make the best Horse Lawn Mower in the world.

We make the best Roller Mower in the world.

We repair and sharpen all kinds of Mowers.

S. P. TOWNSEND & CO., - Orange, N. J.

SEWAGE AND GARBAGE DISPOSAL
problems are solved for Country Homes and Summer Camps by

INTERNATIONAL INCINERATORS

Sanitary, odorless, thoroughly practical. Illustrated booklet and prices on request. Special proposition to agents. **INTERNATIONAL INCINERATOR CO., 648 Prudential Bldg., Buffalo, N.Y.**

FLOWERING SHRUBS

In large assortment. Also complete line of Fruit and Ornamental Trees, Roses, Plants. Write for our handsome illustrated catalog. It's free. Buy direct from grower at wholesale prices.

**GROVER NURSERY CO.,
94 Trust Building, Rochester, N. Y.**



AWARDED *Two Grand Prizes* at the St. Louis Exposition, one for Seeds and another for Vegetables, also a *Silver Medal* for Hyacinths and Crocus.

**Thorburn's
Seeds**

We are every day receiving congratulations on the artistic merit and general excellence of Our 1906 Catalogue—the 107th successive annual edition.

Besides being a *work of art*, it is a valuable text-book of agriculture and horticulture, and should be in the home of everybody interested in gardening.

No garden annual published can compare with it. Mailed free on application.

If you have not yet received it, send for it **NOW.**

J. M. THORBURN & CO., 36 Cortlandt St., New York

Established 1802



HARLAN P. KELSEY
HARDY AMERICAN PLANTS
 BOSTON, MASS.

The Hardest and Best
Rhododendron
 known is
CATAWBIENSE
 The True Carolina Mt. Species,
 grown only at
HIGHLANDS NURSERY

(at 3800 ft. elevation)
 Saginaw, N.C.

SMALL LOTS
 OR **CAR LOTS**

The most unique and beautiful plant catalog published (exclusively) Native Plants) to those interested.

HARLAN P. KELSEY
 Owner
 6 BEACON ST., BOSTON

Fifty-two Lily Blossoms from a Hopeless Bulb

THE bulb of an auratum lily was given to me one fall, by a man who said it was a Japanese water-lily which should be grown in the house in a bowl of water.

Following these directions, I put the bulb in a bowl of water with some stones. After several weeks the odor became so dreadful that I determined to give up and throw it away. On further thought I decided to bury it and watch results.

It was put in the ground very much as one would bury a dead animal. The spot was marked, and in the spring a strong stalk ap-



A gold-banded lily of Japan (*Lilium auratum*) that was rescued after having been nearly killed as an aquatic. It flourished and bore fifty-two flowers when photographed.

peared on which one bud developed. When it opened I found that I had a wonderful auratum lily. It was left alone, having been mulched well in the fall with old manure. The next year it had seven blossoms. The third year there were twenty-one blossoms, then thirty-nine, the fifth year fifty-two, one large stalk having been destroyed just as the buds formed. I had it taken up, separated, the bulbs potted and put in a coldframe. Five of the plants that I had by spring were planted in the centre of a round bed with some speciosum lilies, two I gave away, and two I planted near some rocks where the soil had not been specially prepared. Those in the round bed developed well and had forty-three fine large buds when suddenly some disease attacked them—they died and the bulbs rotted. Those by the rocks flourished, perhaps because of the drainage of the rocks, blossomed, and bid fair to rival the parent bulb.

New Jersey.

H. H. H.



NO FORM OF NITROGEN

is so quickly available, or so positive in its results for the vegetable garden, on the lawn, for shrubbery or trees as a top dressing of

NITRATE OF SODA

(THE STANDARD FERTILIZER)

Send your name and address on Post-Card and we will send you
 "Food for Plants"

a most valuable book of 237 pages, dealing with the use of Nitrate of Soda as a fertilizer, giving detailed information covering a long list of trials at Agricultural Experiment Stations throughout the United States and on all sorts of crops.

NITRATE PROPAGANDA
 Room 125, 12-16 John Street, New York

What Flowers Shall I Plant?

For 10 years I have solved the question satisfactorily for others, let me do it for you.

Send me 30 cents and I will send you a generous supply of the choicest flower seeds appropriate to your locality, my booklet, "Culture of Flowers," and my catalog; also my surprise packet of 20 varieties (40 seeds) choice annuals mixed and certificate of competition for flowers grown from it. 1st prize, \$100. Catalog gives particulars.

Send today, and if you are not highly pleased with my selection keep the booklet, return the seeds and I will promptly refund your money.

If you prefer to make your own selection let me send you my pretty catalog. It is free.

MISS EMMA V. WHITE

Seedswoman

3010 Aldrich Ave. So., Minneapolis, Minn.

Headquarters for
SEEDS, BULBS, PLANTS, CACTUS
 Everbearing Crimson Winter Rhubarb

Special 20 varieties Cactus and Succulents for \$1.00
 12 lbs. of Crimson Winter Rhubarb for \$1.50
 Mail Order Shasta Daisy, 1 packet Good Venture Begonia, 2 packets \$2.50
 Geranium, 1 packet Rare Stocks for \$1.00

Send me Catalog and Special Crimson Winter Rhubarb
 Mention this Magazine. **TREBONIA B. SHEPHERD CO., Ventura, Cal.**

OUR CATALOGUE

opens with a triumphant arch, made up of over 40 varieties of vegetables the world has learned to value, and of which we were the original introducers. It has more, both new and good for this season, and a vast variety of standard vegetable and flower seed. With full and complete instructions for the cultivating of all of them. **CATALOGUE FREE.**

J. J. H. GREGORY & SON
 Marblehead, Mass.

GREGORY'S SEED CATALOGUE
 FOR 1906

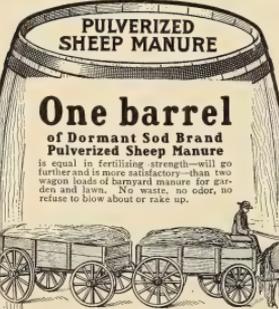


NEW, RARE AND BEAUTIFUL PLANTS

From the World Over

Choicest Palms, Ferns, and all Deciduous stock; Tropical Fruit and Economic Trees; Bamboos, Orange Trees, Conifers, Aquatics, etc. Established in 1884. Send for unique and interesting Catalogue. Our naturally grown plants are much superior to hothouse stock in every way. We send by mail, express and freight to all parts of the world, every week in the year—safely.

REASONER BROS., ONECO, FLORIDA



PULVERIZED SHEEP MANURE

One barrel
 of Dormant Sod Brand
 Pulverized Sheep Manure

is equal in fertilizing strength—will go further and is more satisfactory—than two wagon loads of barnyard manure for garden and lawn. No waste, no odor, no retuse to blow about or rake up.

Fall and Spring are best times to put down Sheep Manure and get results desired.

Full barrel Pulverized Sheep Manure delivered, freight prepaid to any point in the U. S., east of Denver \$4.00. Resubstance must accompany order. Write for quantity prices and booklet.

Dormant Sod Co.
 19 Custon Stock Yards, Chicago.



LARGE TREE PLANTED BY US WITH BALL OF EARTH
Diameter of tree, 15 inches. Weight of ball, 10 to 15 tons

**LARGE TREES MOVED. NO?
SUCCESSFUL? YES.**

Experience is the best teacher. Which has it been 'with you? Or are you waiting for advice? If so, 'write us. We have had success 'with others, why not 'with you? Large trees properly prepared and moved 'will live.

GET YOUR ORDERS IN EARLY

We have no'w a full assortment of choice Nursery Stock. Everything for Ornamental Planting, or Avenues, Parks, Lawns, Flower or Fruit Gardens, Orchards, etc. Large Tree Planting and Landscape Gardening a specialty 'with us. Send for our Free Catalogue. Address

The STEPHEN HOYT'S SONS CO.

Telephone, 148-2 South Norwalk, Conn.

NEW CANAAN, CONN.



YOU can search the world over and not find a more charming tree, and we naturally feel a loyal pride in such a possession.

Its every line is of grace, and when in bloom it presents a spectacle of rare beauty. This is especially true of well developed specimens and groups of them. It is fortunately a long lived tree, increasing in picturesqueness each year, withstands almost every exposure and soil and most fortunately actually thrives under the shade of trees, which gives it a peculiar value.

Plant this beautiful native tree freely, as a specimen, in generous groups, along the woodland border, skirt the driveways with it, in fact, use it as freely as nature sometimes does and equally charming results are sure to follow.

Prices of	Specimens, each 8-10 ft., \$3.00 per 10	\$25.00
Cornus Florida	" 6-8 ft., 2.00 " 10	15.00
	" 5-6 ft., 1.00 " 10	8.00
	" 4-5 ft., .75 " 10	6.00

OUR 1966 CATALOGUE. *If quality counts with you, you will be pleased with the stock we send out. Write for a copy of our newest catalogue, it lists about all the "worth having" kinds of Fruit and Ornamental trees, including a splendid collection of choice Evergreens, Shrubs, Vines, Roses, Herbaceous-plants, Lilies, specimen Bartons, Boxes, etc., etc. It is yours for the asking.*

The Elm City Nursery Co. NEW HAVEN, CONN.

Visitors are always welcome at the Nursery.

WROUGHT
IRON
FENCE AND
ENTRANCE
GATES

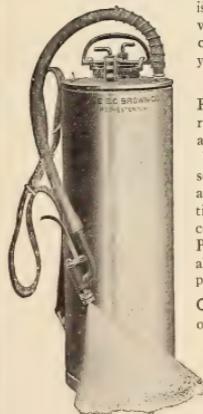
⊕

Wire Fencing Or-
namental Iron-
Work, Lawn Fur-
niture, Tree Guards
Tennis Court Encl-
osures A Specialty.

⊕

F-E-CARPENTER-@
7-6-9-WARREN-ST.
NEW YORK

THE "AUTO-SPRAY"



AUTO-SPRAY No. 1.

is the one perfect spray pump for hand work. 15 seconds work at its plunger charges it with power enough to run your hose 15 minutes. We make it in

40 STYLES AND SIZES

From hand atomizers up to power rigs. Style No. 1, here shown, is almost ideal for all-purpose work. A brass cylinder holding three gallons o solution and one of compressed air, and two pumpings will discharge entire contents. Solid brass pump, stop cock, nozzles, etc. Our patent Auto-Pop valve controls spray perfectly and absolutely prevents clogging. Complete with hose, nozzle, etc. 4

Only One Auto-Spray, but numerous imitations. Get the genuine.

Used at State and Government Experiment Stations, on estates of Vanderbilt, Astor, Hill, etc. Ours is the most complete line of hand and power sprayers in America.

Write for free catalog and copy of most comprehensive and valuable spraying calendar ever issued. All our products fully warranted.

E. C. Brown Company, No. 34 Jay St., Rochester, N. Y.



The Investigators' Club

THE "Investigators' Club" is an organization without constitution, officers, meetings, annual reports or dues, which nevertheless manages to get a good deal of "fun" out of life. The object is to make contributions to our knowledge of horticulture. It is composed exclusively of amateurs—no experiment station workers, professional gardeners or tradesmen.

The method of co-operation is simple: Each man does what he wants to and reports the results to THE GARDEN MAGAZINE. We are glad to pay rather more for such articles than for common ones, but no one should undertake these investigations who wants to get a cent out of them. They are purely for the love of the thing.

The editorial and art staff of THE GARDEN MAGAZINE can be of assistance in these ways:

1. We can suggest subjects. We have a long list of cultural problems like that of the fringed gentian which need solution, and of monographic and plant-breeding work which promises definite returns in three years or less.

2. We can find out for you what is known and what is unknown about your subject, thus simplifying the investigation. Since we are nearer the great herbaria and the great collections of books than most of you, we will gladly do our best to find out what others have done before you begin.

3. We can usually send a staff photographer, or otherwise solve the problem of getting the best possible pictures. In monographic work we can, if desired, supply the botanical element—especially the "key" which is necessary in the series of articles entitled "Little Monographs."

4. We can help in miscellaneous ways, e. g., by suggesting where to get rare plants, etc.

Incidentally we distribute every spring and fall to members of the club new, rare and interesting seeds, plants and bulbs to those who have the proper conditions for growing them and who agree to take good care of them and report the results.

There are also other advantages which can hardly be mentioned publicly.

We shall be glad to correspond with any one who is willing to spend twenty-five dollars for humanity's sake in the hope of adding something worth while to the art or science of horticulture.

Thirty-five problems that need solving have already been published (November, 1905, page 180; and January, 1906, page 282), but we are reserving a choice set for



KELLER'S SUPERB LARKSPURS

Hardy Garden Flowers Number 2

THE Larkspur is the loveliest of all the tall blue-flowered hardy perennials. It blooms abundantly in mid-summer and can be had later on by cutting off the first spikes. Thus it is possible to have flowers right through until frost.

The blue in Larkspur flowers runs through the whole gamut from the palest sky tints to the deepest and most exquisite hues of amethyst and purple, glistening with a wondrous metallic sheen peculiar to this lovely flower. The stately spikes of flowers waving in the breeze transform the garden into a swelling sea of glory. Blue has the extraordinary quality of lending distance and depth to the garden, and will increase its apparent area.

We have a magnificent stock in the following varieties and prices:

NAME	COLOR	HEIGHT	PRICE
D. Belladonna	Turquoise blue	3 to 4 ft.	25c. each; \$2.50 per doz.; \$20.00 per 100
D. Chinese	Dark and light blue	18 in. to 2 ft.	15c. each; \$1.50 per doz.; \$12.00 per 100
D. Formosum	Dark blue	2 to 3 ft.	20c. each; \$2.00 per doz.; \$15.00 per 100
D. Hybridum	Light, medium and dark blue	3 to 4 ft.	20c. each; \$2.00 per doz.; \$15.00 per 100
D. Menopanicum	Large dark blue with white eye	4 to 5 ft.	20c. each; \$2.00 per doz.; \$15.00 per 100
D. Sulphureum	Sulphur yellow	3 to 4 ft.	25c. each; \$2.50 per doz.; \$20.00 per 100
D. Choice Mixed	Varieties	3 to 5 ft.	20c. each; \$2.00 per doz.; \$20.00 per 100

The Larkspur is but a single example of the beauty and distinction of the Hardy Garden. Plant such a garden this year and you will have new flowers in gorgeous masses of color every month from April to November, and year after year this will go on, the garden increasing in charm and loveliness.

Send for our 1906 illustrated catalogue of Hardy Perennials

J. B. KELLER SONS

1023 South Avenue
Rochester, N. Y.

Ideal Sport
A Fine Day
A Good Dog

and



STEVENS FIRE ARMS

It's just as natural for a girl to want to shoot as for a boy. It does her just as much good. Gives her healthy, invigorating outdoor exercise, quickens her eye, steadies her nerve, and makes her self-reliant.

Catalog Free
describing "Stevens" guns of every sort and style, for hunter, marksman, girl or boy, 140 pages. Sent free to any one interested in guns, sending 4 cents in stamps to cover postage.
If your dealer cannot supply you write to us.

J. STEVENS' ARMS & TOOL CO.
450 High Street,
Chicopee Falls, Mass., U. S. A.

such members as are received in 1906. Also it is better if you suggest your own subject. These investigations are along three main lines:

1. Cultural experiments, e. g., how to grow plants that are difficult of cultivation, as arbutus; the best methods of training tomatoes; lime-loving and lime-hating plants, etc.

2. Growing complete collections of some one kind of plant, e. g., lilies, funkias, etc.—not thousand-dollar orchids or plants of mere botanical interest, but all the species and varieties of horticultural promise that are available to the public.

The results may be published in full elsewhere, but we should like the soul of the thing for THE GARDEN MAGAZINE.

3. The improvement of flowers. The "mutation theory" now provides a quicker way of getting new varieties with larger flowers and more of them, new colors and easier methods of cultivation. We can suggest several subjects that ought to show results in two or three years.

ALL THE PLATES IN

Garden Magazine

ARE MADE BY

THE GILL ENGRAVING COMPANY

140 Fifth Avenue, New York

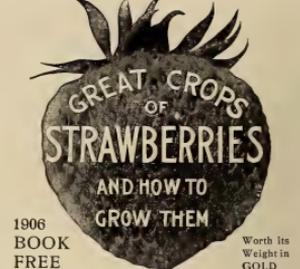


How to Get Penny Packets
of Seed

THE penny packet of seeds is one of the best ideas for civic and village improvement yet invented. This year a quarter of a million packets were sold—not given away—in Cleveland alone. It is a simple, easy thing to sell them to the school children, and the cultivation of these flowers at their homes will transform the whole appearance of a city in less time, and with less effort and expense, than any scheme yet devised.

The sale of penny packets does not antagonize the seedsman, because it does not compete with their five-and-ten-cent packages. On the contrary, they unanimously agree that it makes new business for them. The penny packets are sold only to children, and the bulk of them are taken by children who would not buy five-cent packages this year but are almost certain to do so hereafter. A member of one of the oldest established firms in the city declared that his sales of seeds has increased 33 per cent. since the organization of the Home Gardening Association, and contributes money to the cause, though we buy our seeds elsewhere. This is because the Association's seeds are sold only to children, and the parents becoming interested, buy of the seedsman.

Sometimes a local dealer can be induced to put up penny packages in a city where there is a flourishing improvement association, but if you cannot arrange this you are welcome to write to the Home Gardening Association



GREAT CROPS OF STRAWBERRIES AND HOW TO GROW THEM

1906 BOOK FREE

Worth its Weight in GOLD

The Book that boasts them all because it tells how big crops of big fancy strawberries can be grown every year and how to pick and pack them for big prices. It keeps Experienced Growers posted on new discoveries in plant breeding and latest cultural methods. It takes beginners through a complete course of instruction: tells just when and how to do everything to get Big Results, and how to start a Profitable Berry Farm with little capital. Beautifully illustrated with photo-engravings. Don't order your plants until you read this book. It is free.

R. M. KELLOGG CO., Box 690, THREE RIVERS, MICH.

MONADNOCK

OLD-FASHIONED FLOWER GARDEN

The sweet old-fashioned flowers grandmother used to plant are again coming into prominence. Nothing so sweet and pretty for cut flowers as those of olden times. A corner of your garden devoted to them will be a delight the whole season through.

For 25c (cash or 3c stamps) we will mail you postpaid our "Grandmother's Flower Garden," with full cultural directions. Consists of 30 full-size packets of seed of these beautiful flowers. Don't miss this opportunity for securing hours of enjoyment. This offer we can afford to make only as a means of introducing ourselves to new customers. We send with the collection our 72-page illustrated catalogue describing the best things in flowers and plants. Most truthful descriptions without an exaggeration, therefore no disappointments.

Send no-day letters our supply of collections is unbounded

MONADNOCK GREENHOUSES
KEENE, N. H.

GREEN HOUSES

ROSES grown in new houses FREE from all diseases.
10 large two-year-olds, \$1. 4 for 50c. Postpaid
24 strong young plants, \$1. 11 for 50c.
Best sorts, vigorous roots, true labels, free booklet.
THE LEEDE FLORAL CO., Springfield, Ohio.



QUAKER HILL NURSERIES

310 Main St., Newark, N. J.

All kinds of Trees, Shrubs, Roses, etc., from grower to planter. Free Book, 62 pages, gives prices, describes 528 varieties, tells how to plant and care for them.

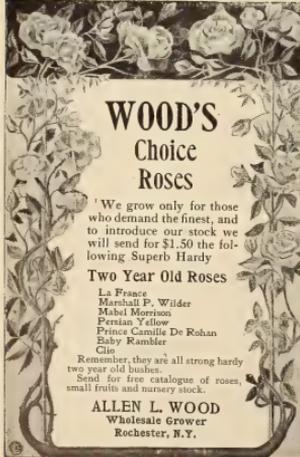
NORTHERN SEED EARLY CROPS

If you are growing potatoes or other garden truck for the early market, plant our Northern Garden Seed and get top prices. Our Extra Early Petoskey is quickest maturing potato growing. Heavy yield. Try some this year and see the difference. For 35c, stamps or coin, will send one large seed potato and complete catalogue of our Hardy, Quick Growing Seeds. Catalogue alone free.

DARLING & BEAMAN, 405 Michigan St., PETOSKEY, MICH.

Write for YOUNG'S SEED BOOK

Don't plant your vegetable or flower garden until you get Young's New Annual Catalogue. This great book contains a choice collection of vegetables, flowers, bulbs and plants; also a lot of valuable information for the planter. Write for other catalogue you may have, be sure you get Young's. Write for free copy to-day. JUSIAH YOUNG, 23 Grand St., Troy, N. Y.



WOOD'S Choice Roses

We grow only for those who demand the finest, and to introduce our stock we will send for \$1.50 the following Superb Hardy

Two Year Old Roses

La France
Marshall P. Wilder
Mabel Monte
Persian Yellow
Prince Camille De Rohan
Baby Rambler
Gis

Remember, they are all strong hardy two year old bushes.
Send for free catalogue of roses, small fruits and nursery stock.

ALLEN L. WOOD
Wholesale Grower
Rochester, N. Y.

EVERGREENS For Hedges, Windbreaks, and Ornament



HEMLOCK HEDGE, RHODE ISLAND.



ARBOR VITAE HEDGE, MICHIGAN.

For nearly forty years these Nurseries have been shipping Evergreens with perfect success to all parts of the Union, from the New England States to the Pacific Coast. Send for Catalogue

FEW people there are who do not love Evergreens, but there are thousands who have few, or none, on their premises because fear of failure to make them live and thrive has withheld them from making the effort. Many have tried and failed, but failure has always been traceable to either a misunderstanding of the proper methods of handling and packing at the nursery, or to a lack of necessary information for the planting and care. Our nearly forty years of experience in raising and digging all kinds of trees, and packing Evergreens for shipment long distances, has put us in the front ranks of successful shippers, and we claim the distinction of being able to so pack Evergreens that they will carry safely to any part of the United States and to Foreign lands. The proper planting and care of Evergreens is now a science that is not confined to few but is widely known and practiced. Each year hundreds of large estates are being thickly dotted with Evergreens, driveways bordered with beautiful Hedges, and thousands of country, village, and city homes are being wonderfully improved and beautified with Evergreen Hedges and specimen trees. **THE EVERGREEN NURSERIES** alone furnishing the trees for thousands of such plantings every year. To those of our customers who doubt their ability to plant successfully, we will furnish, gratis, up-to-date instructions setting forth the most approved methods of planting. If you are desirous of improving your premises with Evergreens or Deciduous trees, a Hedge, Windbreak, or a Screen, write us, giving an outline, near as possible of what you want, and we will give you, gratis, the benefit of our long years of experience. We are confident that our stock will give you satisfaction, as it has to thousands of others. We will serve you well and faithfully. Our Catalog shows many beautiful Evergreen Hedges and Groves.

The illustrations in this adv. are all from photographs of trees bought from us, and the photographs taken expressly for us. Our **FREE CATALOGUE** tells all about them and many more



NORWAY SPRUCE WINDBREAK, INDIANA.



GROVE OF PINES, ETC., NEBRASKA.

Evergreen Nursery Company, Sturgeon Bay, Wisconsin

A FRUIT ORCHARD FOR \$12.50

LOOKING at it from the standpoint of either pleasure or profit, is there anything that surpasses an orchard? When the pleasure of it only is considered, you have early in the spring a gorgeous burst of blossoms, in midsummer the ripening fruit, in the late summer luscious home-grown fruit, and enough over, if you have a part laid out in apples, to store and enjoy the winter through.

If the orchard is looked at and desired merely for profit, the results are even more interesting. For example, one of our customers netted last season \$14 from one four-year-old Elberta Peach Tree. An acre, at this rate, would yield a profit of \$1,400! Another netted \$8 from one ten-year-old Yellow Transparent Apple Tree. Another \$6 from one four-year-old Abundance Plum Tree. Still another customer wrote us that a single Bartlett Pear Tree gave him a profit of \$10.

It is not necessary to go into this thing in a large way, and we make the planting of a small orchard a matter of trifling expense. This is possible because we are one of the largest growers of fruit trees in America, having more than a thousand acres in our nurseries, and sell to the large orchardists of the country in carload lots. We frequently sell for single orchards from fifty to one hundred thou-



Isn't it worth while to get a yield like this every year? You can plant a hundred trees for fifteen dollars

sand trees. We make these special offers:

- FOR A ONE-ACRE PEACH AND APPLE ORCHARD
- 50 Elberta Peach Trees, fine one-year-old stock \$212.50
- 50 Yellow Transparent or Baldwin Apple Trees
- FOR A ONE-ACRE PEACH AND APPLE ORCHARD
- 50 Bartlett Pear Trees \$7.50
- 50 Yellow Transparent or Baldwin Apple Trees
- FOR A ONE-ACRE APPLE ORCHARD
- 100 Yellow Transparent or Baldwin Apple Trees \$5.00
- FOR A ONE-ACRE PEACH AND PEACH ORCHARD
- 50 Elberta Peach Trees \$15.00
- 50 Abundance Plum Trees
- FOR A ONE-ACRE CHERRY AND APPLE ORCHARD
- 50 Early Richmond Cherry Trees
- 50 Yellow Transparent or Baldwin Apple Trees \$20.00

Any other varieties of the fruits included in these combinations may be substituted for those listed. Those mentioned, however, are the most popular varieties among the orchardists, who naturally select the best for yield and quality.

The trees in these offers are all fine stock, and are just what we supply to the commercial orchardist. This stock is grown in the rich Maryland soil, and is perfectly hardy in severe Northern climates.

Lay out some of your unused land in orchard. It requires but a little attention and will yield you large dividends in pleasure and profit. We shall be glad to advise any reader of THE GARDEN MAGAZINE relative to the planting of an orchard, whether large or small, and suggest other combinations than those offered above. Write us today.

J. G. HARRISON & SONS, Nurserymen, BERLIN, MD.

March Opportunities

Seeds and Bulbs Every Gardener Needs Now

This big flower seed offer—a complete flower garden—liberal packets, sent prepaid for one dollar. (Sow these seeds in the house or hotbed in March to set out plants in the spring for early flowers.)



Double fringed petunia four tubular lobes.

Ageratum.....	Pkt.	Lobelia, finest border and ribbon plant.....	Pkt.
Sweet Alyssum.....	5c.	Sweet Signonette, giant spikes.....	5c.
Alyssum, compacta, perfect little ball of bloom.....	5c.	Petunia, single frilled and ruffled.....	10c.
Asters, in choicest sorts.....	10c.	Petunia, double fringed.....	10c.
Cosopsis, large flowered.....	5c.	Salvia Splendens.....	10c.
Candytuft, Giant Hyacinth.....	5c.	Snagragon, brilliant colors.....	10c.
Chrysanthemum, hardy garden sort.....	10c.	Nicotiana.....	10c.
Dahlias, Burbank's single fancy.....	10c.	Pansies, <i>Berger's Never Fail</i> , superb collection.....	10c.
Daisies, Burbank's Shasta sorts.....	10c.	Verbena, mammoth mixture of superb sorts.....	10c.
Heliotropes, in mixture.....	10c.	Wallflower, mixed.....	10c.

These 20 large packets of TESTED PRIME FLOWER SEEDS \$1.00.

Enclose the money to-day and merely ask for "March Flower Seed Collection."

If you want to gain a month on your flower bed this year order these now

Start these bulbs in the house or hotbed in MARCH to have fine young plants for the garden in spring. SPECIAL—in addition to low prices—we will *prepay express charges* on a dollar's worth or more of these bulbs if ordered now, to introduce our new catalogue.

Tuberous Rooted Begonias
Single white, rose, crimson, scarlet, salmon yellow, orange in separate colors: each, 75c.; doz., 7.50.
All colors mixed: each, 6c.; doz., 65c.

Caladium (Elephant's Ears)
Large bulbs: each, 15c.; doz., \$1.50.

Cannas
Red, yellow, tigered, white, rose, vermilion; separate mixed sorts: each, 10c.; doz., \$1.00.
Canna in fine mixture: each, 8c.; doz., 85c.

Caladiums, Fancy Leaved
Superb coloring, named sorts: each, 15c.; doz., \$1.50



Tuberous Begonia.

For \$1.00 we will send you fifteen of these bulbs prepaid by express, our selection, including Elephant's Ears, Fancy Leaved Caladium, Cannas, and Begonias.

This timely collection of seeds and bulbs will mean success to your garden. The special prices are to introduce

OUR 25th ANNUAL CATALOGUE

now ready. It will interest you. Full lists of all sorts Iris, Paconias, Cannas, Gladioli, Lily Bulbs, also seeds, shrubs, etc. Made especially attractive to both large and small buyers. *Send for it to-day.* Address:

H. H. BERGER & CO., 47 Barclay St., New York. Est. 1878

BABY RAMBLER

In the garden in summer, or in the house in winter, it is never out of bloom. The plants are very vigorous, grow to a height of 24 inches. The foliage is dark, glossy, profuse and remarkably free from insects and fungus.

The flowers are borne in clusters of 30 and 50 flowers to a cluster. No garden or window should be without it, just like the Crimson Rambler, excepting it is dwarf, and is never out of bloom, also it is perfectly hardy in the coldest climates. One year olds 20c each, 3 for 50c; two-year-olds 40c each, 3 for 1.00.
N. C. BANGHAT, Florist & Seedman, South Plum Street, SPRINGFIELD, OHIO

TWENTY YEARS EXPERIENCE



in close practical touch with large and small estates in all parts of the country enables us to offer to every owner of Grounds and Gardens our special *best* in Designs and suggestions for the improvement of such, and with great economy and saving. We study to meet the individual requirements of each place, and supply both Plans and Material in the most economical manner.

Our practical suggestions enable you to plant any other portion of your place with a great saving, and we ask you to write us and we will help you.

We send men of experience at all times at nominal rates to advise upon every leading question of Landscape work. Formal and Old-fashioned Gardens and every feature of Landscape work we give close and careful attention to. We refer to many hundreds of private properties in all parts of the United States.

Our Nurseries are among the largest in the United States, and we ask but reasonable profit.

We offer every known hardy form of Trees, Shrubs, Rhododendrons, Evergreens, Herbaceous Plants, Vines, Dahlias, Bulbs, etc., at prices which will attract your close attention.

If you have any problem to solve, we are willing to assist, and will be glad to have you write us.

WRITE US AND SEE OUR CATALOGUES

THE SHADY HILL NURSERY CO., 155 Milk St., corner of Broad, BOSTON, MASS.

of Cleveland. We sold 157,000 packets last year to forty-seven societies and schools outside the city. It is true that we make a little money out of such transactions on account of the great quantity put up, but every cent we make we put back into the movement, which is essentially a philanthropic enterprise. We buy our seeds in bulk from regular importing seedsmen, and they are put up in penny packages by women who have had five years' experience in this work. The Association is able to put up seeds much more cheaply than smaller organizations of less experience, which have to buy in smaller quantities.

The beauty of this penny-package scheme is that anyone can start it who is willing to spend five dollars, and twenty-five hours time for the improvement of his city. You do not have to organize a society, attend committee meetings, and get the approval of a lot of people with conflicting interests before you can do anything. Of course the ideal thing is to have a large and lively association, but when you have that the seed problem will take care of itself. Meanwhile, here is a practical way to start.

The list of seeds we sell includes asters, bachelor's-buttons, balsam, calliopsis, China pinks, four-o'clocks, marigolds, morning-glories, nasturtiums, phloxes, verbenas, zinnias and gladiolus bulbs, corn, beans, lettuce, radishes, beets and onions.

In the spring envelopes are sent to the schools or organizations which have applied (if we do not deal with individuals). One envelope is put on each child's desk before the close of school in the evening. On it is printed the names of the different kinds of flower and vegetable seeds, with general directions for preparation of the soil, time of planting, etc. The envelopes are taken home, and each child marks beside the name of the flower the number of packages desired. He writes his address in the proper space and returns the envelope with his money to the teacher. The money is sent to the treasurer of the Association, and the envelope to the distributing centre where the orders are filled. Each package has specific directions for planting and care of the seeds contained therein.

In 1905 we distributed 389,895 packets of seeds and bulbs. Of these 234,000 packets were used in Cleveland, besides 27,440 bulbs of gladiolus. Last year we reached 50,000 families. The children have all the pleasure of raising flowers during the summer and bringing them to the schools for the autumn flower shows. As a consequence, backyards have been cleared up and the city is in a more sanitary and beautiful condition than ever before.

The Slavic Alliance of Cleveland sold and distributed in 1905 about 12,000 packages of seeds, an increase of almost 100 per cent. over 1903. This Alliance published a pamphlet in four different Slavic languages, namely, Bohemian, Polish, Slovak and Slovenic, which gave an outline of its progress and also contained a treatise on floriculture in general, and special directions for every kind of flower seed offered for sale that year.

LOUISE KLEIN MILLER,

Curator of School Gardens, Cleveland Public School, Cleveland, O.



Arbors, Trellises, Iron and Wire Fences

WE design and build wrought iron arbors and trellises of all descriptions for vines and fruit trees. Write for catalogue No. 29 A illustrating our specialties for gardens and showing as well a great variety of wrought iron railings, entrance gates and fences for all purposes.

ANCHOR POST IRON WORKS

OFFICE AND SALES-ROOMS

15 Cortlandt St. New York



Thousands of trees eight to twenty-five feet apart, with full wide top.

HICKS TREES

Save years of waiting for ordinary Nursery stock. One perfectly developed tree is worth several small trees and is the most economical investment.

Grown 8 to 25 feet apart, highly cultivated, and dug with the full natural root system—a delicate lace work of fine feeding roots, they transplant with the minimum check.

A class of stock that people want. It is within the means of the average purse. Trees 16 to 30 feet high by the carload.

The usual sizes of trees, shrubs, old-fashioned flowers, and formal garden material, in quantity.

Evergreen, oak and chestnut seedlings by the 100,000 grown from Long Island seed to fit the conditions of Long Island and north eastern United States. The foresight and skill of the Westbury Nurseries makes possible reforesting barren land, the planting of windbreaks, shelter belts and screens.

Send for price list of transplanted and seedling evergreens, white, Austrian, Scotch, and Pitch Pines, Spruces, at low rates in quantity.

We have prepared for moving, on Hicks Patent Tree-movers, large shade trees ten to 50 feet high and 30 feet spread of roots and top. Large evergreens up to 45 feet high.

12 TREE MOVERS—EXPERT MEN—SENT ANYWHERE

ISAAC HICKS AND SON

Nurserymen and Scientific Tree-movers

Telephone 76 W

WESTBURY STATION, LONG ISLAND

Bridgeman's

HIGH GRADE

Vegetable, Farm and Flower Seeds

GARDEN TOOLS and HORTICULTURAL BOOKS

Descriptive illustrated catalogue mailed free on application

BRIDGEMAN'S SEED WAREHOUSE

37 East 19th Street, New York City



NURSERY STOCK SPECIALTIES

- Norway Maple, Large Specimen Trees
- Horse Chestnut, " " "
- Oriental Plane, " " "
- Catalpa Speciosa, " " "
- Hemlock Spruce, Specimen, Sheared Trees

- Catalpa Bungeii Blue Spruce, Koster Variety
- Carolina Poplar Rhododendron Hybrids
- Japan Maple Rhododendron Maximum, in car lots
- Concolor Fir Kalmia Latifolia, in car lots
- Dwarf Box for Edging

Full line of stock for landscape work. Write for prices. Catalogue free on application. RUMBERLY OF KEENE & FOLK

P. A. KEENE

1 MADISON AVENUE

NEW YORK CITY



GLADIOLI

"All the colors of the Rainbow"

The Diamond Selection

"VIRGINIA"

"NEWARK"

"WAYNE"

"ARCADIA"

"AGNES"

"GRACE"

"NAVY"

"COKONADO"

"SARADENA"

"CORNBELL"

"SUSANNAH"

"DELA MONTE"

\$5.00 for the 12

Agents Wanted

Stephen Fish Sherman

Proprietor of

Willow Bank Nursery

Newark, Wayne Co., N. Y.

"LADY GAY"

MY new seedling rambler rose, originated at Woods Hole, Mass., a source of wonder at the rose exhibition in England last year, and there awarded two gold medals. Perfectly hardy and most floriferous.

The new hardy hybrid tea rose "Dean Hole," Killarney, Gruss an Teplitz.

The new hybrid perpetual: "Frau Karl Druschki," the best white rose yet introduced.

Hollyhocks, Peonies and Phlox in choicest varieties.

My descriptive catalogue of roses, hollyhocks, peonies, and phlox mailed on request.

First quality stock guaranteed, when shipped.

M. H. WALSH,

ROSE SPECIALIST,

WOODS HOLE, MASSACHUSETTS.



Lombardy Poplars

Pyramidal Birch

Are You Going to Plant?

Of 35 species of Birches the best are the following (varieties of the European White Birch), namely:

1. The Cut-leaved Weeping
2. Young's Weeping
3. Pyramidal, (*Betula Fastigiata*.)

Their white bark, slender branches and graceful forms make them attractive at all seasons. They are as hardy as an Oak, adapt themselves to all soils and grow rapidly.

THE PYRAMIDAL VARIETY shown in the photograph was planted at the same time as the Poplars. It was only four to five feet high and the Poplars were ten to twelve feet, which shows its rapid growth, since Poplars are known to be the most rapid growing of all trees.

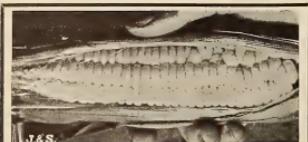
Our Catalogue full of valuable hints, lists the BEST TREES both Fruit and Ornamental. Spring Supplement gives revised prices of Trees and Shrubs.

Our Stock of Norway and Sugar Maples in sizes up to twenty feet is unexcelled.

We are Headquarters for Roses. No wonder our trade doubles every year, since our customers are so enthusiastic as to say to their friends: "There is only one place to buy Roses and that is the ROSEDALE NURSERIES."

Other Specialties: Gladioli, Dahlias, Phlox, Iris and Other Hardy Plants, Rhododendron and Mountain Laurel.

S. G. HARRIS, Tarrytown, N. Y.



Plan your garden now; take plenty of time for it; enjoy it; and have your vegetables early and better than you can buy. You can't get the best results unless you select the latest and best varieties.

When you plant sugar corn let your first planting be our

New White Mexican SUGAR CORN

It has the same remarkable sweetness and delicious flavor that characterized the old-time well-known Black Mexican. It is very early, good size and delicious.

10c pkt.; 25c pt.; 40c qt.

Other choice vegetables and flowers described in our

GARDEN AND FARM MANUAL—FREE

with actual photographs of what you can raise from our thoroughbred test seeds.

JOHNSON & STOKES, Philadelphia.



Gillett's Ferns and Flowers For Dark Shady Places

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Primroses, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the HARDY WILD FERN AND FLOWERS of New England. These we have been studying and growing for 25 years, and can help you in your selections. They are adapted for a great many places, and selections can be made for beautifying the dark corner by the porch, the shaded wall of hedge, shady hillside, wet places in both open sun, deep shade, dry woods and rocky places. Brilliant lobelias for planting in small brooks; dainty gentians for planting by brookside. Before purchasing send for my illustrated descriptive catalogue of over 300 species, which tell about this class of plants.

EDW. GILLETT, Southwick, Mass.

ASTER

Giant Flowering
THE KING
of ASTERS

Grand and magnificent large double flowers, colors beautiful, clear and rich. No flower can approach in many important respects this wonderful variety. As a bedding plant, has no superior.

For only 6 cts. we will send you a packet of 100 seeds for trial, including free copy of our Grand New

BOOK

NORTHERN GROWN SEEDS

which contains all Good Things, worth growing to date, at the right prices. 3 two-cent stamps will bring this bargain to your address by return mail. Send to-day, this offer will not appear again.

L. L. MAY & CO., St. Paul, Minn.



Seven Delights of March

Planting sweet peas.

Eating asparagus that has been forced outdoors under a barrel. Put a barrel over a couple of hills in February. Fresh manure, heaped outside, supplies the heat.

Titto rhubarb.

Parsley from a potted plant in the cellar window.

Titto mint, to go with lamb.

Corn salad, sown late October and wintered outdoors under some litter.

Gloating over the first flowers: snowdrops, crocuses, hepaticas, the blue *Anemone blanda*, glory-of-the-snow (*Chinodoxa*), winter aconite, Christmas rose, and the harbinger of spring (*Erigenia bulbosa*).

Watching for the first green tips that pierce the soil in the beds of tulip, narcissus, and other bulbs.

Important Indoor Jobs

Start flower seeds in "flats" on the kitchen window sill or, better still, make a plant table.

Make two cold storage rooms in your cellar, one for fruit and one for vegetables. You still ought to have apples, pears and plenty of pickles, preserves and jellies.

Look over the vegetable roots. If you have managed well you should have potatoes, sweet potatoes, celery, onions, oyster plant, horse-radish, beets, carrots, parsnips, cabbage, pumpkin, squash and turnip.

Inspect your flowering roots and bulbs: cannas, dahlias, gladioli, poker plants, cinnamon vine, tuberose and elephant's ear. The last needs a warmer place than the others.

Clean and sharpen the tools and fix a neat place for them in which you can take pride.



The Californian's Reminder

March is the best month for lawn-making, unless the spring is late, when you should wait until April.

Sow artichoke, corn, melon, pumpkin and squash. Also those mentioned in February if you have not done so already.

Propagate ageratum, alternanthera, coleus, salvia and bedding plants in general.

Propagate violets.

Plant second lot of gladioli, also tuberous begonias and tigridias.

In light, warm soils plant dahlia roots.

Plant carnations.

Cultivate and water old clumps of chrysanthemums to get new growth for April and May propagation from cuttings.

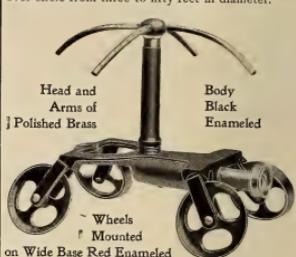
Divide clumps of larkspur, golden rod, sunflower, phlox and rudbeckia.

Prune more gladioli and some tritonas.

Plant bignonia and bougainvilleas.

The New Century Lawn Sprinkler

Revolves freely with any pressure. Equal spray over circle from three to fifty feet in diameter.



SIMPLE AND DURABLE

Your money paid if not entirely satisfactory. Sent express prepaid anywhere in United States east of Rocky Mountains for only \$2.50. Descriptive circular free.

THE YOST ELECTRIC MFG. CO.,
Toledo, Ohio, U. S. A.

1840

Old

1906

Colony Nurseries

Hardy Shrubs,

Trees, Vines,

Evergreens

and

Perennials

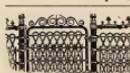
A large and fine stock of well-rooted plants, growing in sandy loam. Good plants; best sizes for planting very cheap. Priced catalogue free on application.

T. R. WATSON, Plymouth, Mass.

RHODODENDRON MAXIMUM, Kal-mias, Wild Azaleas, and Hemlocks—Native grown plants, in carload lots.

C. G. CURTIS,

Calliocon Depot, Sullivan County, N. Y.



LAWN FENCE

Many designs. Cheap as wood, in large Catalogue free. Special prices to cemeteries and churches. Address: COILED SPRING FENCE CO., Box 368 Winchester, Ind.

SEEDS AND PLANTS

Grown by specialists from stock of best vitality, quality and production. Catalogue free—Many photographic reproductions and cultural directions.

F. D. VAN WAGENEN, SEEDSMAN, FULTON, N. Y.

VICK'S
SONS

GARDEN AND FLORAL GUIDE

Ten cents brings you one pocket Vick's Branching Aster in our 1000 Catalogue, and a coupon good for 10 cents on first order of \$1.00. **Free** Quality stands out in our new Violet King and Misses Asters, both offered for the first time. Send for the Guide anyway. It's free.

JAMES VICK'S SONS,
362 Main St. Rochester, N. Y.

FREE
FOR THE
ASKING



This exquisite Japanese shrub (Berberis Thunbergii) makes the most beautiful hedge of any deciduous plant. Nearly all hedge plants are only a fatal defect—they get bare at the base unless very carefully pruned; the Barberry attains a bushy, luxuriant growth in its lowest branches first and then grows up. Thus it is always well furnished at the base with dense luxuriant leafy foliage.

No plant can outdo the Barberry in the brilliancy of its Autumn color, which runs the whole gamut from green, bronze and purple to the most vivid scarlet, making a gorgeous display. But it is in winter that the transcendent merit of the Barberry shines forth. The fall of the leaves reveals the exquisite tracery of its multitude of slender branches hanging gracefully with red berries. Against the snow the fiery berries give the landscape warmth and coziness that cannot be equalled. It is the only shrub whose berries remain attractive all winter and even until May, and almost the only one whose bright berries are not eaten by the birds.

The Barberry is also finely adapted for mass planting on the lawn. From our magnificent stock can be planted a complete full-grown hedge of six to ten year old plants, from 25 to 50 cents per lineal foot. For lawn planting we have six and seven year old bushy plants, \$2.00 and \$3.00 per dozen.

FOR THE ROSE GARDEN

There are hundreds of hardy roses all having some color, and it is difficult for the amateur to make a selection. We have had long experience in growing roses suitable for the American climate, and have selected from our extensive stock, comprising the finest collection in America, the following best all around varieties:

The Best Hardy Garden Rose

DELICATE SHELL PINK, with FINE SATINY PETALS and FINEST COLOR. Three year old bushes, \$9.00 per doz. Special prices on larger quantities.

The Twelve Best Everblooming Roses Killarney, glowing shell pink. Kaiserin Augusta Victoria, large creamy white. Liberty, crimson. American Beauty, brilliant carmine pink. Mrs. Sharran Crawford, silvery pink shaded rose. Madame Caroline Testout, soft rose pink. Victory, deep pink. Maman Cochet, rosy pink. Maman Cochet, white. La France, soft violet pink. Clothilde Loupette, white with pink center. Chateaux, apricot pink. Strong two and three yr. old bushes. Collection, \$5.00.

The Twenty-five Best Hardy Garden Roses Fisher Holmes, Anna de Diesbach, Baroness Rothschild, Captain Crispy, Clio, Duke of Teck, Gen. Washington, John Hopper, \$100. Chesnut Hybrid, Duke of Edinburgh, Gen. Jacquemont, Jean Libaud, Jules Margottin, Mme. Gabriel Luizet, Margaret Dickson, Mrs. John Laing, Ulrich Bruner. Strong 2 and 3 year old bushes—Collection \$20.00.

A COMPLETE ROSE GARDEN of 100 selected strong rosebushes of all the above named varieties, two and three year old bushes, \$35.00. The same in one and two year old plants, \$75.00. We have one of the most complete varieties in this country, where we grow Trees, Shrubs and Hardy Plants in endless variety. Landscape Gardening and Contracting. Planting plans and estimates submitted without charge. Where planted by us we guarantee our stock to grow. WRITE FOR OUR HAND-BOOK, "THE BEAUTIFYING OF COUNTRY HOMES."

ROSE HILL NURSERIES, Siebrecht & Son

Nurseries: New Rochelle, N. Y.

Fifth Avenue and 38th Street, New York

30 Roses for \$1.00

All Charges Prepaid
All Guaranteed to Grow

Here are some of the varieties included in this offer:

Baby Rambler

The perpetual ever-blooming Dwarf Crimson Rambler. Blooms outside all Summer and inside all Winter. In fact, it is without flowers. The individual flowers and trusses are larger and of a brighter crimson than those of the Crimson Rambler. Hardy as an oak. Strong plants, 25c each; 2-year-old plants sent in bud and bloom, 40c.

Keystone

The only hardy ever-blooming yellow climbing rose. Flowers deep lemon yellow, with delicious fragrance. A free-grower, attaining a height of 15 feet in a single season. Perfectly hardy. Strong plants, 25c each; large 2-year-old plants, 40c each.

READ THESE WONDERFUL OFFERS

OFFER NO. 1C. For only \$1.00 we will send one strong plant of each of the above named roses and 25 others of the best known varieties, including such grand roses as Pink Chateau, White Cochet, Brides, Helen Gould and Mal. F. Kruger, making 30 rose plants in all, all on their own roots, all charges prepaid, and with written guarantee that they will grow. We will send the same 30 roses in large, strong 2-year-old plants for \$4.00, all charges paid. Note. No climbing roses except Philadelphia Rambler and Keystone will be included in this offer. Order as Offer No. 1C.

OFFER NO. 2C. For only \$1.00 we will send the four roses named and described above, together with 13 bush roses and 13 climbing roses, making 30 plants in all, all charges prepaid, and guaranteed to grow. The same 30 roses in large 2-year-old plants for \$4.00, charges paid. Order as Offer No. 2C.

Philadelphia Rambler

The best hardy Crimson Climbing Rose today. Blooms two weeks earlier than the old Crimson Rambler. The flowers are of a deep, rich, deep crimson and will not fade, bleach or wash out, but hold their dazzling color to the last. Hardy everywhere. Strong plants, 25c each; extra strong 2-year-old plants, 40c each.

American Beauty

This magnificent flower needs no introduction. It is the grandest and most beautiful rose grown. For its intensity of size, rich color, exquisite form and delicious fragrance, it is unsurpassed. Strong plants, 25c each; 2-year-old plants, 40c each.

ORDER EARLY—STOCK IS LIMITED

Remember that any one of the above four offers will be sent to any address in the United States for only \$1.00. We will send all roses to you in the best condition the plants will grow. No change can be made in any of these offers, and none should be asked. Outside orders must be in, to each offer, with for our 1906 catalogue beautifully illustrated in colors. It is free. Address:

THE SPRINGFIELD FLORAL COMPANY, Box 103, SPRINGFIELD, OHIO

THIRTY THOUSAND ACRES OF RHODODENDRONS!

This is the stock from which you can select Native and Hybrid Rhododendrons, Kalmias and Azaleas and which, if for nothing else, makes the Reading Nurseries one of the most notable in the country. It controls the largest collecting agency in America, comprising thirty thousand acres, and is able to supply the very choicest stock of these shade-loving evergreens in any size and quantity. It is supposed that there is not a more extensive single stock in the world. The Reading handbook, which is quite different from the ordinary nurserymen's catalogue, lists these in detail with price.

Are You Interested in Berry-Bearing Plants?

If so, there is a book for you. Mr. Manning is writing a series of monographs on live horticultural subjects, to be published from time to time. The first discusses berry-bearing plants. It is a forty-page booklet on the two hundred and fifty kinds of berryed plants which have distinctive ornamental value. It has been said that this is one of the most important contributions to horticultural literature that has been published on the subject.

The *Gardener's Chronicle* of England in its issue of May 30, 1905 has this to say of it:

"MANNING'S MONOGRAPHS..." The treatise on berry-bearing plants is really a valuable gardening monograph from the number and variety of the subjects treated of, and especially from the way in which those subjects are handled. Many of the popular names are not familiar here, but this momentousness is compensated for by the addition of the botanical names. Lovers of hardy shrubs will be astonished at the multitude of desirable plants that are mentioned."

A copy of this monograph will be sent on request to those who are really interested.

THE READING NURSERIES

J. Woodward Manning, Proprietor READING, MASS.

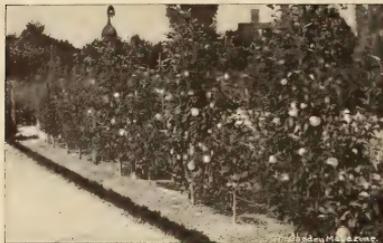
N. B.—The second monograph in the series will be on Rhododendrons. Ready in March.

James Olesner

An Orchard in a Small Garden

THINK of having half a dozen kinds of orchard fruit in the compass of your small garden! This is possible by planting dwarf trained and pyramidal fruit trees. Grown along the border of the garden against a wall or a trellis they do not take up any considerable space, and even a small city plot will contain a dozen without sacrificing anything else. And you will not have to wait years for the trees to come into bearing as in the case of ordinary orchard trees. We can supply bearing trees that should fruit the first year.

Not only do these dwarf trained fruit trees save time and space, but they are far easier to spray, prune and care for, since you have everything within reach. Moreover, the fruit is borne profusely, it ripens much better, it is greatly superior in quality to that of ordinary fruit trees, and has a finer flavor.



By planting a number of dwarf trees of different varieties on a small plot you can supply your table with a succession of extra quality fruit all summer.

We have made a speciality of dwarf fruit trees and have a fine stock of Apples, Pears, Peaches, Plums, Cherries, Apricots, Nectarines, etc.

The prices range from \$2.00 each up, according to the form and variety. Send for our special price list of these trained fruit trees and English pot-grown grape vines.

We have the finest collection of ROSES

in the country, comprising 150,000 two-year-old plants for Spring delivery. They represent the choicest grown and imported by us from all parts of the world, consisting of Hybrid Perpetual, Tea, Climbing, Bourbon, Noisette, Wichuraiana, Lord Penzance Sweet Briar, and others. White and Pink Cochet, White and Pink Kaiserin, Baby Rambler, Frau Karl Druschki, and Mrs. R. G. Sharman Crawford are superb novelties.

We offer these at special prices for immediate acceptance, \$2.00 per dozen, \$15 per hundred. Rare varieties, \$3.00 to \$6.00 per dozen. Send for special detailed price sheets.

We have also an extensive stock of choice

Evergreens and Conifers

Shade Trees and Flowering Shrubs

Hardy Old Fashioned Flowers

Bay Trees, Boxwood and Blue Spruce

English Hardy and Maximum Rhododendrons

Send for our new illustrated general catalogue.

BOBBINK & ATKINS, Nurserymen and Florists, RUTHERFORD, N. J.

VICK'S
JAMES SONS

GARDEN AND FLORAL GUIDE FREE

Contains many new Premium Offers. You should know about Vick's Violet King and Mikado Asters, now offered for the first time. Send ten cents and receive a packet of Vick's Branching Aster, in Six Colors, and coupon good for 10 cents on purchase of \$1.00 or over from 1936 Guide. Send for the Catalogue anyway, it's free.

JAMES VICK'S SONS,
362 Main St. Rochester, N. Y.

Dwarf Trained Fruit Trees

all sizes and forms

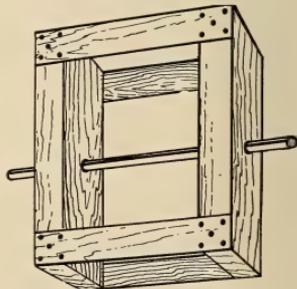
Hot House Grape Vines

Strong 2 and 3 year old canes
75 cents to \$2.00 each

Send for catalogue

ROSE HILL NURSERIES

Siebrecht & Son Co. 5th Ave. and 38th St., New York
Nursery: New Rochelle, N. Y.



Fasten together two pieces of wood at the same distance as the length of your pipe. In the centre of each bore a hole; running through these a broom handle, which becomes the axle of the roller.

When his well had been dug, two or three of the big terra-cotta pipes with which it was lined had been left over. He had taken one of these—it was two feet in diameter and about eighteen inches long—and fitted it up as a roller.

"Why, it's simplicity itself!" I exclaimed, as I looked it over. "All great inventions are," he replied, grandly. "Now you fellows go and copy it, and don't come borrowing mine."

I did copy it, and now I possess a roller. This is how it's made:

Rollers Made from Drain-pipes

THERE are six of us suburbanites—"town farmers" the people around here call us. We all had lawn mowers, but not one owned a roller. Rollers are heavy things and very difficult to get out from town, so we went without them and the lawns suffered.



A simple, cheap and effective lawn roller which can be made from a piece of drain tile.

I looked out one morning and saw my neighbor pushing a big roller up and down his front lawn. It wasn't long before I went over to see him, or rather his roller. I found he had constructed about as servicable a thing as one needed.

The Bay State Nurseries

North Abington, Mass.

Owners of many large Estates are buying their *Shade Trees, Shrubs, Roses, Herbaceous Perennials* etc., direct from our nurseries. We have no agents. We make a speciality of growing *high grade nursery stock*, selling it at reasonable rates. We have unsurpassed facilities for the proper handling of orders, and are so located that *quick delivery is assured*. Upon request we will place in your hands one of the finest illustrated *Nursery Books* published. Write for it to-day.





A Fine Collection of Cypripedium

The tropical Lady Slippers have always held a remarkable fascination for lovers of choice and interesting plants. Connoisseurs often make collections of Cypripedium than of any other kind of orchids. This is partly because of their ease of culture, for they can be grown in rotting soil since they do not get their food from the air. But the real secret of their popularity is the beauty of their form and the extraordinary range of colors. In some species the foliage is beautifully fringed after the fashion of the modern.

The following collection has been especially made for readers of THE GARDEN MAGAZINE. It comprises the most distinct types, the lower priced species and the kinds that are most easily grown by the beginner.

As a special inducement we offer this collection of 8 strong plants for the round sum of \$15.00: 2 *Cypripedium callosum*, 1 *C. Charlesworthii*, 1 *C. acaule*, 1 *C. pubescens*, 1 *C. Lane-veitchianum*, 1 *C. Leucorum*, 1 *C. Spicerianum*, 1 *C. Venustum*.

We have many other kinds of Cypripediums and are specialists in Orchids. If you are an expert, we will help you select the best varieties. If you are an expert, we will help you select the best varieties. If you are an expert, we will help you select the best varieties.

JULIUS ROEHRS COMPANY
Exotic Nurseries Rutherford, N. J.

THE PRIZE GARDENS OF 1905
GROWN WITH **MISS C. H. LIPPINCOTT'S** LAWN AND FLOWER SEEDS

"The Seeds That Keep Faith With You"



FIRST PRIZE \$20 Was given Mrs. Geo. W. Crane, of 833 Harrison Street, Topeka, Kansas, for the first lawn and flowers grown from Miss Lippincott's seeds in 1905. She spent less than \$5 to produce such results—the beautiful *Salvia hedge* is alone worth five times that amount. As her home occupies the most prominent residence lot in town, facing the State House Park, this beautiful lawn has naturally attracted much attention. Mrs. Crane has always found my seeds free germinating, resulting in flowers much healthier than the average, due to my always providing fresh seeds.



Mrs. Elizabeth Armstrong, 1087 Parker Ave., Chicago, was awarded one of the fifteen \$1 prizes. With less than a dollar's outlay she transformed a back yard, with soil none too rich, into the bow of beauty, and has brought pleasure to many an invalid with its treasures.

Mrs. T. W. Moulton, South Road, Adoh, Mass., was awarded one of the three second prizes of \$10. This wealth of bloom was secured with \$2 worth of seeds without the aid of a hot house. The picture, she writes me, does not do the flowers justice.

George Tanner, Allison, Pa., was awarded another of the fifteen \$1 prizes. This beautiful lawn and terrace, 210 feet long, were produced by a bushel of my lawn mixture. The terrace is at an angle of 45 degrees. Yet in six weeks it was ready to mow.

I show above four of the 28 prize gardens grown with my seeds in the season of 1905. It would be a pleasure to reproduce illustrations of all, but I can give only the names of the successful competitors.

- | | | | |
|-----------------------------|------------------------------------------|---------------------------|------------------|
| \$10.00 Mrs. G. W. Moulton | \$20.00 MRS. G. W. CRANE, Topeka, Kansas | | |
| \$10.00 Thomas Lord | Adoh, Mass. | \$5.00 Mrs. L. D. Toliver | Allison, Kan. |
| \$10.00 Mrs. Charles Cannon | New Haven, Mo. | \$5.00 Miss Louise Stake | Granby, Minn. |
| \$5.00 Mrs. L. A. Miller | Emporia, Kans. | \$2.50 Mrs. J. V. Gushing | Loveland, Ohio |
| \$5.00 Mrs. E. E. Hedden | Wauconda, Iowa | \$2.50 Ralph B. Frison | Casey, Ill. |
| \$5.00 J. Wm. Eckhardt | Harrisburg, Pa. | \$2.50 Mrs. Jacob Cromer | Trippe, So. Dak. |
| | Baltimore, Md. | Geo. P. Callahan | Seattle, Wash. |

The names of the fifteen one dollar prize winners will be furnished if requested. The same prizes will be given this season.

Time To Think About Your Lawn

The rarest flowers and plants, the most slightly beds lose much of their charm unless surrounded by stretches of soft velvet turf. A beautiful lawn itself is enough to make a home attractive. If you are making a new lawn this spring or rescuing the old, you want my famous *Lawn Grass Seed*—a careful mixture of various grasses best adapted to produce a permanent satisfactory turf.

Per quart, 25 cents; two quarts, 45 cents; peck, \$1.15; bushel, \$4.00. Post or haul by express at purchaser's expense. A bushel will seed one fourth acre and other quantities in like proportion. April first is the best time to make lawn—be prepared.

FREE—"Floral Culture," my 14th Annual Catalog, with in great lot of new seed bargains and details of \$1.00 price offer for 1906. All FREE for the asking. Write me today—not tomorrow.

MISS C. H. LIPPINCOTT
Fleener Seedwoman of America
706 10th Street, South, St. Paul, Minneapolis, Minnesota



ASPARAGUS

Six varieties of Healthy, Thrifty, one and two year old Roots. Also a full line of Vines, Plants, Vines, California Privet, Garden Tools, Spray Pumps and Mixtures. Write for catalog and valuable Spraying Chart. It's free. Arthur J. Collins, Box N, Moorestown, N. J.

7 BEAUTIFUL PORCH VINES, 25c
The best vines for quick growth (10 to 25 feet in the season), dense shade and profuse bloom are *Thunbergia*, *Giant Nasturtium*, *Perennial Pop*, *Colors Scandinavia*, *Japanese Giant Morning-Glories*, *Japanese Variegated Hop*, *White Moonflower*, *of double-pinked of each—7 in all—30 cents.*

Five Fine Annual Hedge Plants, 25c.
The Best Plants for Hedges are The Gorgeous Dwarf *Crimson Dutch Jasminetum*, The Symmetrical *Kochia Scoparia*, *Triploch. Ill.*, The Flowering *Vines* or *Perennials*, the Well-Known *Fast* of *Stock* and the *Dead Bush* *New Scandinavian Shells*. A full size packet of each, enough in each packet for 50 feet of hedge, five packets in all, 25c.

SPECIAL 25c. Seed Collections.
Hardy Border Collection, 8 pkts. 25c.
"Fragrant Garden," 10 pkts. 25c.
"Ornamental Favorites," 10 25c. "White Camellia," 8 pkts. 25c.
Any collection given by any collector 50c. All life collections 50c.
Large Illustrated Catalogue Floral Genus. Free. Address plainly.

The McGregor Bros. Co., Box A, Springfield, Ohio

SWEET CORN

WOULD YOU LIKE TO RAISE THE MOST DELICIOUS CORN EVER GROWN?

Then you should plant none but **ORDWAY'S GOLDEN**, because this wonderful variety has the leading qualities of the ideal corn which win favor at every well-ordered dinner table—early, tender, juicy and sweet. Testimonials from a large number of customers verify the assertions we make, and assure us that we cannot praise **ORDWAY'S GOLDEN** too highly. Carefully selected seed of this variety sent by return mail on receipt of price. Trial packet containing enough seed for thirty-five hills, 10c; half-pint, 20c; pint, 35c; quart, 65c.

O. P. ORDWAY,
SAXONVILLE, MASS.

Fence, Hitching and Clothes Posts
Standard Steel Fence Posts for supporting lawn and field fencing and for hitching posts, clothes posts and street signs. Far more durable and handsome than wooden posts and can be set by driving into the ground, thus obviating the digging of holes.
Write for catalogue and price list.

J. H. DOWNS, 235 Broadway, New York

WANTED Capital to develop a Southern industry that will appeal especially to the readers of THE GARDEN MAGAZINE. Business has been established twenty years and will easily pay 12 per cent. on the investment. For further particulars address,

INVESTMENT,
care THE GARDEN MAGAZINE

Increase the Yield of Your Garden

by using the **IGOE TOMATO AND PLANT SUPPORTS**. They will mean a more abundant crop of Tomatoes of superior quality, and more beauty and success of your heavily flowered plants, such as Peonies, Dahlias, Golden Glow, Chrysanthemums, etc. *The best and strongest support made.*



PRICES

Per Doz \$1.75
Per 50, \$7.00; per 100, \$12.50

Send for Price List and Catalogue.

THE IGOE CARNATION SUPPORTS are equally important for the success of your Carnations. 2-ring, \$3.50 per 100; 3-ring, \$4.00 per 100.

FOR YOUR ROSES: The Igoe Rose Stakes, made of galvanized wire, take the place of the old-fashioned insect-harbing, decaying, wooden supports. They are neat, strong, and will not rust. Made in all sizes (and prices), looped and straight, 65c. to \$1.65 per 100.

You also need some **Tying Wire** which does not rot nor untie. No. 18, galvanized, 12 lbs. for 85c.; No. 19, \$1.00.

IGOE BROTHERS

228 North 9th Street Brooklyn, N. Y.

**NEW
VEGETABLE
WONDER**

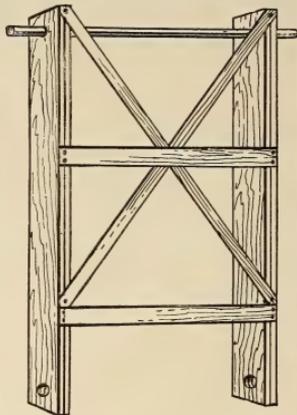
A Sensational
Discovery

Silver King Hardy Celery

3 crops in one season. First crop early in May. Root hardy, everlasting. Multiplicates rapidly like asparagus. Guaranteed as represented. Agents make \$1 to \$20 a day.

THE GREERING NURSERY COMPANY
8 Maple St., Monroe, Michigan.

Take a piece of good, strong joist (mine is 3 x 1 1/2 inches). Saw two lengths from it about one-sixteenth inch longer than the inside-diameter measurement of your pipe. Fasten these two pieces together at the same distance as the length of your pipe. In the centre of each bore a round hole and run through an old broomstick, allowing it to project out three inches each end (see the illustration). Make this fixture very heavy and strong. Nail the broomstick so there is no chance of its revolving; it must be rigid.

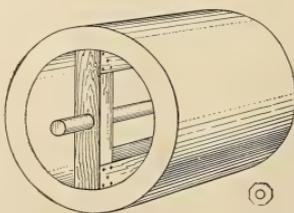


Make a well-braced handle with holes at each end to allow for the broomstick to be inserted

When complete pound the fixture into the drain pipe. It must fit very tight, but there is no difficulty in making it stay if your measurements are correct.

Next make a well-braced handle, as shown, with holes at each end to allow for the broomstick to be pushed through. These holes must of course be larger than the stick, to allow it to revolve freely. Before springing on the handle place on it two eight-sided wooden washers like the one shown in the lower right corner of the sketch below and then adjust.

You will have a good, strong, heavy roller, and it will have cost you practically nothing.



When complete, pound the fixture into the drain pipe. It must fit tightly. Before putting on the handle place a wooden washer at each end of the axle

Don't let your valuable furs and clothing hang around exposed to moths—put them in a

Red Cedar Chest

The Piedmont Cedar Chest gives an absolute protection from the ravages of moths and all injurious insects, as would cold storage, which nearly equals in a year the price of a chest. Will last a lifetime, and keeps articles sweet, clean, fresh and ready for immediate use.

The Piedmont, with its delicious, enduring cedar odor, is both dust and moth proof. Made in several sizes, of fragrant Southern Red Cedar, and fitted with handsome trimmings.

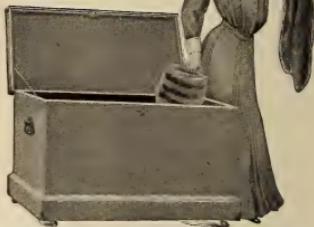
A Beautiful Wedding or Birthday Gift

You run no risk, if you are not perfectly satisfied with the chest, return it in five days at our expense and get your money back.

They are shipped direct from factory to your home, freight prepaid.

Write for booklet with full information and special factory prices.

Piedmont Furniture Co.
Dept. A. Statesville, N. C.



A VALUABLE NEW PEANUT



Dixie Giant. (Natural Size.)

Largest and most prolific variety ever produced. Should be grown in every garden. Write for our special offer of seed with our Journal and illustrated treatise on "Peanut Culture."
AMERICAN NUT JOURNAL, PETERSBURG, VA.

SHEEP MANURE THE STRONGEST NATURAL FERTILIZER.

Shed dried. Is the best. None of the volatile elements driven off. 100 lb. Sacks. Barrels. Carlots. Write for prices.

WESTERN SHEEP & CATTLE CO.,
ROCKFORD, ILL.

Children's Play-Garden Bridges

Towers, castles, mills (with wheels that go), steps, seats etc. architecturally designed and built to stand weather.

See Child's Garden article page 27, February number of the Garden Magazine. Sketches and prices on application.
W. S. DODD, Twinflower Farm, E. Corinth, Vt.

Hardy Trees, Plants and Seeds

A 200-acre nursery in Minnesota, founded in 1868 and devoted to hardy Fruit and Ornamental Stock, Flower and Vegetable seeds. A complete PRICE Catalogue, 60-page book of horticultural suggestions free on application. Prices moderate. 3-year guarantee with all stock. Reliable Agents Wanted.

THE JEWELL NURSERIES
Box 56 Lake City, Minn.

LAWNS

Nothing adds more to the beauty and value of a home place than a nice lawn. Our Lawn Book tells how to make and keep a beautiful velvety lawn. Of great interest and worth dollars to every one who has a small place, but we will be glad to furnish you a copy of same free if you mention this paper. Our large Catalogue of Seeds, Plants, Shrubs, etc. would also be of value to you. Better ask for it.

IOWA SEED CO., Des Moines, Iowa.

STUDEBAKER

THIS is an age of luxury. In perfect harmony with all of its demands for ease and beauty stands the Studebaker ideal. Never have vehicles presented so comfortable for the body, and such charm for the eye as those which come from this maker. Yet above even these qualities, there is one which is the keystone of the Studebaker reputation—perfect reliability. Studebaker harness and accessories are typical of the vehicles.

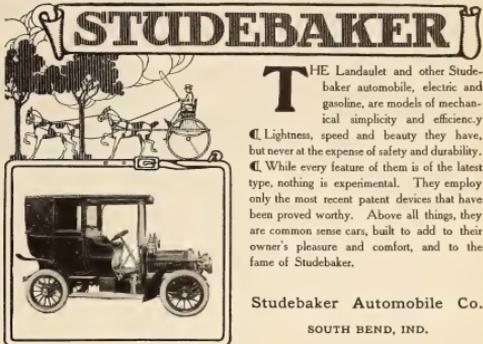
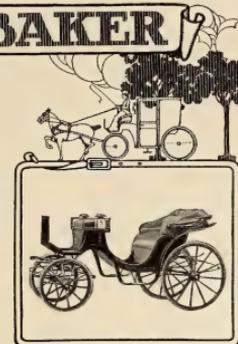
Studebaker Bros. Mfg. Co.

SOUTH BEND, IND.

Local Agencies Everywhere.

Factory and Executive Offices:

SOUTH BEND, IND.



THE Landaulet and other Studebaker automobile, electric and gasoline, are models of mechanical simplicity and efficiency. Lightness, speed and beauty they have, but never at the expense of safety and durability. While every feature of them is of the latest type, nothing is experimental. They employ only the most recent patent devices that have been proved worthy. Above all things, they are common sense cars, built to add to their owner's pleasure and comfort, and to the fame of Studebaker.

Studebaker Automobile Co.

SOUTH BEND, IND.

Member of Association Automobile Manufacturers

Agencies in all Principal Cities

REPOSITORIES:

New York City, Broadway and 7th Ave., at 46th St. Portland, Ore., 330-336 East Morrison St. Denver, Colo., Corner 15th and Blake Sts. Salt Lake City, Utah, 157-159 State St. San Francisco, Cal., Corner Market and 10th Sts. Dallas, Texas, 317-319 Elm St.

X-RAY
Stove Polish

Ask dealer for it.

TRADE-MARK
Is Guaranteed to go twice as far as paste or liquid polishes. X-Ray gives a quick, brilliant lustre and DOES NOT BURN OFF.

FREE Sample sent if you address Dept. G, LAMONT, CURRIE & CO., Agents, 78 Hudson St., New York



Beautiful Trees for Country Homes

as well as the cheaper varieties for wind-breaks, hedges and forest culture. We offer in specimen trees—dug with ball and sawed in buttap:

- Colorado Blue Spruce
- Koster's Gratted Blue Spruce
- Weeping Blue Spruce
- Norway Spruce
- Black Hill Spruce
- Douglas Spruce
- Hemlock Pyramidal and Dwarf Arborvitae
- Retinosporas
- White Pine
- Scotch Pine
- Dwarf Mt. Pine

We grow White Pine by the millions and can furnish this variety in any size and quantity. Large Scotch Pine in car lots—2 to 3 and 3 to 4 ft. Am. Arborvitae, suitable for hedges, ornamental planting and screens or windbreaks. Special rate on car lots. All varieties of deciduous trees and shrubs. Extra fine clumps of snowballs and large, heavy black, Am. Elms and Lindens from 1 to 10 inch diameter. Send for large illustrated catalog and price list.

D. HILL, Evergreen Specialist, DUNDEE, ILL.



Running Water in Your Country Home

can be had simply by installing the RIFE HYDRAULIC ENGINE Operated Automatically

by the power furnished by any brook or stream, however small, producing a constant flow in your house at any distance or any height. As it operates automatically there is absolutely no cost of maintenance and it requires no attention. We make a specialty of equipping country places with a complete water-works system, extending to stable, garden, greenhouses, etc., in successful operation. Catalogue and estimates on request.



RIFE HYDRAULIC ENGINE CO.
2109 TRINITY BLDG. NEW YORK CITY.



FOR THE HARDY AND TENDER GARDEN

HARDY PERENNIALS MAY SOON BE PLANTED

We Offer a Choice Collection

especially in PHLOX, HARDY SUNFLOWERS, PEONIES, IRIS, etc. Also THE BEST CHRYSANTHEMUMS, CARNATIONS, CANNAS, GERANIUMS, and OTHER TENDER STOCK.

Send for Professor's Illustrated Catalogue, containing Many Special Offers—and !!! ORDER STOCK NOW! !!!

NATHAN SMITH & SON
32 W. Maumee St., Adrian, Mich.

IF ANY DEALER OFFERS YOU A SUBSTITUTE, INSIST ON HAVING THE GENUINE

The *Velvet Elvis*

Never Slips nor Tears

EVERY PAIR WARRANTED

CUSHION BUTTON
HOSE SUPPORTER

LOOK FOR THE NAME ON EVERY LOOP

GEORGE FROST CO., Makers,
Boston, Massachusetts, U. S. A.





The **THE FENCE ORNAMENTAL**
Wheelock Trellis
 Flower-Bed Guard
 Lawn Fence

The latest and most practical method and that which makes the strongest and most durable fence is by using large wires without twisting or bending in any way to weaken them, fastening the strands together at intersecting points by locking clamps, as employed in the making of the **WHEELLOCK FENCE**.

THE WHEELLOCK TRELLIS

May be arranged into arches and other forms simple or highly ornamental. Ideal for all running vines.

Prices, per lineal foot: 13 in. wide, 10c.
 19 in. wide, 12c.

THE WHEELLOCK FLOWER BED GUARD (Pat'd.)

Unobtrusively protects gardens, lawns, cemetery lots, etc. Is easily set up. Will last a lifetime. Easily removed. Galvanized after weaving and guaranteed rust proof.

Prices, per lineal foot: 16 in. high, 10c.
 22 in. high, 12c.

THE WHEELLOCK FENCE FOR LAWNS, ETC.

Either of galvanized wire or galvanized after weaving. We manufacture and erect the best, most practical, and neatest ornamental wire fence made. Prices for material complete or for fence erected upon receipt of diagram giving all dimensions. The only fence guaranteed rust proof.

NEW LAWN GUARD 12 inches x 18 inches high, with posts

Send for Illustrated Catalogue

IF YOUR DEALER DOESN'T CARRY THIS LINE, SEND HIS NAME AND AN ORDER DIRECT TO US.

WRIGHT WIRE CO., 71 HAMMOND STREET
 WORCESTER, MASSACHUSETTS

American Flag Daisies

We take pleasure in offering here, for the first time, these three hardy, ever-blooming Daisies in the three national colors, Red, White and Blue. We feel that the greatest discovery ever made in plant life was made when our botanists brought these to perfection after years of trial, and they bid fair to become the most popular bedding plant for lawn massing. They are noted for their freedom of bloom and easy culture from seeds. We will send one packet each of the Blue, White and Red postpaid for 25 cents. Stamps not accepted. Address

BUCKEYE CONSERVATORIES,

Growers of Fine Specimen Plants, **SPRINGFIELD, OHIO**



SEND FOR COUPONS

SIX COUPONS RETURNED TO US IN MARCH

Will bring you to a portfolio of eight pictures, 11 x 16 inches, entitled "**Homes of Famous Americans**," and valued at \$3.50. The pictures are suitable for framing, and aside from their historical interest, are superb engravings of old fashioned gardens and beautiful homes.

The portfolio and pictures will be sent to you *free as a premium for the six trial subscriptions* represented by the six coupons signed by your friends.

Send to us for some of the coupons. They will be mailed to you, together with premium list, prepaid. Your name on the back identifies the coupons and when they are returned to us by your friends or yourself, you are entitled to premiums of pictures, books or magazines.

These coupons were mailed to subscribers just before the holidays, and in many cases were doubtless overlooked. If you overlooked them *send for particulars now.*

Address for coupons, **CIRCULATION DEPARTMENT, THE GARDEN MAGAZINE,**
 133 EAST SIXTEENTH STREET, NEW YORK.

One suburbanite out here made his roller by simply standing the drain pipe on one end and inserting through the centre a one-inch pipe. Running this water pipe into the ground three inches, he left the same length projecting out the other end and poured into the drain pipe a lot of very small stones and cement. This was allowed to stand for a week to set. The same kind of a handle as described was used.

Maryland.

FRANK E. CHANNON.

A Device for Reaching Over the Border

TO reach the back part of the border without walking all over the front of it and yet be in a comfortable enough position to allow me to pull weeds, cultivate



The "bridge" as long as a spade, twelve inches wide, and six inches high. The lower leg has a board attached which prevents it from sinking into the soil when placed on the border

and set plants in the spring was a hard problem until I had built the bridge shown in the illustrations. By its use the work is made much easier. It is long enough



By its use the work of weeding, cultivating and planting is made easier in the border

to reach to the back of the border, is high enough not to injure the young plants, and is made broad enough not to sink into the soil or tip over.

Illinois.

JNO. K. ALLEN.



No. 516. Stanhope. Price complete, \$66.00. As good as sells for \$85 more.

33 YEARS SELLING DIRECT

Our vehicles and harness have been sold direct from our factory to user for a third of a century. We ship for examination and approval and guarantee safe delivery. You are out nothing if not satisfied as to style, quality and price. We are the largest manufacturers in the world selling to the consumer exclusively. We make 200 styles of Vehicles, 65 styles of Harness. Send for large free catalog.

ELKHART CARRIAGE & HARNESS MFG. CO., ELKHART, IND.



No. 646. Combination Top Buggy. Price complete with extra stick seat, \$50.50. As good as sells for \$85 more.

FOR MAKING THE WATER GARDEN.



We manufacture a great variety of Ground Basins with Fountain Subjects for water gardens and lawn fountains. The basins are ample in size for the growing of water lilies and aquatic plants. The Fountain Statuary is made in cast spelter and is rendered in bronze metal if preferred.

For the water garden the ground basin can be sunk to the level of the earth and the edges measurably hidden by moisture loving plants. We also manufacture a great variety of ornamental fixtures for country grounds.

Flower Vases in Cast Iron and Bronze Statuary, Settees and Chairs, Tree Guards, Railings, Gas and Electric Light Posts and Lamps, Stable and Cattle House Fittings.

We issue a separate catalogue of each of the above, which will be sent on request. Please specify catalogue desired.

Address Ornamental Department, **THE J. L. MOTT IRON WORKS,**
84 to 90 Beekman Street, NEW YORK CITY.

**Dried and Ground
Sheep Manure**

*Pure and Unadulterated
A Good Fertilizer for Trucking
Excellent Plant Food*

NATURAL GUANO COMPANY
Aurora, Illinois

Lawn Fertilizer

SHEEP MANURE is unequalled for top dressing the lawn in early Spring. It makes a complete fertilizer and is especially rich in nitrogen. Spread on evenly while the ground is still frozen; the Spring rains will wash in the fertilizing elements ready for the young roots immediately growth starts. There is no danger of carrying in weed seeds if sheep manure is used.

It is also excellent for fertilizing the

Vegetable Garden and Orchard

promoting a steady, rapid growth. It is non-odoriferous, is cleaner, and richer than stable manure.

10 lbs. ... \$0.35 100 lbs. ... \$1.50
\$0 lbs. ... 1.00 Per ton ... 25.00

CAIRNSMUIR FARM, New City, N. Y.

\$43.75 Buys This Rubber Tire Wagon



Union Quality. Fully Guaranteed. Best hickory wheels, 3/4 in. Rubber Tire, long distance, dust proof, high arched axles; oil tempered springs. First quality material and finish. Worth nearly double our Factory Price. We ship for your examination, without a cent in advance, if desired and all over

30 DAYS FREE TRIAL

Money refunded on all purchases not satisfactory. You save dealer's profits. We build 150 styles of Vehicles, from \$26.50 to \$150.00. 50 styles Harness, \$5.00 to \$60.00. Write to-day for our 200 page Illustrated Style Book. Free for the asking.

UNION BUGGY CO., 32 Saginaw Street, PONTIAC, MICH.

SEEDS

Producing the most satisfactory results in the harvest
Are What We Sell
Grown especially for Market Gardeners and Florists and therefore best for private use.

OUR Vegetable Seeds are grown from selected stocks and are used by the most critical Gardeners and Truckers in this country.

Our Flower Seeds are noted for their striking colors and large size of blooms.

Our Lawn Seed is composed of the best grasses, free from weeds and used on some of the largest estates in this country.

Our Perfection Lawn Fertilizer makes the Lawn green, bright and durable. It should be scattered on the Lawn about the middle of March.

Descriptions of the above will be found in our root catalogue, which is free and will be mailed to anyone interested.

We also carry a complete line of Poultry Supplies; Cyphers' Incubators and Brooders; in fact—
"Everything for the Poultry Yard."

J. F. NOLL & CO.

115 Mulberry St. Newark, N. J.

This
**Sun Dial
Pedestal**
is in
white Pompeian stone
\$65.00

GARDEN FURNITURE, FOUNTAINS, PERGOLAS, WELLS, VASDE LIONS, SPHYNXES, ETC., IN MARBLE, STONE, BRONZE AND WOOD: : : : :
We shall be pleased to send illustrations and estimates upon request. : : : :
Henry Erkins & Co.
6 West Fifteenth Street,
NEW YORK CITY.

The New Method of Killing the San Jose Scale

A SOLUTION THAT IS BOTH EFFECTIVE AND INEXPENSIVE IN DESTROYING THE PERNICIOUS SAN JOSE SCALE, PSYLLA, ETC.

This new preparation supplants the lime-sulphur wash with its bothersome preparation, boiling of ingredients and danger of serious injury to the clothes and hands.

The following is an extract concerning it from the January 15th, 1906, Bulletin issued by Professor S. A. Forbes, State Entomologist, Urbana, Ill.:

"The time and labor necessary to the preparation of the sulphur wash may be greatly saved by using as a substitute a spray of soluble petroleum, made by diluting one part of the commercial preparation known as 'Scalecide' with nineteen parts of water. This material, made by the B. G. Pratt Company, No. 11 Broadway, New York City, while more expensive than the sulphur wash, may be used to advantage in a small orchard or in a town lot."

The above estimate by Professor Forbes was probably based on small retail quantities, as the following extract from the Rural New Yorker, January 20th, 1906, page 51, reporting the N. J. State Hort. Society Meet:

"The soluble oils are cheap and convenient, requiring only mixture with a proper amount of water, and make ideal applications from the sprayer's standpoint. A comparative trial made by the Pennsylvania Railroad Company in spraying fourteen miles of Osage orange hedge showed the soluble oils to be cheaper than lime and sulphur when all charges for labor and fuel, as well as first cost of materials, were reckoned up."

Furthermore, one gallon of "Scalecide" spray, costing less than 3 cents per gallon delivered at any railroad station in the United States, will cover as much surface as one and one-half to two gallons of lime, sulphur and salt wash.

Professor Haughton, Delaware Experiment Station, writes of "Scalecide": "I used your preparation this spring on Apple, Pear, Peach and Plum trees, badly infested with San Jose Scale, at the rate of 1 part to 20 parts of water, with very satisfactory results."

Prof. John B. Smith, Entomologist, New Jersey Agricultural Experiment Station, New Brunswick, N. J., July 27, 1905, writes of "Scalecide": "I believe that applied at the right time and in a thorough manner, this is as good, if not a better remedy for this pernicious insect, than any we have up to the present time."

Mr. John R. Parker, Freehold, N. J., writes: "I have closely examined my trees from time to time since July 1st, and can say that I have found no young scale on trees sprayed with 'Scalecide' last March."

"Mr. R. A. Ellis obtained some 'Scalecide' from me, and from results he says he has no fear of the scale."

Prof. H. A. Gossard, Entomologist, Ohio Agricultural Experiment Station, Wooster, Ohio, writes: "The oil we used on San Jose Scale seems to be quite satisfactory."

It has long been known that petroleum oils would kill the scale if they could be mixed with water so as to be conveniently applied. Scalecide is such a unique practical triumph. It is a perfect mixture of oils that thoroughly saturates the scale, causing it to curl up and die, and fall off.

For further information, reports of Experiment Stations, and samples address B. G. Pratt Company, 11 Broadway, New York City.



Manual of the Trees of North America. Exclusive of Mexico. By Charles Sprague Sargent. Houghton, Mifflin & Co., Boston, 1905. 54 x 8 1/2 inches. 820 pages. 64 drawings by Charles E. Faxon. Price \$6.00 net.

Few purely botanical works approach perfection as nearly as this. It is an abridgement of the peerless "Silva of North America."

"The Vegetable Garden." From the French of Vilmorin-Andrieux, translated under the direction of W. Robinson, New York, E. P. Dutton & Co., pp. 75a. Price \$4.75.

This is a new edition of the well-known and classic treatise on garden vegetables first issued in English in 1885, and is a valuable reference book to the student. The treatment is on the dictionary plan. All the common vegetables and nearly all the rare ones are included in the new edition, but some of the rarest have been dropped. The cultural instructions being applicable only to English and French conditions, as a practical work it is inadequate for the American reader, but to the student who goes beyond the mere eating of garden crops the book is invaluable.



Recipe for Lime-Sulphur Wash

To make the lime-sulphur wash bring a couple of gallons of water to boil in an old kettle and to it add two pounds of good quality freshly burnt or stone lime. Then add one and one-half pounds of sulphur which has been made into a paste by stirring with a little water so that it will mix better. Stir thoroughly. Boil at least half an hour—better an hour—then remove and strain through a netting or sieve and dilute to make five gallons. This should cover five four-year-old peach trees. For larger amounts make in the same way, using twenty pounds of lime and fifteen of sulphur to fifty gallons of water. Where much is being made and steam is available, it can often be boiled right in the barrel by using a jet of steam. It is sticky, disagreeable stuff and old clothes and gloves will be needed in its application. The uses of this wash are fully discussed on page 64.

PRATT'S "SCALECIDE"

Soluble Petroleum

The most reliable remedy for
SAN JOSE SCALE
COTTONY MAPLE SCALE
PEAR PSYLLA, Etc.

Five times stronger than petroleum emulsion. Cheaper than lime sulphur and salt. No trouble to prepare. No damage to trees. For Samples, Prices and Endorsements by Experiment Stations, address
B. G. PRATT CO., 11 Broadway, - NEW YORK



GARDEN SEATS AND RUSTIC FURNITURE

Old English
in a variety of sizes and designs.
Old English Garden Seats are much used in Britain and Estates in England. They are finished in both white and green.

Hardy Flowers and Ferns, Cactus Dahlias
Send for Catalogue.
NORTH SHORE FERNERIES - Beverly, Mass.

BUG KILLERS

Insecticides, Fertilizers.

Whale Oil Soap per lb. sec.
per 5 lb. sec.
per 100 lb. \$6.00

Kerosene Emulsion, Tobacco Extracts,
Tobacco Dust, Tobacco Stems,
Tobacco Soap, Kerosene Soap, Bordeaux
Mixture, Fir Tree Oil, Lemon Oil,
Sprayers, Powder Guns, etc.

STUMPP & WALTER CO.,
50 BARCLAY ST., N. Y.

Architects' Directory

The Agricultural Experts Association

GEORGE T. POWELL, President
120 Broadway NEW YORK

EXAMINATION of soils to determine condition and methods for improvement. Laying out of country estates, including architect's services, residences, greenhouses and other buildings. Building and landscape gardening. Problems relating to engineering and sanitation. Selection and purchase of blooded stock. Consultation on all land problems. Correspondence invited.

Ellsworth & Kirkpatrick

LANDSCAPE ARCHITECTS

Rural, Hydraulic and Sanitary Engineers

18 Dwight Street, Holyoke, Mass.

EMORY A. ELLSWORTH, M. Am. Soc. C. E., Consulting Engineer

HUBBARD & ARNOLD

LANDSCAPE
ARCHITECTS

60 State Street, Boston

CORRESPONDENCE INVITED

Let Me Arrange Your Yard Artistically and suggest the best trees, shrubs, vines, plants and seeds for your location. I can save you money and insure a beautiful yard. I have nothing to sell. I will answer inquiries. Send diagram showing house, trees, etc., with \$1. W. O. Graham, 3044 Flora Ave., Kansas City, Mo.



AN INTIMATE ACQUAINTANCE with the BEE

Few realize that they can keep bees. They are afraid of stings. If you learn the habits of the bee and how to handle them there is no danger in the least. They can be made very profitable. Few specialties are so much so. Two or three colonies with a little care can be made to supply a family with honey, and a surplus for selling. Bee-keeping is a fascinating occupation. It is a fine fad. The more you learn about the little fellows the more you like them.

Our printed matter is a great help to those who are studying the bee. It will teach you how to become a successful bee-keeper. We shall be pleased to send, free of charge to those who are interested, any of the following pamphlets: "My First Season's Experience with the Honey-bee," "Habits of the Honey-bee," "Books for Bee-keepers," "10 Facts about Bees," "Outfits for Beginners."

If you wish to purchase an outfit of bees, write us. We will furnish you with everything you need. We have seven branch houses, and many agents all over the United States, and can supply you promptly and at a saving of freight. We will send a man to install an outfit at your home if desired.

THE A. I. ROOT COMPANY,
FACTORY AND EXECUTIVE OFFICE,
MEDINA, OHIO.

Branches in the United States:

CHICAGO, ILL., 144 East Erie St.
PHILADELPHIA, PA., 10 Vine St.
NEW YORK CITY, N. Y., 44 Vesey St.
SYRACUSE, N. Y.
MECHANIC HALL, ME.
ST. PAUL, MINN., 1024 Mississippi St.
WASHINGTON, D. C., 1100 Maryland Ave.

Agencies Everywhere.



This TRADE-MARK insures
THE BURPEE QUALITY
OF THE

"BEST SEEDS THAT GROW"

Burpee's Seeds cost but little more than do usual commercial grades—and yet are worth much more. At our own farms in Pennsylvania and New Jersey—as well as in the gardens of planters everywhere—**Burpee's Seeds** are proved by test to be the **Best Seeds that Grow**. Consequently we hold the largest mail-order seed trade in the world. Our "Silent Salesman," neatly dressed in a "coat of many colors," and telling the *plain truth*, with photographic pictures of the superior products of **Burpee's "Seeds that Grow,"** will be sent by return mail—if YOU will write a postal card for

1876

1906

Burpee's

FARM ANNUAL for 1906

Thirtieth Anniversary
Edition of "The Leading
American Seed Catalogue"

printed, bound in cover lithographed in nine colors, it shows painted from nature, Seven Superb Specialties in Vegetables of unequalled merit and Six Novelties in Flowers—including LUTHER BURBANK'S *New Floral Wonder*.

This Invitation to write for our New Complete Catalogue and then participate in the Special Celebration of our Thirtieth Anniversary is given to all planters who delight in raising the Choicest Vegetables or most Beautiful Flowers. If you intend to garden this Spring you will want to lay your plans, and therefore we urge you to **WRITE TO-DAY!**—the very day you read this advertisement. Mention this paper and address

W. ATLEE BURPEE & CO., Seed Growers, Philadelphia, Pa.



RUNNING WATER IN THE GARDEN

Is a convenience and all you wish can be obtained by installing a

NIAGARA HYDRAULIC RAM

Will work wherever there is a spring or running stream. Costs less than a windmill or gasoline engine and has no whirling to get out of repair. Requires no fuel, attention or expense of maintenance. Fully automatic and will pump a large or small amount, according to size. Used and endorsed by United States Government and Pennsylvania Railroad.

Catalog free. Correspondence invited.

NIAGARA HYDRAULIC ENGINE COMPANY.

Factory: Chester, Pa. 140 NASSAU STREET, NEW YORK.



American Beauty Roses.

Blooming in
your own yard

FROM MAY TO OCTOBER

For the Price of One Florist's Bouquet

If you grow them yourself—in your own garden. By our method you can easily grow them and have flowers to cut a short time after planting—at the cost of a slight expense—and a little pleasurable and healthful work.

We grow them through the difficult time—the baby age—and deliver them to you two and three years old—ready to go ahead and grow with but slight care and live for years, producing hundreds of beautiful flowers that will give you much more pleasure than the "store" kind. With our bushes and directions you cannot fail. By the old method of planting weak little hot house slips, the results were almost always disappointing. Our beautiful new catalogue, "Over the Garden Wall" is most valuable to amateur rose growers; it tells all about our method, gives new ideas on garden rose culture and descriptions of all the new and rare kinds of roses and carnations with complete directions for their culture. Send for it to-day. It's FREE.

HELLER BROTHERS

962 SOUTH MAIN ST.

NEW CASTLE, INDIANA



6

EVER-BLOOMING
ROSES 25¢

Flourish growers and abundant bloomers.

Bridesmaid, white pink; Empress Aug. Victoria, pure red; *Knute de Lays*, yellow; *Miss Gless*, bright red; *Miss F. Kruger*, copper yellow; *Clothilde Souverain*, pink. In all, all strong plants on own roots, postpaid for 25 cents. Will bloom profusely this summer.

14 Choicest Roses for 50c.

The above roses and 8 others, our selection, all different, prepaid for 50c. Large 2-year-old roses, strong, bushy plants, 25 cents, no two alike, 3 for 50 cents, or 2 for \$1.00, charges paid.

8 Chrysanthemums 25c. 8 Carnations 25c.

8 Geraniums 25c. 8 Calceas 25c.

These four collections and the 6 roses named above, 24 plants in all, for \$1.00.

We pay all postage and guarantee safe arrival. Our large 100 catalogue FREE TO ALL. Ask for it.

Geo. H. Mellen Co., Box 11, Springfield, O.

Junefallen Greenhouses. Established 1877.

Cut your first rose here

(CUT FORS)
 The CONRAD & JONES CO., Box
 P., West Grove, Pa. Please send
 me free of charge your book
 "How to Grow
 Roses" and your
 75¢ page Catalogue
 of Roses and
 other choice
 plants.

Grow your own Roses

Key to Roses

1. Souv. de Pres. Carnot
2. Kaiserin Augusta Victoria
3. Killarney
4. Helen Gould
5. Dorothy Perkins—growing as you see it, in cold New England

You can grow roses right in your own garden—plenty of them. It is easy. Our Book "How to Grow Roses" tells you how: with good plants *YOU can do the rest.*

We are the pioneer rose growers of America, and have made roses a life-study. We know them from beginning to end, and we know that the only way to get lots of flowers is to have plants with good, vigorous roots.

Try some of these special favorites selected from the hundreds of choice varieties which we grow.

1 Fine Rose Frau Karl Druschki

One of the grandest, hardy pure white Roses ever introduced. Makes splendid buds and immense flowers, and is deliciously fragrant, durable and handsome. A healthy vigorous grower, entirely hardy, and blooms all summer long. *Strong, Two-year Plants (over roots), \$1.00 each, \$30.00 per dozen.* (Budded Plants), 60 cents each, \$6.00 per dozen, by express.

12 Superb Roses

(All our own roots except *)

Enough for a bed 3 feet x 6 feet, or 2½ x 9 feet.

- Frau Karl Druschki, large pure white.
 Anna de Diebach, bright pink, beautiful shade.
 General Jack, brilliant crimson.
 Magna Charta, rich pink.
 Paul Neyron, deep rose, very large.
 Kaiserin Aug. Victoria, large creamy white.
 Baby Rambler, the dwarf Crimson Rambler.
 *Killarney, glowing light pink.
 Green as a Lily, the richest of red roses.
 Herosua, the old-fashioned pink rose.
 La France, soft violet pink.
 White Maman Cochet, pure white, beautiful form.

All specially selected two-year plants. Above collection of 12 for \$5.00, delivered free in U. S. by express.

25 Choice Roses

(All our own roots)

Enough for a bed 3 feet x 12 feet, 5 feet x 6 feet, or a border bed 18 feet long and 2½ feet wide.

The twelve roses mentioned, besides the following:

- Athena Gould, rich, rosy crimson.
 Mack Canille, clear rosy pink.
 Maman Cochet, pink, rich, rosy pink.
 Mrs. E. B. Clark, lovely light red.
 Souv. de Pres. Carnot, exquisitely shaded pink.
 Coquette des Alpes, large pure white.
 Gloria Lyonskove, creamy white with yellow tinge.
 John Higgins, clear rosy pink.
 La Reine, large rich pink.
 Ockham, most profuse, peach pink.
 Mad. Gabrielle Lutzer, clear bright pink.
 Prince Canille, deep velvety crimson.
 Ulrich Brunner, bright cherry red.

The above collection of 25 for \$11.00, delivered free in U. S. by express.

6 Beautiful Climbing Roses

(All own root plants)

- Philadelphia Rambler (The New Crimson Rambler).
 Dorothy Perkins, pink.
 Climbing Climie Soupert, cream.
 Betty Queen, ruby.
 May Queen, charming pink.
 Gardenia, golden yellow.

Strong, heavy three-year-old plants of the above collection, \$3.00; two-year-old plants, \$2.00; delivered free in U. S. by express.

Send us your order now.

We guarantee these Roses to be first-class and to give results (we prefer to return the purchase money rather than have a dissatisfied customer).

You should have our two books, "How to Grow Roses" and the 136-page Rose Catalogue, to help you in your plans. They are free.

THE CONRAD & JONES COMPANY

"Growers of the best Roses in America"

Box P West Grove, Pa.



NAME

STREET

TOWN

STATE

Vaughan's New Orchid Flowering Sweet Peas

Countess of Spencer Hybrids

The New Orchid Flowering Sweet Peas.

1520. Here we have a new and distinct type and form in Sweet Peas. The flower stems are unusually long and the flowers are so set on the stem that there is a graceful fluffiness to a bunch of them in distinct contrast to the ordinary kinds of Sweet Peas. So far but a few colors have developed in this novelty class, and some of these sport or change more or less in flowering. The wings and standards of the flowers are very large, and its graceful form with the immense size make it certain to supersede all older kinds of Sweet Peas, as fast as standard colors appear and become fixed. In our mixture of this new class will be found deep pink, light pink, orange pink, white, with pink edging. Every lover of Sweet Peas should plant Vaughan's Countess of Spencer Mixture. Price, prepaid everywhere, Pkt., 10c.; oz., 20c.; 2 ozs., 30c.; ¼ lb., 50c.; lb., \$1.50.

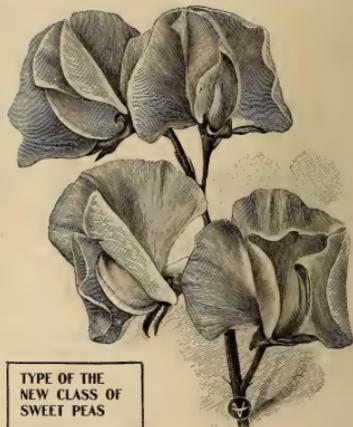
Vaughan's "Twelve Best" Sweet Peas

WHITE, Dorothy Eckford.	CRIMSON STRIPED, Vaughan's America.
SCARLET, King Edward VII.	BLUE, Flora Norton.
SHELL PINK, Prima Donna.	ORANGE PINK, Miss Willmott.
MAROON, Black Knight.	ROSE, Bridesmaid.
YELLOW, Hon. Mrs. E. KENYON.	MAUVE, Dorothy Tennant.
LAVENDER, Mrs. Geo. Higginson, Jr.	PRICOTTE EDGED, Dainty.

12 Pkts. One regular size packet each of the above 12 **\$0.25**
 Best Sweet Peas, (special offer No. 48A.) for

12 Ozs. One ounce each of the above selection of 12 **.60**
 Best Sweet Peas, (special offer No. 48B.) for

No. 1594. The 12 Best Sweet Peas, Mixed. Per oz., 15c.; 2 ozs., 25c.; ¼ lb., 35c.; lb., \$1.10, postpaid.



TYPE OF THE
NEW CLASS OF
SWEET PEAS

Vaughan's "Twenty Best"

The Above "TWELVE BEST" and the following:

PINK AND WHITE, Florence Frazer.	WHITE, BLUE EDGED, Lottie Eckford.
PRIMROSE, Speckled Beauty.	CREAM PINK, Countess of Lathom.
PURPLE, Duke of Westminster.	ROSE-CRIMSON, Prince of Wales.
INDIGO BLUE, Navy Blue.	PRIMROSE-STRIPED, Sunset.

20 Pkts. One regular size packet each of the above 20 **\$0.50**
 Best Sweet Peas, (special offer No. 48C.) for

20 Ozs. One ounce each of the above 20 Best Sweet **\$1.00**
 Peas, (special offer No. 48D.) for

No. 1595. The 20 Best Sweet Peas, Mixed. Per oz., 15c.; 2 ozs., 25c.; ¼ lb., 35c.; lb., \$1.10, postpaid.

This most popular mixture is prepared by us from the best named kinds of the whole Sweet Pea list. The proportion of right shades is carefully made up with light colors predominating. No seeds saved from mixed fields of Sweet Peas will prove satisfactory or in the right proportions of colors because the poor purples and darker shades produce so much more seed than other kinds. We aim to make Vaughan's Prize the best general mixture possible regardless of price.

Order No. 1626, Vaughan's Prize Mixture, prepaid, pkt., 10c.; 2 ozs., 25c.; ¼ lb., 35c.; lb., \$1.10; 2 lbs., \$2.00.



St. Louis Gold Medal



Columbian Exposition

Sweet Peas

Vaughan's

Prize Mixture

There is Nothing
Better Anywhere
at Any Price

Vaughan's Seed Stores, Chicago, New York

Send me..... ounces of Sweet Pea Seed
 No. 1520, No. 1594, No. 1595, No. 1626, accepting
 this coupon as partial payment to the extent of
 ten cents if not less than two ounces are taken.

Name.....

Address.....

Cross out the numbers not wanted.

Vaughan's Seed Store

84 and 86 Randolph Street, CHICAGO.

14 Barclay Street, NEW YORK.

April
1906
Vol. III, No. 3

SPRING PLANTING NUMBER

SPECIAL
DOUBLE NUMBER
25 Cts.
\$1.00 a Year

THE GARDEN MAGAZINE



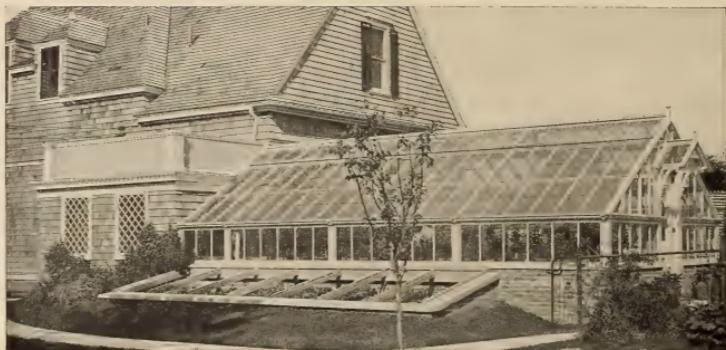
COUNTRY LIFE
- IN AMERICA -



DOUBLEDAY PAGE & CO
133-135 & 137 EAST 16TH ST. - NEW YORK



THE WORLD'S
- WORK -



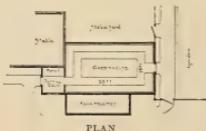
A Small Greenhouse and Some Things it Grew

YOU see this man has attached his little greenhouse to the stable, with the tiny shingled workroom adjoining. The boiler supplying hot water heating for the greenhouse is located under the stable, and heats two or three rooms of it as well. Really quite a compact, practicable arrangement. You may be able to do similarly, or better yet for your own convenience, attach directly to your dwelling; but don't get it confused with a conservatory; keep it a greenhouse pure and simple. We can make it conform just as pleasingly with the architecture of your house as this one does in its placing.

But first you want to know what such a house will grow: So we will take for example one of these single compartment houses and tell you just what we saw growing in it the middle of last October. It was filled around the side beds with strong stocky carnations just showing bud; chrysanthemums, the cluster kinds in plumey whiteness, and those stately, resplendent yellow chaps with single blooms, full five and a half inches across. Setting in the centre beds were two large thrifty branching variety rubber plants, some half a dozen potted begonias with a profusion of pink flower clusters; numerous other potted plants besides several strings of smilax, a couple of palms and some vigorous asparagus ferns, that queen of bouquet foliage.

The old Scotch gardener—a real character—said he "raised all his violets, pansies, lettuce, radishes and spinach, in the coldframes just down in the garden." You see, by this use of the frames he really added a cool compartment to the greenhouse and permitted the exclusive use of the house for plants demanding the higher temperatures. Along in December, this gardener expected to sow, direct from seed, some tomatoes and cucumbers on the east side beds. He has a method of trimming off all laterals, inducing the tomato plants to yield clusters of fruit at each joint in full rotation. He also hoped to force some azaleas and lily bulbs for Easter—and this is just a glimpse of what can be done with one of these little houses. You may have been thinking a good deal on this greenhouse question; perhaps even talked it over a bit with "her"; why not write us just what you have in mind and we will tell you the probable cost, the best way to locate it and the many other things you will likely want to know. Besides we will send you cuts showing several small houses; many larger ones and a number of conservatories.

We have collected these cuts in a little portfolio and call it "Some Greenhouses We Have Built." You'll probably want this collection anyway.



Lord and Burnham Co.

Greenhouse Designers and Manufacturers

1133 Broadway, Cor. 26th Street, New York
Boston Branch: 819 Tremont Building.

TIFFANY & CO.

DIAMOND AND GEM MERCHANTS
STRICTLY RETAILERS NO AGENTS

Gold Brooches

<i>All 14-Karat Gold</i>	<i>Photographs Upon Request</i>	
Oval Amethyst in gold scroll border, - - -	- - -	\$ 9.00
Five-point Coronet, with 5 baroque pearls, 4 oval pearls, leaves and bands set with half-pearls, -	-	\$16.00
Sweet Pea, pink and green enamel, with solitaire diamond, - - - - -	- - - - -	\$22.00
Spray of Bleeding-hearts, pink-and-green enamel, set with 4 diamonds, - - - - -	- - - - -	\$26.00
Iris, enameled leaves, large baroque pearl with 3 diamonds - - - - -	- - - - -	\$40.00
Fancy Gold Scroll, green enamel, with oblong peridot, 3 diamonds and 1 pearl - - - - -	- - - - -	\$48.00

Gold Barettes for the Hair

<i>All 14-Karat Gold</i>	<i>Photographs Upon Request</i>	
Roman gold, 2½ in. long, open-work design, -	-	\$11.00
Oval Pearl Loop, 1½ in. long, containing 49 half-pearls, - - - - -	- - - - -	\$16.50
Elliptical-shaped, gold wire, 2½ in. long, with 16 baroque pearls - - - - -	- - - - -	\$24.00
Oval, 1½ in. long, border and net work effect set with 51 whole pearls, - - - - -	- - - - -	\$33.00

Designs of Richer Brooches or Barettes Upon Request

Jewelry on Approval

Upon receipt of satisfactory references from any National Bank or responsible business house, Tiffany & Co. will send on approval selections from their stock to any part of the United States

Fifth Avenue New York

37th Street

Formerly at Union Square

Comparison of Prices

Tiffany & Co. always welcome a comparison of prices and an examination of their merchandise. This applies to their entire stock of rich as well as inexpensive jewelry, silverware, watches, clocks, bronzes, fine pottery, glassware and other artistic objects, on all of which their prices are as reasonable as is consistent with the standard of quality maintained by the house.

Tiffany Blue Book

The 1906 edition of the Tiffany Blue Book is the first to be issued from the firm's new Fifth Avenue marble building, and it concisely describes the largely increased stock. As heretofore, there are no illustrations of Tiffany & Co.'s wares, a convenient alphabetical side-index giving quick access to the diversified stock of this great establishment.

To all persons at a distance from trade centres this Blue Book is a great convenience, as it conveys suggestions and gives prices of articles suitable for gifts. It is often as difficult to think of an appropriate gift as to find money to pay for it. The Tiffany Blue Book obviates the first difficulty.

A copy of the Book will be sent upon request. Address

Tiffany & Co.
New York



OUTDOOR AND PRACTICAL BOOKS

For any information concerning any publications, address

GARDEN BOOK DIRECTORY, THE GARDEN MAGAZINE
Nos. 133-137 EAST SIXTEENTH STREET, NEW YORK CITY.



SCRIBNER'S NEW GARDEN BOOKS

SUPERB GARDEN VIEWS

THE GARDENS OF ITALY

Being a Series of Illustrations from Photographs of the Most Famous Examples of the Gardens of Italy by CHARLES LATHAM. With descriptive text by E. MARCH PHILLIPS. With 500 beautiful half-tone illustrations. 2 vols., folio, \$18.00, net.

A superbly illustrated work, treating most completely the deservedly famous and beautiful Gardens of Italy, fascinating alike to the lovers of Gardening, Architecture, Art and History.

GARDENS OLD AND NEW—Second Series

Containing Additional Examples, Beautifully Illustrated, of the "Country House and Its Garden Environment." 4to, Profusely illustrated, \$12.00 net. Also GARDENS OLD AND NEW—First Series. Profusely illustrated, 4to, \$12.00 net.

THE ENGLISH FLOWER GARDEN

Design and Arrangement shown by existing examples of gardens in Great Britain and Ireland, followed by a Description of the Plants, Shrubs and Trees for the Open-air Garden and their Culture. By W. ROBINSON, author of "The Wild Garden." With many beautiful engravings on wood. Eighth Edition. Large 8vo, \$6.00 net.

THE BOOK OF GARDENING

A HANDBOOK OF HORTICULTURE. By Various Writers Edited by W. D. DRURY. With numerous full-page plates and over 700 text illustrations. Thick 8vo, \$6.50 net.

GARDENING FOR BEGINNERS

A Hand-Book to the Garden. By E. T. COOK, Joint Editor of "The Garden," and Garden Editor of "Country Life," assisted by Experts in the various branches of Horticulture. With nearly 100 diagrams in the text, and 90 full-page illustrations from photographs of selected Specimens of Plants, Flowers, Trees, Shrubs, Fruits, etc. New and enlarged Edition. 8vo, \$3.75 net.

THE SEASONS IN A FLOWER GARDEN

A Handbook of Instruction and Information for the Amateur

By LOUISE SHELTON

A practical guide for amateurs who have small gardens where space must be economized in order to secure a variety of constantly flowering plants from April to November. The chapters follow the order of the months, each of which has a list of its flowering plants with practical hints for garden work during that month. The book also contains a great variety of general information regarding the culture of flowers. The work will be published shortly. For further particulars in regards to price, size, contracts, etc., address

CHARLES SCRIBNER'S SONS

153 FIFTH AVENUE, NEW YORK



SEND TO-DAY



I want my new catalogue of beautiful pictures in color to get into every home, and to give you an idea of the high character of my line of oil and water color pictures—suitable for every purpose (framing, oil and water color painting and china decoration)—I will send to any address for only 25 cents, the two lovely pictures shown in this ad.—Roses by Paul de Longpre, and Sweet Peas, each 10x35 inches. These two studies alone sell for \$1.00. My new six-page catalogue illustrates hundreds of subjects, and will be sent anywhere on request. Send now. All orders filled same day as received.

POSTCARDS Have the finest assortment of Souvenir Post-cards—thousands of subjects—in exquisite colors, and in monochrome. Also new importation of Easter and Greeting Cards. Specials for this month.—Set of 20 Easter Brown, 15c.; 6 exquisite views, 15c.; 6 Japanese scenes, 30c.; 6 Easter (Chickens), 25c.; 6 Easter (Little Chicks), 25c.; 4 Easter (Little Piggies), 20c.; 3 Easter (silver), 15c.; 5 Birthday, 20c.; 10 Menu, 20c.; 10 Kittens, bromide, 50c.; 10 Puppies, bromide, 20c.; 6 Old Masters, gold leaf edge, 20c. Order at once to be in time as they go quickly. All of these sets, 83 different cards, for \$3.00. These are all latest and finest new goods in the Souvenir Postcard line. **W. A. OERTEL, Art Pub'r, P. O. Box 63, Branch O, NEW YORK.**

"The Book of Books," says *Country Life in America*, for those who would like to go into the country, "live a new and most healthy life, and incidentally to make it pay" is

A Self Supporting Home

By MRS. SAINT MAUR

Illustrated, Cloth, \$1.75 net. (Postage, 14 cents.)

The book abounds in an uncommon quality of commonsense, showing how the poultry, pet stock, and the gardens which naturally belong to a country home, can be turned to its support. "The book is wonderfully helpful," says *American Homes and Gardens*.

ADDRESS

MACMILLAN & COMPANY

Publishers, 65 Fifth Avenue, New York

The HOUSE BOOK

PLANS FOR 100 MODERN HOMES OF MODERATE COST. Interiors, Articles on the correct planning of each room. Hints on construction. Reliable Estimates of Cost. 128 pages beautifully illustrated. Price, \$1.50, prepaid. A REAL HELP in planning your new home. Send your ideas.

FREDERIC J. KLEIN, ARCHITECT.
Peoria, Illinois

Box 217.



WE will send this handsomely bound volume, size 12 x 14 in., containing one thousand illustrations of Antique, Medieval and Modern Sculpture from the Museums, Historical Castles and Gardens of Europe, etc., for three dollars.

Medieval and Modern Sculpture from the Museums, Historical Castles and Gardens of Europe, etc., for three dollars.

Published by

Henry Erkins & Company

4 West Fifteenth Street 143-145 Varick Street
New York

Makers of

Garden, Conservatory and Hall Furniture

Fountains, Statues, Columns, Pergolas, Balustrades, Standards, Sun Dials, Pedestals, Benches, Tables, Vases, Lions, Sphynxes, etc., in Marble, Bronze, Wood, Stone and Artificial Stone that successfully withstands the weather.

PICTORIAL GARDENING SERIES

A wonderful new library of indispensable little volumes that go to the heart of modern gardening in a comprehensive way. Most convenient for carrying into the garden.

"The least experienced can read and understand them and put their teachings into actual and safe practice—those who are, unexpectingly, will discover much that is of value and interest."—*Journal of Horticulture*.

Pictorial Practical Carnation Growing	\$0.60
(Profuse Illustrations)	
Pictorial Practical Rose Growing	.60
(100 Illustrations)	
Pictorial Greenhouse Management	.60
(100 Illustrations)	
Pictorial Practical Vegetable Growing	.60
(100 Illustrations)	
Pictorial Practical Gardening	.60
(140 Illustrations)	
Pictorial Practical Fruit Growing	.60
(100 Illustrations)	
Pictorial Tree and Shrub Culture	.60
(100 Illustrations)	
Pictorial Practical Flower Gardening	.60
(100 Illustrations)	
Pictorial Chrysanthemum Culture	.60
(100 Illustrations)	
Pictorial Practical Bulb Growing	.60
(100 Illustrations)	
Profitable Home Farming	.50
How to Manage a Horse	.50

(A practical "Black Beauty," every body should read it)
Each 5 x 7 1/2, strong cloth binding, about 150 pages

SPECIAL OFFER

These twelve necessary volumes will be sent to any one address for \$6.00. Your choice of any six titles for \$3.25. Prepaid on receipt of price.

CASSELL & COMPANY,
LIMITED

43 and 45 East 19th Street, New York



FOR THE FRUIT GROWER The Orchard and Fruit Garden

By E. P. POWELL

Author of "THE COUNTRY HOME"

A volume that is indispensable to everyone who is anxious to get the best results from his fruit and berries, whether he grows them for the market or his own table. Every known variety of fruit that grows in America is considered.

"This thoroughly practical volume embodies all the latest developments and sums up all available information on the selection and cultivation of fruits."—*N. Y. Herald*.

Profusely Illustrated, Cloth, Net, \$1.50; Postpaid, \$1.68.

Send for prospectus of the Country Home Library

McCLURE, PHILLIPS & COMPANY

44 East 23d Street, NEW YORK

THESE FOUR PICTURES IN COLORS FREE



TO every reader of this periodical who loves nature and animals and outdoor life, we will send without charge the four beautiful pictures shown in the accompanying illustration, which retail at 50 cents each. These pictures are wonderful examples of the art of color photography, being printed on heavy art paper by the most improved process. Framed at moderate cost they will make splendid decorations for den or cozy corner, or they can be used just as they are in any room of the house. The subjects represented are such as will appeal to nature lovers generally. Exact size of pictures, 10 1/2 x 7 1/2 inches.

Why We Make This Offer

The object of this offer is to acquaint you with our new "Library of Natural History" which has just been published after years of labor and at an enormous expense. It is the only work of its kind in existence illustrated from actual photographs, of which it contains over 2,000, beside many full-page plates showing birds and animals in their natural colors. Every living creature on earth—animal and man—is described and pictured. In many cases special expeditions armed with cameras and dry plates had to be sent to foreign lands to secure the photographs from which the illustrations were made. The work is not technical or dry, but teems with the most interesting and instructive stories of animal life, told by famous naturalists and explorers. Over 2,000,000 copies have already been sold in Germany and England.

No Obligation

Your application for the pictures imposes no obligations to purchase the library. We will forward the pictures, together with a description of the books, by mail, postpaid and you will

not be bothered by agents or canvassers, this Society transacts all its business by correspondence. Please mail the accompanying coupon promptly, as the supply of pictures is limited, and this advertisement will not appear again.

CUT THIS OUT

THE UNIVERSITY SOCIETY, New York

Please send me by mail, postpaid, the four pictures you offer, together with a description of the "Library of Natural History." It is understood that the sending of this coupon does not in any way obligate me to buy anything. (Six-4-06.)

Name

Address

To know the Wild Flowers.

at a glance, their names, family and relatives in field, wood and garden; what poets have said of them, and the many curious facts concerning them. Carry in your pocket the little case of

14 "Q" Nature Studies
Each series, complete in itself, 25 cents, postpaid.

"The Wild Flowers of Early Spring"
"Spring Wild Flowers, April-May"
Each series contained in a specially designed and artistic carrying case, that slips easily into the pocket, and accompanied by a guide card with illustrated directions.

The "Q" Company
PUBLISHERS
Box 848-h PHILADELPHIA

Send for illustrated folder with descriptions of the Series.

Do not confuse these with cheap pictures. They sell at Art Stores for 50 cents each.

correspondence. Please mail the accompanying coupon promptly, as the supply of pictures is limited, and this advertisement will not appear again.

The University Society, 78 Fifth Avenue, NEW YORK CITY



IMPLEMENTS

For any information concerning the purchase or use of any garden or farm implement, etc., address
IMPLEMENT DEPARTMENT, THE GARDEN MAGAZINE
 NOS. 133-137 EAST SIXTEENTH STREET, NEW YORK CITY



LAWNS

Repairing the Lawn

THE best time to lay down a new lawn or repair an old one is from the middle of March to the middle of April. The grass seed if sown at this time has a much better chance to secure a good hold upon the soil than if planted later in the warmer weather.

Upon looking over the lawn there are likely to be found many weeds—such as dandelions, plantains and daisies. These should be cut out. An old case-knife with a sharp, square end will be found very useful. Cut off the roots as far below the surface as possible, so as to reduce the chances of the plant making a new start. Cutting is far better than pulling the weeds, as it will not disturb the grass roots nearly as much. Each hole made by removing a weed must be filled with soil, which should be firmed; then drop a pinch of grass-seed mixture on it.

Fill all the hollows with good, rich soil, which should be firmed by pounding with the back of the spade or with a tamper, that can be made from a heavy block of wood to which a handle is fitted; and sow some grass seed on the surface.

With an iron-toothed rake scarify the entire surface of the lawn, following this with a sowing of the seed.

A good lawn-seed mixture for re-airing lawns is as follows:

- 10 parts Kentucky blue-grass.
- 3 " Rhode Island bent-grass.
- 3 " Redtop grass.

Ten pounds of this mixture is enough for a lawn 40 x 100 ft.

From now on, the roller should be run over the lawn once or twice a week. This will firm the soil which has been loosened by the frost, giving the roots a much better chance to come in contact with the soil and will prevent its drying out too rapidly.

A good dressing of fertilizer will help to give the lawn the dark, rich green color so so much desired. Well-decomposed stable manure is excellent, but it is liable to introduce more weeds' seeds; further, it is more or less unsightly, and has an objectionable odor. Sheep manure has not this objection.

Unleached hardwood ashes are very beneficial. These can be used instead of commercial fertilizer. The application of these seems to unlock the food which is stored in the ground. They give the grass a dark, rich, green color. They may be applied at any time. The ashes come in barrels containing 200 pounds, which is enough to give a lawn about 40 x 100 feet in size.

Nitrate of soda is a good fertilizer for quick results but they are not lasting. Twenty pounds will be ample for the above sized lawn and its effect will be noticed in a week.

Coldwell Lawn Mowers

HAND, HORSE AND MOTOR POWER

Over 600 in use on the parks of GREATER NEW YORK
 where they have been used exclusively
 FOR OVER TWELVE YEARS



COLDWELL'S MOTOR LAWN MOWER

We make all styles, sizes and grades. If your dealer does not sell them we will quote you special prices and terms.

SEND FOR CATALOGUE

COLDWELL LAWN MOWER CO.

30 Coldwell Street Newburgh, N. Y.

Knapsack Spramotor
 destroys all insects or fungi on potatoes, berry bushes, trees, plants or vegetables.
 Copper tank \$15, galvanized \$12.
 Agents Wanted.
 Ask for 66-page treatise K.
SPRAMOTOR CO.
 Buffalo, N. Y. London, Ont.

SPRAY It Is Worth While

Buy a machine that does the work right—that cleans its strainer automatically with a brush, mixes liquid mechanically so that foliage is never burned, but gets its due proportion.

Empire King, and Orchard Monarch
 do these things. They throw finest spray, are easiest to work and they never clog. You ought to know more about them. Write for instruction book on spraying, formulas, etc. Mailed free.

FIELD FORTÉ FERT. CO.
 No. 48 11th Street, Elms, N. Y.

GARDENING

FOR PROFIT OR PASTIME

YOU READ THE GARDEN MAGAZINE because you are interested in gardening, and get from its pages many helpful suggestions for making the garden more successful. For the same reason you should read the *Iron Age Book*, describing the most modern, approved and scientific tools for bringing the garden to the highest state of productiveness with the least labor.



No. 6 SOWING SEED.

In the *Iron Age Book* you read about the wonderful *Iron Age Tools*, from which it gets its title—not “tools” as you usually think of them, but implements, so marvelous in their range of work, so accurate in their performances that they seem almost “human.”

Just think of a tool so light a child can manage it; so strong the heaviest hand will not injure it—that will, with its various attachments, break and open the ground, distribute the fertilizer, plant the seed in hills or drills and cover it at uniform depth—that's planting! When it comes to cultivation, this same tool will hoe, rake, plow, harrow and weed.

Think of all this controlled by one pair of handles, and you have an idea of one—only one—of the many *Iron Age Tools*, the only complete line of practical, labor-saving, crop-insuring farm and garden implements made in the world.

To undertake to get the best from a garden without reading this *Iron Age Book*, and at least learning of the opportunities it affords you, is like trying to run a railroad without watch or timetable. Let us send you THIS PROFIT MAKING BOOK FREE.

BATEMAN MFG. CO., Box 535, Grenloch, N. J.

No. 1 IN OPERATION.



SPRAYING INDOOR PLANTS



How much mother would like one!—she has so many plants.

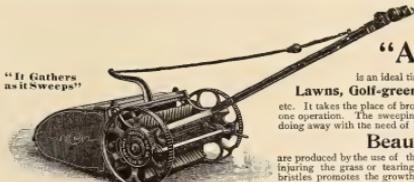
If your dealer does not have it, Send 50c. and Get One by Mail. If you are in business, you will want more.

A cake of Tobacco Soap and Booklet free with each. Make a soap and spray; your plants will surprise you.

THE LENOX MFG. CO.

1296 BROADWAY NEW YORK

“It Gathers
as it Sweeps!”



“Apollo” Sweeper

is an ideal time and labor-saving machine for the care of Lawns, Golf-greens, Porches, Walks, Barn-floors; etc. It takes the place of broom and shovel, sweeping and gathering all in one operation. The sweepings are carried into the box attached, (see cut) doing away with the need of basket or cart for collecting the sweepings.

Beautiful Lawns

are produced by the use of the “APOLLO” sweeper, because instead of injuring the grass or tearing it up as a rake does, the action of the fibre brushes promotes the growth of the turf, makes the grass thick and produces a rich, green, “velvety” appearance, instead of a dull gray or brown color. It removes every particle of cut and dead grass, leaves, twigs, manure, dirt, etc. If your dealer cannot supply you, write

THE GREENE MFG. COMPANY, 34 Seymour St., SPRINGFIELD, O. (Good Canvasers Wanted.)

GET THE BEST!

A Good Spray Pump erases big profits and lasts years.

THE ECLIPSE



is a good pump. As practical fruit growers, we were using the common sprayers in our own orchards—found their defects and then invented

The Eclipse

Its success practically forced us into manufacturing on a large scale. You take no chances. We've done all the experimenting

Large fully illustrated Catalogue and Treatise on Spraying Free.

MORRILL & MORLEY
Benton Harbor, Mich.

Indispensable Implements

Lawn or Golf Green Roller

This new pattern Roller is made with our Improved Wood Handle strongly braced, has the counterpoise balance

weights on shaft for holding the handle up when roller is not in use. The best roller made.

These special prices are for this month only.



Size A,
50 lb.,
\$7.25

Size B,
55 lb.,
\$11.00

Also larger sizes up to go lbs.

Indispensable for successful lawn and garden work this month, and tennis courts, drive-ways, walks and paths.



Coldwell's Imperial Lawn Mower.

The best of all lawn mowers. The ready adjustment of the revolving cutter to the bottom knife and the sharpening of same also its easy and noiseless running, place the Imperial ahead of all others now made. Wheel eight inches, 16 in. with Four Blades Net, 6.50

Gardening Without Backache

“The wheel hoe is the most important garden tool invented within a century.” (see GARDEN MAGAZINE, February, 1905, page 88).

This Wheel Hoe

and Cultivator is a new and attractive implement, with five attachments, including one



large garden plow. The other sweeps range from 18 to 30 inches. This is a most effective and economical tool for large or small gardens

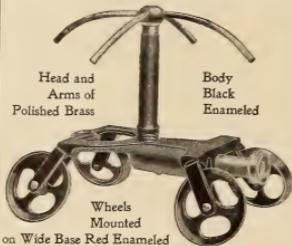
PRICE, COMPLETE | \$3.25 (if ordered this month)

Our new Catalogue “N,” containing over 600 illustrations of Tools and Implements for the Field, Farm and Garden, mailed free, if you mention THE GARDEN MAGAZINE.

J. S. WOODHOUSE, 191-195 Water Street, NEW YORK

The New Century Lawn Sprinkler

Revolves freely with any pressure. Equal spray over circle from three to fifty feet in diameter.

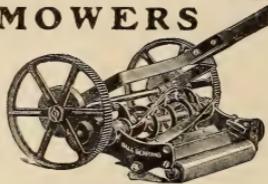


SIMPLE AND DURABLE

Your money back if not entirely satisfactory. Sent express prepaid anywhere in United States east of Rocky Mountains for only \$2.50. Descriptive circular free.

THE YOST ELECTRIC MFG. CO.,
Toledo, Ohio., U. S. A.

TOWNSEND MOWERS



TOWNSEND GAVE TO THE WORLD The Ball-Bearing Lawn Mower

His mowers are more imitated than any others.

We make more high-grade mowers than any other firm and they are all ball-bearing.

We make the best Lawn Mower in the world.

We make the best Horse Lawn Mower in the world.

We make the best Roller Mower in the world.

We repair and sharpen all kinds of Mowers.

S. P. TOWNSEND & CO., - Orange, N. J.

Cosmos until November

IN ORDER to have cosmos next fall when the other tender flowers are gone start now, and if you give your plants good care you can cut flowers until November first.

It is a late-blooming annual; in fact, it blooms so late that in localities subjected to early frosts it will have time to open only a few flowers before being cut down.

There are two varieties, white and pink, and the flowers measure one and one-half to two inches across.

Seed should be sown indoors in March, and the young plants grown along as rapidly as possible. As it is a plant which does not transplant easily, it is best to grow it in pots.

When danger of frost is past, set them in some place in the garden where they may be covered when the early fall frosts come.

Persons living in the Northern states, where cosmos cannot be flowered out of doors because of the shortness of the season, can succeed by the following method; many florists, in fact, handle the plant in this way, that they may extend the flowering season.

Instead of planting cosmos in the open ground, grow it in pots. Shift the plants gradually from two-inch to four-inch, from four-inch to six-inch, and from the sixes to nine-inch pots, always taking care not to allow them to become potbound before shifting. Flower them in the nine-inch pots.

Boxes will answer the purpose just as well, using boxes about a foot or fifteen inches square for each plant. Transfer the plants from the four-inch pots to the boxes. In making so large a shift there is always danger of the soil becoming sour because more water is given than can be used by the plant; therefore, until the box has become fairly well filled with roots, avoid over-watering.

Any good garden soil will grow cosmos. It will be found advisable to incorporate some sand in the soil, unless it is naturally sandy, as it will keep the soil well drained. Well-rotted horse manure may be added at the rate of one part manure to three of soil.

Be sure to have several holes in the bottom of the box—four or five, one inch in diameter—and about two inches of broken pots, stones, or coal linkers, for drainage.

The cosmos will grow six feet or more high, but this is undesirable where the plants are to be brought into the house in the fall. To keep them down, and secure stocky plants, pinch out the end of the stem when it is six inches high, and repeat this just as soon as the new shoots have made four inches of growth.

The pinching may be kept up until the middle of July. This will give compact plants, three or four feet high, in the fall. A stout stake should be given the plant for support.

If the boxes or pots are plunged in coal ashes during the summer the roots will be kept cool, and earthworms will not enter the soil either, but they must be taken up about once a week, lifting them high enough to break any roots which are seeking food outside the pots.

After the soil has become well filled with roots, manure water of the color of weak tea may be given once or twice a week.

Massachusetts. W. CLARK.

\$1.00 IN TIME SAVES MANY BACKACHES

OUR SPECIAL OFFER FOR APRIL

IT COSTS YOU ONLY \$1.00 and EXPRESS CHARGES

Adjustable Garden Cultivator

The most useful hand garden tool on the market. A one-dollar bill mailed to-day will bring this labor saver to you without delay.

It will pull out the weeds, pulverize the ground thoroughly, leaving it level. Works where other implements fail. It will work Between the Rows, or the Center Rowel can be removed, and Straddle the Row if desired. It is Adjustable in width by sliding the Top Plate. It is the Lightest, weighing but 3 pounds complete with long handle, and the Strongest, as the blades are forged out of a solid steel rod. Wise gardeners will possess themselves of it early.

Save time, worry, and expense; write us about your needs now. We are the New York headquarters for all the best manufacturers and you save money by dealing with us. Catalogue "N." containing over 400 illustrations of the best Tools and Implements made for the Field, Farm, and Garden, mailed free, if you mention THE GARDEN MAGAZINE.

J. S. WOODHOUSE, 191-195 Water Street, NEW YORK

A THRIFTY GARDEN

whether large or small, needs proper tools for seedling and cultivating. We make garden implements of all kinds, a tool for every purpose.

MATTHEWS' NEW UNIVERSAL HAND SEEDERS AND CULTIVATORS



single or combined with Hoes, Flows, Rakes, Markers, etc. Over 20 styles. Free Booklet giving description, prices and valuable information mailed to any address. Send for it now.

Garden Tools for Every Purpose

AMES PLOW CO., 20 Market Street, Boston, Mass.

Rhodes Double Cut Pruning Shear



Cuts from both sides of limb and does not break the bark.

We pay express charges on all orders. Write for circular and price.

RHODES MFG. CO.
421 West Bridge St., Great Bridge, Mich.

STARK FRUIT BOOK

shows in NATURAL COLORS and accurately describes 216 varieties of fruit. Send for our liberal series of distribution to planters.—Stark Bro's, Louisiana, Mo.

THE NEW "IDEAL" GARDEN HOE



ONE FREE!

The best, easiest and longest wearing hoe on earth. It is a "Knee Cutter" and works with pleasure. Why use a hand hoe after that? Get a "Knee Cutter" when you can get an "IDEAL" that will more than pay its cost in one day's use. To specially interested persons we offer in **BELLEVUE ONE HEE FREE** to the first person who will accept our offer. Write today for further particulars. Address.

The Ideal Manufacturing Co.
190 High St., Factoryville, Pennsylvania



Meeker Disc Smoothing Harrow

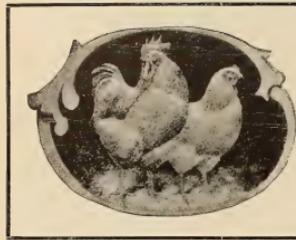
Onion Seed Drills, and Wheel Hoes
Southport Globe Onion Seed
Send for Catalogue and Prices

THE C. O. JELLIFF MFG. CORP.,

Southport, Connecticut

Poultry Directory

Information about the selection or care of poultry will be gladly given. Address
INFORMATION DEPARTMENT, THE GARDEN MAGAZINE, 133 E. 16th St., New York



EGGS FOR FOWLS

As an inducement to secure new customers I will sell eggs this spring at the following low prices:

	Per setting		Per setting
Buff P. Rocks.....	13 00	R. C. B. Leghorns.....	13 00
Barred P. Rocks.....	13 00	Black Minorcas.....	13 1 00
White P. Rocks.....	13 00	Dark-Green W's.....	13 00
Light Brahmans.....	13 00	S. C. B. Orpingtons.....	13 1 50
B. Wyandottes.....	13 1 00	S. C. B.'s Orping's.....	13 2 00
S. Wyandottes.....	13 1 00	R. C. B. Orping's.....	15 3 00
W. Wyandottes.....	13 1 00	S. C. W. Orping's.....	15 3 00
Buff Leghorns.....	13 1 00	R. C. W. Orping's.....	15 3 00
S. C. W. & B. L's.....	13 1 00	R. C. B.'s Orping's.....	13 3 00

S. C. Buff Orpington eggs, \$1 for 30; \$8 for 100; R. C. Buff Black and White Orpington eggs \$1 for 25; \$8 for 100; All other eggs \$6 per 100. 40 years among poultry and now have the largest and best equipped poultry establishments in America.

Circular Free

LEWIS C. BEATTY, Box 174, WASHINGTON, N. J.

GEDNEY FARM POULTRY YARDS

S. C. Buff Orpingtons
S. C. Black Minorcas

Cornish Indian Games
White Wyandottes

We breed our prize winners and can sell you birds that will enable you to do the same. At Madison Square Garden we won first and Club special on S. C. Buff Orpington pen—14 pens competing. Also third pullet—39 pullets in the class.

At Albany, N. Y., we made a clean sweep. Our Buff Orpingtons won every regular prize offered, except one third—54 Buffs competing. Also eight specials, including silver cup for best display—all varieties competing. On C. L. Games we won two 1st, four 2d and three 3d at the same show.

Our Black Minorcas are bred for egg production and shown for exhibition only. Stock and eggs sold at right prices. Satisfaction guaranteed. FRANK W. GAYLOR, Mgr., White Plains, N. Y.



We win

At the late Madison Square Garden Show, New York, in the S. C. Buff, Black and White Orpington classes as follows: 7 firsts, 9 seconds, 7 thirds, 4 fourths, and 5 fifths and these in the strongest class of Orpingtons ever put together, there being 370 birds competing. We also won National S. C. Comb Buff Orpington Club Silver Cup for best display of Buff Orpingtons. Also American Orpington Club Silver Cup for best black female. Also Cup for best white male and Cup for best white female. It was a clean sweep, nothing ever approaching it. We won the most prizes of any breeder in these same classes.

One week later at Boston with a smaller entry we won thirty-one prizes and one week later at Newark, N. J., upon twenty-six entries won 13 firsts, 11 seconds, and 2 thirds and also the Ivory Soap \$25.00 Silver Cup for whitest bird in show. We have the stock and established winning breeding lines. But buying high grade stock and eggs cannot safely be done upon the strength of the mere argument a breeder has room to advance in his advertisements.

Now we want you to send for our catalogue, testimonial book and a very elaborate sixteen page mating list, describing over forty different breeding yards and prices of eggs from same. Our catalogue shows views from our farm are taken from real photographs and are not sketches of an imaginary place. Do not be fooled or misled by mis-advertisements but come to the fountain head to get your stock.

WILLOW BROOK FARM, Berlin, Conn., U. S. A.

W. L. Davis, Prop.

Box 11

Catalogue Free—Exhibition Barred, White and Buff Plymouth Rock Eggs \$2.50, also \$2.50 per 45. Grand Pekin Duck Eggs \$2.00, also \$1.00 per 11. Incubator eggs by the 1000. Stock for sale. Plymouth Poultry Farm Co. Route 22, York, Pa.



HALLOCK'S WHITE WYANDOTTES ARE THE BEST

Won first hen, first cockerel, first pullet, first pen at Madison Square Garden Show in competition with 485 White Wyandottes. Write for free egg circular to

Rose C. H. Hallock

6306 Clifton Avenue,

St. Louis, Mo.



BRED TO LAY BRED TO WIN
The Triumph Strain of
White Wyandottes

LINE-BRED for fifth of a century. For heavy BROWN EGG production and SHOW ROOM HONORS this STRAIN is today recognized as the leader. Choice cockerels and pullets yet to spare. Free illustrated catalogue free. Write your wants to HARRY W. BRITTON, Moorestown, N. J.

Rhode Island Reds

WHITE AND BARRED ROCKS, WHITE WYANDOTTES AND LEGHORNS, LIGHT BRAHMAS
Hardly profitable farm bred, pure stock. For BIRDS (moderate prices) or EGGS to HATCH at 80 cents per egg. WALTER SHERMAN, Mendon, Mass., New Port, R. I.



Greider's Fine Catalog

of Prize-Winning Poultry for 1905. This book is printed in several beautiful colors and is larger than ever. Contains FINE CHROMO of like-like fowls. It illustrates and describes to varieties of poultry, including geese, pigeons, etc. It shows best equipped poultry yards and houses—how to build houses; cure for diseases, and all kinds of information indispensable to poultry keepers. Send 2 cents for this small book. B. H. GRIDER, 1: REEMS, PA.

U. S. REGISTER AND STUD BOOK

400 addresses, 539 descriptions
69 illustrations, \$2.00 cloth; \$1.00 leather. Gilt top.

THE CATTARIAN

100c. a copy. \$1 a year.
1113 O St., N. W. Washington.

Originators of all the Orpington Fowls



WM. COOK & SONS

Box 33, Scotch Plains, New Jersey

850 Washington St., Newark, N. J.

If you want the best Orpingtons, any of the ten varieties, it is natural that you would send to us, their originators, for them. Winners of over \$,000 cups and prizes. Largest winners wherever we show.

REAM from the finest Orpingtons in the world, \$10 per setting; from exceptionally fine stock, \$5 per setting. All guaranteed.

Send for our illustrated catalogue, 60 pages, 10 cents to cover postage.

ORPINGTON POULTRY JOURNAL, 5 cts.; yearly, 60 cts.

We have thousands of Orpingtons mated up.

Inspection of poultry farms cordially invited. Trains met. Advice free.

BUFF WYANDOTTES

All purpose fowl, ideal broiler, winter layer. Eggs \$3.00 per 100. Incubator Eggs \$5.00 per 100.

MARION FARM,

SMYRNA, GA.



SHOEMAKER'S BOOK ON POULTRY

And Almanac for 1906 contains 50 pages, with many cuts, showing how to raise, feed, and care of all about chickens, their care, diseases and remedies. All about incubators and how to operate them. All about poultry houses and how to build them. It's really an encyclopedia of chicken-fowling. You need it. Fully only 15 cts. C. C. SHOEMAKER, Box 457, Freeport, Ill.

HOMING PIGEONS

A Source of Pleasure and Profit

Start a pigeon flying club; it is good sport and profitable also. Write for particulars on flying.



Our Homers are Nest-Mated and produce large plump squabs which market in 4 weeks at top prices.

Enclose stamp for free circulars on squab raising.

Bay State Squab Co., Dept. G. Wakefield, Mass.

SQUABS PAY

If you have the best HOMER PIGEONS. We can supply a limited number of very choice breeders at right prices.

NEWARK SQUAB CO.

NEWARK NEW YORK

Raising Little Chicks

successfully isn't a matter of luck. It's as sure as anything can be, if you give them the proper food and care.

We have the best supplies of every sort from Chick Manna and Vigor Foods to incubators, incubators and brooders.

Send for our free illustrated Poultry Supply Book and find out all about the business.

JOHNSON & STOKES 217-219 Market Street Philadelphia

KEYSTONE INCUBATOR

has "success" stamped all over it. You'll know why when you learn how it's built and operates. New catalog tells why and how. Free. Write for it today. STAR INCUBATOR THE DEW-SCHILLING CO. Box 616, Easton, Pa.

YOUR LUCKY STAR

never brought you greater success than will

STAR Incubators and Brooders

They make poultry raising profitable and certain.

Sold on a guarantee that makes you safe. Free catalog tells why. Write.

STAR INCUBATOR

688 Church Street, Bound Brook, N. J.



KENNEL DIRECTORY

Information about the selection or care of dogs will be gladly given. Address, Information Department, THE GARDEN MAGAZINE, 433 E. 16th St., New York



Scottish Terriers

Offered as companions. Not offered to fighting or roaming—Best for children's pets.

NEWCASTLE KENNELS
Brookline, Mass.

Collies and Bull Terriers

A beautiful white Collie, sable and full white collar, one year old, \$20. Two fine tri-colors with full white collars, one year old, \$15 each. Two of the three are imported winner sires, grand dog, fully pedigreed. PUPS, \$10.00 EACH.
Two fine white Bull Terrier sires, one year old, fine dispositions. One at \$20 is out of the great old champion Woodstock Wonder strain. The other is a good one at \$15. Sold for no fancy. Speak quick.
W. W. KEMP, Box 32, Pottstown, Pa.

Cairnsmuir Fox Terriers

MAJOR C. M. CARROCHAN
New York, N. Y. office at New St., offers pure puppies, either wire or smooth haired, to be shipped as soon as wanted, **BOYS \$15, GIRLS \$10.** This is an excellent opportunity to obtain the Cairnsmuir blood at very reasonable prices. Purchasers should send cheque with order, stating sex and variety. Green dogs and other puppies for sale at all times. Also Welsh Terriers.



AT STUD FEE \$50.00
The English Bulldog
Clyde Nestor
No. 822. Sire, King Edward, ex Clyde
Narcie. Color brindle; weight
45 pounds. *Stock for Sale.*
R. L. BROWN
Fisher Bldg., Chicago, Ill.



Thoroughbred Boston Terriers
PUPPIES AND GROWN STOCK FOR SALE
P. Herbert Reeder, Melrose, Mass.

Setters For Sale Four setter dogs, broken on game. Good wench dogs.
W. GEO. SMITH, MARYDELL, Md.

COLLIE PUPS

sable and white and tri-color pups, from eight weeks to eight months old. All are eligible for registration, being very highly pedigreed and combining the blood of the present day winning strains with that of practically all of the famous collies of the past. Price from \$20.00 up, according to sex and quality. Correspondence invited, but please state wants specifically.
HARVALE FARM KENNELS, Midland Park, N. J.

FOR SALE

High class English Beagles, 10 months old, 2 females, 1 male.
These puppies are from my prize winner "LORNEBONE" at Madison Square.
Poplar Grove Farm
Hackensack Ave.
HACKENSACK, N. J.

B E E S

Have you ever thought of keeping Bees? We have started thousands of successful beekeepers in the past 14 years, and would like to start you right.
A complete outfit for \$19.90. Small outfit, \$7.80.
Personal attention given each order.
A booklet "Hints to Beginners" 10 cents. Catalog free.
I. J. STRINGHAM,
Apleries, Glen Cove, L. I. 105 Park Place, N. Y. City.

The Ideal Garden Fertilizer for . . .
Kitchen Gardens, Flowers and Lawns
BLATCHFORD'S
Plant Grower and Land Renovator
Composed only of Pure Bone Growers Bone Meal, Nitrate Soda, Ferrous Oxide, Sulphate Ammonia, Sulphate Potash and Gypsum, of the best qualities and in the correct proportions. A Sample 100 lb. bag shipped on receipt of \$2.75.
Address: **BLATCHFORD'S GOLF MEAL FACTORY AND AGRICULTURAL WORKS,** Waukegan, Illinois.
Established at Leicester, England, in 1800.

DR. PAYNE'S SANITARY POULTRY HOUSE
has given universal satisfaction. Plans for nests, roosts and house mailed upon receipt of \$1.00
A. V. PAYNE, M. D. 524 Flatbush Avenue, Brooklyn, N. Y.

IMPORTED CHOICE ENGLISH LAWN GRASS SEED.
We are the only exclusive Importers of this fine Seed. Anyone desiring a beautiful and luxuriant Lawn, similar to the best English Lawns, and free from Weeds and Coarse Grasses, write us. Sample 5 lb. Bag, sufficient for 75 x 75 feet, sent anywhere in the Central and Eastern States, express paid, on receipt of \$1.50.
Address:
Blatchford's Golf Meal Factory & Agricultural Works
Established at Leicester, England, in 1800. Waukegan, Illinois

METAL MOTHERS
Complete fire-proof hatching and brooding plant for \$7.50. 2 7/8 oil hatches 50 cents and raises chicks. Catalogue free. **CYCLE HATCHER CO., Box 289, Salem, New York.**



THE GARDEN MAGAZINE
VOLUME II.

August, 1905 to January, 1906, inclusive
Price, Bound, Complete, (Postage, 32 cents extra) \$1.35
OR WE WILL BIND YOUR OWN COPIES FOR 75c.

It is not too late also to purchase Volume I. (February, 1905, to July, inclusive) and thus own the set of beautiful, practical and interesting books, from the beginning: The price of Volume I. while the few copies we have remain unsold, will be \$2.00.



We have the attractive permanent cloth bindings for Volume I. and Volume II., gold stamped, for your local binder to stitch on. Price, 50 cents each (postage 12 cents each volume, if mailed.)

Or, if the six copies of either volume are returned to us by express, prepaid, we will return the volume neatly bound. Our charge for the binder and the work is 75 cents for each volume. Postage 32 cents.

Back numbers 10 cents each, prepaid, excepting October, which is 25 cents, prepaid, and February, and April 1905, which are out of print. Any copies of incomplete files which are returned to us prepaid (with no duplicate numbers) will be credited on this bill for bound volumes at 10 cents each.

Indexes for Volume I. and Volume II. sent free on request to those who bind their own volumes.

In returning copies mark your name and address plainly on the package.

Cut out coupon along this line

DOUBLEDAY, PAGE & Co., 133-137 East 16th St. New York (G. M.-April 06)

Enclosed find \$_____ (note credit for copies returned), for which please fill my order as follows:

Cross out lines not needed	{	One Permanent Cloth Cover for Volume II.	\$0.50	Please credit me 10 cents each for copies for returned-to-day and apply on \$1.35 order.
		One Volume II. bound, complete	2.00	
		One Volume II. bound with copies returned to you to-day . . . . .	.75
		One Volume I. bound complete	1.35	

Yours truly _____
Address _____

If you wish us to mail volumes add 32c each for postage, or 12c each for mailing the covers

WASHINGTON AS A COUNTRY GENTLEMAN

Letters and Recollections of George Washington

BEING HIS CORRESPONDENCE WITH TOBIAS LEAR AND OTHERS, TOGETHER WITH A DIARY
OF WASHINGTON'S LAST DAYS, KEPT BY MR. LEAR

THIS volume is no less than a revelation of the home life at Mt. Vernon, so much does it contain of information as to property, farm, methods of handling servants and the like. Illustrated with rare portraits, etc.

(\$2.75 postpaid.)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE



DOUBLEDAY, PAGE & CO. NEW YORK.

*The funny side of every-
day life in a small village*

A Few Neighbors

By HENRY A. SHUTE

Author of

"The Real Diary of a Real Boy"

The reader's face "slips" as it would at actually seeing the inimitable townfolk and their unavoidable complications.

(\$1.10 postpaid.)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

COUNTRY HOMES OF FAMOUS AMERICANS By OLIVER BRONSON CAPEN.

"A BOOK TO ADMIRE, TO GLOAT OVER, TO ENJOY."—CHICAGO RECORD-HERALD.
PROFUSELY ILLUSTRATED FROM BEAUTIFUL PHOTOGRAPHS, Net \$5.00 (Postage 50c)

DOUBLEDAY, PAGE & COMPANY, 133 East 16th Street,

NEW YORK CITY.

COUNTRY LIFE IN AMERICA

FOR APRIL

Beautiful, practical, helpful and inspiring. It is one of the largest issues we have ever printed and at this time of year will do good to everyone who owns a country home. The April issue will be ready March 26th and can be procured through any newsdealer. Price, 35c.

A year's subscription for \$4.00 includes three double (fifty-cent) numbers—\$4.65 for \$4.00. Subscriptions also received through booksellers and newsdealers, or may be sent direct on this blank:

DOUBLEDAY, PAGE & COMPANY, 133 East 16th Street, New York.

Please enter my name as a subscriber, beginning with April number, for one year, for which I enclose \$4.00.

(Signed) _____

To Our New Friends

THIS month perhaps you see THE GARDEN MAGAZINE for the first time. If this number is helpful and interesting to you do you not think that the magazine will, in the twelve months to come, bring you inspiration and suggestions worth a dollar for the whole year.

We have planned for the coming year a series of issues that will each one deal with an important phase of gardening vital to the complete success of the garden—things that you find pleasure and profit in knowing at the proper time.

We mention below a few of the subjects our editors are already working upon.

In June we shall tell you a new and better way of planting your melon, cucumber and other vegetable vines, as well as the tender bedding plants, such as Cannas. This number will be out on May 15th.

The July number will have the best directions for getting succession crops of vegetables, that have ever appeared. It will tell you everything that you ought to plant in July in order to have plenty of fresh vegetables even in October and November, and through the winter.

August is the best month in the year to build a greenhouse, and we shall show an incredible variety of little greenhouses, conservatories, window gardens, etc., costing less than \$500.

The Great Fall Planting Number in October will be a complete manual for the increasing number of people who believe the Autumn is the season for setting out orchards, trees, shrubs, fruits and vines, to gain a year in

their growth. This large double issue will also cover very comprehensively the subject of hardy perennials for Fall planting, and the bulbs that bloom in the Spring.

The November number deals more helpfully than the subject of "The Winter Protection of Plants" than the subject has ever before been treated in any magazine, and readers may make a great saving in trees, shrubs and flowers. Next month, in the May issue, we shall tell you "Why Your Plants Died Last Winter"—although it was apparently the mildest on record.

December and January are the months of window gardens, greenhouses, and the recounting of the achievements of the year past, made up of the contributions of our readers. These numbers also plan out the work of the coming season.

During the year there will be many more planting plans such as appear in this number. They should be worth \$150 to anyone who wishes to use them.

An investment of \$1.00 in this way is simply garden insurance—your garden cannot fail. "THE GARDEN MAGAZINE is as necessary to my garden as sunshine," writes a gardener of some repute.

\$1.00 A YEAR - 10c. A COPY - DOUBLE NUMBERS 25c.

Use this coupon now, in time for the important May number (ready April 15th)

DOUBLEDAY, PAGE & COMPANY, 133-137 East 10th St., New York.

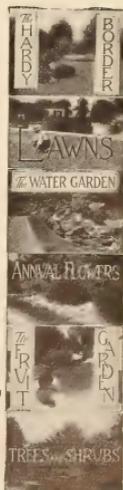
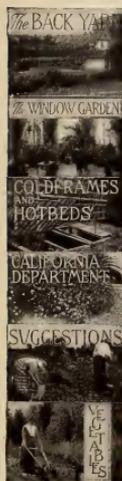
Enclosed find **One Dollar** for a year's subscription to THE GARDEN MAGAZINE, including all double numbers. Commence with May.

Value of twelve numbers if purchased separately, \$1.50

Address _____

190

© 24—APR. 06



TO readers of THE GARDEN MAGAZINE who have not seen or subscribed to our new magazine,

FARMING:

THIS is a practical and beautiful monthly publication which tells the farmer, be he amateur or venerable, experienced tiller of the soil, all that is new and useful in the world of farming. Each month these special departments are covered:

Field Crops	The Farm Home	The Farm House
Good Roads	Implements	The Young Farmer
The Dairy	How to Keep Well	The Housewife
Poultry	Cattle, Horses and Sheep	The Orchard
	Etc., Etc., Etc.	

THE April issue is especially devoted to *planting for record crops*. This issue alone might easily be worth a hundred times the price of a year's subscription.

Sign this and enclose \$1.00 and mail to

DOUBLEDAY, PAGE & Co.,
133 East 16th Street, New York:

G. M., 4, '06

Enclosed find \$1.00 for a year's subscription to FARMING.

Name _____

Address _____

AGENTS

who represent THE GARDEN MAGAZINE receive large special inducements for work done during the Spring.

Write for samples and particulars. You will probably wish to represent THE GARDEN MAGAZINE regularly in your locality. It pays: Good agents find THE GARDEN MAGAZINE the most profitable one to work for. Address:

THE GARDEN MAGAZINE,
133 East 16th St., N. Y. City.

Wanted

FEBRUARY AND APRIL, 1905, numbers of THE GARDEN MAGAZINE. For unsoiled, complete copies of these two issues (mailed to the address we shall send you) we will allow six months' subscription to THE GARDEN MAGAZINE. The subscription may be sent to any address in the United States or Canada, or may be added to the date of expiration of your own subscription. Write us before you send them.

THE GARDEN MAGAZINE,
133 East 16th Street, -:- -:- New York.

*The first adequate treatment
of the Dog in America*

The Dog Book

By JAMES WATSON

What Others Say:

New York Times

"Author, artist, publishers, have evidently combined their talents, their enterprise, and their patience to make 'The Dog Book' the most magnificent literary and artistic monument ever created in honor and in explanation of 'man's most faithful friend.' A really unequalled publication."

New York Sun

"If any man knows about dogs it is Mr. Watson."

New York Telegram

"There has been nothing written or published pertaining to dogs which has quite equalled this work."

Boston Transcript

"'The Dog Book' proves itself of the greatest value to every dog lover."

To be in ten parts, six now ready

Price, each, \$1.10
(Subscription)

Write for special terms and monthly-payment plan, mentioning THE GARDEN MAGAZINE.



DOUBLEDAY, PAGE & Co. NEW YORK.

The New Cyclopedia OF American Horticulture

(A new and enlarged edition of the work edited by Professor Liberty H. Bailey, and formerly published in four volumes.)



is now in process of publication, and will soon be ready for delivery. In the meantime special inducements are offered to "Before-Publication" subscribers. Write for full particulars.

Every man or woman who cares for outdoor matters actually needs this

Cyclopedia. It will be the one great authority, containing in its six great quarto volumes 2,100 pages of:

1. Descriptions, alphabetically arranged, of all—over a thousand—of the native trees, plants and flowers worth cultivating, with keys enabling you to name any species as well as to find out all about it.
2. Fullest cultural instructions for every flower, fruit and vegetable, trees and ornamental plants you may want to grow.
3. Hundreds of elaborate articles on such subjects as the tools necessary for all sorts of work in the ground, railroad gardening, spraying, thinning, transplanting, and so on.
4. Over 4,357 articles in all, by 450 expert writers, occupying about 2,100 pages and covering 24,434 plant names.
5. 2,800 detailed illustrations, enormously increasing the ease of identification to the amateur, and 146 beautiful full-page plates.
6. An inexhaustible mine of information from practical cultivators on culture, marketing, localities, and the horticultural capabilities of each State and section.

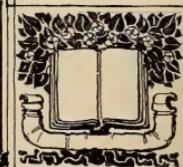
THE GARDEN MAGAZINE  COUNTRY LIFE IN AMERICA  THE WORLD'S WORK

DOUBLEDAY PAGE & CO NEW YORK
133-135-137 EAST 16TH STREET, NEW YORK

CUT OFF HERE AND MAIL TO US
If You Are at All Interested
in flower culture, permit us to send you our circular and full particulars of your present advantages over other of the New Cyclopedia of American Horticulture. Please write very plainly and your address.

82228-2

THE TALK OF THE OFFICE



"To business that we rise betime
And go to 't with delight."—*Ansony and Cleopatra*

"THE GARDEN" GROWS

This is the season when THE GARDEN MAGAZINE is supposed to do its readers the most good. This Planting Number (April) has been planned a year in advance; it is bigger, and we hope better, than all the numbers which have preceded it—more copies, more advertising, and more pages are printed than ever before.

If you find it good, will you not tell a gardening friend about it? If you are willing to take a few subscriptions, write us for terms; we will pay you well for your trouble.

THE OPENING FIELD

It is true, we believe, that the gentle art of garden-making has advanced more during the last five years than for the twenty preceding years. When we began the publication of *Country Life in America* there was hardly a friend who did not prophesy failure; they could see no market for a magazine for country lovers unless it were a farm journal. In five years *Country Life in America* has become an institution. We believe that it has done much to help make country living popular, and here is one of many proofs of it:

The real estate department of that magazine, which prints every month many pages of advertisements of homes in the country for sale, has caused to be sold through its columns but little less than two million dollars' worth of property. Attractive country houses are no longer a "drug in the market"—they are not sacrificed nowadays unless the house or land is undesirable for some cause.

A year ago THE GARDEN MAGAZINE found readers keen for a magazine which would cultivate and foster the love for the garden, and satisfy the need for practical advice. That it was needed has been shown by the success of some of the advertisements—a severe and true test of a magazine's usefulness.

Nurserymen and seedsmen have been loud in their praises of the results the magazine is bringing them, but what is more remarkable is that even the general advertisers are reaping unusually large returns. A few days ago we received a letter from a furniture manufacturer which reads in part as follows:

"We have ordered Geo. Batten & Company to run another four-inch advertisement in THE GARDEN MAGAZINE for April. Excellent results were produced from the February number. We wish THE GARDEN MAGAZINE had a circulation of about a million, as we think we would confine ourselves almost exclusively to it."

A few days later a publisher who used the March issue for the first time wrote us:

"Thus far we have received more responses from the advertisement in your magazine than we have from any ten publications that we have heretofore used."

We look forward to the day when the garden will be universal in this country, as it is in England; when everyone from the poorest to the richest will have a personal garden, and information on all the subjects which have to do with gardening will be of interest to everybody. THE GARDEN MAGAZINE sets for itself the task of helping along this movement, and in five years it confidently expects to have done as much in its field as *Country Life in America* has accomplished. It is a congenial task because every garden means a home.

OUR NEW MAGAZINE—"FARMING"

It was a rather surprising thing to discover that when we advertised our new periodical baby in our other magazines *The World's Work*, *Country Life in America*, and *THE GARDEN MAGAZINE*, the largest returns came from *The World's Work* and the next largest from *Country Life in America*, in proportion to space used.

Several thousand people sent one dollar in advance on the announcement, so we have no cause to complain and are striving to make full return for the money so trustfully remitted.

We wonder if THE GARDEN MAGAZINE readers know that we publish a new magazine called *Farming*. If you are not interested in poultry, horses, cows, and sheep; in the growing of crops and the dairy; in the wonderful advances made in the art of farming; in the selection of seed and the proper feeding of the land to get the best yield; and in the farm home—you won't want *Farming*.

If you are interested in these subjects, the magazine will be worth at least the \$1.00 a year it costs. Begin with the first issue while we have copies, and remit the dollar bill now.

ARE YOU GOING TO BUILD?

If you are, you have made up your mind to spend more or less money—less, probably. We believe it will pay you to invest \$3.50 in a very complete and valuable book by Chas.

Edw. Hooper (an architect and experienced builder), "The Country House." There are scores of attractive houses pictured, plans and specifications, more practical and money-saving information, than was ever put into a book before. Our mail-order department will send it on approval if desired.

THE CYCLOPEDIA OF HORTICULTURE

Just a year ago we expected to issue this revised and enlarged edition of Professor Liberty H. Bailey's great work. It has taken a whole year to get it ready. There are 500 illustrations. We will not attempt to describe it here; look at the advertisement on page 125. It is a work every garden lover needs, and now is the time to get it. Pay for it while you are using it. It costs \$3.00 a month for eight months (if ordered now; later we shall raise the price to ten payments of \$3.00 each) for the complete set in six large volumes uniform in style with "The Nature Library," or \$22.80 cash, sent on approval.

OUR SERVICE DEPARTMENTS

Before Service Departments get to be so much a matter of custom with magazines that we may be accused of adopting the idea from someone else, we should like to call attention to the ground covered by the various services offered by our different magazines as follows:

In connection with *Country Life in America* we provide information to our subscribers and readers about

Real Estate,
Poultry, Dogs, and Cattle,
Country House Furnishings and Decorations,
Landscape Work,
and all that constitute the needs of the owner of a country home;

The World's Work:
Business Helps Service, Life Insurance Service,
Building Aids;

THE GARDEN MAGAZINE:
Implements, Trees, Plants, and Seeds;

Farming:
Farm Implements, Farms for Sale,
Fertilizers, Crop Seeds, and Supplies.

These questions sent to us are put in the hands of experts for reply. Already our Service letters are numbered by the thousand, and we are thankful to say that we have accomplished some good to our readers. The Service is entirely free; all we are trying to do is to make new friends and to keep old ones.

Practical Books for the Garden

Ferns and How to Grow Them

By G. A. WOOLSON.

An authoritative little hand-book, dealing with the growing of hardy ferns both in the garden and indoors. Profusely illustrated. Net, \$1.10. (Postage 10c.)

Roses and How to Grow Them

A very practical volume, uniform with the above. Profusely illustrated. Net, \$1.10. (Postage 10c.)

How to Make a Vegetable Garden

By EDITH L. FULLERTON.

A real necessity for a suburban or a country home. 250 beautiful photographic illustrations. Net \$2.00. (Postage 20c.)

How To Make a Flower Garden

A charming and practical book by experts on every branch of the subject. 219 beautiful photographic illustrations. Net, \$1.60. (Postage 16c.)

How To Make School Gardens

By H. D. HEMENWAY.
Illustrated. \$1.10 postpaid.

How To Plan the Home Grounds

By SAMUEL PARSONS, JR.
Illustrated. \$1.10 postpaid.

A Plea for Hardy Plants

By J. W. ELLIOTT.
Beautifully illustrated. \$1.76 postpaid.

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

YOUR GOOD TASTE BESPEAKS A COPY OF

The International Cook Book

By ALEXANDER FILIPPINI

Formerly of *Delmonico's*

Author of "The Table"



HIS is the world's cook book. It is replete with rare and deliciously original dishes, drawn from the author's wide experience and years of travel here and abroad. There are nearly 3,500 recipes in all—a veritable encyclopedia representing countries all over the globe.

Two washable bindings, white seal grain and red morocco grain. Net, \$4.80 (postage 48 cents).

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

The Garden Magazine

CONTENTS - - - APRIL, 1906

PAGE

COVER DESIGN—A garden of flowering shrubs, *Crimson Rambler* and other roses, *Mick orange* and *Rosa multiflora*. Herbaceous perennials at the right

THE GARDENER'S REMINDER - - - 129

FLOWERING SHRUBS FROM APRIL TO NOVEMBER - - - 130
Photographs by N. R. Graves, Henry Troth and the author

Leonard Barron

ALPINE FLOWERS OF EASIEST CULTIVATION - - - 133
James T. Scott
Photographs by J. Horace McFarland Co. and others

IDEAL EDGING PLANTS FOR WALKS AND FLOWER BEDS - - - 136
Jens Jensen
Photographs by Henry Troth, Vermont Experiment Station, and others

CLASSIFIED PLANTING LIST FOR ANNUALS - - - 139
P. T. Barnes

A BEDDING PLANT GROWN AS A TREE - - - 142
W. N. Craig

QUALITY POTATOES FOR THE HOME TABLE - - - 143
Effie M. Barron
Photographs by Herbert E. Angell

A CONSTANT SUCCESSION OF HARDY FLOWERS - - - 145
H. G. Taylor

HOW TO USE A PLANTING PLAN - - - 147
I. G. Tabor
Sketch by the author

A KALEIDOSCOPE SERIES OF SMALL GARDENS - - - 148
John F. Johnston

A KANTANKEOUS BROOD OF APHIDES - - - 150
E. Dwight Sanderson
Photographs by the author and C. M. Weed

SOME SUGGESTIVE GARDENS - - - 152
Photographs by Henry Troth and Herbert E. Angell

CLASSIFIED PLANTING LIST FOR VEGETABLES - - - 155
P. T. B.

GROWING QUALITY POTATOES - - - 158

THE CALIFORNIAN'S REMINDER - - - 160

GROWING THE EDELWEISS FROM SEED - - - 162

POPPIES AS CUT FLOWERS - - - 164

GROWING CHINA ASTERS FREE FROM DISEASE - - - 166

CHEESE-CLOTH PROTECTION FOR GARDEN SEEDS - - - 168

THE SECRETS OF GROWING GOOD SWEET PEAS - - - 170

SOWING SWEET PEAS FOR SUCCESSION - - - 172
Photographs by the author

SWEET PEAS WORTH GROWING - - - 174

A 12 X 9 FT. GREENHOUSE FOR \$100 - - - 176

GROWING ALPINE PLANTS FROM SEEDS AND CUTTINGS - - - 178

CARDINAL FLOWERS AS ANNUALS - - - 180

HOW WE SOLD 80,000 BULBS TO SCHOOL CHILDREN - - - 182

WILHELM MILLER, Editor

Copyright, 1905, by DOUBLEDAY, PAGE & COMPANY. Entered as second-class matter January 12, 1905, at the postoffice at New York, N. Y., under the Act of Congress, March 3, 1879.

JAPANESE IRIS

Some years ago a set of Japanese Iris (*I. Kampheri*) were sent to us from Japan to test, which were said to be identical with the collection in the Royal Gardens. We cannot vouch for this statement, as we have never been in Japan, but we have never seen another collection in America or Europe that would equal it in any way. The collection contained many colors and varieties we had never seen before, and the flowers were of remarkable size and beauty. When these Irises were in bloom they excited the greatest admiration and enthusiasm, and it was hard to convince people that these unique and exquisitely beautiful flowers were as hardy as apple trees, and as easily grown as potatoes. They will thrive in any good garden soil, but if the soil is made very rich and deep, and flooded with water for a month before and during their blooming season, they will produce flowers of a wonderful size, sometimes ten to twelve inches across. These Irises should be planted in full exposure to the sun.

Since the above collection was received we have annually added to it the newest varieties from Japan and new varieties selected from thousands of seedlings grown on our own grounds, until we now have what is unquestionably the finest and most complete collection of Japanese Iris in the world.

PRICES OF JAPANESE IRIS

50 Named Varieties, 35 cts. each, \$1.50 per doz., \$6.50 for 25, \$20 per 100; a few rare varieties, 60 cts., 75 cts. and \$1.00 each. American-grown, fine mixed, \$1.25 per doz., \$6 per 100, \$50 per 1,000.



THE SPRING-TIME GLORY OF THE JAPANESE IRIS IN JAPAN (From The Country Calendar)

THESE GLORIOUS IRISES SUCCEED JUST AS WELL IN AMERICAN GARDENS

We have the largest, finest and most comprehensive stock of Hardy Plants in America, including three hundred varieties of the choicest Paeonies, one hundred varieties of Japanese and European Tree Paeonies, a superb collection of old English garden and wild roses; and also an unsurpassed collection of named Phloxes. Our illustrated catalogue describing these and hundreds of other Hardy Plants, Trees and Shrubs will be sent on request.

"A Plea For Hardy Plants," by J. Wilkinson Elliott, contains much information about Hardy Gardens, with plans for their arrangement. We have made arrangements with the publishers of this book to furnish it to customers at a very low price. Particulars on request.

ELLIOTT NURSERY CO.,

--

--

Pittsburg, Pa.

The Garden Magazine

VOL. III.—No. 3
PUBLISHED MONTHLY

APRIL, 1906

ONE DOLLAR A YEAR
TEN CENTS A COPY



How to Avoid the Spring Rush and Have a Better Garden

THE planning and planting of a garden can be divided into about fifty items which are classified and numbered below.

Go over these now and strike out the items that do not concern you, e. g., hotbeds, if you cannot have them this year.

Next put a check mark against the items you will do yourself and a cross against the work which you will have done by hired labor. The invariable tendency is to attempt too much. Unless you have a mental picture of yourself doing the work at the right time and in the best possible way put it on the hired man's list. Let us take no chances this year.

Then concentrate on the items that can be done evenings before April 10th.

The rest is easy; for the secret of success in gardening is to plan everything before the ground is fit to dig.

Check off each item as fast as it is done. Use this "check list" faithfully during April and you are bound to have a better garden.

This "check list" is an annual feature of THE GARDEN MAGAZINE. If you see any way of improving it or of simplifying the work of gardening in the one month when everything has to be done at once, please give us the benefit of your experience.

The chief improvement this year consists in giving references to articles in the magazine containing the best available suggestions for each piece of work. The numbers refer to volumes and pages. They show what a valuable reference work the bound volumes have become.

Do you realize that there are two bound volumes of THE GARDEN MAGAZINE already and that the easiest, cheapest and pleasantest way to secure a working library on home gardening is to have your set bound? If you do not, you will never refer to the back numbers and they will get lost. Without an index they will be of no use. Do you know that the publishers supply indexes free to subscribers? Better arrange with the pub-

lishers now for bound volumes or it will be too late and you will always regret it.

INDOORS BEFORE APRIL 1ST.

1. Send postals for catalogues of advertising seedsmen and nurserymen. Let us start right by getting new and inspiring ideas. We need many points of view.
2. Arrange for manure or buy fertilizers (1: 27, 236).
3. Plan the vegetable garden (2: 261).
4. Plan the flower garden (1: 17).
5. Order seeds, plants, trees.
6. Order better tools (1: 134, 67).
7. Order complete spraying outfit (1: 32, 22, 68).
8. Buy some good books on gardening, e. g., "How to Make a Vegetable Garden" and "How to Make a Flower Garden" (2: 229).
9. Get outfit for canning fruits and vegetables (2: 69).
10. Make separate and better facilities for storing vegetables and roots (1: 76); and plan to have plenty of fresh vegetables all winter.
11. Make veranda boxes (1: 228) and bird houses (*Country Life in America*, 6: 88, 186; 5: 344).
12. Write all labels and mark on them the distance apart the plants should stand when thinned or transplanted.
13. Look over roots in cellar (1: 57).
14. Clean and sharpen tools (1: 57).
15. Start flower seeds in window.
16. Take slips of geraniums (2: 164).
17. Plan a children's garden.
18. Start a garden diary (1: 265).
19. Join a civic or village improvement society or start one.

OUT OF DOORS BEFORE APRIL 1ST.

- (or before farmers begin to plow)
20. Clean up!
21. Put all the manure you can get on the vegetable garden.
22. Manure asparagus and rhubarb beds or fertilize with nitrate of soda (1: 146).
23. Fertilize (1: 82), roll and repair the lawn (1: 146). Good time to make new ones (*Country Life in America*, March, 1906).
24. Any grading or draining?
25. Prune fruit trees (1: 64) and grapes (1: 18) not berry bushes or early-blooming shrubs (1: 225).
26. Prune hardy roses, already planted, by March 15th.
27. Train berry bushes (1: 88) and grapes (1: 18).
28. Spray fruit trees, berry bushes and ornamental shrubs with lime-sulphur before the buds open (1: 22).

29. Get Paris green and Bordeaux mixture ready for later sprayings (1: 144).
30. Get pea brush or chicken wire ready; provide poles for beans and tomatoes.
31. Trim paths and borders.
32. Buy or make a hotbed (1: 58) and a cold-frame (1: 30).
33. Plant deciduous trees and shrubs.
34. Plant fruit trees (1: 122, 183), and berry bushes (1: 106, 125).
35. Plant new hardy roses about March 25th (1: 129). Sow sweet peas (1: 150).
36. Sow a few seeds of extra early round peas and Golden Bantam corn (1: 105).

OUTDOORS ON APRIL 15th.

- (or as soon as the land is fit to dig and before the danger of frost is past).
37. Plow and harrow the garden, or dig and rake it.
38. Sow seeds of hardy vegetables (1: 110). Practically everything except beans, corn, vines and tomato family.
39. Plant onion sets and early potatoes.
40. Transplant hardy vegetables from cold-frame to garden, especially cabbage and cauliflower plants.
41. Sow seeds of all hardy flowers (1: 117).
42. Prepare for frost (1: 166).
43. Divide and rearrange perennials; give surplus to neighbors who cannot buy them. If you want a large mass of one kind of perennial flower propagate by cuttings (2: 116).
44. Prune tender roses (1: 129).
45. Spray roses with whale oil soap toward end of April (1: 129).
46. Plant evergreen trees and shrubs.

HOTBEDS AND COLDFRAMES

This is the busiest month for hotbeds and coldframes. They need the closest care on account of sudden rains, hail, changes of temperature, frost, rapid alternation of clouds and sunshine, and the dangers of drying out, burning foliage, spindling plants, etc.

47. Sow tender annuals in hotbeds before April 1st, e. g., cosmos and others which cannot stand frost (1: 34).
48. Start canna by April 1st and the early crops of dahlias and gladioli, also dahlias for propagating; main crop outdoors in May.
49. Harden cabbage and other vegetables that can stand frost. Have them ready to move from coldframes to open by April 15th. Harden tender vegetables and flowers by transferring them to coldframes April 15th, from which they may be set out-doors the first or second week of May.
50. Sow seeds of perennial flowers that will bloom the first year from seed if sown now in coldframes (3: 140).

Flowering Shrubs from April to November—By Leonard Barron New York

SEVEN BUSHES THAT WILL GROW ANYWHERE AND WILL FILL OUT
THE BIG GAPS THAT ORDINARILY OCCUR IN MIDSUMMER AND FALL

IT IS a perfectly easy matter to have flowers in the shrub garden for seven months of the year. Here for example is a list of seven shrubs or small trees that will maintain a continuous performance of bloom from frost to frost: Forsythia, lilac, deutzia, spirea, smoke bush, hydrangea, and witch-hazel. All are well-known shrubs that can be had from any nurseryman. They will grow in any ordinary garden soil, and are hardy in the New York district. All are pictured here.

APRIL—THE GOLDEN BELLS

Although the fragrant yellow jasmín (*Tasminum nudiflorum*) may open its flowers a few days earlier than the golden bells (Forsythia) still it does not make so showy a plant and the huge masses of bright yellow blossoms that the golden bell bushes give in the early spring are familiar to all. Almost simultaneously with the returning warmth of spring the shrubbery becomes aglow. I do not know of a better shrub to plant in the foreground of others than the drooping golden bell (*F. suspensa*). Yet strangely the one most commonly seen is the erect (*F. viridissima*) which has the further disadvantage of being also less hardy in the extreme North. The drooping golden bell makes a very graceful shrub in a very short time and its willowy branches, sometimes eight feet long, are studded with the large flowers from end to end. It can be used as a vine to cover up to a height of eight feet which it will attain in the course of three years from the cutting in any good soil. If you want an upright golden bell plant that

known as Fortune's (*F. suspensa*, var. *Fortunei*); a smaller growing one is *F. suspensa*, var. *Sieboldi*, which also has more slender branches and is suitable for small gardens and places where there is not room for free growth.

MAY—THE LILACS

The common lilac (*Syringa vulgaris*) is the most characteristic flowering shrub of the month of May. Of recent years there have been so many improved varieties introduced that the old fashioned flower is in danger of being eclipsed. Yet it is not surpassed in profusion of bloom nor in the delightful fragrance. This is the best lilac for ordinary planting and is exempt from the attacks of borers—but it is a welcome home for the scale! One thing that must be done to keep lilacs with a decent appearance is to cut out all weak growths that spring up from the base. This is one of the troubles with this delightful flowering shrub and results in the development of a tall plant all open at the base and bearing its flowers up on top away out of reach. Remove the old flower-clusters as soon as the season's bloom is past and never prune in the winter—that is don't cut back the shoots then because the next season's crop of flowers appears on the shoots that will be made this summer. Lilac bushes grow rapidly for the first six years, and afterward add about one foot each year until the height of about twelve feet is attained. If planted at the back of the shrubbery they may be allowed to develop in their own way as the lower part will be hidden by the fore-

ground plantings of smaller growing things. Here are some good varieties worth growing, all newer hybrids of the old common lilac: Marie Legraye (white); Jacques Callot (rosy pink), remarkable for the very large flowers; Ludwig Spath (dark purple-red). The best doubles are probably Madame Lemoine (white); Charles Joly (dark red). All the varieties of the common lilac are best planted in the fall, because they begin to grow so very early in the year. There are several other species which may be planted in the spring, such as the Chinese (*S. Chinensis*), blooming about the same time as the common one, and is valuable because of the large size of its flower-clusters; the Persian lilac (*S. Persica*) growing only six feet high; and the Pekin lilac (*S. Pekinensis*) growing fifteen feet high, but it does not flower until June, so has not a proper place in this discussion. The lilacs are by all odds the best tall-growing flowering shrubs.

JUNE—THE SPIREAS

A shrubbery-garden without some of the host of spireas is hard to imagine. We simply must have them. There are many to choose from, but the one that is transcendently the best is the bridal wreath (*S. Van Houttei*). There is the more recent *S. arguta* which some consider to be even more beautiful than the former favorite. You will make no mistake in planting either or both these lovely shrubs; or even *S. Thunbergii* or *S. triloba*. All those named produce their immense wreaths of snow-white flowers in May, June or July. The one illustrated is the



April. The "first" showy spring flowers in the shrubbery are those of the golden bells (*Forsythia suspensa* and its varieties, *Fortunei* and *Sieboldi* are the best). Will grow eight feet high in three years



In May, the common lilac (*Syringa vulgaris*) and its varieties. Will reach a height of twelve feet;

best known and is good enough to satisfy the most fastidious, surely. It does not grow more than five feet high and will easily reach its maximum in four years from the cutting, so even if very small plants are set out one does not have to wait long for best results. My own fancy is to plant these very showy spiraeas as isolated specimens on the lawn. They are good enough to stand a close inspection. How to prune for the greatest quantity of flowers was told on page 225 of the first volume of THE GARDEN MAGAZINE.

JULY—THE DEUTZIA

In June and July we look for the tassels of the deutzias. Of course this is also the month of the roses, but they are as things apart, not shrubs of the month for general planting. The deutzias are moderately low growing shrubs that bear a profusion of white flowers and are especially suitable for foregrounds or as lawn specimens. The nurserymen offer hybrids under the names of *Lemoinei* and *Pride of Rochester*, both of which will give more satisfaction than the older species. The first named is the one for general planting; it is not only the showiest but is also quite hardy, while some of the others may not be so. These make low, rounded bushes of three feet in height. *D. scabra* grows six feet or more in four or five years, but is not always to be relied upon north of New York.

AUGUST—THE SMOKE BUSH

Really, a tree, but capable of being grown as a shrub, the smoke bush or Venice sumach (*Rhus Colinus*) is a suitable addition to the border for the dense masses of its much-purpled inflorescences. Left to itself this tree will reach a height of 30 feet, in time, but it is a very slow grower. In the first six years it will perhaps make a bush six feet high at which it may be kept by annually cutting back the current season's growth. Left to itself it will in all probability not make more than a few inches growth each year after it has reached that height. It is a curiously attractive shrub and makes a good lawn specimen. Unfortunately it is attacked by the borers. There is a variety with much darker "smoke" that is known as the purple smoke bush. The foliage colors well in the fall, and it is a pity that the plant has fallen down the scale of popularity.

SEPTEMBER—THE HYDRANGEA

The one flowering shrub that everyone plants for this month is the hardy hydrangea (*H. paniculata*, var. *grandiflora*). And no wonder, too, for there is really nothing to compare with it. The rose of Sharon is a hardy enough late-season shrub, but cannot begin to be classed with the hydrangea as a gorgeous flowering subject. I grant that it grows taller and that there is more variety in the flowers but for rich, almost luxuriant profusion of result give me the hydrangea. You can prune this very severely in the winter or spring and the more you prune the more profuse will be the flower, but hard pruning makes willowy branches that somehow are



June. The deutzias, low spreading bushes, generally with white flowers. *D. Lemoinei* is one of the best. These shrubs are best planted in the foreground. *D. scabra* grows six feet high in four or five years.

not in character with the plant—at least that is my fancy. Plant the hydrangea alone, not nesting among trees. It likes a rich soil and will repay feeding with fertilizer in the spring. It will attain a height of five or six feet in four or five years from either hardwood or soft-wood cuttings. The type species is a still more rapid grower than the grandiflora variety, and taller, too. It will reach six feet in three years from the cutting.

OCTOBER—THE WITCH-HAZEL

The American Witch-hazel (*Humamelis Virginiana*) should be planted wherever a corner can be found for it. During this month and in November its quaint flowers of

brown and yellow add a cheery touch of color to the garden when there is nothing left unless one has a few chrysanthemums. At the same time as it flowers the fruits of the previous crop of flowers are on the tree and the noisy explosions of the bursting seed-pods in the October days if brought indoors are an added attraction to the tree. There is another species that comes from Japan (*H. Japonica*) which is quite different as it does not flower until the early spring. The native witch-hazel is a shrub or small tree, from ten to thirty feet, but grows slowly after it has reached a height of eight or ten feet, which it will do in about six years from the seed.



July. Many of the spiraeas flower during June and July. The bridal wreath (*S. Van Houttei*) is the most beautiful of all. Plant as an isolated specimen, preferably. Attains five feet in four years.



August. The plumose flowers of the smoke bush (*Phlox Götting*). A tree thirty feet high, but which can be grown as a shrub by keeping it cut back to six feet in height. After that it grows slowly

In stating the rates of growth above, reference has been to growth from cuttings in every case but this last, which is best raised from seed. The nurseries generally offer three- or four-year-old plants which cost about fifty cents each. They do not have any "spread" but will attain that in a couple of years or so after planting.

NOTHING EASIER TO GROW

The successful cultivation of shrubbery depends upon the simple principles of ordinary gardening: First, proper preparation of the ground—which is merely digging or plowing a foot or two deep and seeing that there is a supply of fertile soil, properly drained. If the original soil is poor get some good loam, or preferably the top soil from an

old pasture, and fill in the site for the shrubbery with this. Very often the builders carefully spread over the rest of the lot the poor bottom soil from the cellar excavation and so the surface soil that confronts the gardener is about as inert as anything can be. Don't expect to grow good plants in such a medium. And don't blame the nurseryman for the failure. It is a wise economy to spend a little extra money in the beginning and provide good soil. A good dressing of well-rotted stable manure spread over the surface of the bed and dug in will achieve wonders. Spread it on the ground to a depth of two or three inches and dig it in. Fresh, or "green" manure is not advisable as the heating that will take place will injure the tender roots of the newly planted shrubs. No matter how carefully the plants may have been taken up the roots will have suffered and the new fibers that they will make as soon as they are planted out must be encouraged to grow. If you cannot get anything but fresh manure spread it over the surface of the bed after the planting is done and it will serve a double purpose. Rains or watering will dissolve some plant food, and it will act as a mulch to preserve the soil moisture.

The second point of importance to consider in planting is whether you want to have done with the work once and for all or whether you will carefully tend the plantation for the next few years. To be sure the ideal way is to plant a little thickly—that is to plant a few more than can later on be comfortably accommodated upon the space, and to thin out in succeeding years as the various plants attain greater size.

This necessitates an acquaintance with the future possibilities of the plants themselves. All shrubs do not develop at the same rate of growth, some again grow rapidly for the first few years and then make but slight increase year by year.



October and November. The American witch hazel has curious yellow and brown flowers at this season. The fruits of the previous year are also seen. Grows to ten feet in the first six years

Most shrubberies in suburban gardens that have been planted some years look ragged, and each plant crowds its neighbors just because this little matter of thinning out has not been properly done.

ERRORS IN PRUNING

Most amateurs worry themselves over what they consider the intricate problem of pruning. My advice is simply this: Don't prune! Avoid the annual trimming that ruins so many of our gardens. There are more shrubs ruined by the pruning mania than by any other one cause and the worst part of it all is that the damage is suffered by just those people who would most appreciate having a few good shrubs. After the thinning out of surplus specimens the only attention that the shrubbery needs is a thinning out of the old growths to make room for the new season's wood and of course the removal of any dead or dying branches. Remember that shrubs do not need the attention of the pruner to make them grow; pruning is only a means to make the garden look neater. And remember this golden rule: prune after flowering. This means that a late flowering shrub like the hydrangea can be pruned in the spring because the flowers are produced on the growths that it will make in the summer, but it is just as satisfactory to prune it in the winter time. The early flowering shrubs that flower on the growths of the previous season may be pruned in the spring, but not until after they have done flowering. Therefore spires, lilacs, deutzias, golden bells, and such like must not be cut back if you want to have flowers the same season. They will in all probability require some reduction of the top, but it must be done by reducing the number of the growths, rather than by shortening.



September. The hardy hydrangea, the flowers of which, opening white, turn pink as they age, and can be cut for indoor decoration in November. Grows five to six feet high in five years



The rock garden, at Smith College, made up of specially prepared pockets of soil and every sort of exposure to suit the greatest variety of plants



To grow alpines from seed, start them in cold frames in some sheltered nook. Best results will generally follow from summer or fall sowing

Alpine Flowers of Easiest Cultivation—By James T. Scott, ^{New York}

TREASURES FROM HIGH ALTITUDES
HOW TO CARPET BARE ROCKS AND

THAT WILL GROW IN LOWLAND GARDENS WITHOUT A SPECIAL ROCKERY—
ROADSIDE LEDGES WITH FLOWERS THAT ONLY NEED A PINCH OF SOIL

THE alpine plants worth growing in America are chiefly hardy perennial herbs that make tufts or rosettes, or carpet the ground with a continuous sheet of flowers. Examples are the famous gentians, pinks and primoses of Switzerland. These plants are not confined to the European Alps, but come from all high mountains and therefore, in horticultural literature, the word "alpine" has become so generalized that it is no longer capitalized.

Unfortunately some of the choicest alpines can be grown only in a special rockery, where they can have cool air, plenty of light, but without shade, with constant moisture, but perfect drainage. Yet there are plenty that can be grown in the ordinary border which are able to withstand the alternate freezing and thawing of American winters. These are the subject of the present article, and also plants that will cover rocks that have only two or three inches of soil above them.

The one best plant for such a situation is the moss pink *Phlox subulata*. This will subsist upon a very meagre fare. Two or three inches of good soil on the top of a rock or a gravelly bank will suffice. It forms a complete mat in a very short time, and will stand the heat and drought of summer on an exposed bank, where grass will refuse to grow. In spring and early summer (April, May and June) it will produce a blaze of pink blossoms that will last for two or three months. Small clumps are pretty in odd corners, or in mixed borders, but can be appreciated at its true value only when seen in

large masses, with no other color around save the surrounding green. After the flush of flowers its glory is past for a year, but it will remain green and thrifty throughout the summer. When buying, get pot-grown plants if possible, as they are practically sure to live, but if dug from the open ground, and shipped any distance, there is danger from drying out. If planted one foot apart each way they will com-



The sort of rock garden where alpines will not grow. No soil and no moisture present



The simplest sort of rockery that anyone can make. Thoroughly practical, and with no special soil pockets



Grows in any soil, but will do amazingly if highly fed. Garden anemone (*A. cononaria*)



The native bloodroot (*Sanguinaria Canadensis*) delights in having its roots, in a rocky crevice. It must be kept well within bounds, however, as it is hard to eradicate

pletely cover the ground by the end of the season.

THE LONGEST SEASON OF BLOOM

About the beginning or middle of May a few seeds of rose moss (*Portulaca grandiflora*) may be sown very thinly, and covered over with a handful of fresh soil. They will produce flowers best under these conditions, intermittently from June till frost. The season can still further be lengthened by planting a few bulbs of crocus, snowdrops, sparaxis, scilla, ixia, Spanish iris, or grage hyacinths, in the fall. They will bloom in early spring, before the phlox.

Thus, for a small outlay, an otherwise bare spot can be made to look bright and cheerful from early spring till late fall, with almost no attention whatever other than an annual top dressing (which is desirable) of good soil and manure mixed in equal proportions, and applied in spring or fall, about one to two inches deep, to replace the wastage from washing by rain, which will always occur in elevated, exposed situations.



Bold, solid masses of one plant give richer effects than a mixture of many on the same space. The true colors of the Alpine flowers are realized only in large sheets

To prepare such a bed, commence in early spring. Cover the whole spot three or four inches deep with a mixture of good soil and well-rotted animal manure in equal parts. Fork this over, and incorporate whatever good top soil is already there. This will all pack down together, and be less liable to wash away.

REQUIRING MORE SOIL THAN PHLOX

The rock cress (*Arabis albidia*) delights in a dry situation and produces a profusion of white flowers from early spring till early summer.

The purple rock cress (*Aubrietia deltoidea*) makes excellent mass effects. When planted in pockets in the rocks, it gives the greatest satisfaction. It loves a rich soil, with cool rock environment such as is found in rock pockets. It flowers in early summer, and gives a color and effect which is uncommon at that time. It is not quite so hardy as the others, but with a slight protection of dead leaves in winter, it will survive all right.

For a mass of yellow, grow golden-tuft (*Alyssum saxatile*) which is gorgeous in April and May.

IDEAL FOR SAND

For a sandy soil and sunny situation the sea pink (*Armeria maritima*) is ideal. It flowers in summer and is quite distinct from any of the plants just named. The flower heads are borne six inches along the ground. The leaves are a glaucous green, and the plant is beautiful, even when not in flower.

THE BEST WHITE-LEAVED ALPINES

Woolly-leaved chickweed (*Cerastium tomentosum*) and the edelweiss (*Leontopodium alpinum*, known to the trade as *Gnaphalium Leontopodium*) are suitable for massing in sunny places. Both have white, downy foliage, and whitened flower heads, forming a dense mat of growth, their beautiful foliage conspicuous at all times.

THE BEST KIND FOR CREVICES

But the rocky spots are not always to be found in the open, where the summer sun beats incessantly from early morning until late in the afternoon. There are sheltered spots below the trees, in the shade of buildings, and in the corner of the woods. There are precipitous slopes where the falling rains have washed the rocks bare, and in the intervening crevices the young seedlings have been washed away before they got sufficient foothold. These bare rocks, with their ragged edges, usually have intersecting crevices, however, that can be used to advantage; and often a few rocks can be so placed as to form receptacles that will hold enough soil to accommodate many suitable plants that will change the whole aspect of a place. Such a place cannot be made. It is nature's handiwork, but man can improve it. Soil should be added wherever space can be found to hold it. Small spaces are not desirable; they should be three square feet, at least. Plant in masses; patchwork looks artificial, and shows too clearly the human trail.

The well-known lily-of-the-valley (*Convallaria majalis*) is a gem that can stand close inspection. Plant it as near the bottom—or edge—as possible, just as soon as the ground is fit to work in spring, and if established clumps are used they will flower freely the second season.

There are the forget-me-not (*Myosotis palustris*), and windflower (*Anemone Canadensis*, known to the trade as *A. Pennsylvanica*), St. Brigid's anemone (*Anemone coronaria*, var. *St. Brigid*), Pasque flower (*Anemone Pulsatilla*), and snowdrop anemone, (*Anemone sylvestris*, var. *flore-pleno*).

The common English primrose (*Primula vulgaris*), the cowslip (*Primula officinalis*) and polyanthus (*Primula Polyantha*, known to the trade as *P. variabilis*) are all hardy, if given a slight covering of leaves in winter.

The heart-leaved saxifrage (*Saxifraga cordifolia*) is one of the most striking of rocky plants. It has bold, showy, heart-shaped leaves, and large heads of pink flowers. It is at home among rockery surroundings, and is perfectly able to take care of itself.

☞ The native bloodroot (*Sanguinaria Canadensis*) interests as much by its handsome white-coated foliage as by its pretty white flower. The situation described is ideal for it. The thick, fleshy rootstocks find their way into the rock crevices, and when once established this plant is hard to depose.

FALL-PLANTED BULBS

The spring-flowering bulbs already mentioned, and also most of the varieties of narcissus and jonquils, should be planted in the fall, between such late-flowering subjects as foxglove (*Digitalis purpurea*), columbine (*Aquilegia Canadensis*), and blanket flower (*Gaillardia aristata*, known to the trade as *G. grandiflora*). The one succeeding the other prolongs the flowering period. The glory-of-the-snow (*Chionodoxa Lucilia*, known to the trade as *C. grandiflora*) is one of the prettiest of spring-flowering bulbs.

ROCK PLANTS FOR SUNNY PLACES

TEN KINDS FLOWERING IN APRIL	Color
Spring aconit	<i>Adonis vernalis</i> Yellow
Golden-tuft	<i>Alysum saxatile</i> , var. <i>compactum</i> Yellow
Silver-tuft	<i>Alysum argenteum</i> Yellow
Columbine	<i>Aquilegia Canadensis</i> Red
Rock cress	<i>Arabis albidia</i> White
Woolly-leaved chickweed.	<i>Cerastium tomentosum</i> White
Candytuft	<i>Iberis sempervirens</i> White
Forge-me-not	<i>Myosotis palustris</i> Blue
Moss pink	<i>Phlox subulata</i> Pink
Thick-leaved saxifrage	<i>Saxifraga crassifolia</i> Pink

TEN KINDS FLOWERING IN MAY

Bugle-weed	<i>Ajuga reptans</i> Blue
Sea pink	<i>Armeria maritima</i> Pink
Edelweiss	<i>Leontopodium alpinum</i> White
Coral bells	<i>Heuchera sanguinea</i> Scarlet
Iceland poppy	<i>Papaver nudicaule</i> Yellow
Purple moss pink	<i>Phlox amena</i> Purple
Wild Sweet William	<i>Phlox divaricata</i> Blue
Periwinkle	<i>Vinca minor</i> Blue
Mother of thyme	<i>Thymus Serpyllium</i> Pink
Bachelor's button	<i>Ranunculus acris</i> , var. <i>flora-plena</i> Yellow

TEN KINDS FLOWERING IN JUNE

Mountain aster	<i>Aster alpinus</i> Blue
Poppy mallow	<i>Calliopsis involucrata</i> Magenta
Hawkweed	<i>Hieracium aurantiacum</i> Red
Chinese dwarf iris	<i>Iris tectorum</i> Lavender
Bird's foot trefoil	<i>Lotus corniculatus</i> Yellow
Evening primrose	<i>Oenothera Missouriensis</i> Yellow
Frickly pear	<i>Ospania Rafinesquii</i> Yellow
Hairy Ruellia	<i>Ruellia ciliosa</i> Blue
Sea lavender	<i>Statice latifolia</i> Lavender
Hoary speedwell	<i>Veronica incana</i> , var. <i>candida</i> Blue

TEN KINDS FLOWERING IN JULY

Downy milfoil	<i>Achillea tomentosa</i> Yellow
Mountain aster	<i>Aster alpinus</i> Blue
Self-heal	<i>Brunella grandiflora</i> Blue
Carpathian bellflower	<i>Campanula Carpathica</i> Blue
Beard-tongue	<i>Penstemon barbatus</i> Red
Stone crop	<i>Sedum album</i> White
Love entangled	<i>Sedum sexangulare</i> Yellow
Hybrid stone crop	<i>Sedum Hybridum</i> Yellow
Woolly woodwort	<i>Stachys lanata</i> Pink
Feathered columbine	<i>Thalictrum aquilegifolium</i> Pink

TEN KINDS FLOWERING IN AUGUST

Red tickseed	<i>Cercopis rossa</i> Rose
Blanket flower	<i>Gaillardia aristata</i> Bronze
Red cranesbill	<i>Geranium sanguineum</i> Red
Beard tongue	<i>Penstemon difusus</i> Blue
Shoal sedum	<i>Sedum spectabile</i> Pink
Blue sage	<i>Salvia azurea</i> Blue
Stokes's aster	<i>Stokesia cyanea</i> Blue
Baby's breath	<i>Gypsophila paniculata</i> White



The early spring bulbs may be planted in a bed with some late appearing plant, which will occupy the space later. Glory-of-the-snow (*Chionodoxa gigantea*)

TEN KINDS FLOWERING IN SEPTEMBER	Shooting star	<i>Dodecatheon Meadia</i>	Pink
Yarrow	<i>Achillea millefolium</i> , var. <i>roseum</i> Rose	<i>Mercurialis pulmarisoides</i>	Blue
Japanese anemone	<i>Anemone Japonica</i> , var. <i>alba</i> White	FIVE KINDS THAT FLOWER IN MAY	
Japanese anemone	<i>Anemone Japonica</i> , var. <i>elegantissima</i> Rose	Lily-of-the-valley	<i>Concullaria majalis</i> White
Anemone: Queen Charlotte	<i>Anemone Japonica</i> , var. <i>Queen Charlotte</i> Pink	Spotted cranesbill	<i>Geranium maculatum</i> Pink
Anemone Whirlwind	<i>Anemone Japonica</i> , var. <i>alba</i> White	Meadow cranesbill	<i>Geranium pratense</i> Purple
Michalmas daisy	<i>Aster Novae-Angliae</i> Purple	Jacob's ladder	<i>Polemonium reptans</i> Blue
Autumn crocus	<i>Aster Novae-Angliae</i> , var. <i>rosea</i> Rose	False goat-beard	<i>Antilla Japonica</i> , var. <i>compactum</i> (Spirea Japonica, var. <i>compactum</i>) White
Mist flower	<i>Colchicum autumnale</i> Purple	FIVE KINDS THAT FLOWER IN JUNE	
Blue leadwort	<i>Conoclinium coelestinum</i> , (Eupatorium coelestinum) Blue	Cohosh	<i>Actea spicata</i> White
	<i>Ceratostigma plumbaginoides</i> , known in the trade as <i>Plumbago Lappenz</i> Blue	Perennial foxglove	<i>Digitalis amoegua</i> , (D. <i>grandiflora</i>) Yellow
		Foxglove	<i>Digitalis purpurea</i> Purple
		Mountain spurge	<i>Pachyandra procumbens</i> Masson
		Horned violet	<i>Viola cornuta</i> White
		FIVE KINDS THAT FLOWER IN JULY AND LATER	
		Plantain lily	<i>Funkia cordifolia</i> Purple
		White plantain lily	<i>Funkia subcordata</i> , known in trade as <i>F. Japonica</i> White
		Plantain lily	<i>Funkia lanceifolia</i> Blue
		Variegated plantain lily	<i>Funkia lanceifolia</i> , var. <i>undulata</i> (F. <i>undulata variegata</i>) Variegated
		Toad lily	<i>Tricyrtis hirta</i> , var. <i>nigra</i> Brownish

ROCK PLANTS SUITABLE FOR SHADY PLACES

FIVE KINDS THAT FLOWER IN APRIL	Color
Anemone St. Bridget	<i>Anemone coronaria</i> , var. <i>St. Bridget</i> Various
Pasque flower	<i>Anemone Pulsatilla</i> Blue
Wool anemone	<i>Anemone sylvestris</i> White



All the anemones find a happy home in the alpine garden. *A. Canadensis* flowers in summer, and thrives in moist, shady or open places



One of the best of all alpine plants is the heart-leaved saxifrage (*Saxifraga cordifolia*). A vigorous growing plant, with thick fleshy leaves, dark green above, purplish red beneath, and has pink flowers

When conditions are right, say when the space is large enough, or when a background has to be formed, the planting list need not be confined to strictly alpine herbaceous plants and a rich variety is available.

TALL PLANTS FOR BACKGROUNDS

The great laurel (*Rhododendron maximum*) and mountain laurel (*Kalmia latifolia*) are especially useful for the purpose, as also are the lily-of-the-valley tree (*Pieris floribunda*, known in the trade as *Andromeda floribunda*), the Japanese andromeda (*Pieris Japonica*, known to the trade as *Andromeda Japonica*), the dwarf, showy azalea (*Azalea Indica*, var. *amena*, known to the trade as *A. amena*), the flame-flowered azalea (*Azalea calendulacea*), the pinxter flower (*Azalea nudiflora*), the Pontica azalea (*Azalea Pontica*) and the Ghent azalea (*Azalea Gandavensis*).

LIME-LOVERS AND LIME-HATERS

Plants of the pea family and most alpine plants revel in a limy soil; hence in rockeries it is advisable to use limestone in their construction.

On the other hand, plants belonging to the heath family (and this includes rhododendrons, mountain laurel and azaleas) are apparently averse to lime. They require a denser, more compact, moisture-retaining environment, with large quantities of humic matter; nor are animal manures suitable, the changes there are too rapid, and the heat given off too severe to suit the slow growth which such plants make. Peat, and well rotted leaf mold answer the requirements

Ideal Edging Plants for Walks and Flower Beds—By Jens Jensen Chicago Illinois

FORTY LOW-GROWING FLOWERS THAT WILL REMAIN ATTRACTIVE THROUGHOUT THE SEASON: COLORS, HEIGHTS AND SUITABILITY FOR SPECIAL SITUATIONS AND PURPOSES

[NOTE.—The author of this article is superintendent of the West Side Park System of Chicago. But the edging plants here recommended are not the conventional "park material," i. e., tender, costly plants which must be replaced after their brief show is past. They are hardy plants for the home garden.

AS EDGING plants put the finishing touches to a garden, it is of great importance that only those plants be selected for edging which remain in good form during the entire season. The next point of importance is the selection of colors that harmonize with the surroundings. Edging plants are as a rule not suited to the informal or naturalistic border planting of mixed plants; their proper place is along walks and more or less formal places.

For convenience's sake let us classify edging plants for the various purposes for which they are best fitted:

1. Suitable for walks, open green, and terrace edging.
2. Suitable for pools and fountains.
3. Suitable for flower beds.
4. Suitable for formal shrubbery.

The well-known evergreen box (*Buxus sempervirens*) is perhaps more used than any other edging plant, and is admirable where it will thrive; it is not hardy in the northern parts of the prairie states.

The only hardy conifer of my acquaintance that is adapted for edging of open grounds or terraces is *Thuya occidentalis*, var. *Little Gem*, a pretty little variety of the arborvitae, but not very plentiful in the nurseries. It has dark green foliage, and grows broader than high. Another desirable hardy plant for this purpose is the well-known Adam's needle, (*Yucca filamentosa*), always pleasing with its evergreen foliage, and pretty when in bloom. It is one of the most effective plants in cultivation for edging the terrace slope or wall. It has sword-shaped leaves which form a rosette, twelve to eighteen inches high. In July it has a branching stalk three to four feet high, covered with creamy white pendulous flowers.

The Japanese grass (*Miscanthus Sinensis*, known in the trade as *Eulalia Japonica*) makes a large clump, two to three feet high. There are several varieties: var. *zebrinus*, with yellow banded leaves; var. *variegatus*, with yellow striped foliage; and var. *gracillimus*, which has leaves about one half

the width of the type, or about half an inch.

The pretty annual grasses (*Pennisetum villosum*, or *P. longistylum* of the florists, and *P. Ruppelii*) send up flower spikes one to two feet high which all summer are covered with long feathery tassels of pale brown, almost white.

FOR EDGING POOLS AND FOUNTAINS

For edging formal pools or basins, the blue African lily (*Agapanthus umbellatus*) is one of the most beautiful. In the north this pretty plant is not hardy, so must be lifted every fall, and wintered in the cool greenhouse or dry cellar. It has dark green strap-like foliage about two feet long, which arches over gracefully, and flower stalks bearing from twenty to fifty blossoms of the most beautiful blue color.

The well-known umbrella plant (*Cyperus alternifolius*) varies from one and one-half to three and one-half feet in height. It has very straight upright stems which are crowned with tufts of narrow leaves eight inches long.

The formal growth of the plantain lilies (Funkia) makes them desirable for edging a basin of geometric design. They have dark green foliage and grow from twelve to twenty inches high. The flower spike of white or blue flowers overtops the foliage by six to ten inches. The broad-leaved forms, *F. subcordata*, var. *grandiflora*; *F. ovata*, and its variegated form, var. *marginata*, with white margined leaves, and the narrow-leaved *F. lanceifolia* are equally desirable for this purpose.

THE WEALTH OF THE FLAG FAMILY

The grass-leaved flag (*Acorus gramineus*) is a semi-aquatic plant forming compact grass-like tufts eight to twelve inches high. It is specially suited for foreground planting along swamps or lagoons. The common blue flag (*Iris versicolor*), grows one and one half to two feet high, and has violet-blue flowers in July. For variegated foliage in a swampy place, plant the variegated sweet flag, *Acorus calamus*, var. *variegatus*, which grows about two feet high. The leaves have stripes of deep yellow when young, which fades to a lighter color during the summer.

The German irises come in many colors. They have stiff, flat, light green leaves, which reach one to one and a half feet. The flowers, which come in May or June, are borne on stems two to three feet high, and have a great range of color, varying from pure white through all the shades of mauve and blue to dark purple.

Quite different is the Siberian flag (*Iris Sibirica*). It is distinct from all other irises in having grass-like foliage, which grows in compact tufts two or three feet high. The flowers, which are borne in June, vary from very light to deep blue. There is one variety having pure white flowers.

The Spanish iris (*I. Xiphium*) is a bulbous kind, growing one to two feet high. It blooms in late June, and has flowers of purple, yellow, or bronze.

One of the prettiest of all the plants possible for this situation is the ribbon grass (*Phalaris arundinacea*, var. *variegata*); leaves one-half inch or less wide, which are striped rosy-white when young, changing to yellow when old.

THE PROBLEM OF THE FLOWER BEDS

It is far more difficult to select proper edgings for different groups of flowers than it is to find a suitable fringe for a pool. The delicate shades of rose or blue need careful handling. If there exists any question as to what to select, decide on white and green, and you will never go astray. Scarlet and yellow in certain shades harmonize well, and a light yellow edging for a group of pale blue flowers is charming.

Such foliage plants as the coleus, which may be had in endless shades, and the alyssums, with its highly colored leaves of various shades of red and green, are suitable for gay flower beds. Both can be kept in form by pinching.

The variegated salvia (*Salvia pratensis*, var. *variegata*) is very desirable. It is a peren-

nial, growing about two feet high, with pale blue flowers, and submits well to pinching and trimming.

For low edging the common sage (*Salvia officinalis*, var. *tricolor*) is very attractive. It has tri-colored leaves, gray-green, yellowish white and pink, becoming rose or deep red.

The variegated sweet alyssum is very attractive, but demands a dry situation. It grows six inches high, has white flowers, and white-edged leaves.

Lavender cotton (*Santolins chamaecyparissus*, var. *incana*), is a small evergreen with silver gray, finely cut leaves, and yellow flowers; it grows one and one-half to two feet high. Thyme, especially the variegated form, is very useful for this purpose. Both these plants appeal to the passer-by on account of their spicy fragrance.

The quaint little fire cracker plant (*Cuspea*

ignea, known in the nurseries as *C. platycentra*) is pretty for edging. Some of the cupheas are not unlike box in their appearance when not in flower. They are rarely seen in our gardens, and need a greenhouse for propagation. The foliage is usually dark green and they are from one to two feet high.

The numerous variegated geraniums in the market are not all thrifty in growth, and therefore are not always desirable for edging. Three of the old standbys are Madame Salleri, Cloth of Gold, and Mountain of Snow. Geranium Madame Salleri is the best. It hardly ever flowers, and you have therefore only to consider its white and green variegated foliage. On most of the other varieties the color of the flowers should not be overlooked, or they are liable to cause considerable disturbance. They attain a height of about six inches.

The double-flowered sweet alyssum is



Pansies are the most showy of all dwarf plants used for edging. They are not ideal plants, however, as their period of bloom does not extend throughout the season. In public places, where immediate effect is sought, and labor is available for replanting, pansies are excellent.



On the right a border of horned violet (*Viola cornuta*) and white annual phlox, which blooms all the season. White is always a safe color to use as an edging.



For the narrow informal path in the woodland, use periwinkle (*Viola minor*). It is evergreen, and grows under the shade of trees where nothing else will.

another desirable edging plant, delighting us with its white, sweet-scented flowers until late summer. As it is only propagated from cuttings, it must be grown in the house during the winter months. It reaches a height of six inches.

Lobelias, also charming when in bloom, are less satisfactory for edgings, their flowering period being rather short. The trailing *L. erinus* is perhaps the most satisfactory, as it flowers the entire summer.

The feverfew (*Chrysanthemum Parthenium*) is another pretty edging plant, and as it is grown from seed every spring, no garden need be without it. When not trimmed, it grows about nine inches high. The foliage is yellow, but will become green later in the season, especially when the flowers are allowed to form.

Alternantheras in all varieties and colors are useful for edging, and submit to the sheep shears better than any other plant. They do not keep their brilliancy of color throughout the entire season, and too much heat or too much cold weather has an injurious effect.

When an edging of a light color is desirable, no plant equals dusty miller (*Senecio Cineraria*, or *Cineraria maritima* of the trade). It stands pinching well, and can be had in height from six to sixteen inches. It has a white, woolly foliage. Not very unlike this

plant is the silver-leaved knap-weed (*Centaurea gymnocarpa*). Both plants are raised from seed sown in frames or greenhouse in late January or early February.

FOREGROUNDS FOR SHRUBBERY

Formal shrubbery groups or borders are often improved by edgings of herbaceous perennials or annuals. Some desirable plants are:

The Chinese bellflower (*Platycodon grandiflorum*) forms a dense branching bush one to two feet high, with blue or pale white flowers often three inches in diameter. It is a herbaceous perennial. The yellow day lilies (*Hemerocallis*), grow one and one-half to two and one-half feet high, with grass-like foliage and yellow flowers.

The pyrethrum (*Chrysanthemum coccineum*, or *Pyrethrum roseum* of the catalogues), is one to two feet high, has finely cut foliage, and flowers in red, white or intermediate shades.

The Giant daisy (*Chrysanthemum uliginosum*, *Pyrethrum uliginosum*), makes a stout bush, four to five feet high, with light green foliage and white flowers two to three inches across, like those of the common wild daisy of the roadsides.

Nothing is superior to the pompon chrysanthemums for late flower. The plants grow from one to five feet high, and may be had in white, red or yellow.

For a low growing plant, with clusters of delicate white chrysanthemum-like flowers in summer, grow the pearl achillea or double-flowered sneezewort, which attains a height of from one to two feet.

All through the summer until frost the showy flower heads of perennial phlox will make the border gay. The large clusters of purple, white or red flowers can be had at almost any season by cutting back the successive growths.

The red-hot poker plant (*Kniphofia uva-*



A strip of grass bordering the walk is the most practical edging. Back of this plant some dwarf flowering plants. White rock cress (*Arabis altida*) flowers successfully, if cut back.

ria), is a good subject for distant effects. It has a somewhat ragged appearance when near it. Its long, weak, narrow leaves arch down to the ground. The fiery red flower spikes, four to eight inches long, on stalks about five feet long, are well known to all.

Last summer I noticed a shrubby border, a straight walk edged with a Cassia. It was one of the prettiest edgings I have seen in many a day. This Cassia must be taken up in fall and cuttings made from it during the winter.

It can also be cut back and planted out again the following spring.



Candytuft is a valuable plant growing wild in any sort of soil. Flowers pure white

Classified Planting List for Annuals—By P. T. Barnes ^{New York}

FOR the purpose of reckoning dates, New York city is generally taken as a standard. In making calculations for other sections allow six days' difference for every hundred miles of latitude.

DATES FOR PLANTING

January 15th.—Sow indoors tender annuals and biennials which are to be treated as annuals.

February 15th.—Successional sowing of biennials and annuals indoors.

March 1st.—Sow all kinds indoors for later transplanting outdoors.

March 15th.—Sow sweet peas outdoors; risk a few other very hardy seeds on light soils.

April 1st.—If ground is free from frost, sow hardy annuals in the garden.

April 15th.—Sow all hardy seeds outdoors.

May 1st.—Sow more seed of hardy annuals in the garden. Risk first tender annuals.

May 15th.—Sow all tender annuals outdoors. Plant out from indoors and complete the garden.

June 1st.—Plant out bedding stock, cannas, and other subtropical plants.

September 15th.—Sow sweet peas and other hardy annuals outdoors.

TEN ANNUALS USEFUL AS CUT FLOWERS

COMMON NAME	WHEN TO SOW		DEPTH TO SOW (inches)	SPACING (inches)	WHEN THEY FLOWER		DURATION OF BLOOM (inches)	COLOR	HEIGHT (feet)	OTHER POINTS
	Indoors	Outdoors			Early Crop	Main Crop				
Sweet alyssum	March	April Sept.	½	12 x 12	July	Aug. to Sept.	20	white	½	<i>Alyssum maritimum</i> . Dainty little flower, sweet-scented. Cut back for more.
China aster	Feb. April	May	½	18 x 18	July to Aug.	Sept. to Oct.	6	red, white, blue	1	<i>Callistephus hortensis</i> . Use wood ashes and tobacco water to prevent lice on roots.
Baby's breath	March April	May	½	12 x 12	June	July to Oct.	12	white, rosy	2 to 3	<i>Gypsophila muralis</i> . Compact, mound-shaped little plant, covered with flowers.
Annual coreopsis	March	May	½	12 x 12	June	Aug. to Nov.	12	yellow, brown	12	<i>Coreopsis tinctoria</i> . Useful in border. Has small, velvety brown, flowers ¾-1¼ in. across.
Daisy, Swan River	March April	May	½	15 x 24	June	July to Oct.	12	blue, white	1 to 1½	<i>Brachycome iberidifolia</i> . Useful in annua suited for borders; daisy-like flowers.
Nasturtium, dwarf, fall	March April	May	1	10 x 12 12 x 30	June	July to Oct.	8 to 10	scarlet, yellow, maroon	1 to 5	<i>Tropaeolum majus</i> , climbing, and <i>T. minus</i> , dwarf. Leaves used as salad.
Pansy	Jan. Feb.	June to Aug.	½	6 x 12	May to June	Sept. to Oct.	6 to 8	purple, blue, white, yellow	½ to 1	<i>Viola tricolor</i> . August-sown flowers in May. Give slight winter cover. Best spring bedder.
Sweet pea	March April	June	3	4 x 24	July to Oct.	July to Oct.	4 to 8	white, scarlet, blue, yellow	4 to 6	<i>Lathyrus odoratus</i> . November-sown early flowers. Trench deep. Keep seed-pods picked.
Pink, Chinese	Feb. March April	June	1-16	6 x 12	May	Aug.	4 to 6	white, rose, maroon	1	<i>Dianthus Chinensis</i> , var. <i>Heddeburgi</i> (<i>D. Heddeburgi</i>). Give warm, well-drained land.
Stock, ten-weeks	March	May	½	12 x 12	June	July	10	white, pink, purple	1	<i>Matthiola incana</i> , var. <i>annua</i> . Double white especially useful. Flowers very lasting.

SIX FRAGRANT-FLOWERED ANNUALS

Bartonia	March April	May	½	12 x 12	June	July to Sept.	15	yellow	1 to 3	<i>Mentzelia Lindleyi</i> (<i>Bartonia aurea</i>). Flowers 2½ inches across. Fragrant in evening.
Mignonette	Feb. March	April Aug.	½	12 x 12	May to July	July to Oct.	3 to 4	greenish	1	<i>Reseda odorata</i> . Hard to transplant. Make succession sowings; the last for winter.
Sweet pea	March April	June	3	4 x 24	July to Oct.	July to Oct.	4 to 8	white, scarlet, blue, yellow	4 to 6	<i>Lathyrus odoratus</i> . Sow for succession. Syringe well and regularly for red spider.
Stock, ten-weeks	March	May	½	12 x 12	June	July	10	pink, purple, white	1	<i>Matthiola incana</i> , var. <i>annua</i> . Sweet-scented at night. Good as cut flower.
Sweet sultan	March April	May	½	12 x 12	June	July Aug.	4 to 6	white, yellow, purple	2	<i>Centaurea moschata</i> . Good cut flower. Lasts ten days.
Sweet alyssum	March	April Sept.	½	12 x 12	July	Aug. Sept.	20	white	½	<i>Alyssum maritimum</i> . Low-spreading plant. Good for edgings, border, rockeries.

SIX CLIMBING ANNUALS

Balloon vine	March	May	½	12		Aug.	10	white	10	<i>Cardiospermum Halicacabum</i> . Rapid grower. Has curious inflated seed vessels.
Hyalanth bean	March	May	2	12		July to Oct.	12	purple, white	10 to 20	<i>Dolichos Lablab</i> . Killed by first frost. Rapid grower. Good on trellises or old fences.
Cypress vine	March April	May	½	6	June	July	10	scarlet	10 to 20	<i>Ipomoea Quamoclit</i> . Beautiful in foliage and flower. Scald seeds before sowing.
Japanese hop	March	May	½	24	foliage plant			inconspicuous	8 to 20	<i>Humulus Japonicus</i> . Very quick grower. Pretty mottled foliage.
Moon-flower	Jan. to March	May	½	18	July	Aug. to Sept.	10	white	15 to 20	<i>Ipomoea Bona-nox</i> . Rapid grower. Night flowering. Good cut flower for evening.
Morning-glory	March April	May	½	12	June	July Aug.	10	purple to white	1 to 20	<i>Ipomoea purpurea</i> . Rapid grower, bearing many flowers. Has good double variety.

SIX ANNUALS THAT RE-SOW THEMSELVES

COMMON NAME	W-EN TO SOW		DEPTH TO SOW (inches)	HOW TO BE TRANSPLANTED (inches)	WHEN THEY FLOWER		DURATION OF BLOOM (weeks)	COLOR	HEIGHT (feet)	OTHER POINTS
	Indoors	Out doors			Early Crop	Main Crop				
Japanese hop	March April	May	$\frac{1}{2}$	24 x 72	foliage	plant		insignificant	8 to 20	<i>Humulus Japonicus</i> . Once established, seeds start when soil gets warm.
Morning glory	March April	May	1	12 x 72	July	Aug. to Oct.	10	red, blue, white	15 to 30	<i>Ipomoea hederacea</i> . Rapid grower. Good for temporary screens, cover unsightly objects.
Poppy		March May	$\frac{1}{2}$	6 x 12	June to July	Aug. to Sept.	3 to 4	pink, scarlet, white	$\frac{1}{2}$ to 2	<i>Papaver Rhoeas</i> , and <i>P. somniferum</i> . Self-sown seed come up and bloom first.
Rose moss	March April	May	don't cover	10 x 12	June	July to Oct.	12	white, red, magenta	$\frac{1}{2}$ to $\frac{1}{4}$	<i>Portulaca grandiflora</i> . Many forms and brilliant colors. Single bloom earlier than double.
Pot marigold	March April	May	$\frac{1}{2}$	8 x 12	June	July to Oct.	15	orange, yellow	1 to 2	<i>Calendula officinalis</i> . Flower heads for flavoring soups. Delights in warm soil.
Tobacco	Feb.	May	don't cover	24 x 60	June	July Aug.	5	red and white	3 to 5	<i>Nicotiana Tabacum</i> . Good temporary screen. Produces showy flowers. Rich soil.

SIX ANNUALS FOR SUNNY PLACES

Love-lies-ble.c.ing	March April	May	$\frac{1}{2}$	18 x 24	June	July	6	red	3 to 5	<i>Amarantus candelatus</i> . Large drooping spikes; also varieties with yellowish and whitish spikes.
Balsam	March April	May	$\frac{1}{2}$	24 x 24	June	July to Oct.	8 to 10	red, white, yellow	1 to 2	<i>Impatiens Balsamina</i> . Prefers rich, sandy loam, abundance of moisture, full sun.
Hyacinth bean		May	2	12 x 96		July to Oct.	12	purple, white	10-20	<i>Dolichos Lablab</i> . Fragrant flowers. Good temporary screen and cut flower.
Gaillardia	March April	May	$\frac{1}{2}$	24 x 24	July	July to Oct.	10	red and yellow	2	<i>Gaillardia pulchella</i> , and <i>var. picta</i> . Showy flowers. Last well on plants, or cut.
Nasturtium, dwf.	March April	May	1	10 x 12, 12 x 36	June	July to Oct.	8 to 10	scarlet, yellow, maroon	1 to 5	<i>Tropaeolum minus</i> , <i>T. majus</i> . Rapid growers; profuse bloomers. Talls good for screens.
Rose moss	March April	May	don't cover	10 x 12	June	Aug.	12	white, red, magenta	$\frac{1}{2}$ to $\frac{1}{4}$	<i>Portulaca grandiflora</i> . Delights in hottest exposure. Flowers close in shade.

SIX ANNUALS FOR SHADY PLACES

Godetia	March April	May	$\frac{1}{2}$	18 x 18	June	July to Oct.	8 to 10	red, white	1 to 2	<i>Enothera amana</i> , (<i>E. Whitneyi</i>). Very showy flowers, with satiny lustre.
Musk	March April	May	$\frac{1}{2}$	6 x 6	June	July Aug.	8	yellow	$\frac{1}{2}$ to 1	<i>Mimulus moschatos</i> . Irregularly mottled and dotted. Give cool, moist situation.
Nemophila	March	April Aug.	$\frac{1}{2}$	6 x 6	June	July to Oct.	6 to 14	blue, white	1 to 3	<i>Nemophila insignis</i> and <i>N. Menziesii</i> . Plant in cool, moist, partially shaded places.
Pansy	Jan. Feb.	June to Aug.	$\frac{1}{2}$	6 x 12	May to June	Sept. to Oct.	6 to 8	purple blue, white, yellow	$\frac{1}{2}$ to 1	<i>Viola tricolor</i> . Sown in cool, moist place in June, July. Good fall bloomers.
Tarweed		May	$\frac{1}{2}$	12 x 12		July to Oct.	12	yellow	1 to 2	<i>Madia elegans</i> . Graceful open habit. Flowers open morning and evening.
Wish-bone flower	March April		$\frac{1}{2}$	6 x 6		July to Oct.	12 to 15	yellow, purple, blue	$\frac{1}{2}$	<i>Torenia Fournieri</i> . Low, bushy, floriferous. Good bedding plant. Pansy substitute.

SIX ANNUALS FOR ROCKY PLACES

Annual phlox	March April	May	$\frac{1}{2}$	8 x 8	June	July to Oct.	12	red, white	1 to 1 $\frac{1}{2}$	<i>Phlox Drummondii</i> . In poor, dry soil stop flowering in midsummer.
Candytuft	March	April Sept.	$\frac{1}{2}$	4 x 8	May	July to Sept.	4	red, white	$\frac{1}{2}$ to 1 $\frac{1}{2}$	<i>Iberis amara</i> . Fall-sown flower first. Needs slight protection. Sow for succession.
Catch-fly	March April	May	$\frac{1}{2}$	6 x 10	June	July Aug.	8	red, white	1 to 1 $\frac{1}{2}$	<i>Silene Armeria</i> and <i>S. pendula</i> . Prefers sandy loam in sunny situation.
Clarkia	March April	May June	$\frac{1}{2}$	6 x 12	June	July to Oct.	8	purple, rose, white	1 $\frac{1}{2}$	<i>Clarkia elegans</i> , thrives in full sun, partial shade; warm, light soil, double forms.
Nasturtium, dwf.	March April	May	1	10 x 12	June	July to Oct.	8 to 10	scarlet, yellow, maroon	1	<i>Tropaeolum minus</i> . Flowers earlier and more abundantly than taller species.
Rose moss	March April	May	don't cover	10 x 12	June	Aug. Sept.	12	white, red, magenta	$\frac{1}{2}$ to $\frac{1}{4}$	<i>Portulaca grandiflora</i> , blooms freely in any situation. Excellent for edgings.

FIVE EVERLASTING-FLOWERED ANNUALS

Globe amaranth	Sufficient time is not gained by planting early under glass to repay one for the trouble.	May	$\frac{1}{2}$	18 x 18		Aug. Sept.	10	red	1 to 1 $\frac{1}{2}$	<i>Gomphrena globosa</i> . A good bedding plant. Flowers globular, one inch across.
Immortelles		May	$\frac{1}{2}$	18 x 18		Aug.	4	yellow, orange	1 to 2	<i>Helichrysum bracteatum</i> . Flowers 1-2 $\frac{1}{2}$ inches across. Pick before fully open.
Rhodanthe		May	$\frac{1}{2}$	18 x 18		July Aug.	6 to 8	pink, white, dark red	1 to 1 $\frac{1}{2}$	<i>Helipterum Manglesii</i> (<i>Rhodanthe Manglesii</i>) and <i>H. roseum</i> . Two of the best.
Palafoxia		May	$\frac{1}{2}$	18 x 18		July Oct.	15	red	1 to 4	<i>Polypterus Hookeriana</i> (<i>Palafoxia Hookeriana</i>). Handsome plant; flowers one inch across.
Everlasting		May	$\frac{1}{2}$	18 x 18		Aug. Sept.	12 to 15	purple	1 $\frac{1}{2}$ to 2	<i>Xeranthemum annuum</i> . Flower 1-1 $\frac{1}{2}$ inches across. Purple, rose or white.

SIX ANNUALS THAT RESIST DROUGHT

COMMON NAME	WHEN TO SOW		DEPTH TO SOW (inches)	SPACING TO OR. (inches)	WHEN THEY FLOWER		DURATION OF BLOOM (inches)	COLOR	HEIGHT (feet)	OTHER POINTS
	Indoors	Outdoors			Early Crop	Main Crop				
Hyacinth bean		May	2	12		July to Oct.	12	purple, white	10 to 20	<i>Dalichos Lablab.</i> Good temporary screen. Thrives in any soil. Flowers very variable.
Ice-plant	April	May	½	12 x 12	July	Aug. Sept.	7	white	trailing	<i>Mesembryanthemum crystallinum.</i> Esteemed for its foliage, which has glistening glands.
Nasturtium, dwf.	March	May	1	10 x 12	June	July to Oct.	8 to 10	scarlet, yellow, maroon	1 to 5	<i>Tropaeolum minus, T. majus.</i> Never flags in hottest weather. Abundance of bloom.
Petunia	March	May	don't cover	12 x 12	May	July to Sept.	10	magenta, white	1 to 2	<i>Petunia hybrida.</i> Rather weedy habit. Profuse bloomer; sweet-scented.
Portulaca	March	May	don't cover	6 x 6	June	Aug.	12	white, red, magenta	½ to 1	<i>Portulaca grandiflora.</i> Succulent plants. Seeds need high temperature to sprout.
Zinnia	March	April	½	6 x 12	June	July to Nov.	12 to 15	red, scarlet yellow, magenta	1½ to 2	<i>Zinnia elegans.</i> Garden flowers 2½-3 inches across. One of the best garden annuals.

SIX ANNUALS FOR SANDY SOILS

Clarkia	March	May	½	6 x 12	June	July Oct.	8	purple, rose, white	1½	<i>Clarkia elegans.</i> Good for edgings; double forms showy, but single are satisfactory.
Poppy	March	April	½	6 x 6		July to Aug.	6	white to red	½ to 2	<i>Papaver somniferum.</i> Hard to transplant. Early sown seed does better. Showy.
Godetia	March	May	½	18 x 18	June	July to Oct.	8 to 10	red, white,	1 to 2	<i>Enothera amana, E. Whitneyi.</i> The latter species produces the larger flowers.
Nasturtium, dwf. tall	March	May	1	10 x 12	June	July to Oct.	8 to 10	scarlet, yellow, maroon	1 to 5	<i>Tropaeolum minus, T. majus.</i> Beautiful cut flowers. Dwarf's good edgings.
Rose moss	March	May	don't cover	7 x 0	June	July to Sept.	12	white, red, magenta	½ to 1	<i>Portulaca grandiflora.</i> Killed by the first frost. Valuable for hot, rather dry situations.
Zinnia	March	April	½	12 x 12	June	July to Nov.	12 to 15	red, scarlet, magenta	1½ to 2	<i>Zinnia elegans.</i> Thrives in any deep rich soil. Best for distance masses.

SIX ANNUALS FOR HEAVY SOILS

Annual chrysanthemum	March	May	½	18 x 18	July	July to Oct.	15	white, yellow	1 to 2	<i>Chrysanthemum coronarium.</i> Coarse grower, producing many flowers.
Godetia	March	May	½	18 x 18	June	July to Oct.	8 to 10	pink, red, purple	1 to 2	<i>Enothera amana, E. Whitneyi.</i> Showy flowers one to four inches across.
Sweet pea		April	3	4 x 24		July to Oct.	4 to 8	white, scarlet, blue, yellow	4 to 6	<i>Lathyrus odoratus.</i> Plant early in deep, rich, moist soil, for cut flowers.
Petunia	March	May	don't cover	12 x 12	May	Sept.	10	magenta, white	1 to 2	<i>Petunia hybrida.</i> Give open, sunny situations. Furnishes mass of bloom up to first frost.
Sweet alyssum	March	April	½	12 x 12	July	Aug. Sept.	20	white	½	<i>Alyssum maritimum.</i> Thrives in any soil. Sow early spring, thickly, to form masses.
Pot marigold	March	May	½	8 x 12	June	July to Oct.	12 to 15	orange, yellow	1 to 1½	<i>Calendula officinalis.</i> For flavoring soups. Profuse bloomer, even after first frost.

SIX ANNUALS FOR VERY COLD CLIMATES

Sweet alyssum	March	April	½	12 x 12	July	Aug. to Sept.	20	white	½	<i>Alyssum maritimum.</i> Sow September for May bloom. Flowers six months.
Clarkia	March	April	½	6 x 12	June	July to Oct.	8	purple, rose, white	1½	<i>Clarkia elegans.</i> Thrives in light warm soil in sun or shade. Good edging.
Marigold	Feb.	April	½	12 x 12	June	Aug.	8	light yellow, orange, brown	½ to 2	<i>Tagetes patula, T. erecta.</i> Lasts well after first frosts. Dwarf kinds good borders.
Pansy	Jan.	June	½	6 x 6	May	Sept. to Oct.	6 to 8	purple, blue, white, yellow	½ to 1	<i>Viola tricolor.</i> Good plants can be grown outside, but better to winter in coldframe.
Sweet pea		April	3	4 x 24		July to Oct.	4 to 8	white, scarlet, blue, yellow	4 to 6	<i>Lathyrus odoratus.</i> Make three sowings, last one between the two earlier for shade.
Stock, ten-weeks	March	April	½	12 x 12	June	July	10	white, pink, purple	1½	<i>Matthiola incana, var. annua.</i> Good bedder. Rich soil produces more doubles.

SIX ANNUALS THAT BLOOM AFTER FROST

Sweet alyssum	March	April	½	12 x 12	July	Aug. to Sept.	20	white	½	<i>Alyssum maritimum.</i> Stands the early fall frosts. Very satisfactory plant for edging.
Candytuft		April	½	6 x 12		June to Sept.	4	red, white	½	<i>Iberis amara.</i> Good cut flower and for masses. Sow every two weeks for succession.
Cornflower		April	½	6 x 6		June	12	rose, white, blue	2 to 3	<i>Centaurea Cyanus.</i> Once started, they resow themselves. Good for border or cutting.
Marigold	Feb.	April	½	12 x 12	June	Aug.	8	light yellow, orange, brown	½ to 2	<i>Tagetes patula, T. erecta.</i> Bright colors which light up the garden after frosts.
Annual phlox	Feb.	March	½	4 x 6	May	July to Aug.	4 to 12	yellow, maroon, white, red	½ to 1	<i>Phlox Drummondii.</i> Best low plant for general purposes. Self sows. Abundant water.
Stock, ten-weeks	March	April	½	12 x 12	June	July	10	white, pink, purple	1½	<i>Matthiola incana, var. annua.</i> May-sown seeds flower after most annuals are dead.



Tree heliotropes for decorating porches or dark halls. Young plants bought this April can be easily trained to tree form without a greenhouse and should give four crops of flowers between May and October next year. The picture shows them recuperating after three weeks' absence from full sunlight

A Bedding Plant Grown as a Tree—By W. N. Craig Massachusetts

THE HELIOTROPE OR "CHERRY PIE" AS A PLANT FOR PIAZZA OR FORMAL PLACES—A PLANT THAT CAN BE RAISED FROM SEED, AND WHICH WILL BLOOM FOUR TIMES IN ONE SEASON

Photograph by Henry Troth

FEW plants are more useful for piazza decoration than heliotropes, when grown in standard or tree forms. The rich deep mauve color of the flowers, and their delicious fragrance make the heliotrope a favorite with everyone. As ordinarily grown it is not a very conspicuous object. If given a light situation, where they can get a reasonable amount of sunshine, and be watered carefully, they will flower nearly all summer. Even under a heavily-shaded piazza or in a hallway they will keep well for two or three weeks, after which they should be placed outdoors in a sunny position, pruned back a little, syringed two or three times daily, and carefully watered. Within a month they will again be a mass of bloom. Four good crops of flowers can thus easily be secured between May and October.

There is nothing specially difficult in the growing or training of this type of heliotrope. In March or April secure a few small, vigorous plants from a local florist, which should be potted along as required, taking care never

to allow the plant to become matted with roots or potbound. The top must not be pinched from the main stem until the desired height is reached, but all flowers and side shoots should be carefully removed, and the stem tied to a stake sufficiently stout to keep it firm. The stem can be run up to any desired length before being topped; the usual height is about four feet. A number of side shoots will soon appear, which, when they have made a growth of five or six inches, are pinched, and this pinching is continued until the plant carries a head of the desired size.

A cutting rooted in the spring will produce large heads during the summer of the year following. If started in the fall, and grown all winter in a moderately warm house stand-ards can be had the following July. Seedlings make better standards than cuttings.

The plants may be flowered in either large pots or tubs, preference being given to the latter. We use tubs sixteen inches square, and round ones of the same diameter. These will carry a plant several years if liberal top

dressing and liquid stimulants are given. It is a good plan to raise a few standards each year: the older plants can then be set out in beds or borders, where they are very effective.

Heliotropes are best grown outdoors from June 1st until the first frost. They can be carried over in a temperature of fifty degrees in a greenhouse or light cellar, and should be kept moderately dry during the severe winter months.

Care must always be taken to see that the plants are securely staked, as otherwise strong winds would break or seriously injure them. A compost of two-thirds turf loam, one-third well dried cow manure, in which there is a good dash of sand is excellent.

The one cultural fact that makes for success with heliotrope, is to keep the plant growing. It suffers more than most plants if it once gets dried out, and must be kept fairly moist at all times.

There are several varieties offered by the florists and seedsmen, but the best is probably Queen of Violets.



Round, scabby, irregular and oval potatoes. The first is of ideal shape for convenient and economical handling, though the fourth is preferred in some markets. Irregular potatoes are wasteful. Scabby potatoes are unsightly when baked. You cannot raise quality potatoes without spraying with Paris green and Bordeaux mixture

Quality Potatoes for the Home Table—By Effie M. Barron New York

THE BEST VARIETIES, METHODS OF CULTIVATION AND WAYS OF COOKING—THE FIRST OF A SERIES OF ARTICLES ON "QUALITY VEGETABLES FOR THE HOME TABLE"

NOTE.—As Mrs. Fullerton's "How to Make a Vegetable Garden" marked a new era in horticultural literature by combining kitchen recipes with garden practice and by confining the subject to the home garden, so Mrs. Barron's series of articles marks a step in advance by focussing the attention upon quality and how to get it.

At last we have some articles containing a good deal about cooking which can be read by "men folks" with wakefulness and perhaps interest. For, here we have no string of recipes, but reasons why one way is better than another; no tyrannical judgments on matters of taste, but a sincere effort to show the latest results of science in three departments hitherto absurdly divorced—cultivation, varieties, cooking.

Mrs. Barron was formerly cookery teacher under the London School Board. In cultural matters she will be assisted by her husband, Mr. Leonard Barron, who spent his youth in the gardens of the Royal Horticultural Society at Chiswick, England, and is experienced in judging vegetables at American exhibitions. Both Mr. and Mrs. Barron have for years tried the novelties by standards which mean more to us than the mere cultural tests of the experiment stations, for they have raised, cooked and eaten them. Anyone who has known varieties or methods better than those here recommended is invited to send proofs to the Editor of THE GARDEN MAGAZINE who will provide some fair way of testing and reporting on them.

THERE are two radically different kinds of perfection in potatoes. The ideal potato for baking becomes light, dry and mealy; it has a floury texture. The ideal potato for salads makes thin, firm slices; it has a waxy texture.

European varieties are mostly of the latter type, Americans of the former. A wet, soggy potato is our abomination; the same quality is in potato salads a virtue. You can make a mealy variety soggy by growing it on wet, heavy clay; the best flavored potatoes are grown on light sandy loam.

While the potato is the commonest of all vegetables, it is doubtless prepared with more waste and less skill than any other. It is too easy to raise and too easy to cook in a passive manner. The chief vices of potato culture are growing them on heavy soil which makes big crops and large tubers but poor quality. In wet soils potatoes are imperfectly ripened and therefore of poorer flavor and

keeping quality; also they are more liable to rot and scab. A scabby baked potato is not a pleasant sight on the table. Heavy soils tend to develop the hollow heart and black spot in the centre.

If the cultivation of potatoes on wet heavy soils is the commonest fault of the farmer,



The right and wrong way of testing a boiled potato. Skewer punctures; fork breaks

the besetting sin of the home gardener is that he does not spray his potato vines with a combination of Paris green and Bordeaux mixture to destroy the beetles, scab and rot. Even if you have enough potatoes and do not mind small ones, the chances are that they

will be imperfectly ripened. You cannot grow high-quality potatoes unless you spray.

THOSE WITH MOST GLUTEN ARE BEST

Most people, I suppose, take it for granted that the best potatoes are the ones that contain the most starch. On the contrary, it is the ones that contain the most gluten, because gluten is an albuminous food, and starch is much cheaper than albumen.

Now cut a potato open and look at the small illustration and we shall learn something worth knowing about this gluten.

First comes the skin of the potato. In a new potato it is thin and clear; while a corky skin indicates a mature potato, and one more likely to be mealy.

Second is a thin layer varying from one-eighth of an inch to one-half an inch in thickness. This is the gluten.

Third comes the largest part of the potato—the starch. If this is very dense the potato will be mealy, but if non-uniform the potato will be of poor quality.

Fourth is the very centre of the tuber which contains little starch and a great deal of water. If this area branches out into the starch the potato will not be a good cooker.



Dark part gluten; light part starch. Save the best part of the tuber by thin peeling



Damaged and discolored potatoes are unsightly when cooked whole, and wasteful, as so much has to be cut away. They are best used for mashing



"Ricing" potatoes—one of the easiest and most attractive of the "fancy" ways of serving. A good way to use spoiled potatoes



Round vs. irregular potatoes for baking. The ends of long potatoes often soggy when the middle is done



The wrong way of peeling potatoes—thumb too far from knife. Makes thick irregular slices

It is true, therefore, that the best part of the potato lies next to the skin and that its very thin peeling is so important. This process can be transformed from a dirty, tedious job to a fine art. If you will scrub the potatoes till clean the work of peeling will be much easier and pleasanter. Use cold water and an ordinary five-cent nail-brush, kept for this purpose. Make the knife follow your thumb closely all the time you are peeling or you will have no control over it. Potato peelers can be bought for five cents. While they force this peeling they are not often very sharp and soon get out of order. New potatoes do not require peeling as the skin is very thin; they must be scraped.

THE BEST AND WORST WAYS OF COOKING

The commonest mistakes we make in cooking potatoes are that we use too many fried and boiled potatoes. Fried potatoes are less easily digestible than food cooked in other ways. The most wasteful way to cook potatoes is to peel them, put them in cold water and bring them slowly to a boil. This method allows the water to penetrate to the centre of the potato so that a good deal of the starch may be dissolved and lost and the potato becomes soggy because it has not been "cooked dry." On the other hand, if you put peeled or cut potatoes into boiling water the gluten is hardened at once (as is that other common albuminous food—the white of an egg) thus preventing the water from getting to the starch and thereby ensuring a mealy potato.

The best way to cook potatoes is to bake them, because a dry heat being used none of the food value is lost. Next in nutritive order is the boiling of potatoes with their skins on. Next comes steaming which everyone should practice instead of the common way of boiling because it wastes less starch, while giving the same kind of flavor and texture. Frying is the least rational process. Of the "fancy" methods "ricing" is one of the easiest and most attractive and it has the great advantage of being useful for potatoes unfit for other uses.

THE BEST WAY OF BAKING

In baking a hot oven is necessary, or the skin will not be crisp. Choose large, well-matured tubers, as small potatoes are not attractive and new ones are not mealy enough. A round one is better than an oblong one, for the pointed ends of the latter remain hard and soggy while the rounded part is floury and well cooked. Prick the skin, to allow the steam to escape, when the potatoes are nearly cooked, otherwise the

potato will probably burst. Potatoes can be beautifully baked on the top of the gas range, instead of heating the oven for one dish. Use the asbestos mats that you can get at any hardware store, two for five cents. Place a mat on one of your top burners, put on your potatoes, and cover to keep in the heat. Bake as usual, turning frequently.

THE BEST WAY OF BOIL

It is better to boil potatoes with their skins on than to cut and peel them, because a



Showing relative size of cooked starch grains at the right and uncooked at the left; paucity of starch in internal medullary area; abundance of starch in external medullary area. (Courtesy Cornell Countyman)

great deal of the starch is dissolved by boiling water and thrown away with it. Put the potatoes into cold water, which draws out the disagreeable acid in the skin of the potato. After scrubbing the potatoes, put them in cold water, bring it to the boil, and then boil



A good, cheap substitute for the ideal steamer shown below. A ten-cent home contraption

the potatoes briskly for about twenty-five minutes. When done, drain off every drop of water, shake the pan gently to break the skin, so as to let the steam escape. Now put the pan near the fire for about ten minutes with a soft cloth on the top, to ab-



An ideal steamer, which costs \$1.55, but soon pays for itself by saving what is wasted in the common method of boiling



Make the knife follow your thumb closely, or you will have no control over it

sorb the steam. Peel them, and send them hot to the table.

STEAMING BETTER THAN BOILING

The next method in order of merit is steaming. Here the potatoes are not dropped into the water, but cooked entirely by the steam from boiling water. Special steam cookers can be bought for the purpose, but I have often improvised one that answers the same purpose. A ten-cent frying basket fitted on an ordinary saucepan will do very well. The only thing to be careful about is that the lid fits pretty snugly, or the steam will escape, and the potatoes will take much longer to cook. Peel the potatoes, and have the water boiling in the lower part of the steamer. Put the top part on, lay the potatoes in that, put the lid on, and leave them. By this method, which is the best way to get "boiled" potatoes, you can leave them alone for an hour or more without fear of their being over-done or breaking.

To find out if they are soft try them with a skewer or knitting needle. Push it into the potato, and if it goes in quite easily the potato is done. Do not use a fork, as so many people do, or you will break the potato and spoil its table appearance. When the potatoes are cooked sufficiently, take the steamer part off the lower saucepan, shake the potatoes gently, and finish as for potatoes boiled in their jackets. Sprinkle with salt just before taking the pan from the fire.

THE BEST WAY TO BOIL PEELLED POTATOES

Choose potatoes of equal size as nearly as possible, e. g., all large ones one day, all small ones the next. If obliged to cook large and small at the same time do not cut the large ones to make them the same size as the small, but cook the larger ones about eight or ten minutes before the small ones are put in.

Have ready a saucepan with plenty of boiling water. Prepare the potatoes the same way as for steaming. If you do not require the potatoes at once after peeling, lay them in cold water until needed; this makes them a good color when cooked. Peel the potatoes and plunge them into boiling water, boil gently and evenly (if boiled very fast they will "break"), try them with a skewer, and if done, proceed the same as with potatoes cooked in their skins.

Potatoes that have been overcooked or cooked too fast and have broken in the water, can be turned into a dainty and palatable vegetable by mashing. Pass them through a potato "ricer," or beat them with two forks, with the prongs joined together.



End of May. Daffodils gone. German iris dominant. A good background of other foliage



July. Phlox and hydrangeas dominant. (Peonies past). Alyssum, platycodon and Shasta daisy in flower



September. Hydrangeas now deep pink. In front is blue spirea, which never shows well in a picture—SHOWING A REMARKABLE SUCCESSION OF FLOWERS

A BIT OF HARDY BORDER FROM THE SAME VIEW-POINT IN SPRING, SUMMER AND AUTUMN, SHOWING A REMARKABLE SUCCESSION OF FLOWERS

A Constant Succession of Hardy Flowers—By H. G. Taylor Orange, N. Y.

THE STORY OF A COMMUTER WHO HAS FLOWERS EVERY DAY FROM APRIL TO OCTOBER—SEVEN YEARS OF STEADY PROGRESS TOWARDS COLOR HARMONY AND FLORAL SUCCESSION

Photographs by the author

IN the January number of THE GARDEN MAGAZINE I told how I began gardening seven years ago in my 50 x 75 backyard by making meaningless flower beds of geometrical design in the middle of the lawn and how I changed to the border system. I now have irregular borders of hardy flowers all round the yard, and every year I have shifted plants and added new ones, until I can honestly say that I have plenty of flowers every day for seven months and that there is not a vacant or ragged spot anywhere. As to color harmony I make no boast, for that is a matter of taste and mine may be bad, but I know that I have suppressed color discords as fast as they appeared, and every year I have made new and better color combinations.

AN INGENIOUS SCHEME

My borders are divided—on paper—into twenty-five-foot units. Diagrams are drawn to scale and show the position of every plant. In the summer I note on those plans everything that is a failure in any way. During the winter I pore over these war maps and mark every move of the campaign. If 42 and 43 make a color discord and 43 would look better next to 105, I draw a line from 43 to

105 and next spring I know exactly what I want to do when the plants are fit to move.

MARCH AND APRIL GLORIES

Before the flowers in my borders begin to bloom I have a show in the lawn itself, from the snowdrops, scillas and crocus which are scattered in the grass. These bulbs have to be planted in the fall in such a way as not to mar the lawn.

THE SECRET OF PRODUCTIVENESS

It is only telling sober fact to say that my flowers are larger, better-colored and more numerous than those of ordinary gardens simply because the soil has been more thoroughly prepared—trenched to the depth of two and a half feet instead of the depth of an ordinary spade.

My planting has been criticised as being too thick, but I have experienced no trouble. Whenever I fear a group of plants may be insufficiently nourished I simply use liquid manure. I have always been better satisfied with thick planting and frequent division than more open placing and the expectation that the distances between the plants would be just right after several seasons' growth, the spaces to be occupied by annuals mean-

while. One reason is that you have to shift plants to places where they will look better.

FIFTEEN FLOWERS IN PERFECT SUCCESSION

The following flowers are the ones shown in the pictures. The numbers refer to the diagram.

April		
Key No.	Variety	Color
37.	Crown imperial....	Red and yellow
48.	Narcissus.....	Yellow and white
May		
45.	German iris.....	Mixed
June		
43.	Peonies.....	Red and white
41.	Gaillardia.....	Bronze
July		
35.	Shasta daisy.....	White
36.	Hydrangea paniculata, var. grandiflora.....	White, turning to pink
38.	Platycodon grandiflorum, var. mariesii.....	Blue
39.	Phlox "Lumineux".....	Pink
42.	Tiger lily.....	Orange
46.	Phlox "Coquelicot".....	Scarlet
47.	Achillea "The Pearl".....	White
	Sweet alyssum "Tom Thumb," planted to cover 48	White
August		
40.	<i>Liatri pycnostachya</i>	Rose purple
September		
44.	Blue spirea (<i>Caryopteris Mastacanthus</i>).....	Blue



Plan of the 6x30 strip shown above. Numbers refer to table, in the next column. (If the diagram were placed vertically you would get the same view-point as in the pictures)

and height as in the table below. Then pick out the flowers that are to be dominant at each of the twelve periods between April 1st and November 1st.

Then make three charts—one each for spring, summer and autumn effect, and use colored pencils for your big masses.

Lastly fill in with your flowers of minor importance.

TWO CROPS OF FLOWERS ON THE SAME GROUND

My narcissus is planted in a belt about eight inches wide and after they have bloomed the same space is covered for three months with the blossoms of "Tom Thumb," sweet alyssum. The narcissus bulbs stay in the same place for several years and the alyssum seeds are sown right above them early in May. Alyssum begins to bloom in July and continues for the rest of the season.

The space occupied by the crown imperial is later covered over by the foliage of the phlox and Shasta daisy.

TRAINING THE OBSTREPEROUS ACHILLEA

The phlox "Coquelicot" and "Pearl" achillea are alternated in a row about a foot apart and a foot back from the front of the border. "The Pearl" achillea is most useful because it blooms the greater part of the sum-

mer and because white is a great pacifier of conflicting colors.

As the stems are inclined to fall over, one year I pegged the two-foot stalks along the ground, over the narcissus, where the up-lifted bloom made an excellent edging. The second year I was better satisfied with the result of cutting off the tops when the plants were six inches high. This made them bushy and the individual stalks lighter, and they appeared to better advantage, using the leaves of the German iris behind them for support. An occasional bent wire was inserted to prevent their crowding too closely upon the phlox which was interspersed for contrasts.

HOW THE BLUE SPIREA HIDES THE DEFECT OF THE PEONIES

About a foot behind my irises, and alternating with the peonies which are just behind, is the blue spirea (*Caryopteris Mastacanthus*), the plants of which are set five feet apart. This is a very profuse bloomer and eventually hides the foliage of the peonies which is liable to become unsightly late in the season. The blue spirea attracts innumerable bees whose humming is most delightful.

About fifteen inches behind the blue

spirea is a row of peonies and hydrangeas which alternate and are about two feet apart. The hydrangeas commence flowering in July, the flowers lasting till long after frost, gradually turning from white to deep pink. They are pruned in February and the peony tops are cut off late in the fall.

Between these and the fence—back of the border—is a row of tiger lilies in clumps about two feet apart.

THREE POINTS ABOUT PHLOX

The phloxes are more effective when planted in groups or masses of separate colors. They will do better for being raised a little above the level of the bed. It will prevent damping off.

Should you mourn because the phlox is just coming into bloom when you are leaving home for two or three weeks, nip off the heads and the side shoots will have a display nearly ready to greet you upon your return.

DESCRIPTION OF THE 6 X 30 BORDER

My German iris is planted in clumps about two feet apart in a row a foot and a half from the phlox and achillea. Each clump is a color by itself, but the different clumps have different colors—white, blue or yellow. After the flowers are gone the foliage is very effective.

How to Use a Planting Plan—By I. G. Tabor ^{New York}

A COMPLETE CHART FOR A 50 X 100 LOT, SHOWING EXACTLY WHERE TO SET EVERY TREE AND SHRUB, AND HOW TO TRANSFER THE PLAN TO THE GROUND—A FEATURE NEVER BEFORE PRESENTED IN ANY HORTICULTURAL PERIODICAL.

Publisher's Note. If you want an artistic garden, you must learn how to make and use plans. A plan like this would probably cost you about \$150. It solves one of the hardest and commonest problems—how to lay out a typical suburban lot, or rather, a pair of lots measuring 55 x 100 (the common unit near New York and several other large cities). The shallowness of the lot makes it difficult to screen unsightly objects and create a landscape picture. Both these results are accomplished below, and the plans are also selected with reference to permanence, ease of culture, harmony of color-effect, and year-round interest. We shall be glad to be of further service to anyone who intends planting a place in accordance with these plans.

The planting plans hitherto given in *THE GARDEN MAGAZINE* and *Country Life in America* have met with a cordial reception because they have given more specific directions than any other plans that have been published in American periodicals. They have told what to plant, the cost, and the general position of the various plants. The present plan goes a step farther; it shows exactly where to place each plant. It also illustrates how to transfer any other plan from the paper to the ground. This additional detail requires an enormous amount of work on the part of the landscape gardener, and an inordinate amount of space in the magazine. Therefore we cannot allow ourselves this luxury, as a regular thing, unless there is a well-defined demand for it, but anyone who will take the pains now to find out how to use a planting plan will be able to use to advantage subsequent plans containing less detail. There is a little knack in using plans. They always look more formidable than they really are.

PLANTING from a plan, though a very simple matter when you know how, grows difficult when first approached, and for this reason I think many people shrink from attempting to follow one. For the sake of argument let us assume that one object is to transfer to the garden the plan given on the next page. First of all the tools:

- (1) A 5 ft. stick or rod, on which the divisions into single feet are plainly marked.
- (2) A dozen or two wooden stakes, pointed at one end so that they may be easily driven into the ground.
- (3) A heavy cord or twine about 25 ft. long.

Armed with these tools and the plan, which has been marked off in 5 ft. squares, let us start at the southwest corner and lay out the border planting of shrubs and perennials which forms the boundary along the south side of the lot. On the western boundary line measure 5 ft. north by laying the rod on the ground with one end at the corner. Drive a stake at this point, and measure 5 ft. north

from it and drive another stake. This gives 10 ft., which is more than the width of this border, excepting in one place. That we will consider when we come to it.

Now, beginning again at the corner, measure 5 ft. east on the southern boundary line and drive a stake, repeating four times, which will give a distance of 20 ft. At this point—20S on plan—measure north 5 ft. and drive a stake. From this stake stretch the cord to the stake at 5W—the first one driven—and you have enclosed the area of the first four squares.

Starting once more from the corner measure 5 ft. east, this time on the stretched cord instead of on the southern boundary line. Lay the measuring rod from the point found on the cord to the first stake on the southern boundary—5S on plan—and you have enclosed the area of the first square. In the centre of this square the plan calls for No. 27. The hole for it may be dug at once, or its location staked, as is most convenient.

It is better, usually, to put in stakes for all

the plants of one kind, then dig the holes and set them before proceeding to the next lot.

The next three squares will now be measured off in the same way, and the stake driven in the centre, before any holes are dug. Then the four plants of elder (*Sambucus nigra*) may be planted at the same time. After these are set, go back to the second square, and 1½ ft. from its western edge, on the line marked by the cord, drive a stake to indicate one of the plants of No. 1, high cranberry (*Viburnum Opulus*). In the same way stake the place for the last honeysuckle No. 3 (*Lonicera Morrowi*)—in the fourth square. Dig the holes for these and set them at once, if it is your purpose to set out the perennials as well as the trees and shrubs. Of course, the heavy shrubs must always go in before the lighter things.

Three plants of No. 20, Sweet William, fall within the line of the cord—one is almost on the corner of the second square, the next one is 1½ ft. from the first, in the third square, and the third 1½ ft. removed from the second.

On-plant of No. 28, baby's breath, is 1½ ft. from the northeast corner of the fourth square and a second plant of this is on the line which separates the fourth from the fifth square. Drive stakes for these five plants, fastening a number or label to each stake to avoid confusion, so that when the actual planting time arrives everything goes at once to its place.

From the stake opposite, or north of, 20S, measure north again 5 ft. and drive a stake. This gives 10 ft. from the southern boundary and is therefore opposite, and east of, 10W. From the stake at 10W stretch the cord to the stake just driven—and now the northern boundary of the second set of squares is found. In the first one are two plants of No. 1. Dig the holes and plant these at once.

Now proceed to stake off the perennials in order as they come; three plants of No. 30, (Yucca) in the first square; two of the same in the second square; seven of No. 20 (Sweet William), in the second square with one on the line and two of the same in square three; five of No. 29 (gold flower) in this square with three of the same in the fourth square and one of No. 28 (baby's breath), to make the planting complete up to the fifth set of squares.

All the planting within the space bounded by the lines 0 to 10W, 10W to X, X to 20S and 20 S to 0 may now be finished, before pulling up stakes and proceeding east another 20 feet.

For the next section measure in just the same way on the southern boundary 20 ft., driving a stake every 5 ft., then at the point 40S, measure north 5 ft., drive a stake and stretch the cord from it back to the stake 5 ft. north of 20S. Stake off in the big shrubs and plant them just as in the first section and drive stakes for the smaller stuff.

Then measure 5 ft. north again, just as in the first section, and plant the shrubs in this space, and all of the perennials of this section.

Now on the lines running north from 40S and 30S measure another 5 ft. and stretch the cord from the stakes at these two points. This encloses the two squares which contain the three plants of No. 24 (Hydrangea), and also gives a line from which to measure for the tree. This is 2½ ft. east of the eastern boundary of these squares and 1 ft. south of their northern boundary. It should be planted before the hydrangea.

Proceed in the same way the length of the border, dividing it into 20-ft. spaces and these in turn into 5-ft. squares. The same method applies to all planting wherever it may be. Around the building measure from the building in just the same way.

PLANTING LIST

SHRUBS AND HERBACEOUS PLANTS

ENGLISH NAME	STANDARD AND TRADE NAME
1 High cranberry	<i>Viburnum Opulus</i>
2 Rhododendron	<i>Rhododops torridus</i>
3 Bush honeysuckle	<i>Lonicera Morrowi</i>
4 Snowberry	<i>Symphoricarpos racemosis</i>
5 Peonies	<i>Paeonia officinalis</i>
6 Van Houtte's spirea	<i>Spiraea Van Houttei</i>
7 Japanese spindle tree	<i>Eurostylis alata</i>
8 Purple barberry	<i>Berberis vulgaris</i> , var. <i>atropurpurea</i>
9 Pompon chrysanthe-mums	<i>Chrysanthemum Indicum</i>
10 Dogwood	<i>Cornus alba</i>
11 Dockmackie	<i>Viburnum acerifolium</i>
12 Thunberg's spirea	<i>Spiraea Thunbergii</i>
13 Wayfaring tree	<i>Viburnum Lantana</i>
14 Golden bell	<i>Forysthia suspensa</i> , var. <i>Fortunei</i> (P. Fortune)
15 Michaelmas daisy	<i>Aster Novae-Angliae</i>
16 Japanese anemone	<i>Anemone Japonica</i>
17 Japanese barberry	<i>Berberis Thunbergii</i>
18 Lily	<i>Lilium speciosum</i>
19 Sneeze wort	<i>Achillea Pharnacia</i> , var. <i>The Pearl</i>

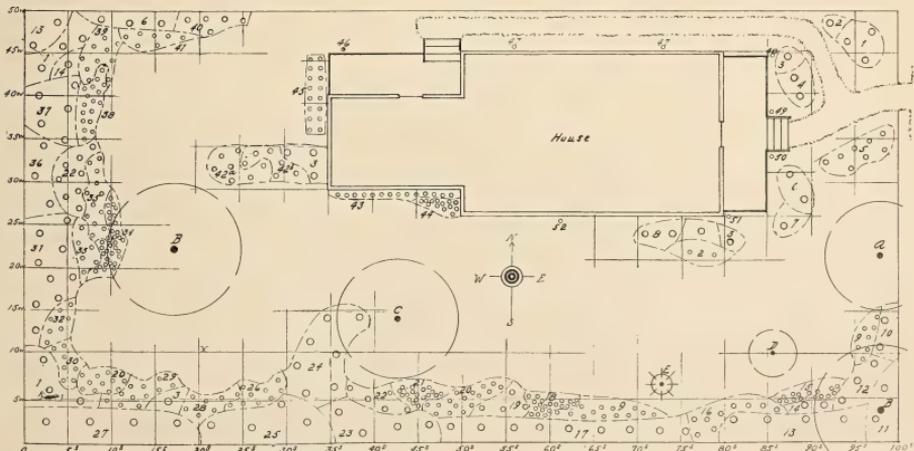
20 Sweet William	<i>Dianthus barbatus</i>
21 Polyanthus	<i>Primula Polyantha</i>
22 Marsh mallow	<i>Hibiscus Mosehoensis</i>
23 Rose of Sharon	<i>Hibiscus Syriacus</i> , var. <i>Yvonne d'Arc</i>
24 Hardy hydrangea	<i>Hydrangea paniculata</i> , var. <i>grandiflora</i>
25 Smooth sumach	<i>Rhus glabra</i>
26 Tickseed	<i>Careopsis lanceolata</i>
27 European elder	<i>Sambucus nigra</i>
28 Baby's breath	<i>Gypsophila paniculata</i>
29 Gold flower	<i>Hypericum Messorianum</i>
30 Adam's needle	<i>Yucca filamentosa</i>
31 Lilac	<i>Syringa vulgaris</i> ; white and colored
32 Sweet pepperbush	<i>Clethra alnifolia</i>
33 Ghent azaleas	<i>Anolea Gandavensis</i> (A. <i>Fontica</i>)
34 German iris in variety	<i>Iris Germanica</i>
35 Perennial larkspur	<i>Delphinium, formosum</i>
36 Kinnikinnick	<i>Cornus Amomum</i>
37 Arrow-wood	<i>Viburnum dentatum</i>
38 Fossilglove in variety	<i>Digitalis</i>
39 New Jersey tea	<i>Ceanothus Americanus</i>
40 Deutria Pride of Rochester	<i>Deutria scabra</i> , var. <i>erecta flore plena</i>
41 Christmas rose	<i>Helleborus niger</i>
42 Rugosa rose	<i>Rosa rugosa</i> , (s-var. <i>alba</i> ; s-var. <i>rubra</i>)
43 Hollyhock	<i>Althaea rosea</i>
44 Garden columbine	<i>Aquilegia vulgaris</i>
45 Hardy ferns in variety	

VINES

46 Hall's honeysuckle	<i>Lonicera Japonica</i> , var. <i>Halliana</i> , (L. <i>Halliana</i>)
47 English ivy	<i>Hedera Helix</i>
48 Wistaria	<i>Wistaria Chinensis</i> (in trade as <i>W. Sinensis</i>)
49 Japanese virgin, bowen	<i>Clematis paniculata</i>
50 Jackman Clematis	<i>Clematis lanuginosa</i> , var. <i>Jackmani</i>
51 Crimson Rambler rose	<i>Rosa multiflora</i> , var. <i>Crimson Rambler</i>
52 Climbing hydrangea	<i>Hydrangea petiolaris</i>

TREES

A European white birch	<i>Betula alba</i>
B Sugar maple	<i>Acer saccharum</i>
C Maidenhair tree	<i>Ginkgo biloba</i>
D Flowering dogwood	<i>Cornus florida</i>
E Mugho pine	<i>Pinus montana</i> , var. <i>Mughus</i> (P. <i>Mughus</i>)



To transfer a plan from paper to the ground, first rule off the drawing into squares at, say, intervals of five feet on the scale. Stake out the boundary lines either proposed garden, at corresponding intervals, and by stretching cords to intersecting points, the exact place for a given plant can be determined. Drive stakes in the places indicated, and label or number to agree with planting list.



Three parallel straight borders: the central one of dahlia Countess of Lonsdale, snapdragons, gladioli and lemon verbena; side borders of sweet peas, carnations or opium poppies, China asters and mignonette, edged with slyssum

Two irregular borders in which chrysanthemums are the main display. In the background sweet peas, larkspurs and hollyhocks maintain a succession of bloom until the chrysanthemums are ready

A Kaleidoscopic Series of Small Gardens—By John F. Johnston Long Island

HOW A VEGETABLE GARDEN DIVIDED INTO COMPARTMENTS BY ROWS OF GRAPE VINES WAS TRANSFORMED IN ONE YEAR INTO A SERIES OF THIRTEEN DISTINCT FLORAL PICTURES EACH HIDDEN FROM THE OTHER

A SINGULAR circumstance enabled Mr. Paul Dana to have at his summer home, Dosoris, Long Island, a series of "surprise gardens." He had decided to change an old vegetable garden into a flower garden. This vegetable garden was separated into thirteen compartments each thirty feet wide and from one hundred to a hundred and thirty feet long by rows of grape vines, the foliage of which was so dense that each compartment was hidden from the other. This suggested the idea of making each one of these compartments a distinct landscape composition, so that as a person drives or walks along, he is struck by a succession of floral pic-



Rough sketch of the kaleidoscopic series of gardens. There are thirteen of them (although the diagram shows only twelve). A long row of grapes hides each garden from the next one

tures, each as different as possible from the other.

Since the gardens were only made last year, they naturally lack perfection of detail, because it is impossible to get a perfect lawn in one year. Every garden ought to contain some lawn, since a bit of green is needed to rest the eye from the vivid colors of the flowers. Nevertheless, the scheme as a whole has received such favorable comment from visitors that it seems worth while to show some of the pictures and to raise the question whether a garden of this kind is not more interesting than one which can be taken in at a single glance.



Irregular borders of annuals selected for their vivid colors. Sunflowers and cosmos at the back, scarlet sage burning in the middle and marigolds to make the autumn yellow. Half circles of heliotrope and cornflower



A hardy border with a straight edge. This is composed chiefly of perennials and the idea is to get the utmost variety of color and form throughout the season. Few of a kind are used



A garden of two scroll-like beds. Each of the circles is composed of General Grant geranium carpeted with alyssum. The two narrow beds planted with yellow Tom Thumb snapdragons and *Begonia semperflorens*.

The founder of the estate, the late Charles A. Dana, editor of the New York *Sun*, was very fond of dwarf fruit trees trained against walls and in various symmetrical shapes. There is a growing interest in such trees in this country because they occupy so little room and enable one to get fruit of higher quality than with the full-sized trees. Such trees are particularly suited to suburban gardens, and whenever it is planned to make them a permanent feature of the kitchen garden it might be well to arrange them in such a way that the entire garden cannot be seen from any one point of view. Or a vegetable garden could be arranged for decorative effect.

A NOVEL USE OF GRAPE VINES

It must be said, however, that dwarf-trained fruit trees require the constant attention of an expert, and where it is impossible to guarantee this it would be much simpler, safer and more economical to use grape vines instead.

It might be well, for the sake of contrast, to have a formal garden followed by a nature-like garden, a very vivid garden by one that will be green most of the season, one of robust growth by one of slender and diminutive growth and so on.

The flowers that are contained in each of the miniature gardens here shown are mentioned beneath their picture. There seems no reason why the culture of each should be given in detail as they are all familiar flowers, but a summary of the operations is here given.

FLOWERS PLANTED IN EARLY FALL (SEPTEMBER)

All hardy perennials and biennials protected by mulch during winter. Examples: Peonies and pansies, phloxes, larkspurs, hollyhocks.

FLOWERS PLANTED IN EARLY SPRING

As soon as the ground is free from frost: Hardy perennials and biennials.



This will eventually be a rose garden. The four straight beds are filled with China asters and phlox this year; the circular one has roses edged with verbenas. The trained fruit trees combine to frame the picture.

SEEDS OF ANNUALS

- A. Sown where intended to flower.
 A. Sown in the greenhouse in March and April.
 B. Started as early in the season as possible after all danger from frost is past.
 Sweet peas
 Sweet alyssum
 All poppies
 R.B. Started later, or early in May.
 Godetia Nasturtium Sunflower
 Mignonnette Lupines Phlox Drummondii
 Clarkia Candytuft Marigolds
 Linum Cornflower (Centaurea)
 Stocks Snapdragon Vincas

The more tender annuals and hardier kinds, which are wanted for early bloom and require transplanting from seed boxes, and are placed out-of-doors in some sheltered spot to gradually harden before planting in the garden:

- | | |
|--------------------------------------|------------------------------|
| Asters | Verbenas |
| Phlox Drummondii | Cosmos |
| <i>Salvia splendens</i> | Zinnias |
| Balsams | Morning glories |
| <i>Nicotiana glauca</i> (N. affinis) | <i>Begonia semperflorens</i> |
| " <i>Sanderi</i> | Perunias |
| <i>Nemisia Suttoni</i> | Lobelia |



A semi-formal effect—two circular beds flanked by irregular borders. In the foreground at either side blazes Kelway's golden marguerite (*Anthemis tricolor*, var. *Kelwayi*). Near the vines are stately hollyhocks, foxgloves, dahlias and cosmos.



A very simple formal garden—merely two circular beds of *Hydrangea hortensis*, edged with annual phlox and China asters. The phlox is too dark to show and the asters are not yet in bloom.

The Rantankerous Brood of Aphides—By E. Dwight Sanderson New Hampshire

A GROUP OF INTERESTING BUT TROUBLESOME INSECTS ON WHICH WE YEARLY SQUANDER SEVERAL TONS OF PARIS GREEN IN BLISSFUL IGNORANCE OF THE TRUE REMEDY

JUST as the apple buds burst open in the spring close examination will reveal many little green aphides assembled upon them. Usually they remain unnoticed for two or three weeks, until the foliage commences to curl up, and inside of the rolled leaf are found myriads of the little villains. Had the twigs been carefully examined during the winter especially around the buds, there would have been seen many tiny, glossy black eggs, which were laid the previous autumn while the leaves were fall-

of fifty to a hundred young being thus formed around each mother by the end of this time. In this way the aphides soon cover the young leaves and unfolding apple blossoms. Each one grows to maturity in about the same length of time and likewise becomes a mother in ten days or two weeks after birth, for curiously all the aphides during the spring and summer are females. The individual which hatched from the egg may thus become the grandmother of hundreds of young before she dies. It is to this remarkable power of rapid reproduction that injury by aphides is due, for the damage done by an individual is usually insignificant. Thus with the aphides of the pea-vines, commonly called pea lice, where on May first but one aphid could be found after several minutes search, by the end of June its progeny will have so increased that all the vines over many acres are covered.

Mrs. Aphid is an exceedingly sharp-tongued individual. Her head is prolonged into a long tube-like beak which rests upon the surface of the leaf. Within it are four very slender, bristle-like little lancets which are plunged into the tissues of the leaf until it is so lacerated that the sap exudes and is drawn up into the mouth through the beak. With thousands upon thousands of these little pumps drawing out its life, it is any wonder that the leaves of the tree or plant curl up and fall exhausted? With the food plant ruined, starvation for the aphides would ensue were it not that when food becomes scarce, their style of dress changes and with the last molt they become winged and can

much as if they were little green cattle. Frequently an ant may be seen tapping an aphid with her antennae, upon which a drop of the honey-dew is exuded and quickly lapped up. Thus, the ants are probably entirely responsible for carrying the young aphides which affect the strawberry roots in Delaware, Maryland, New Jersey and elsewhere, from the foliage down to the roots, and for carrying them from plant to plant, as the plants wither from their injury. The melon louse is similarly carried by the ants



A familiar sight as the apple buds are opening. Myriads of green aphid sucking out the juices

ing. From each egg a young aphid is hatched a few days before the first buds open, who at once stations herself upon a swelling bud ready for a meal as soon as the first bit of foliage peeps out. The young aphid grows rapidly.

The outer skin of all insects is more or less hardened, and when a certain amount of growth has taken place, further increase is impossible owing to the unyielding nature of the skin. It therefore splits down the centre of the back and is thrown off, and while the new skin is hardening growth occurs. Thus, feeding all the time and growing rapidly, the young aphid discards her old dress every few days. In a week or ten days she is full-grown, with her fifth and last new garb. Where aphides are numerous these little white molted skins become quite abundant. Mrs. Aphid now proceeds to rear her family, which is exceedingly large and grows rapidly: from three to five or six young are born directly, without eggs, every day or so for ten days or two weeks, a colony



Ants "farm" the aphides for the honey-dew that they secrete. In this photograph an ant is seen gently tapping an aphid. The corn aphid is specially nursed by the ants and lays her eggs in the ants' nest

fly to new pastures. "Fly to new pastures" in many cases they do literally, for after one or two generations is over upon the apple, one species migrates to various grasses; another which occurs in early spring on plums migrates to hops; and many kinds migrate from one weed to another as the season of each passes.

In such migrations they are often aided by their foster-mothers, the ants, for many species are carefully cared for and guarded by the ever diligent ants. A peculiar, sweetish liquid called "honey dew," is secreted by the aphides of which the ants are extremely fond. To secure this they herd the aphides,



The mother aphid and one of her numerous progeny newly born. The pea aphid (enlarged twelve times)

from hill to hill. But most remarkable of all is the case of the corn-root aphid, which lays its eggs in ants' nests in the fall, where they are carefully guarded all winter and in the spring the young aphides are carried by the ants to the roots of their favorite food plants.

But the aphides have enemies as well as friends, to whom we are the more indebted. Small, parasitic wasp-like flies lay their eggs upon or within them, and from which little white maggots hatch and feed within the aphides, soon killing them. As it dies, the skin of the aphid distends into a small brown bladder-like shell, from which the adult parasite emerges through a neat round door, which it cuts out for its exit. Such parasitized aphides should never be destroyed, so that the beneficial parasites may multiply. These parasites multiply even more rapidly than the aphides in warm, sunny weather, so that within a few days myriads of aphides which were destroying a crop may very quickly disappear through their good work. Many other larger insects, such as the well-



The white molted skins—they are shed five times—often disfigure the leaves. Portion of lily leaf



The winter eggs of the aphid may be seen on twigs of various plants. This is a portion of willow



A natural enemy of the aphid is one of the sawflies, which lays eggs in the aphid. The adult parasite emerges through a neat round door. Dead strawberry-root aphid and the parasitic fly

known lady-bird beetles and their little alligator-like larvae find the aphides dainty morsels and devour large numbers of them, as do the larvae of the black-and-yellow banded syrphus flies which are always found hovering around a colony of aphides, the larvae of the aphid lions, and many others. In some cases fungous diseases kill out hordes of aphides in a few days when damp weather favors the growth of the disease.

To describe all the different sorts of aphides would require a book; they affect almost all the garden crops, trees, and field crops. The black peach aphid curls up the



Towards the end of the season the winged aphides appear. An apple leaf in fall

tender terminals, while its yellow cousins corrugate the leaves of the raspberry. Melons, cucumbers and all the melon family are seriously injured in the field and green-house by a little green and black species.

Cabbages, turnips, etc., are devoured by the well-known cabbage aphid, while other familiar species attack the rose, carnation, or chrysanthemum. The snowball bush is particularly troubled by a brownish kind which curls up the leaves in disgusting shape.

As frost approaches many of the creatures become winged and fly to the plants upon which the winter eggs are to be laid. Thus in October and November the apple leaves are often covered with the winged aphides which give birth to forms quite different from those during the summer. Some are small, with long legs and long antennae, or feelers, and run around nervously as if filled with their importance. These are the males and occur but this once in a year. Others are true females which lay the winter eggs. With many species the eggs have never been observed, but they probably occur at some out-of-the-way time and place and so have eluded discovery. It is apparent that to combat aphides successfully they must be handled while still few in numbers, for when they have so increased as to curl up the foliage it is practically impossible to reach them by ordinary means. So be on the lookout for them, have the apparatus and insecticides ready for immediate warfare, and waste no time before exterminating the first few found.

Being sucking insects, Paris green and other arsenical poisons for coating the surfaces of the leaves are of no value whatever. The aphides quickly succumb to sprays of kerosene emulsion, tobacco water, or whale oil soap. The soap may be used in a solution of one pound to five or six gallons of water on most plants, and with it may be combined Bordeaux mixture for diseases, and Paris green for biting insects if necessary, as was advised in the *MARCH GARDEN MAGAZINE*. Many times tobacco dust freely used will prove effective upon small plants. The work must needs be thoroughly done, as every individual aphid must be hit with these insecticides. The sprays should be applied in a fine mist and just enough used to wet the foliage thoroughly.

Where the leaves are badly curled it is impossible to reach the aphides within with a spray. Fumigation is therefore often feasible. In greenhouses this is the best method for the control of aphides. A tobacco powder, known as the "fumigating kind" is used extensively by florists and seems to be the best all-round fumigant. It is placed in shallow pans, a little kerosene poured on to start burning, and when lit it burns slowly, giving off a smudge which is fatal to aphides and many similar insects. Ordinary tobacco powder does not answer. Various extracts of tobacco are similarly used, being evaporated over a flame or upon steam pipes or by throwing hot irons into the containers. I have been very successful by covering



As a result of the puncture by many aphides the leaves curl up. It is then very hard to reach the insects by a spray

melon vines out-of-doors with oiled canvas over a frame and fumigating the vine beneath with one of the special preparations of paper soaked in tobacco extract, and which are very handy for such use. It would be easy to make covers for plants such as chrysanthemums, growing in rows so that they could be readily fumigated out-of-doors. The value of fumigating over spraying lies in the fact that the gas penetrates everywhere and kills practically every aphid.



Is it any wonder that the leaves of plants curl up when they are infested by a host like this? Back of an apple leaf

SOME SUGGESTIVE GARDENS

GARDENS THAT MEAN SOMETHING, STAND FOR DEFINITE IDEAS, SHOW ORIGINALTY AND STIMULATE THE CREATIVE IMAGINATION—A YEARLY FEATURE OF THE SPRING PLANTING NUMBER TO WHICH READERS ARE INVITED TO CONTRIBUTE



A secluded rose garden with a large amount of open lawn and a small central pond for water-lilies. A well screened garden



An outdoor living room that combines privacy with an inspiring view. Showing how formal and landscape gardening may co-operate. Near Philadelphia



The most informal formal-garden in America—that of Captain Larz Anderson at Brookline, Mass. Notice how the feathery blossoms of spirea soften the hard outlines of architecture and consider how cold and formal the evergreens would be without their foil. The vines also subdue the work of man



A terrace garden in Sewickley, Pa., the most beautiful suburb of Pittsburg. Naturally suggested by the hilltop location. See picture below



A front-yard garden in Pittsburg hidden from the street by trees. Beds of various shapes and sizes with grassy walks between



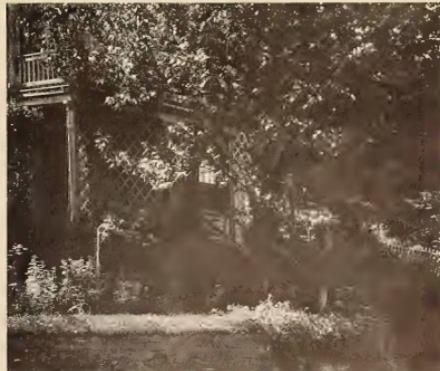
The outlook from the terrace garden. The Annunciation lily (*L. candidum*) is in bloom. J. Wilkinson Elliott, landscape architect



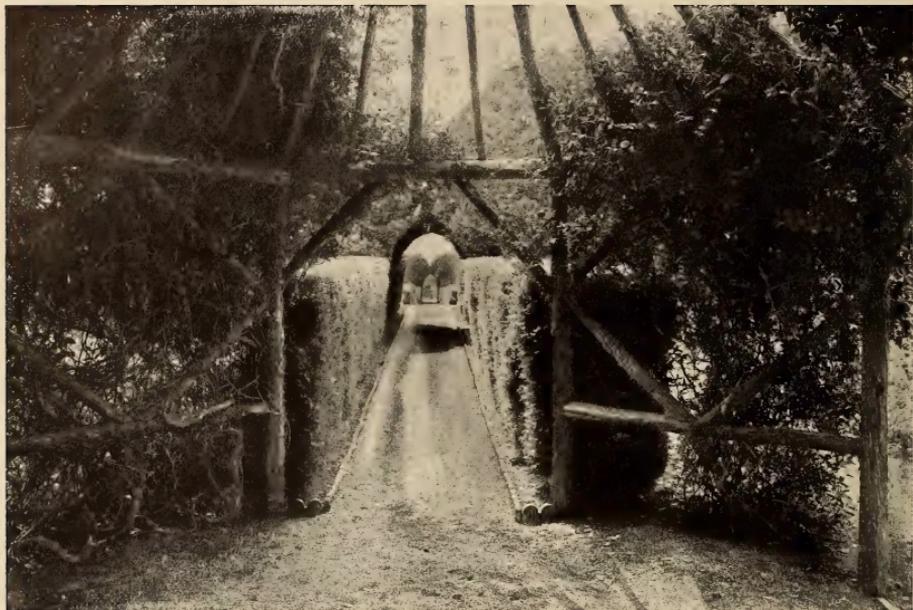
A garden hidden by informal planting, which consists of a broad winding grass walk bordered by hardy flowers. South Lancaster, Mass.



A modest roadside garden at Roslyn, L. I., which is gay with annuals all summer. Suggestion for a steep and shallow front yard



This wall is covered with nasturtiums and a line of portulacas which grow in a thin layer of soil and bloom three months



This rustic summer house, the former home of President Madison, offers a shaded ante-room where one may await friends for a stroll through the garden. Unlike the other arbors, it has no seats, so that no one will be tempted to neglect the beauties of the garden



An old-fashioned garden, with formal beds, of geometrical shapes, edged with dwarf box and filled with hardy perennial flowers

Classified Planting List for Vegetables—By P. T. B. New York

A GUIDE TO THE BEST WAY OF GROWING THE EVERYDAY VEGETABLES AND SUGGESTIONS FOR SUCCESSION ALL THE SEASON

POT-HERBS OR GREENS

Pot-herbs or greens are grown for their leaves which are served cooked. In order that they may be tender and crisp they should be grown rapidly. Give the ground good tillage, supply an abundance of quickly available nitrogenous fertilizer, particularly when nearing maturity. As a rule they are cool-loving plants and are cropped for part of season only, so are usually grown as succession or companion crops.

NAME	WHEN TO SOW		DEPTH TO SOW S-Seeds R-Roots (Inches)	THIN OR TRANSPLANT			READY TO EAT		OTHER POINTS
	Early Crop	Main Crop		Thin (inches)	At inches high	Transplant (inches)	Early Crop	Main Crop	
Asparagus		April	S. 1. R. 6	24 x 36	3	24 x 36	Third year	April June	Cut all foliage in fall and burn; dress with salt and heavy coat manure.
Cabbage	Feb. Mar. indoors April outdoors	May June	$\frac{1}{2}$		6	24 x 36	July	100	Needs rich soil. Transplant, if possible, on cloudy day—store late crop.
Cauliflower	Feb. Mar. indoors	May June	$\frac{1}{2}$		6	24 x 36	July	110	Must not be checked in growth at any time—needs rich soil; start in coldframe.
Celery	Feb. in hotbed	April in seedbox June	barely cover		first 2 second 6	3 x 48 6 x 48	as greens May	170	Early crop in hotbed, two transplantings. Plant early varieties close to self blanch.
Beet	April May	June to Aug.	1 $\frac{1}{2}$	9 x 18	4	9 x 18	June	50	Seed germinate quicker when soaked over night in warm water.
Spinach	Sept.	March to May	1	6 x 18	1		March	30	Can pick two or three times; give slight protection in winter.

SALAD PLANTS AND SWEET HERBS

Salad plants and sweet herbs may be used uncooked. They prefer cool, moist soil. In the kinds which are grown for their leaves a quick growth is necessary and can be secured by applications of quickly available nitrogenous fertilizers. Give clean, thorough tillage and rich ground with plenty of moisture.

Lettuce	Feb. to March indoors	April to to Aug. 1	$\frac{1}{2}$	8 x 12	3	8 x 12	April May	21 to 65	Sow for early crop in boxes or coldframe. Give rich soil, plenty of sun.
Celery	Feb. in hotbed	April in seedbox	barely cover		first 2 second 6	3 x 48 6 x 48	July	170	Transplant twice before putting in trench, makes better root system.
Parsley	Sept.	April	$\frac{1}{2}$	6 x 12	2		May	50 to 75	Soak seed over night in warm water, seeds start quicker. Fall-sown seed need protection.

SEEDS AND FRUITS

Seeds and fruits which we eat are, with the exception of the pea, warm-season plants—they are tender to frost and must not be planted until the ground is warm. The tomatoes, eggplant and peppers are started in heat early; it is necessary in order to get a good crop. The cucumbers and their kin resent having their roots disturbed, so when they are started early indoors it is usually on inverted sods.

Beans, Lima	April 15 outdoors	May 1	2	36 x 36	5			Aug. to frost	Put the eye down. Set pole first, putting beans around it.
Beans, snap	May to Aug.		2	12 x 24	3		July	45	The later varieties bear heavier crops. Three or four plantings enough for small family.
Corn	April to May	June to Aug. 1	1 early 1 $\frac{1}{2}$ late	12 x 24	3		July	55 to 90	Needs plenty of moisture at roots and good cultivation. Large varieties need more room.
Cucumber	Feb. Mar. indoors	May to July	$\frac{1}{2}$	36 x 36	2	36 x 36	July	50 to 75	Sow seed edgewise, about six to a hill. When bugs are gone thin out to two plants to a hill.
Eggplant	Feb. indoors	May indoors	$\frac{1}{2}$		3	36 x 36	July	80 to 160	Start in March—transplant to open about June 10th. Must not receive the slightest check in growth.
Muskmelon	April indoors	May to June	1	60 x 60	4	60 x 60	Aug.	100	Plant seeds on edge. Pinch ends to induce growth of fruit-bearing side shoots.
Peas	March outdoors	April to June	3	3 x 30			May	36 to 80	Plant early crop in double rows six to eight inches apart; use brush or wire support.
Pepper		March indoors	$\frac{1}{2}$		6	18 x 24		140 to 150	Hen-manure or guano best fertilizer; put it in below the roots. Start in house or coldframe.
Pumpkin		May to June	1 $\frac{1}{2}$	108 x 108	4			120	Give plenty of fertilizer. Plant away from melons and cucumbers.
Squash	March indoors	May to June	1	72 x 96	4	48 x 48	60 to 65 July	125 Aug. to Sept.	Needs room and rich fertilizer; late kinds should be gathered before frost.
Tomato	Feb. Mar. indoors	April seedbed	$\frac{1}{2}$	36 x 48	thin 3 tr. 6	36 x 48	July	150	For early crop, sow in house or coldframe; accustom to cold before planting out after frost is past.

ROOT CROPS are cool-loving plants, so do better in spring and fall rather than in summer. They should be grown in rows and, as a rule, are not transplanted. Some are main-season and others are secondary crops. They are all easily grown, no special skill being necessary.

NAME	WHEN TO SOW		DEPTH TO SOW				THIN OR TRANSPLANT		READY TO EAT		OTHER POINTS
	Early Crop	Main Crop	>Seeds R-Root (inches)	Thin (inches)	At inches high	Transplant (inches)	Early Crop	Main Crop			
Beet	Mar. 15 outdoors	Mar. 20 to Aug. 1.	1½	9 x 18	4	9 x 18	May to June	50	Store the roots in cellar for winter use; cut tops off ½ inch from the root.		
Carrot	April	June July	½	6 x 18	3		July	100		Give deep, sandy loam. Early crop must be used at once.	
Onion	Aug.	Feb. Mar. indoors April outdoors	S. ½ R. 2	5 x 14	3	5 x 14	May	100 to 160	Spanish onions are bigger and better when sown in coldframe and transplanted.		
Parsnip		April	½	6 x 18	3			140	Fine, deep soil best. Roots may be left in ground or stored in cellar.		
Radish	Feb. to Mar. indoors	April to Sept.	½	3 x 8	2		20 April	30 to 45	Sow every ten days for succession. For early crop, sow in boxes in house.		
Sweet potato	Mar. indoors		R. 3		when frost is past	18 x 24		120 to 150	Start in coldframe. Transplant when danger of frost is gone.		
Turnip	April	June to Aug.	½	4 x 18	3		June	70	Pull before they become corky. May be stored like carrots for winter use.		

TYPE VARIETIES FOR SUCCESSION

An effort is here made to give a guide to the inexperienced gardener. One will, of course, succeed equally well with a totally different list. These varieties are given merely as types—the names may not be in your seedsman's catalogue; but he can supply varieties that will give equivalent results if you candidly ask for something like the one here quoted; for latest sowing use an early variety.]

NAME	FIRST EARLY	SECOND EARLY	MAIN SEASON CROP	LATEST SEASON CROP	OTHER POINTS
Beans, bush Lima	Henderson's	Dree's	Large Bush	Henderson's	Early crop start in pots; sow main crop when leaves are well developed. Put the eye down. Use fertilizer.
Beans, pole Lima	Early Sieva	Early Jersey	Large White	Dree's Pole	Use poles 10 ft. long; 5 beans to hill; plant will plant 100 hills. Dry and shell surplus for winter use.
Beans, snap	Early Valentine	Refugee Wax	Golden Wax	Early Valentine	Quick growth makes crisp, delicious snap-beans. Sow every two weeks from May 1st.
Beets	Egyptian	Eclipse	Edmunds	Eclipse	Prefers light, rich, sandy loam. Sow early varieties every two weeks until July 1st.
Cabbage	Early Jersey Wakefield	All Head	Late Flat Dutch	Jersey Wakefield	For home use try the Savoy variety, excellent for salads. Late crop can use same ground as early peas had.
Carrot	Early Forcing	Early Horn	Danver's Guerande	Long Orange	Sow early crop as soon as ground can be worked. Late crop June 1st. Store in cellar in damp sand.
Cauliflower	Earliest Dwarf Erfurt	E. Snowball	Algiers	Earliest Dwarf Erfurt	Prefers cool climate, rich, moist soil. To keep heads, tie outer leaves together or break over flower.
Celery	White Plume	Golden Self-blanching	Pascal		Grow two crops: early summer and winter. Store in cellar, packing roots in damp sand.
Corn	Cory	Crosby	Country Gentleman	Cory	For very early, sow seeds in pots in house. Some people prefer to sow an early variety every two weeks.
Cucumber	Early White Spine	Cool and Crisp	Long Green	Early White Spine	For early crop start few on inverted sods in coldframe. Main crop outdoors. Dust with washes for beetle.
Lettuce	Grand Rapids	Curled Simpson	Salamander	Grand Rapids	Sow every two weeks for succession. Try the Cos lettuce; blanch it by tying top of leaves together.
Muskmelon	Netted Gem	Emerald Gem	Long Island Beauty		Start early crop on inverted sod in coldframe. Main crop outdoors. Prefers sandy soil and lots of sun.
Onion	Sets	White Globe	Prizetaker		Early onions to eat raw, plant onion sets. Prizetaker should be planted in coldframe and transplanted.
Parsnip	Early Round	Improved Hollow Crown			Needs a rich, deep loam. Dig some for winter use, storing in cellar. Leave rest in ground till spring.
Peas	Daniel O'Rourke	Nott's Excelsior	Champion of England	Daniel O'Rourke	Wrinkled kinds are sweeter. Medium and late varieties must be planted early; early kinds until Aug. 15.
Potato	Early Rose	Beauty of Hebron	Carman No 1.	Green Mountain	For early crop, sprout the tubers before planting. Spray with Bordeaux and Paris green fortnightly.
Radish	Early Scarlet Turnip Forcing	French Breakfast	Long Scarlet	Half-Long Black Spanish	The small round ones are earliest. The Chinese and Spanish varieties make good winter eating.
Squash	White Bush Scallop	Yellow Crookneck	Boston Marrow	Hubbard	The scallops and crooknecks are for summer use, others for winter. Store winter kinds in dry place;
Tomato	Earliana	Acme	Stone		Train on trellis or to stakes. Season may be extended by bringing green fruits into the house to ripen.
Turnip	Early Milan	Purple-top White Globe	Yellow Globe	Rutabaga	Let them follow the early peas or potatoes. This will give time to mature before winter.

New Crimson Rambler

"The Rose That Never Fails"

If ever there was such a rose, *that* rose is "Philadelphia Crimson Rambler."

"Philadelphia" is the rambler among ramblers— noted for its magnificent, rich, brilliant roses, and big, solid, heavy clusters. And bloom! One plant alone often bears 15,000 to 20,000 blossoms a season. This exceptional rose begins blooming two weeks ahead of other ramblers, and the bush stays radiant with beauty for more than a month. "Philadelphia" is a great climber— often grows ten feet in one season—the very finest rose for training up porches, arbors, pergolas, archways, fences, etc.

Special Prices—Express Prepaid in U. S. A.

Two-year pot-plants, 2 for \$1; 10 for \$4. Extra size, field-grown plants (pruned, ready for planting) 2 to 3 ft., 75c. each; 5 for \$3. Three to 4 feet, \$1 each; 5 for \$4. Four to 5 feet, \$1.50 each; 5 for \$6.

Favorite Roses for Your Garden and Table

Cut-flowers in your Home all Summer

Here are three special offers of some of the best bloomers, selected from the many choice varieties which we grow. It's the root that makes the rose. You can't get an abundant supply of large beautiful roses without strong, vigorous roots. Our whole business life and study has been spent growing "the Best Roses in America." We test all the new fine varieties and add to our stock only such roses as come up to our standard for root and bloom.

One Fine Rose.—Frau Karl Druschki

One of the grandest pure white Roses ever introduced. Makes splendid buds and immense flowers, and is deliciously fragrant, durable and handsome. A healthy, vigorous grower, entirely hardy, and blooms all summer long. *Strong, Two-Year Plants* (own roots) \$1 each, \$10 per dozen. (Budded Plants) 60 cents each, \$6 per dozen, by express. (Not prepaid.)

Twelve Superb Roses (All on own roots, except*)

Enough for a bed 3 feet x 6 feet, 2½ feet x 9 feet.;

Paul Neyron, deep rose, very large.

Kaiserin Aug. Victoria, large, creamy white.

Baby Rambler, the Dwarf Crimson Rambler.

*Killarney, glowing light pink.

Gruss an Teplitz, the reddest of Red Roses.

Harmosa, the old-fashioned pink rose.

La France, soft violet pink.

White Maman Cochet, pure white, beautiful form.

All specially selected 3-year plants. Above collection of 12 for \$5, or the last 6 for \$2.75, delivered in U. S. A. free, by express.

Twenty-five Choice Roses

Enough for a bed 3 feet x 12 feet, 5 feet x 6 feet, or a border bed 18 feet long and 2½ feet wide.

The 12 Roses above, besides the following:

Helen Gould, rich rosy crimson.

Mad. Camille, clear rosy pink.

Maman Cochet, pink, rich rosy pink.

Mrs. B. R. Cant, lovely light red.

Souv. de Pres. Carnot, exquisitely shaded pink.

Coquette des Alps, large pure white.

Gloria Lyonnaise, creamy white with yellow tinge.

John Hopper, clear rosy pink.

La Reine, large rich pink.

Oakmont, most productive, peach pink.

Mad. Gabriel Lilliet, clear bright pink.

Prince Camille, deep velvety crimson.

Ulrich Brunner, bright cherry red.

The above collection of 25 for \$10, delivered in U. S. A. free, by express.

Six Beautiful Climbing Roses. (All own root plants.)

Philadelphia Rambler, (The New Crimson Rambler.) Climbing Clotilde Soupert, cream.

Dorothy Perkins, pink.

Ruby Queen, ruby.

May Queen, charming pink.

Gardenia, golden yellow.

Strong, heavy 3-year-old plants of the above collection \$3, 2-year-old plants \$2, delivered in U. S. A. free, by express.

Send us your order now. We guarantee these Roses to be first-class and to give results (we prefer to return the purchase money rather than have a dissatisfied customer). You should have our two books: "How to Grow Roses," and the 136-page Rose Catalogue, to help you in your plans. They are free.

The Conard & Jones Company, Box P, West Grove, Pa.

"Growers of the Best Roses in America."

Mellin's Food

for the
Baby

"We are advertised
by our loving friends."



GEORGE W. GILE
One of our loving friends.

Are you having trouble in feeding your baby? Does his food disagree with him? Does he lose in weight? Does it seem as if he never would stop crying? Then Mellin's Food will help your baby and we will prove it, if you will write us just what the trouble is and what you are doing. As soon as your letter reaches us, we will send you a sample of Mellin's Food and a book of helpful directions. We will also write you a personal letter and tell you exactly how to use Mellin's Food for your baby. We have helped thousands of babies and we can help yours—if you will let us.

MELLIN'S FOOD COMPANY,

BOSTON, MASS.

\$43.75



Buy This Rubber Tire Wagon

Union Quality. Fully Guaranteed. Best hickory wheels, $\frac{3}{4}$ in. Rubber Tire, long distance, dust proof, high arched axles; oil tempered springs. First quality material and finish. Worth nearly double our Factory Price. We ship for your examination, without a cent in advance, if desired and allow

30 DAYS FREE TRIAL

Money refunded on all purchases not satisfactory. You save dealer's profits. We build 150 styles of Vehicles, from \$25.50 to \$150.00. 50 styles Harness, \$5.00 to \$60.00. Write to-day for our 200-page Illustrated Style Book. Free for the asking.

UNION BUGGY CO., 32 Saginaw Street, PONTIAC, MICH.



Growing Quality Potatoes

THE ideal soil for potatoes, as for most crops, is a sandy loam. If your garden is a wet heavy clay, it ought to be drained. Plow in the fall, if possible, and make wide ridges. In the spring fill the furrows with manure, or use for a plot 100 x 100 feet:

	Lbs.	Cost
Nitrate of soda,	7	\$.35
Dissolved rock,	8	.16
Wood ashes,	55	1.10
	70	\$1.61

Once in a long while an enthusiast whose soil is in excellent condition uses too much manure, and his potatoes "run to vine," at the expense of tubers, which need large quantities of potash, but most gardens do not have enough nitrogen—the element that makes for growth, as opposed to flowers and fruit. You may use sulphate of potash for potatoes, but not muriate.

If you have raised your own potatoes you can afford to use small whole tubers for "seed," but if they are full of eyes they will probably make so many shoots that they will all be weak for the want of sufficient food, therefore some should be cut off, leaving a few strong shoots. Another method is to cut large potatoes to one or more eyes to each piece. There is endless dispute as to which plan is better.

Plant the potatoes eight or ten inches apart, and cover to a depth of from four to six inches. The temperature and moisture at this depth are more nearly uniform than at a depth of two or three inches.

Spray the vines at least four times during the season, with a combination of Paris green and Bordeaux mixture. The former is for biting insects; the latter for all fungous diseases (rot, scab, blight), and strangely enough it is the only thing that helps to repel the flea beetle, that mean little black insect which jumps like a flea, and riddles the leaves with holes the size of a pin head. Begin spraying before the larvae of the potato beetle appear, and keep the foliage covered with the poison the whole season.

KEEPING POTATOES

In no case should potatoes be kept in the light. They will often become of a greenish color (in which condition they are poisonous) and will also begin to sprout. The best way to keep them is to bury them. Dig a pit and sink your barrel in it, with straw at the bottom for drainage; straw at the top, and then the lid. This will keep them cool

DIGITALIS

(Foxglove)

THE MOST BEAUTIFUL OF ALL EARLY
SUMMER FLOWERING HARDY PLANTS

With but trifling attention they will give a wealth of flowers during July and August ranging in color from pure white to deep rose. When planted in masses or in partial shade among shrubbery they produce a grand effect and give an abundance of cut flowers.

☞ We will send prepaid to any place in the U. S. or Canada one dozen assorted colors for \$1.50. Extra large plants, 6 for \$2.00. One dozen, \$3.00. Twenty-five for \$5.00. ☞ To Canada or west of the Rocky Mountains remit \$1.00 extra with orders for extra large plants, to cover additional transportation charges.

SWEET PEAS FROM SPRING UNTIL FROST

There is scarcely any flower so temporary and with such an undesirable foliage as the tender sweet pea, dying just in the middle of the summer season when everything should be green and attractive. While often used for screening purposes, their early decay makes them a complete failure. The Perennial Pea will give you the same beautiful blossoms as the annual or tender varieties and will give them in great abundance from early summer until stopped by heavy frost. With the Perennial Pea the annual expense and trouble of replanting is entirely eliminated, while the foliage is a very desirable feature. Where it is not too exposed to the sun, it will remain a lovely green until after snow falls. For screens it is all that can be desired, and, being almost an evergreen, it scarcely has an equal. It also attains a more desirable height, often growing over ten feet high, making a complete mass of beautiful green. They are perfectly hardy and require no care whatever.

☞ One year old field-grown plants, white, pink, and red, 3 to 50 cents, 7 for \$1.00, and \$1.50 per dozen (We will use our best efforts to send these true to color, although we cannot guarantee them.)

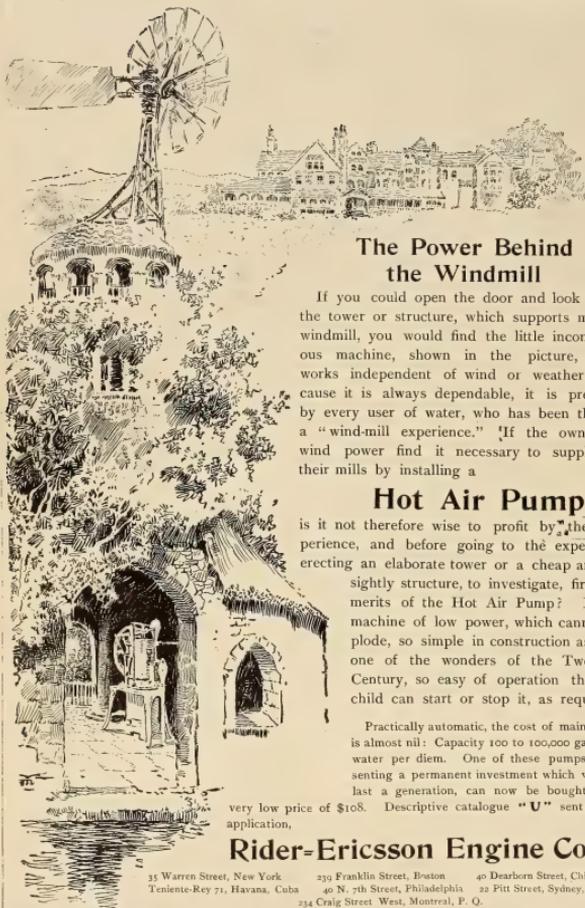
We have a fine lot of two year old field-grown plants, colored delicate pink, at 50¢ each; 3 for

\$1, or \$3 per doz.

All charges prepaid anywhere in U. S. and Canada.

We grow all the most desirable Hardy flowers
Wagner Park Conservatories
Box 16 SIDNEY, OHIO Box 16

Write for catalog of "Plants and Plans for Beautiful Surroundings."



The Power Behind the Windmill

If you could open the door and look within the tower or structure, which supports many a windmill, you would find the little inconspicuous machine, shown in the picture, which works independent of wind or weather. Because it is always dependable, it is preferred by every user of water, who has been through a "wind-mill experience." If the owners of wind power find it necessary to supplement their mills by installing a

Hot Air Pump

is it not therefore wise to profit by their experience, and before going to the expense of erecting an elaborate tower or a cheap and unsightly structure, to investigate, first, the merits of the Hot Air Pump? It is a machine of low power, which cannot explode, so simple in construction as to be one of the wonders of the Twentieth Century, so easy of operation that any child can start or stop it, as required.

Practically automatic, the cost of maintenance is almost nil: Capacity 100 to 100,000 gallons of water per diem. One of these pumps, representing a permanent investment which will outlast a generation, can now be bought at the

very low price of \$108. Descriptive catalogue "U" sent free on application.

Rider-Ericsson Engine Co.

35 Warren Street, New York
Templeto-Rey 71, Havana, Cuba

230 Franklin Street, Boston

40 Dearborn Street, Chicago
25 Pitt Street, Sydney, N. S. W.

23 Craig Street West, Montreal, P. Q.

without freezing, and is convenient. You can put potatoes on straw on your cellar floor, covering them first with straw, and heaping up earth over them.

VARIETIES THAT STAND FOR QUALITY

The earliest variety of all is from Bermuda, "Triumph," and there is another good one, "Ashleaf Kidney." These are both waxy, in fact, the early ones nearly always are, as they are not grown to maturity.

If you want another and later waxy potato, try Magnum Bonum.

The following are all good varieties for home culture, that will be mealy when properly cooked.

Among the best floury varieties, when cooked, are these:

For early, Early Rose, Early Irish Cobbler, Early Puritan, Bovee.

For the main crop try any of the following: Rural New Yorker, Green Mountain, Sir Walter Raleigh, New White Peachblow, and Noroton Beauty, a new variety introduced only last year.

For late planting use Uncle Sam, Carman No. 3, State of Maine, New White Peachblow.

For waxy potatoes for salads the earliest of all, from Bermuda, Triumph is a good one, and for the main crop, Magnum Bonum.

For long keeping purposes either late or main crop potatoes can be used. Some that may be recommended are: Uncle Sam, late Puritan, Carman No. 3, Green Mountain, Rural New Yorker.

New York. L. and E. M. BARRON.



The Californian' Reminder

APRIL is the last month for spring planting.

Plant out caladiums, cannas, dahlias, and tropical bedding plants. April-planted gladioli usually give best flowers.

Propagate chrysanthemums from cuttings.

Don't forget some more sweet peas. Put in bulbs of tigridias and tuberose. Don't wait longer for the planting out of egg-plant, pepper and tomato plants.

This is the best month to put out sweet potato plants; don't let the roots dry out during transplanting.

You may still plant the following vegetables:

Plants: Cabbage, cauliflower, horseradish, onion (sets), potato and rhubarb.

Seeds: Asparagus, beet, bean, cabbage (late), carrot, cauliflower, corn (sweet), cucumber, lettuce, melon (musk and water), onion, parsnip, pea, pumpkin, tomato and turnip.

Los Angeles. FERNET BRAUNTON.

Hardy Trees, Plants and Seeds
A 1000 acre nursery in Minnesota, founded in 1858 and devoted to hardy Fruit and Ornamental Stock, Flower and Vegetable Seeds, a complete FREE Catalogue. 50-page book of Horticultural Suggestions free on application. Prices moderate. 2 year guarantees with all stock. Remainder Agents Wanted.
THE JEWELL NURSERIES
Box 36 Lake City, Minn.

Headquarters for
SEEDS, BULBS, PLANTS, CACTUS
Everbearing Crimson Winter Rhubarb
15 choice plants, our selection all different for \$1.00
20 varieties Cactus and Succulents for \$1.00
18 choice of Crimson Winter Rhubarb for \$1.50
Special 10 choice of Skandia Baler's packet Good Venture Begonia, 1 packet Good Venture Geranium, 1 packet Rare Stocks for \$2.50
Send 50c for Catalogue and Special Crimson Rhubarb Certificate.
Mention this Magazine. THEODORA B. SHEPHERD CO., Yonkers, Cal.

QUAKER HILL NURSERIES [30 Main St., Newark, N. Y.]
All kinds of Trees, Shrubs, Roses, etc., from grower to planter. Free Book, 62 pages, gives prices, describes 528 varieties, tells how to plant and care for them.

A beautiful colored plate of our
NEW EATON
Red Raspberry
and our strawberry catalog of valuable information about varieties with instructions for beginners. Free to all.
THE FLANSBERGH & POTTER CO.
Livley, Michigan.



RUST PROOF FENCING

The Wheelock

Trellis
Flower-bed Guard
Lawn Fence
Lawn Border
Tree Guards, etc.

The only fencing made that is galvanized after weaving and
GUARANTEED RUST PROOF

The latest and most practical method and that which makes the strongest and most durable fence is by using large wires without twisting or bending in any way to weaken them, fastening the strands together at intersecting points by locking clamps, as employed in the making of THE WHEELOCK FENCINGS.

THE WHEELOCK TRELLIS

May be arranged into arches and other forms simple, strong and highly ornamental. Ideal for all running vines
Prices, per lineal foot: 13 in. wide, 10c.; 19 in. wide, 12c.

THE WHEELOCK FLOWER-BED GUARD

Unobtrusively protects gardens, lawns, cemetery lots, etc. Is easily set up. Will last a lifetime. Easily removed.
Prices, per lineal foot: 16 in. high, 10c.; 22 in. high, 12c.

THE WHEELOCK FENCE FOR LAWNS, Etc.

Either of galvanized wire or galvanized after weaving. We manufacture the best, most practical and neatest ornamental wire fence made. Prices for material complete upon receipt of diagram giving all dimensions. Posts, gates, and all fittings, plain or galvanized.

WHEELOCK LAWN BORDER, 12 inches and 18 inches high, with posts.

SEND FOR ILLUSTRATED CATALOGUE. If your dealer doesn't carry this line send his name and an order direct to us.

WRIGHT WIRE CO. 71 HAMMOND STREET
WORCESTER, MASSACHUSETTS
FENCES FOR ALL PURPOSES

CLIPPER

Hand and Pony

Lawn Mowers

will cut short grass,
tall grass and weeds.

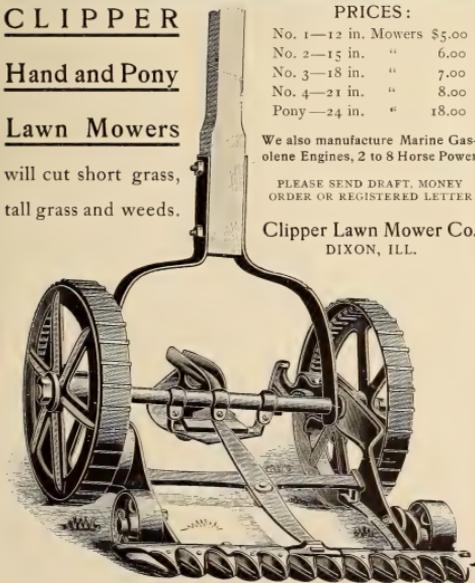
PRICES:

No. 1—12 in. Mowers	\$5.00
No. 2—15 in. "	6.00
No. 3—18 in. "	7.00
No. 4—21 in. "	8.00
Pony—24 in. "	18.00

We also manufacture Marine Gasoline Engines, 2 to 8 Horse Power

PLEASE SEND DRAFT, MONEY
ORDER OR REGISTERED LETTER

Clipper Lawn Mower Co.
DIXON, ILL.



HOME STUDY COURSES



JOHN CRAIG

Professor of Horticulture in Cornell University

who would ever have the pleasantest homes.

Every reader of the GARDEN MAGAZINE who is interested in these matters is invited to send for a free copy of our eighty-page catalogue and full information in regard to our home study courses.

EVERYONE interested in farming or gardening, everyone who owns or who expects to own a suburban or a country home, should know about the Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture, which we offer under Prof. Wm. P. Brooks of the Massachusetts Agricultural College and Prof. John Craig of Cornell University.

There is money and pleasure, too, in farming and gardening, in the growing of fruit and of flowers, for those who understand the ways and the reasons why of modern agriculture. A knowledge of landscape gardening and floriculture is indispensable to those

THE HOME CORRESPONDENCE SCHOOL

Dept. 8, SPRINGFIELD, MASS.

LOOK FOR KODAK ON THE SPOOL END.



The picture depends on the film, far more than on lens or on camera.

"KODAK" FILM

has 20 years of experience behind it—it is *not* in the experimental stage.

Make sure that you get the genuine Kodak Film by examining the spool end.

EASTMAN KODAK CO.

Ask your dealer or us to put your name on list for special catalogue of Kodaks and Brownies.

Rochester, N. Y.

The Kodak City.



LOOK FOR KODAK ON THE SPOOL END.

VEGETABLE AND FLOWER SEEDS

W & D'S SPECIALTIES "The Don" Forcing Tomato.

Nasturtiums, Giant Flowering, all Colors.

Sweet Peas, Selected Mixture; Lawn Grass, Central Park; Mushroom Spawns, "English and Pure Culture."

Illustrated Catalogue Free.

WEEBER & DON

Seed Merchants and Growers
114 Chambers St. NEW YORK, N. Y.

Growing the Edelweiss from Seed

ALTHOUGH the common belief is that the edelweiss—that treasure of the Swiss Alps—is a hard plant to grow, still it may be readily grown from seed, as it requires no more attention than is given to asters or to zinnias.

The seeds should be sown in April or May, the earlier the better, for it gives the seedlings time to make strong plants the first season. When sown in July or August, they are apt to die during the winter. Sow thinly in a flat which is about three inches deep, in a seed bed of light soil, in rows one inch apart, cover to a depth of twice the dia-



Edelweiss (*Leontopodium alpinum*) seedlings six months old. The secret of cultivation is abundance of moisture, but thorough drainage, with protection from hot sun

meter of the seed, with finely screened soil, water thoroughly with a fine-rosed watering pot, and shade with a sheet of newspaper.

Like all other seeds, those of the edelweiss will do better if they can be germinated and the young plants obtain a good start before the second watering is given.

The seed will germinate in about two weeks. The seedlings will be very small, and will grow slowly at first. In six weeks the second pair of leaves should be well developed. The plant at this stage looks like a small piece of cotton, an eighth of an inch in diameter.

They are easily handled now, as they have a compact, fibrous root system. Transplant them into flats two inches apart, or use two-inch pots, putting one plant in each, the flats are easier and handier. Place the flats in a coldframe, or cool section of greenhouse, protecting the young plants from strong sun for about a week. If watering is carefully attended to, they will grow quickly, and should be ready to plant in the open ground in four or six weeks, and will be one and a half to two inches across.

I find that if allowed to get even moderately dry, a large percentage will die. If the foliage is kept wet, or in a close atmosphere, the leaves will turn black and drop off but many of them may be induced to make a fresh start from the root by placing the plants in a cool, airy place.

The edelweiss does not like a damp, close atmosphere, but enjoys plenty of moisture at the root, with a good circulation of air, so when ready to plant in the rockery or border a spot near water should be selected. Use a loose but not rich soil, and avoid manure, or fertilizer of any kind, as they will cause them to grow soft, and wilt badly in a hot spell, or in continued wet, muggy weather, to drop off. In a poor soil they grow firm and compact, and can withstand our climatic changes

IF YOU MUST CHEW
GUM
CHEW

Weyler's



THE HIGHEST PRICE

BUT THE

10¢

FINEST QUALITY.

Bridgeman's

HIGH GRADE

Vegetable, Farm
and Flower SeedsGARDEN TOOLS
and HORTICUL-
TURAL BOOKSDescriptive illustrated catalogue
mailed free on applicationBRIDGEMAN'S SEED WAREHOUSE
37 East 19th Street, New York City

ORCHIDS

Largest importers and growers of
ORCHIDS in the United StatesLAGER & HURRELL
Orchid Growers and Importers SUMMIT, N. J.

Lambert's Pure Culture Mushroom Spawn

Produced by new grafting process from selected and prolific specimens thoroughly acclimated, has never failed to run. Sold by Leading Seedsmen. Practical instructions on "Mushroom Culture" mailed free on application.
American Spawm Co., St. Paul, Minn.



A New and Distinct Variety of ASTER, termed with
"VICK QUALITY"

Send 25c. with your request for catalogue and we will send you a packet of

Vick's Violet King Aster
and a Coupon

good for ten cents on your first order from the catalogue.

THE TAKE DOWN FEATURE OF A STEVENS



appeals to its owner every time he has to clean it, pack it in small space, or for any reason wants to take it apart.

Merely turning a thumb-screw, which goes through the frame, frees the barrel from the stock.

Our 140-page Catalogue FREE

tells all about the famous Stevens shotguns, rifles and pistols; the care of firearms, notes on ammunition, sights, targets, cleaning tools, reloading implements, and much more valuable information. Send four cents in stamps and we will mail it free.

Stevens firearms sent, express paid, if dealers won't supply.

J. STEVENS ARMS AND TOOL CO.
420 High Street,
Chicago Falls, Mass., U. S. A.



SPECIAL Flower Seed Offer

To get our Spring Catalogue to as many flower lovers as possible, we will send **Three Large Packages** of seeds with the catalogue if you will send us your name and address, with to cents for packing and mailing.

We will send enough Firebrand Salvia seed (Scarlet Sage) for two beds, enough Great Double Spike Hollyhocks for both sides of the fence, and a Large Packet of Rainbow Mixture Sweet Peas. The Salvia shows its dazzling, scarlet color early in the summer and lasts till frost. The Hollyhocks are the grand, old-fashioned summer flowering kind, rich in tone and variety. The Sweet Peas are the newest shades and show perfect galaxy of color. This is an offer you cannot duplicate anywhere. Our catalogue contains the largest assortment of seeds, is beautifully illustrated, and contains much information for flower growers.

WILLIAM ELLIOTT & SONS
Established 60 Years 215 Fulton Street, New York

"SURE KILL"

Now is the time to save your Orchards, Trees and Shrubs from San Jose Scale by using

THOMPSON "SURE KILL"

SIEBRECHT & SON
425 Fifth Ave., N. Y. New Rochelle, N. Y.

This Book

On Artistic Inexpensive Home Arrangement

FREE

This is the most elaborate and practical book on woodfinishing ever published.

Do It Now—Write for the above book "The Proper Treatment for Floors, Woodwork and Furniture" and see how easily and inexpensively you can beautify your home. This book tells all about woods, wood-cleaning, finishing and polishing—the result of 23 years' experience of a practical wood finisher. Explains how you can finish soft pine to look like beautiful hardwood. Don't wait—write now. This book sent **FREE** by the manufacturers of



Write Us For It Today

Don't miss this opportunity of getting a lot of good original ideas **FREE**.

Every person who desires to make the home more beautiful and comfortable cannot afford to be without this book.

Johnson's Prepared Wax

"A Complete Finish and Polish for All Wood"

Unequaled for Woodwork, Furniture and Floors

Applied with cloth to bare or finished wood, it produces a lasting, artistic, sanitary finish to which dust and dirt will not adhere. It will not crack, blister, peel off, show laps, scratches or heel marks. Johnson's Prepared Wax is far superior to any other, one reason is that it contains the most polishing wax to the pound. Fine for preserving and polishing oilcloth and linoleum. Just try it.

Johnson's Prepared Wax is sold by all dealers in paint— $\frac{1}{2}$ lb. can, 30 cents; 1 and 2 lb. cans 60 cents per pound; 4, 5 and 8 lb. cans, 50 cents per pound.

Special Refinishing Outfit—To quickly introduce our wood-finishing specialties and to supply the demand from persons who desire to refinish old pieces of furniture and woodwork and do the work themselves we have decided to make this offer. We will send you, charges prepaid,

- 1 pint can Johnson's Electric Solvo; for removing all finish 40 cents
- 1 pint can Johnson's Wood Dye; for the artistic coloring of wood 30 cents
- Any of these shades—Weathered Oak, Flemish Oak, Mission Oak, Light and Dark Mahogany, Light and Dark Oak.
- $\frac{1}{2}$ lb. can Johnson's Prepared Wax for finishing and polishing wood 30 cents

Including the above book for \$1.00

Only one outfit to a family. If a dealer in your town handles our goods we will make delivery through him. Send order now. Write today for above book and mention edition G.M.4.

S. C. JOHNSON & SON, Racine, Wis.

"The Wood-Finishing Authorities."



CHOICE GRAPE VINES

Best of Stock, Thrifty Trees, Plants, Vines, etc. Garden Tools, Spray Mixtures, Pumps, etc.

Write for Catalog. **ARTHUR J. COLLINS, Box N, MOORESTOWN, N. J.**

SPRING STYLES There is fashion in paints as well as in clothing. Repainting may be from desire for change as well as from necessity. If a different style in house-dress is desired, what so convenient, so economical as a high grade prepared paint based on Oxide of Zinc? Where, too, such variety of choice?

FREE—Our practical pamphlets: "The Paint Question," "Paints in Architecture," "Specifications for Architects," "French Government Decrees" and "Paint Why, How and When."

THE NEW JERSEY ZINC CO.,
71 BROADWAY, NEW YORK

We do not grind zinc in oil. A list of manufacturers of high grade zinc paints will be furnished on application.

"Old Hickory" **\$2.75** Andrew Jackson Chair

For comfort, serviceability, style and durability this chair is perfection. Just the thing for Porch, Lawn and Out-door use as the weather cannot affect it. Made entirely of genuine white hickory with beautiful natural bark finish. An exact duplicate of the Old Andrew Jackson Chair. Seat 17 inches wide, 15 inches deep; height over all, 36 inches. Price, \$2.75; 2 for \$5.00. Freight prepaid east of Mississippi River. 120 other styles of "Old Hickory" Chairs, Settees, Tables, etc., from \$1.50 to \$25.00.

Old Hickory Furniture Pleases Everyone.

"We are more than delighted with your furniture. Please send catalogue to my cousin, Mrs. Geo. H. Hall, Tusledo Park, N. J." I remain, very truly, MRS. HOWARD TRACY, Evanston, Ill.

"Chairs arrived O. K. We think they are fine and cannot be equalled anywhere." J. W. STUART, Braddock, Pa.

"The two chairs ordered of you were received and we are delighted with them. I expect you will receive orders soon from several of my friends who have seen the chairs and your catalogue. I herewith enclose postal order for \$5.00 and will be glad to have you ship me as convenient to Woodlawn, Ala.—one No. 9, Rocker." W. S. REYNOLDS, Woodlawn, Ala.

Be sure to get the "Old Hickory" Furniture. If your dealer will not supply you, remit to us and we will ship promptly. Write for new FREE 48-page Illustrated Catalogue and Special Introductory Offer.

THE OLD HICKORY CHAIR CO.

124 CHERRY STREET,

MARTINSVILLE, IND.

"The Original Old Hickory Furniture Manufacturers."



576 No. 24

The Colors of Cabot's Shingle Stains are like velvet;

soft and deep, yet transparent, so as to show the grain of the wood. They give a finishing touch of beauty which is a constant joy to the householder, and they "grow old gracefully."

On the practical side, they wear as well as the best paint, cost one-half less in material and labor, and thoroughly preserve the wood, while other colorings do not.

Stained wood samples and color studies sent free on request.

Cabot's Sheathing "Quilt" Samuel Cabot, Sole Mfr.,
warms the whole family. 1 Oliver St., Boston Mass.
Agents at all Central Points



Little, Brown & Moore, Boston, Architects.
Woodruff Letting, New York.

The ANGLE LAMP

For Lighting City and Country Homes

Positive Proof of how entirely different The Angle Lamp is from the ordinary kind is the class of people who use it.

What other lamp—or what other lighting system for that matter—can show endorsements from ex-President Cleveland, the Carnegies, Rockefellers and thousands of others of almost equal prominence?

These people would not think of using ordinary oil lamps, yet they have chosen THIS oil-burning lamp for lighting their homes and estates in preference to gas, electricity, gasoline, acetylene or any other method because they have found that while as

CONVENIENT AS GAS OR ELECTRICITY

to operate, its light is more brilliant than either, and of the beautiful, soft, readable quality for which kerosene is so justly famous.

Just when you need not take even this evidence of the superiority of The Angle Lamp, for the very fact that The Angle Lamp always surprises and deludes even the most particular people, enables us to offer you better proof yet—

A THIRTY DAYS TRIAL

of any lamp listed in Catalogue "41" in your own home, where you yourself can prove that it is the best, the cheapest and the most satisfactory of all lighting methods. Lighted and extinguished like gas. Filled with lighted with perfect safety. Requires filling but once or twice a week. Burned high or low without odor. No smoke; no danger.

Just one thing to be borne in mind—If a lamp of this light and convenience were the only features of The Angle Lamp, it might be considered a luxury. But, as this lamp actually costs less to burn than even the troublesome, old-fashioned kind, it becomes an actual necessity.

Write for Catalogue "41," listing 24 varieties from \$1.80 up.

THE ANGLE MFG. CO., 78-80 Murray Street, NEW YORK



A northern exposure, protected from sun in fall and spring is best. If planted in a position exposed to sun for the greater part of the day, a light cover of leaves and loose litter should be given. This covering is only necessary in dry, freezing weather, when there is no snow on the ground. It stops evaporation from the foliage, when the roots are dormant.

New York.

THOMAS MURRAY.

Poppies As Cut Flowers

POPPIES are usually considered as undesirable as cut flowers because they will not keep. I use them freely for cut flowers every summer with this precaution. In the evening I pick off all blooms that have not already lost their petals so that in the morning all the open flowers will be new ones. These are cut as early as possible even while the dew is still on them and plunged immediately into deep water. After they are well soaked, say an hour, they can be distributed into vases and many of them will last two days.

I buy single mixed seed of the annuals which includes the Shirley poppy (*Papaver Rhoeas*, var. *Shirley*) and the single and semi-double opium poppies (*Papaver somniferum*).

I sow them in rather broad rows with alternate rows of asters which make their growth and flower after the poppies are gone, but sometimes I plant them by scattering the seed broadcast and raking it in.

The poppies should be thinned out after they are up a few inches retaining only the strongest plants. After the first year it is seldom necessary to buy seeds as they bloom and seed so freely that one can save all the seeds wanted. When they are in bloom all the unattractive colors and weak plants should be removed so they will not ripen seed.

Pull up all the dead plants as soon as they finish blooming and if they are not there already, plant late asters or other plants from the nursery rows.

Nothing self-sows so readily as do the poppies. If the ground is gently raked the following spring, to soften and even the surface, the poppies will come up so thickly that they will probably need thinning. These self-sown plants are in their glory on the fourth of July, while the spring-sown ones are generally two or three weeks later. The same result may be obtained by preparing a bed and sowing in the fall. Two or three spring sowings can be made for a succession.

Poppy seed may be scattered among young perennials, and serve to fill up the space during the early part of the summer. By the time the perennials want the room the poppies are gone; or it can be sown among newly planted shrubs, with gladioli for later bloom.

One of the most interesting things I have observed about poppies is the crossing of the different varieties. Nearly every year I have one or more colorings that I did not have the year before.

They love moisture, and if it is not a wet summer, when they are at their best, they will be watered freely.

ILLINOIS. EDITH GRANGER.

4 WEEKS FROM SOWING



SAGAMORE HILL
THE HOME OF
PRESIDENT ROOSEVELT

The "HENDERSON" LAWN GRASS SEED

THE MOST BEAUTIFUL LAWNS In America Are Made With It.

In 4 to 6 Weeks Time it Produces a Perfect and Permanent Lawn of Luxuriant Richness

Its composition of various native and foreign fine leaved, interweaving, deep-rooting grasses, that flourish under our varied conditions of soil and climate, insure a smooth, velvety sward, free from clumps. Its deep green color is maintained from snow to snow, year after year.

We have made the formation and renovation of lawns a study for years, and thousands of the finest lawns and grass plots in America were obtained by following our instructions and using

The "Henderson" Lawn Grass Seed

The famous lawn of "Sagamore Hill," the home of President Roosevelt (here shown), was made with it.

It is Used and Praised from Maine to California

"The Henderson Lawn Grass Seed sent me worked like magic! It made a good lawn in one month from sowing and has kept thickening up ever since." It was the wonder of the town to see such a lawn on June 21 on ground plowed on May 21.

S. R. PRENTISS, Bangor, Me.

"For quick, permanent and beautiful results, the Henderson Lawn Grass is pre-eminent; it gives us greater satisfaction than any we ever tried."

ROBT. CAMPBELL, Superintendent, Cave Hill Cemetery, Louisville, Ky.

"I had the most satisfactory results ever achieved with the Henderson Lawn Mixture. See it on two bulbs more of the same. On the advice of some parties, I sent me some Kentucky Blue Grass, but it does not compare with the mixture you sent me."

F. M. CARTER, Washington, D. C.

"It is just six weeks since I sowed your Lawn Grass Seed and we have had to cut it three times; every one who goes to stop to look and remark the beauty of our lawn."

Mrs. E. W. COLLINS, 59 Chestnut Street, San Francisco, Cal.

Price of the "Henderson" Lawn Grass Seed

25 cents per quart; 85 cents for 4 quarts; \$1.50 peck; \$5.00 per bushel of 20 pounds. Delivered free in the U. S. at above prices to those who mention THE GARDEN MAGAZINE.

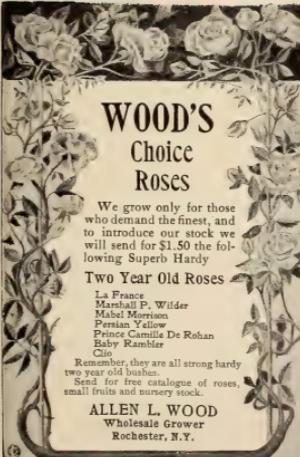
The quantity required for making new lawns: 1 quart for a plot 15 x 20 feet, 5 bushels for an acre. For renovating old lawns, see above list quantities.

Henderson's Brochure "Lawn Formation and Care," bound with our Catalogue, "Everything for the Lawn," mailed free to those mentioning THE GARDEN MAGAZINE.

READY FOR MOWING



PETER HENDERSON & Co. 35 AND 37 CORTLAND ST., New York



WOOD'S
Choice
Roses

We grow only for those who demand the finest, and to introduce our stock we will send for \$1.50 the following Superb Hardy

Two Year Old Roses

La France
Marshall P. Wilder
Mabel Morrison
Puritan Yellow
Prince Camille De Rohan
Baby Rambler
Crisp

Remember, they are all strong hardy two year old bushes.
Send for free catalogue of roses, small fruits and nursery stock.

ALLEN L. WOOD
Wholesale Grower
Rochester, N. Y.

Gillett's Hardy Ferns and Flowers For Dark, Shady Places

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Peonies, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the

Hardy Wild Ferns and Flowers

of New England. These we have been studying and growing for 25 years, and can help you in your selections. They are adapted for a great many places, and selections can be made for shading the dark corner by the porch, the beautiful wall or hedge, shady hillsides, wet places in deep shade, dry woods and rocky places. Brilliant lobelias for planting in small brooks; dainty gentians for planting by brookside. Before purchasing send for my illustrated descriptive catalogue of over 50 pages, which tells about this class of plants and

Hardy American Shrubs

EDW. GILLETT
Southwick Mass.



NITRATE OF SODA
for
LAWN and GARDEN

NO FORM OF NITROGEN

is so quickly available, or so positive in its results for the vegetable garden, on the lawn, for shrubbery or trees as a top dressing of

NITRATE OF SODA
(THE STANDARD FERTILIZER)

Send your name and address on Post-Card and we will send you

"Food for Plants"

a most valuable book of 277 pages, dealing with the use of Nitrate of Soda as a fertilizer, giving detailed information covering a list of trials at Agricultural Experiment Stations throughout the United States and on all sorts of crops.

NITRATE PROPAGANDA
Room 125, 12-16 John Street, New York

The house pictured below has a roof that is proof against sun, rain, snow and chemical action, and danger of fire from falling sparks—

BECAUSE IT IS COVERED WITH

Rex Flintkote ROOFING

This is unlike any other prepared roofing ever made. It contains no paper or tar. It is made of long-fibre wool, chemically treated, both sides covered with a fire-proof compound, the underside protected by a covering of flint to prevent rot. It can't rust like tin—can't warp, blow off, or burn at touch of a spark like shingles—and unlike either of them, is laid as easily as though it were cloth.



TRADE MARK

SEE THE ROOF

TRADE MARK

SEE THE ROOF

This trade-mark is your protection against a host of Rex Flintkote imitations. They cost about half as much to make, but sell at almost the Rex Flintkote selling price, a chance for profits that means temptation to some dealers.

The best dealer prefers to sell the genuine Rex Flintkote, for he knows that in years to come he will get, not your criticism, but your thanks—which, to an honest dealer, is better than questionable profits any day.

Our Book on Roofing, Free

It tells you facts that every house owner should know. Send for free sample of Rex Flintkote to make your own tests. That is the best way to learn why Rex Flintkote has set the standard in quality and price.

J. A. & W. BIRD & CO.
29 India St., Boston
opposite Free Church

Growing China Asters Free From Disease

ASTERS can be grown successfully in almost any soil, provided it is cultivated deeply, and plenty of decayed farmyard manure is used. The secret or success lies in continuous growth, without a check.

For blooms in July and August, sow the seeds in a cold-frame, hotbed, or boxes in the greenhouse the latter part of March, or early part of April; or for September and October blooms, sow in open ground in May. Cover seed about half an inch.

When the seedlings have made three or four leaves they may be transplanted, placing them eighteen inches apart, and watering them well to settle the soil around.

WOOD ASHES A SPECIFIC

One drawback in the raising of asters is the so-called "aster disease," which is caused by a blue aphid which feeds on the tender parts of the roots. But this can be overcome by giving the plants a good start, never letting them suffer a check in growth, and by feeding well. Wood ashes is almost a specific for the disease. Stir a handful of ashes into the soil around each plant, when it is set out.

Just before the buds appear give an application of tobacco water, prepared as follows:

Put a good armful of tobacco stems in a water-barrel or other receptacle which can be covered tightly, pour hot water over them until it covers the stems entirely. Cover tightly for four or five hours, then add double the amount of water and give this liquid to the plants, watering around each plant, so that all the roots get a thorough soaking. The tobacco water should be used the same day as made, as it quickly ferments, and becomes valueless.

Pull out a plant or two a couple of days afterwards, and if there is blue aphid left, the liquid used was not strong enough. Give them another watering. This seems to be a good deal of work, but it pays in the end.

When the buds have formed, dissolve a quarter of a pound of nitrate of soda in twenty gallons of water, and give each plant one watering with the solution. It will result in blooms of fine color and large size.

The best asters I ever raised were planted, as described above, in a spent hotbed, ten inches apart, and ten inches in the row. If asters are treated as suggested above and watered copiously during dry weather, fine flowers will surely be produced.

Another troublesome pest is the aster beetle, and it is not easily destroyed without injury to the bloom. I find handpicking is the best remedy. Take a vessel containing a little kerosene, benzine, or gasoline, give the flower a light tap, and the beetle will fall into the vessel. This should be done twice a day for eight or ten days, for the little beetle appears for about this length of time only. Paris green may also be used, one part of Paris green to twenty parts of land plaster or air-slacked lime, dusting it on with a bellows; but it has to be washed off when the flowers are cut for use, which is an inconvenience.

New Jersey.

N. BUTTERBACH.



Beautiful Lawns

Are the pride of the home; why disfigure with ugly cloths posts?

Hill's Lawn Clothes Dryers

hold 100 to 150 feet of line, take small space, quickly removed when not in use. Make a neat and tasty appearance, last a life-time.

More than 2 million people use them.

No traveling in wet grass. No snow to abate. The line comes to you. Also

Balcony and Roof Clothes Dryers.

If not found at your hardware store write

HILL DRYER CO.

228 Park Ave., Worcester, Mass.
Write for Cat., 25c.



HORSFORD'S

HARDY PLANTS AND FLOWER SEEDS

have a reputation of their own. If you want plants that will last from year to year, get them from a hardy climate like Vermont. New catalogue for 1906 offers all the most desirable kinds for the decoration of summer homes, without confusing the purchaser with the names of so many plants of doubtful hardiness and durability. It includes herbaceous plants, wild flowers and ferns, shrubs, trees, vines, bulbs, etc. for wet or dry ground, sun or shade, and all for outdoor culture. Ask for it.

FRED'K H. HORSFORD,
Charlotte, Vt.

A Beautiful Flower Garden for \$1.00

Neff's Celebrated Collection of 20 leading kinds of Flower Seeds, 6 plants of Phlox, Miss Lingard, white, perfectly hardy; the finest variety known for 50c'ts. in stamps.

Post paid. No Catalogue.

L. I. NEFF, FLORIST,
218 Sixth Street, Pittsburg, Pa.

A WOMAN FLORIST

6 HARDY EVERBLOOMING ROSES

On their own roots. ALL WILL BLOOM THIS SUMMER.

Sent to any address post-paid; guaranteed to reach you in good growing condition.

GEM ROSE COLLECTION

Beulah, deep rose.
Cardinal, bright red.
Elliott, gradient pink.
General McArthur, deep red.
Snowflake, pure white.
Yellowface, golden yellow.

SPECIAL BARGAINS

6 Catalogues, the "Rose Flower," all colors, 25c.
10 Framing Cards, 25c.
10 Anthems, . . . 25c.
4 Grand Orchid Camas, . . . 25c.
10 Grand Tulips, . . . 25c.
10 Fuchsias, all different, . . . 25c.
10 Sweet Peas, all colors, . . . 25c.
10 Pink Flower-seeds, all colors, 25c.

Any Five Collections for One Dollar. Post-Paid Guarantees satisfaction. Once a customer, always one. Catalog Free. MISS ELLA V. BAINES, Box 95 Springfield, Ohio.



Iron Reservoir



Vases

AND
Lawn Seetees

Manufactured by
McDONALD BROS.,
COLUMBUS, OHIO

The largest manufacturers of these goods in America. Send for catalogue.

No. 2

No. 6

No. 7

"Bombayreed" Jardinieres

Ideal for Home Decoration

Bombayreed Jardinieres represent the first successful effort to produce an artistic jardiniere at a moderate cost. Their introduction has proven an immediate success, both from a decorative view point and for their beneficial effect upon the plants they contain.

☞ Glazed jardinieres choke a plant. Bombayreed Jardinieres allow the house plant to breathe—their construction allows the necessary ventilation and drainage. Your palms and ferns will live longer and grow more beautiful in Bombayreed Jardinieres.

☞ These jardinieres are constructed of a peculiar reed, imported from the Malay Peninsula, especially for this purpose. These illustrations show a variety of shapes—but the beautiful colors can only be appreciated in the jardinieres themselves. Made in Greens, Yellows, Gold, Maroon, Red, etc.—or especially colored to harmonize with or match any room. The colors as well as the reeds are absolutely impervious to water. The reed is of great strength and elasticity. Bombayreed jardinieres cannot be broken; their decorative qualities are unequalled.

PARTIAL PRICE LIST

Made for 8-inch pot 10-inch pot		Made for 8-inch pot 10-inch pot	
No. 1 Persian, \$1.00	\$1.50	No. 3 Grecian, \$1.50	\$1.75
No. 2 Roman, 1.25	1.75	No. 4 Arabian, .90	1.25
No. 5 Egyptian, 1.00	1.25	No. 6 Cingalese, .75	1.00
No. 7 Japanese, 1.50	1.75		

Write for Complete Price List

Jardinieres are also made in 8 1/2 and 14-inch pots, and larger ones are made to order. Express prepaid to all parts of U. S. when two or more Jardinieres are ordered.

☞ Write at once for catalogue in colors, describing Bombayreed Jardinieres in detail, and giving full price list for any size pot—also special sizes and coloring.

FREE—An expert treatise, "The Care of Palms," which tells in detail how to care for house-plants. Send your name and address, and that of your florist, and we will mail you copy of the booklet and catalogue in color.

WRITE TO-DAY,
Carolina Glass Co.
 Columbia, S. C.
 DEPT. D

No. 4

No. 3

No. 1

No. 5

AWARDED *Two Grand Prizes* at the St. Louis Exposition, one for Seeds and another for Vegetables, also a *Silver Medal* for Hyacinths and Crocus.

Thorburn's Seeds

If you are interested in Gardening you cannot afford to be without our 1906 Catalogue. It is without exception the most complete and most reliable Garden Annual published, and besides being a work of art, is a valuable text-book of horticulture and agriculture. It contains a full description of our celebrated new Noroton Beauty Potato, introduced by us last year, besides many other valuable novelties offered for the first time this season.

Mailed free—Send for it now if you have not yet received it.

J. M. THORBURN & CO., 36 Cortlandt St., New York

Established 1802



Birmingham, Ala.
Hot Springs, Ark.
San Francisco, Cal.
1100 Market St.
West Haven, Conn.

Washington, D. C.
211 N. Capitol St.
Bright, Ill.
Mevion, Ind.
Plainfield, Ind.

Des Moines, Ia.
Lexington, Mass.
Portland, Me.
St. Louis, Mo.
2803 Locust St.
North Conway, N. H.

Buffalo, N. Y.
White Plains, N. Y.
Columbus, Ga.
100 N. Dennison Ave.
Philadelphia, Pa.
915 N. Broad St.

Hartburg, Pa.
Pittsburg, Pa.
4246 Fifth Ave.
Providence, R. I.
Salt Lake City, Utah

For Liquor and Drug Using

A scientific remedy which has been skillfully and successfully administered by medical specialists for the past 25 years

AT THE FOLLOWING KEELEY INSTITUTES:

**Our
Greatest ROSE OFFER**

Every year we offer a remarkable collection of fine roses at an exceptionally low price. Our 1906 offer includes as a special attraction the famous **BABY RAMBLER** shown in illustration—the rose that blooms every day in the year. For fifty years we have been cultivating roses. With over seventy greenhouses and stock of over one million plants, we may fairly claim to be the **LEADING ROSE GROWERS OF AMERICA.** This year we offer

18 D. & C. ROSES for \$1.00

Superb, strong, hardy ever-blooming kinds in two alike. All on their own roots. Sent by mail post-paid anywhere in the United States. Satisfaction and safe arrival guaranteed. Each variety labeled. Will bloom continuously this year. Other famous roses in this collection are the **KEYSTONE** the only hardy, ever-blooming Yellow Climbing Rose; also **PINK MAMAN COCHET**, the queen of all pink garden roses. Orders booked for delivery when directed.

If you mention this magazine when ordering, we will send you a return check for 25 cents which we will accept as cash in a future order. Free to all who ask for it, whether ordering the above collection or not, the 37th annual edition of **Our New Guide to Rose Culture for 1906**—the *Leading Rose Catalogue of America*, 316 pages. Tells how to grow and diseases our famous roses and all other flowers worth growing. Offers at lowest prices a complete list of Flower and Vegetable seeds.

THE HINGEE & CONARD CO. West Grove, Pa.
10 Greenhouses Established 1820



Cheese-Cloth Protection for Garden Seeds

HIGH winds, hot sun, beating rains, insect and feathered enemies have a tendency to make the amateur's attempts to raise flowers from seed in the open garden an almost hopeless task. In addition to these troubles, the soil in my garden has a tendency to bake, and a rain will form a hard crust over the most carefully prepared seed bed. Covering with sand, shading with boards or newspapers has not been entirely successful, so I made a cheese-cloth cover, which gave me one little spot completely under my control.

The first time I made one small frame three by four feet using material two inches square; at each corner were uprights 18 inches high, made from the same-sized lumber. The top edges were made of one-half by three-quarter inch strips. This I covered, top and sides, with cheese-cloth, tacked all around. It was light enough to be easily lifted and set to one side while working or on cloudy days, yet heavy enough to keep its place in a high wind. Seeds were sown in this as follows: Siberian columbine (*Aquilegia Sibirica*) in the middle of June, Canterbury bells in July and pansies in August.

Last season I made two frames three feet by six feet and one foot high. They were made of three-quarter inch by one and one-quarter inch cypress strips. It took just four yards of cheese-cloth to cover each frame. The materials cost less than fifty cents for each.

Here I planted seeds of phlox, poppies, petunias, schizanthus and other annuals as early in the spring as the ground would allow. They were exposed to two late snow storms without suffering the slightest damage. In June *Nicotiana Sandera*, delphiniums, anemone, Australian star flower and snapdragons were sown. Later, after these were transplanted, the frames were used for foxgloves, Canterbury bells and a collection of many perennials.

The smallest slow-germinating seeds of perennials and annuals were started with the most gratifying success. I used the frames in early spring, midsummer and late fall. They were invaluable for protecting tender plants and cuttings from sun, high winds and frost, and were not unsightly in the garden.

For one who has no hotbeds or coldframes, one or two covers of this kind are a great aid in Wisconsin unfavorable weather.

F. B. DRAKE.

FAIRFAX ROSES

Cannot be Equalled in Quality or Price

IF YOU BUY CHEAPER ROSES YOU BUY A CHEAP PRODUCT

We will send you any of the following varieties in *Strong two-year-old Dormant Plants at 15c. each.*

Madam E. Lambert
Countess Eva Starberg
Malmeson
Christine De Noux
Soubriault
Princess Sagan
Coquette De Lyon

Bon Silence
Queen
White Bouquet
Bride
Hermosa
Marie Van'Houtte
Pearl

Pernet's Triumph
Virginia
Euchariss
Duchess De Brabant
Burbank
Bridesmaid
La Princesse Vera

Safrano
Etoile De Lyon
Golden Gate
Clothilde Souperet
Ouzens Scaylet
Catherine Marmet
Chatenay

Helen Gambier
Helen Gould
Mrs. Cant
Papa Goulet
Rainbow
Crimson Rambler
Climbing Souperet
Marchal Niel

And many others. Any of these, mailing size, postpaid, at

5 Cents Each

We have also all the finest Hybrid Perpetuals and the newer roses, at prices ranging from 8 to 15 cents postpaid, and 20 to 40 cents for two-year-old stock.

DAHLIAS A SPECIALTY

We believe the following twenty kinds include the finest in America and we will send one each in strong, growing plants.

Prepaid for \$1.65

Kismetilly, Finest Pink Cactus
Cathryn of Lonsdale, Crimson Pink Cactus
Earl of Pembroke, Plum Color Cactus
Aurifer, Cream White and Crimson Cactus
Mendocino, Yellow Mexican Cactus
Lambert, Double Cactus
Henry F. Mitchell, Orange Red Cactus

Island Queen, Lavender Pink Cactus
Austin Cassell, Crimson Cactus
Cynthia, Cream & Coral
Lily Brage, Dark Red
Rosalind, Orange Red and Gold
Frank, Bicolor, Royal Purple
Mrs. Bennett, Crimson

Grand Duke Alexis, Largest and Finest
White Show
Clifford W. Boston, Largest Yellow Show
Nymphs, Light Pink
See, De Mexico, Pink Show
Fern, Leaf Beauty, Fancy
20th Century, Extra Large Single Crimson
and White

Also twenty-five other varieties at from 5 to 8 cents each

CATALOGUE FREE

W. R. GRAY, - - - Box 6, Oakton, Fairfax Co., Va.

A Complete Manual of House Building in the Country

THE COUNTRY HOUSE

BY
CHARLES EDW.
HOOPER

THIS volume gives competently and in detail, yet without technicalities, all the information necessary in the building of a country house.

Its practical value is unlimited. Nearly 300 illustrations. Net, \$3.00. (Postage, 30 cents.)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY PAGE & CO.

133-134-137 EAST 16TH STREET, NEW YORK.



WROUGHT IRON FENCE AND ENTRANCE GATES

Wire Fencing Or-
namental Iron-
Work, Lawn Fur-
niture, Tree Guards
Tennis Court Enclos-
ures A Specialty.

F. E. CARPENTER & C.
7 & 9 WARREN ST.
NEW YORK

TIGER SKINS
LEOPARD SKINS
BEAR SKINS
WOLF, FOX, ETC.

GAME HEADS
ROBES
AND
MATS

Special Offer, 3 foot So. American
Tiger Cat, dressed, \$4.00



Small German Fawn Skin,
dressed, \$1.50

To introduce my direct
importations of
**SPECIAL MOTH
PROOF FURS**
If you will apply for my cat-
about I will send you a
beautifully mounted
**CHINESE
LEOPARD SKIN**
(average size 1/2 feet)
London quotation £11, for
\$35.00

A similar introductory
offer for mounted
Game Heads
on application.

F. C. JONES, Importer

176 FEDERAL STREET, BOSTON, MASS.

PURE FOOD LAW

Senate Expected to Pass It

There will be no change in the
cure of

FERRIS HAMS AND BACON

because we have never used
injurious preservatives

INSIST UPON THE BEST



No. 6284. Top Buggy with Large Phaeton Seat and 3/4
inch cushion tires. Price complete, \$75.00. As good as
sells for \$30.00 more.

33 Years Selling Direct

Our vehicles and harness have been sold direct
from our factory to user for a third of a century.
We ship for examination and approval and guaran-
tee safe delivery. You are not nothing if not sat-
isfied as to style, quality and price. We are the
largest manufacturers in the world selling to the
consumer exclusively. We make 200 styles of
Vehicles, 65 styles of Harness. Send for large
free catalog.

ELKHART CARRIAGE & HARNESS MFG. CO., ELKHART, IND.



No. 436. Single Curved Breast Collar Harness. Price
complete, \$10.75. As good as sells for \$5.00 more.

The Secrets of Growing Good Sweet Peas

WE think our success with sweet peas is
due to the depth and quality of the
soil, deep planting, and frequent cultivation.

Our first bed was laid out with the rows
running east and west, and this has proved
more favorable to the plants, as the hot
afternoon sun does not beat down upon the
entire side of a row, as it will with north and
south rows.

First, we took up the sod, two feet wide,
and fifty feet long, cutting it into convenient
lengths to handle, and laid it to one side.
All the soil was taken out, to a depth of twenty



Cut sweet peas in the morning before the sun
strikes them. Pulling the vines loosens the roots and
the plant dies

inches. In the bottom of the trench thus
made the sods were placed, roots up; next
came a six-inch layer of well-rotted cow
manure. The hose was turned on this, to
thoroughly settle it.

Then the trench was filled level full with a
soil prepared by thoroughly mixing equal
parts of good garden loam, old manure, and
woods' earth. This was firmed down, and
the trench filled again.

A furrow six inches deep was made the
length of the strip, in which the seeds were
planted one inch apart, and covered with
two inches of soil, which was pressed firmly
by means of a two-inch strip.

Strong posts were set ten feet apart, to
which was fastened some five-foot wire net-
ting, and the bed given a thorough watering.

Our aim is to get the seed into the ground
between the 15th and the 25th of March.
One spring it was the fifth of April, and the
vines were not as strong that year. It is our
experience that the earlier the planting can
be done, the better the success, and it pays
to plant only the best seed.

As soon as the young plants reach a height
of two inches, draw the soil in from the sides

LIEBIG COMPANY'S New Cook Book



FREE
to users
of the
genuine,
with blue
signature:

Liebig Company's Extract of Beef

Send postal check for New Cook Book to
Liebig's Extract of Meat Co., Ltd.,
120 Hudson St., New York.

Art and Utility

combined is becoming more and more of a feature
in articles made by American manufacturers for
household use and decoration.

Perhaps one of the most successful examples is
the "Bombayreed" jardinières of which a half-dozen
styles and colors are illustrated on a back cover
page. The common ugly glazed pot is doomed if
the favor with which "Bombayreed" jardinières are
meeting is any indication.

A few exclusive features of "Bombayreed" jar-
dinières will show why every house-owner and palm
lover should prefer them. They are unbreakable;
the impored reed is elastic and will stand any
amount of wear. Both reed and coloring are im-
perious to damp or moisture.

Besides the great variety of colorings the makers
agree to produce special colors to match or har-
monize with the color scheme of your room at a
small extra cost.

Be sure to look for the styles displayed on another
page, and note that the makers offer to send you
a text book free on "The Care of Palms." This
should interest every lover of house-plants.

See full page advertisement.

Strawberry Plants That Grow

BEST STANDARD VARIETIES

Also Raspberry, Blackberry, Currant and Grape Plants, Apranage
Roots and Sweet Potatoes in assortment. All stock warranted
high grade and true to name. Forty-page Catalogue with
cultural instructions. Free.

C. E. WHITTEN, Box 10, BRIDGMAN, MICH.



THE BEST IS
NONE TOO GOOD.

My Challenge

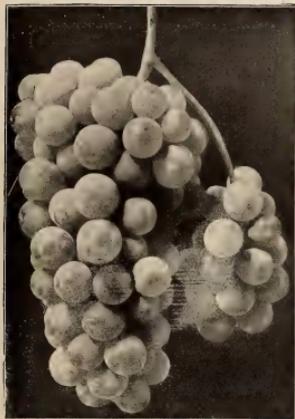
BRANCHING ASTER
White, Pink, Lavender,
Crimson, Purple
Is the Best.

Pkt. 250 Seeds 15c. ea.

1/2 oz. 1/2 doz.

Mixed 500 Seeds, 25c.

O. H. Dickinson,
Seedsman
Springfield, Mass.



GRAPE VINES

NO garden is complete without a sufficient number of grape vines to supply an abundance of this delicious fruit. For nearly 40 years we have been furnishing high-grade vines for this purpose.

We will send ten large vines of the best table varieties, including three red, three white and four black, for \$1.00, delivered free. Send for our elegant Illustrated Descriptive Catalogue and Price List. It will tell you how to plant, cultivate and train them.

T. S. HUBBARD CO.

Grape Vine Specialists

FREDONIA, N. Y.



PARE CACTUS DAHLIAS.

This class of flowers is probably the most popular of all decorative cut-flowers in homes of refinement and culture. Our Mr. Vaughan has selected the six kinds named below for special introductory offer to the readers of this paper:

KRIEMHILDE—An exquisite, delicate shell-pink, shading to cream in the center; the finest and best pink.
BURBANK—New, clear dark red with a sheen of purplish crimson, never shows an open center no matter how dry the weather or poor the soil.

COUNTS OF LONSDALE—A perfect Apricot color, shading toward the edges of the petals to carmine pink. Early flowering.

VOLKER—Clear golden yellow, a German novelty.
AUNT CHLOE—Darkest color, nearly black.

BRUNHILDE—Bright plum color, of perfect form.
 We will mail one and after April 15th six fine started plants, one each of the above splendid sorts with our complete 120 page catalogue for \$1.00 (regular price, \$1.40).

Vaughan's Seed Store
 (Chicago) New York

STUDEBAKER

Automobiles for 1906



Model F Touring Car, 28-32 H. P. Price \$5,000

NOW that the great automobile shows of New York and Chicago are at an end, thousands of prospective buyers are debating the salient points of one car as compared with another; doubtless wondering in greatest perplexity why each enthusiastic salesman insists upon the fact that his car is the best.

Permit us to suggest that in regard to extreme accuracy and scientific painstaking in both design and construction there is little or no material difference between the products of several of the more reputable and substantial builders. The buying public has but one great, important consideration to fall back upon—**reputation**. The first and last essential in automobile buying is the **reputation** of the manufacturer back of the machine.

We believe the Studebaker equal to any car offered. We know that its design is up to date and that its construction is thorough. We offer the most liberal guarantee based upon this knowledge.

Catalogue and detailed information direct or through our nearest agency will be furnished with pleasure upon inquiry.

Studebaker Automobile Company

SOUTH BEND, INDIANA

Members Association of Licensed Automobile Manufacturers

BRANCH AGENCIES in New York, Boston, Philadelphia, Washington, Chicago, Denver, Kansas City, Dallas, Salt Lake City, Portland, Ore., San Francisco, and many other places.

15	Packets of Choice Named Sweet Peas, including 3 packets English Sweet Peas.	25c.
5	Packets of New Nasturtiums, including one ounce Mad. Gauthier's Hybrids	25c.
6	Packets of the Finest Asters, all different	25c.
12	Packets of the Choicest Early Vegetables	25c.
6	Packets of Giant-Flowered Pansies, named varieties	25c.
44	All of the above 44 packets, regular value, \$2.60, sent postpaid for	\$1.00
Catalog free		Address
STANDARD SEED CO.		
210 EAST STREET	VALPARAISO, IND.	

All the plates used in

THE GARDEN MAGAZINE

are made by

The **GILL** Engraving Company

140 Fifth Avenue New York

Kaleidoscope Cannas



A BED OF CANNAS Free to Our Customers

We offer the following beautiful kaleidoscopic assortment of colors:

RED, SCARLET, PINK, WHITE, YELLOW, SALMON,
CRIMSON DARK FOLIAGE, YELLOW SPOTTED RED,
RED EDGED YELLOW, RED SPOTTED YELLOW, WHITE SPOTTED ROSE,
and a GRAND, TALL GROWING DARK FOLIAGE VARIETY.

These Cannas will bloom continuously until frost, and will give a brilliant and gorgeous effect if massed in a bed or planted against a house or wall, or they may be arranged to screen a fence or an unsightly spot.

All are strong, dormant roots, which may be started at any time. If you wish to gain a few weeks' bloom before the usual long flowering season, you may start them at once in boxes or pots in the house or hotbed.

We will send one of each of the twelve (12) different colors, or your own choice of any one or several colors, for one dollar (\$1.00). You may get these twelve roots free by following out the conditions of the attached coupon. Send the coupon, accompanied by a one-dollar bill—the twelve Cannas and a due bill worth one dollar will be returned to you together with our handsomely illustrated catalogue. You may return the due bill to us at any time during the season, and we will accept it as a one-dollar payment on any order from our catalogue, for seeds or bulbs amounting to three dollars (\$3.00) or more, providing no other premium is selected.

ARTHUR T. BODDINGTON, *Seedsman*

342 West 14th Street, New York City.

CUT OFF THE COUPON HERE

ARTHUR T. BODDINGTON, *Seedsman*,
342 West 14th Street, New York City.

Enclosed find one dollar. Please send me the one-dollar collection of Cannas, the one-dollar due bill and your 1906 catalogue.

Name.....

Address.....

of the furrow, until half their height is covered. Repeat this as the plants grow, until the furrow is completely filled.

Twice a week the bed is given a thorough watering, at evening, and every second week a light covering of manure is hoed under. When July comes, a light mulch of lawn clippings is given, which is removed and a fresh one put on when the semi-monthly cultivating is done.

No blossom is ever allowed to form seed, and it is particularly insisted that the flowers shall be cut—not picked—as the pulling at the stems loosens the roots, killing the vines. Usually the cutting is done in early morning or evening, as the blossoms keep better than if cut when the sun is on them. The vines generally begin to bloom within two months after the seed is planted, and with this care, continue to blossom until frost.

In the fall the vines are pulled up, and a generous covering of manure forked under,



Sweet peas will bloom eight weeks after planting. Mulched with litter, watered thoroughly and all flowers picked every day, they will flower till frost

and a covering of manure is then put on, and left over winter. Generally this is forked in before planting time, but several times we simply ran the furrow after raking the bed over, and found the results equally as good.

New Jersey. K. W. LAWSON.

Sowing Sweet Peas for Succession

A PERFECT succession of sweet peas is secured by planting at least three rows, sowing each at a different time. One row may be planted in September (except in the extreme northern states) another as early in the spring as the ground can be prepared, and the third five or six weeks later. The last row is planted in the center, in order that it may be somewhat protected from the sun by the taller vines of the two outside rows. This method insures sweet peas of a good quality, from spring until frost.

Increase the Yield of Your Garden

by using the IGOE TOMATO AND PLANT SUPPORTS. They will mean a more abundant crop of Tomatoes of superior quality, and more beauty and success of your heavily flowered plants, such as Peonies, Dahlias, Golden Glow, Chrysanthemums, etc. *The best and strongest support made.*



REPAY'S
THE COST
MANY
TIMES
OVER
IN A SINGLE
SEASON

MADE
STRONG
AND LIGHT
OF HEAVY
GALVANIZED
WIRE

PRICES

Per dozen \$1.75
Per 50, \$7.00; per 100, \$12.50

Send for Price List and Catalogue.

THE IGOE CARNATION SUPPORTS are equally important for the success of your Carnations. 2-ring, \$3.50 per 100; 3-ring, \$4.00 per 100.

FOR YOUR ROSES: The Igoe Rose Stakes, made of galvanized wire, take the place of the old-fashioned insect-harbing, decaying, wooden supports. They are neat, strong, and will not rust. Made in all sizes (and prices), looped and straight, 65c. to \$1.05 per 100.

You also need some **Tying Wire** which does not rot nor unie. No 18, galvanized, 12 lbs. for 85c.; No. 19, \$1.00.

IGOE BROTHERS

228 North 9th Street

Brooklyn, N. Y.

TWENTY YEARS AGO

We were the first of American Nurseries to realize that American gardens and grounds could not be laid out and planted under our severe climatic restrictions without a practical and expert study of plant life and conditions, especially where advice and sound judgment in determining results were needed. We have worked twenty years on this basis, and many hundreds of the most attractive estates in all parts of this country, planned by us, prove that we were right. We can refer to them.

Thousands of plans are made on paper, but real success requires a practical expert knowledge, which comes only with a life study of the relative value of every tree, shrub and flowering plant.

We offer this experience as plantsmen to secure for every client, no matter where, a finished and beautiful result, and at comparatively small cost.

We not only prepare plans for every form of garden and grounds, through the medium of sketches sent by mail, but send promptly men of experience at reasonable rates to advise upon every leading feature of landscape work.

We call special attention to our catalogues, which are hardly equalled for detail, cultural advice and thoroughness. Our large catalogue is regarded as the very best practical work in this country.

Our Nurseries are among the largest in the United States, and we sell at exceptionally reasonable prices. We offer every known hardy form of **Trees, Shrubs, Rhododendrons, Evergreens, Herbaceous Plants, Vines, Bulbs** at prices with quality, which will command your attention.

We will be prompt in taking up any garden problem, or will advise upon the smallest question which any one interested in this work may wish to bring to our attention.

Write us early and get our special views or advice or prices.
SHADY HILL NURSERY COMPANY, BEDFORD, MASS.
BOSTON OFFICE, 155 MILK ST., COR. BROAD ST.



BURBANK'S NEW PHENOMENAL RED RASPBERRY BEATS THEM ALL

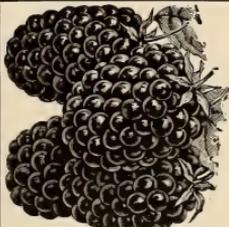
Giving a Crop of Berries to a Plant Fourteen Months from Planting
Returns this season over \$1,400 per acre

The berries are 3 inches long and $3\frac{1}{2}$ inches in circumference; they will ship 1,000 miles easily. Large numbers are being planted in California for Canning Purposes, and the plants are in great demand.

We have a limited quantity of strong plants received direct from the California nurseries, which we will deliver by mail or express, prepaid, at 50c. each or \$5.00 per dozen.

THE THOMPSON SEED CO.

SCRANTON, PA.



Collections of Seeds, Etc.

VEGETABLE SEEDS

No. 1—Containing 22 standard varieties. Value, \$1.30 for \$1.00; postpaid, \$1.25.

No. 2—Containing 32 standard varieties. Value, \$2.60 for \$2.00; postpaid, \$2.40.

FLOWER SEEDS

No. 3—Containing 8 choice varieties, annuals. Value 40c. for 25c., postpaid.

No. 4—Containing 16 choice varieties, annuals. Value 80c. for 50c., postpaid.

No. 5—Containing 30 choice varieties, annuals. Value \$1.50 for \$1.00, postpaid.

No. 8—Containing 7 varieties of climbing annuals. Value, 35c. for 25c., postpaid.

SUMMER FLOWERING BULBS

No. 9—Containing 50 selected bulbs, 8 varieties. Value \$1.40 for \$1.00 or \$1.25 postpaid.

Special Offer of Plant Food—

We will send free by mail one package of our genuine Natural Peruvian Plant Food for 20c. in stamps.

FREE With any order of \$1.00 will give gratis one collection of the new annual sweet-scented tobacco plant *Nicotiana Sandera* in 8 separate colors as illustrated above. Value, 35c.

Our illustrated catalogue and full particulars of these collections mailed free for asking.

W. E. MARSHALL & CO., 146 West 23d Street, New York

As a renovator of soil and as a food for stock, the cow-pea is unsurpassed. To get the largest possible yield of cow-peas from any given soil, a plentiful application of POTASH is necessary.

The best methods leading to certain success are fully explained in the 65-page illustrated book, which we send free to farmers who write for it. It tells of the remarkable results attained with cow-peas nourished upon Potash.

Address, GERMAN KALI WORKS,
93 Nassau Street, New York.



KELLERS DELICATE ANEMONES

Hardy Garden Flowers. Number 3

The charming Japanese Anemone is the loveliest white flower of the late autumn. It glorifies the garden after the Phlox is gone. It survives a succession of late frosts and lasts well into October or November until the killing frosts devastate the garden.

While one of the most delicate and beautiful of all flowers, the Japanese Anemone is not critical for it will grow in any location either in sun or shade, demanding only a fairly good garden soil.

Its blossoms are either a pure white or an exquisite shade of pink and massed against a dark background make a strikingly beautiful effect for the autumn garden. The Anemone is excellent for cutting, and will furnish flowers for the house in great abundance.

Of all our stock of hardy perennials none surpasses our collection of Japanese Anemones. They are strong one-year-old plants that will bloom profusely this fall. The Queen Charlotte, with its large pink flowers, is especially beautiful.

PINK

DOUBLE—A. Japonica Rubra. Carmine with yellow center.

DOUBLE—A. Japonica Queen Charlotte. Flowers a beautiful and pleasing shade of pink, semi-double very large, fine for cutting.

WHITE

SINGLE—A. Japonica alba. Fine large white flower. August to November.

DOUBLE—A. Japonica Whirlwind. Flowers pure white.

PRICE, 15c EACH. \$1.50 PER DOZEN. \$10 PER HUNDRED

The exquisite garden effect pictured above can easily be produced for \$1.50

The Anemone is beautiful—notably beautiful, but is not exceptional among hardy perennials, for the hardy garden abounds with such charming flowers. Each day, from frost to frost there is bloom, succession after succession, in every color and shade with always something new and interesting.

The garden of hardy flowers is the garden of character. Plant one this spring.

We grow hardy perennials exclusively and have a superb stock such as only a specialist can have.

Our 1906 catalogue of Hardy Perennials is yours, for the asking

J. B. KELLER SONS, Rochester, N. Y.

Nothing is more essential to the growth of good sweet peas with long stems than to plant them early. The rows should run north and south.

When the vines are about four inches high, begin training them on strings, chicken wire, or brush. Sweet peas require an abundance of moisture, and need to be watered frequently during dry weather. The vines should also be syringed with a hose, or force pump, once or twice a week, to keep down the red spider, especial care being taken to hit the under side of the leaves with considerable force.

When the plants have grown too high, they may be cut back to within three or four feet of the ground. They will soon grow up and bloom again. The blooming period will be much prolonged if the flowers are picked daily. It is always best to buy new seed each year.

Portland, Ore. JAMES H. SPENCER.

Sweet Peas Worth Growing

THE average seed catalogue with its long list of varieties is a bewildering maze to even the professional grower. Most of them offer from fifty to one hundred varieties, and many of the kinds are duplicates or so near alike that it takes an expert to tell the difference. While it is true that some will do better in one locality than in another, yet one cannot attempt to grow them all unless a whole farm is at his disposal.

Many of the failures and disappointments in sweet-pea growing have been the result of late sowing. To ensure success the young plants must have a good start before the advent of hot weather.

The seeds must be sown thickly, and covered to a depth of three or four inches. They germinate slowly. When about six inches high, draw the soil toward them on both sides, making a slight mound, two to three inches high. At the same time put up the supports, for if once allowed to fall over, they never do as well. After this apply the mulching, and water liberally in dry weather.

I give here a list of the cream of the varieties in their colors as I have found them and am satisfied that they are sufficient for all purposes:

White.—Blanche Burpee (profuse bloomer), Dorothy Eckford (large flower), White Wonder (long stemmed) and White Cupid (very dwarf).

Pink and white.—Cupid (dwarf), Dainty (edged with pink), Earliest-of-All (very early), Mrs. Joseph Chamberlain (striped pink).

Light pink.—Blanche Ferry (very early), Countess Spencer.

Other varieties.—America (white, striped with scarlet), Grey Friar (white with peppered markings of purple), Lovely (shell pink), Janet Scott (dark pink, long stemmed), Miss Willmott (orange-pink, long stemmed), Salopian (scarlet), King Edward VII. (very brilliant crimson), Prince of Wales (rose), The Hon. Mrs. E. Kenyon (primrose yellow), Lady Grizel Hamilton (lavender), Othello (maroon), Navy Blue (blue).

New York. JAMES T. SCOTT.

Superb Magnolias



Magnolia tripetala. Tri-lobed foliage. Large white flowers. In bloom across. Shaded left.

Sweet Bay. The thick glossy foliage and creamy cups make an effective background for the flower border that is new and artistically good. Special offer M.

	EACH	PER 50	PER 100
Magnolia tripetala, 1 1/2 ft.	.35	2.00	15.00
" " 2 1/2 ft.	.45	2.50	20.00
" " 4 1/2 ft.	.70	5.50	50.00
" " 5 1/2 ft.	1.00	6.00	50.00
M. glauca, Sweet Bay, 3 in.	.65	4.00	3.00
" " 1 ft.	.25	2.00	15.00
" " 2 1/2 ft.	.40	3.50	35.00
M. macrophylla, 1 1/2 ft.	1.25	10.00	100.00
M. acutilata, 2 in.	.65	3.75	6.12
" " 1 1/2 ft.	1.50	10.00	100.00

M. Kobus, M. hypoleuca, 2 ft., at \$1.00. M. Watsonii, M. parviflora, M. Yulan, 1 ft., at \$1.00. M. soulangeana, M. salicifolia.

General Nursery Stock Old Fashioned Flowers

Shade and evergreen trees up to 30 ft. high shipped by the carload. Send for catalogue. "Trees for Long Island." 12 Trees—more for various types of trees and shrub, carrying 1000 ft. high, by 25 ft. wide, with the full material cost 15 cents, spreading 30-45 ft. The permanently successful method.

ISAAC HICKS AND SON, Nurserymen and Scientific Tree-merchants,
WESTBURY STATION, LONG ISLAND, N. Y.
Telephone 251W

Everblooming 6 ROSES 25c.

Vigorous Growers
Abundant Bloomers

Upon receipt of only 25 cents we will send one strong, healthy, vigorous plant of each of the 6 superb roses described below, prepaid to any address. All Roses on their own roots. Safe arrival guaranteed.

Bridesmaid—The most popular pink tea rose. Fine for bedding out. Very free flowering.

Kaiserin Aug. Victoria—One of the finest white roses in existence, has long pointed buds, richly perfumed.

Etoile de Lyon—A beautiful yellow rose with large, full, double flowers, deliciously fragrant.

Helca Gould—Warm, rosy crimson. Beautiful buds, long and pointed, opening out into perfect double flowers.

Mlle. F. Kruger—A strikingly handsome rose. Large, symmetrical flowers of a unique coppery yellow shade. One of the best.

Clotilde Souper—A compact, vigorous grower and profuse bloomer. Flowers white, shading to rosy blush in the center. Withstands the hottest weather.

14 CHOICE ROSES, 50c.

The above 6 roses and 8 others of our selection, all equally good, all different, will be sent prepaid upon receipt of only 50 cents. (Large, 2-year-old Roses, all strong, bushy, well-rooted plants, our selection, no two alike, 3 for 50 cents, or 8 for \$1.00, prepaid.)

8 Chrysanthemums, 25c.

8 Vari-colored Coleus, 25c.

6 Geraniums, 25c.

6 Fine Carnations, 25c.

These 4 sets and the 6 roses named above, 34 plants in all, \$1.00

Remember, we pay all charges and guarantee safe arrival. Our large, beautifully illustrated 1906 CATALOG FREE to all. Write for it.

THE GEO. H. MELLEEN CO.

SPRINGFIELD, O.

Box G 4,

(Tanisfallen Greenhouse, Established 1877)



Now that planting time has come, have you considered what you should plant to beautify your grounds? To get the best results in landscape architecture requires a liberal use of individual specimens that are certain to evince their characteristic beauties. Such investments prove permanent and materially enhance the value of your property. Moreover, good plants are sure to live, and better effects can be produced with smaller quantities. Many of our specimens are sold at very low prices, considering the cost of production, and our customers get better bargains than purchasers of inferior plants at lower prices. Our entire stock has been personally selected from the finest nurseries and gardens at home and abroad, has been carefully developed and acclimated and is now the most extensive collection of fine specimens in existence.

COTTAGE GARDENS CO.

Queens, L. I.

N. Y.

PETERSON'S ROSES SET A NEW STANDARD

Just to show you what they are like and what they accomplish in the way of bloom even the first season, I offer the following:

BEST TWELVE HYBRID PERPETUALS

Alfred Colomb.....	30c
Anne de Diesbach.....	30c
Baroness Rothschild.....	30c
Clio.....	30c
Fisher Helmas.....	30c
Franz Karl Dreschfeld.....	45c
John Hopper.....	30c
Jubilae.....	40c
Mrs. John Laing.....	30c
Mrs. R. G. Sherman.....	Crawford 35c
Paul Neyron.....	40c
Ulrich Brunner.....	30c
	\$3.00

The Set for \$3.60

These are very large, strong, dormant plants which have been grown two full years out-doors, and are the hardest of all roses. I also offer 100 of the World's best roses, including ETTOILE DE FRANCE, 85c. FRAU KARL D R U S C H K I, 45c. ETOILE DE LYON, 50c. BESSIE BROWN, 45c. MILDRED GRANT, 55c., etc.



Killarney

"A Little Book About Roses,"

which is far-and-away ahead of anything of its kind ever published, and which an enthusiastic reader calls "A Little Rose Classic," will be mailed to you on receipt of 10 cents in stamps—deductible from your first order.

G. H. PETERSON

Rose and Peony Specialist,

Fair Lawn, N. J.



BEAUTIFYING YOUR GROUNDS

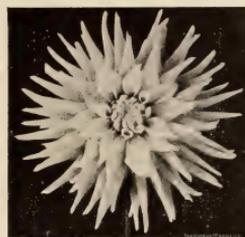
It would be difficult to conceive a plant that would add more to the beauty of your grounds than the ever-blooming

"BABY RAMBLER"

It has been planted in all parts of the country, and has never failed to develop into a hardy and sturdy plant. It grows from 2 1/2 to 3 1/2 inches in height and blooms continuously from early June to severer frost; think of roses every day from June to November. As many as 120 individual flowers have been counted on a single panicle. The foliage is of a fine polished dark green. Every plant we ship is exceedingly sturdy and is guaranteed to be healthy and perfect in every respect.

Our landscape department is complete in its various departments. Can it be of service to you? Our beautiful catalogue illustrating ornamental trees, vines, shrubs, flowering and fruit-bearing plants is sent free on application.

T. J. DWYER & CO., Box 4, Cornwall, N.Y.



DAHLIAS Cactus and Decorative

We have one of the most complete lists of the choicest and latest varieties in this country

NO other flower enjoys more popularity at present than the Dahlia and no garden can be complete without a choice collection.

Our catalogue for 1906 of "Arlington Tested Seeds" gives a complete list also of Flower and Vegetable seeds. It is our aim to look first for quality; our strains of Flower and Vegetable seeds show this care; our catalogue contains an exceptionally large list. It has been compiled with the greatest care as to descriptions and illustrations of a complete collection of Flower and Vegetable seeds, Plants and Shrubs.



We want you to receive this catalogue; write us and we will send it.



W. W. RAWSON & CO.

SEEDSMEN

12 and 13 Faneuil Hall Square, BOSTON, MASS

NURSERY STOCK SPECIALTIES

- Norway Maple, Large Specimen Trees
- Horse Chestnut, " " "
- Oriental Plane, " " "
- Catalpa Speciosa, " " "

Hemlock Spruce, Specimen, Sheared Trees

- Catalpa Bungei Blue Spruce, Koster Variety
- Carolina Poplar Rhododendron Hybrids
- Japan Maple Rhododendron Maximium, in car lots
- Concolor Fir Kalmia Latifolia, in car lots

Desert Box for Edging

Full line of stock for landscape work. Write for prices. Catalogue free on application.

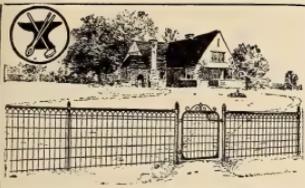
P. A. KEENE FORMERLY OF KEENE'S FOLK

1 MADISON AVENUE NEW YORK CITY



LIVE-FOREVER PINK ROSE AS A HEDGE. 10 to 20 cts. EACH PLANT

This hardy and beautiful rose blooms abundantly every year, 50 roses on one bush, and succeeds everywhere. It is especially desirable for bedding, for the rock hedge or as a climbing rose. No garden is complete without this rose, which endures more neglect than any other, and is less troubled by insects. Price of Live-Forever Rose a year bushes, one each, 15 for \$2.00, 50 for \$7.50. Price of 1 year bushes by mail post paid for hedges, 25c. each, 10 for \$1.00, 50 for \$4.00. All of the best hardy varieties of fruit trees, small fruit plants and vines true to name. Buy direct from grower and save 25 per cent. **TREES FOR SALE** cent. Green's New Illustrated Catalogue, also a copy of Green's Big Fruit Grower Magazine Free. Send postal card for them to-day. Address: GREEN'S NURSERY CO., 315 Wall St., Rochester, N. Y.



The Glen Steel Folding Mat

Prevents Anyone Tracking Mud or Snow Into the House.

One strap of the foot in any direction across a Glen Steel Mat takes off all those balls of mud and snow which cling so tenaciously and resist all the ordinary means. The Glen Mat is least and most attractive, is easily cleaned, does not curl up. Its wonderful construction and flexibility will make it wear a lifetime. Unexcelled for residences and entrances to all public and private buildings. All first class dealers handle the Glen, if you don't, write today for catalog and particulars. We make her a soda fountain mat on same principle.

Glen Mfg. Co., 149 Mill St., Ellwood City, Pa.

Also Mfrs. Hartman Steel Picket Fence, Hartman Flexible Wire Mats and Hartman Stockade Woven Wire Mats.

TRUE—AMERICAN BEAUTY ROSES—NEW

Last year on our immense Rose Farm there were discovered so many new varieties that so far outlasted the old ones that we have devoted our entire attention to putting these on the market and have disposed of all other varieties. Chief among these there were four which have caused wonder and amazement among the judges at the latest flower shows. They have been termed the Pink, White, Striped and improved Red American Beauties, because in every way, excepting color, they exactly resemble that World-famed American Beauty Rose, but to the delight of Rose growers have proven to be the most profuse bloomers of any rose yet introduced, and are so hardy will live outdoors the year round in the coldest climates. We are positively the only place where these wonders can be purchased. We discovered them, we named them, and we are introducing them for the first time. We have grown a large quantity of these roses in both sizes, and offer them to you at an extremely low price—less than cost of single bud at the cut flower stores. We will send this collection of roses in two sizes, both strong and well matured plants, all charges prepaid, and guarantee to arrive in good growing condition. Postage stamps not acceptable.

Price for 1-year-olds, the Red (improved), Pink, White and Striped, 25c. each, the 4 for \$1.00. 2-year-olds, 50c. each, the 4 for \$2.00

Address **American Beauty Rose Co., SPRINGFIELD, OHIO**

Fences?

THIS is one of the many beautiful Lawn Fences we make—strong, beautiful, durable and very inexpensive considering the quality. Made of heavy woven netting, with the patented Anchor Post Construction—a patented and galvanized Post that keeps the fence in perfect alignment forever, and fully protects it against rust.

We also make and erect—on one contract—all kinds of Iron and Wire Railings, Fences and Gates, for Lawns, Gardens and Farms. Original Design and Estimates free. If you really want the highest possible quality, write for Catalog No. 30 A. Anchor Post Iron Works, 15 Cortlandt St., N. Y.

A REMINDER FOR PLANTERS ORDER NOW

We shall be pleased to send our **Booklet of Novelties and Specialties and General Catalogue** (144 pages) describing best Fruits, Ornamental Trees, Flowering Shrubs, Roses, Hardy Plants, with colored plate of New Rose Frau Karl Druschki, by mail free on request.

Particular attention is directed to the following:
BECHTEL'S CRAB—Large double flowers. Very ornamental.

BISMARCK APPLE—A showy, large, red Fall apple; bears while quite young; a market variety.

BANANA APPLE—Beautiful yellow Winter apple.

WALTER PEASE—Handsome red Fall apple.

BARRY APPLE—Valuable late-keeping Winter apple.

BARRY PEAR—Best late pear; extraordinary keeper; high quality, large.

PERFECTION CURRANT—New, best red currant; fine quality.

JOSSELYN GOOSEBERRY—Large, red. For market.

Shrubs and Plants

LEMOINE'S NEW DOUBLE LILACS—Marvelously beautiful.

LEMOINE'S NEW HYBRID DEUTZIAS.

HARDY PERENNIAL PHLOX—In great variety.

DOUBLE AND SINGLE PEONIES—Select as assortment.

JAPAN AND GERMAN IRIS—Of best kinds.

New Climbing and Rambling Roses

RUBIN—Ruby red.

PHILADELPHIA RAMBLER—Improved crimson Rambler.

HELENE—Violet rose, showy, abundant bloomer.

DOROTHY PERKINS—Most beautiful, delicate pink variety.

New Hybrid Perpetual Rose

FRAU KARL DRUSCHKI—Best hardy white rose yet introduced; beautiful in bud and when fully open; abundant, continuous bloomer; great acquisition.

New Dwarf Hardy Crimson Perpetual Blooming Rose, known as Baby Rambler

A very valuable new rose, particularly desirable for planting out of doors in beds, masses, borders, etc., being hardy and producing all Summer long crimson flowers in clusters. It is also a fine house plant, being constantly in bloom.

ELLWANGER & BARRY

Nurserymen Horticulturists

MOUNT HOPE NURSERIES

ROCHESTER, NEW YORK

any difficulty with coal gas, as the draught is direct and strong. The stovepipe goes through a sheet of galvanized iron in the roof directly over the stove. This galvanized iron takes the place of a pane of glass.

In 1904 under the benches I started ixias, paper-white narcissi, freesias, Roman hyacinths, alliums, and callas. On the benches were carnations, snapdragons, asparagus and nasturtium vines, cyclamen, cinerarias and small ferns for the house, also a lemon tree, an orange tree, a small camellia, gardenia and genista in pots.



Mushrooms, ixias, narcissus, freesias, hyacinths, snapdragons, carnations, and nasturtiums grow in this house all winter.

In 1905, three-quarters of the house was divided equally between snapdragons and carnations, and the rest kept for callas, ferns, and potted things. Under the bench, near the door, is a three-foot-square mushroom bed, which bore a good crop.

It takes about one load each of compost and leaf mold to fill the benches.

Pennsylvania. B. P. C. CURVES.

Growing Alpine Plants from Seeds and Cuttings

ALPINE plants can easily be increased by dividing the plants in early spring, when growth is commencing or cuttings can be taken from the young shoots when they are two inches long, and treated as other cuttings. Put them in a coldframe, water, and shade them from the warm sun. When rooted, pot them in small pots, plunge in a coldframe, and leave them there over the first winter. During the severest weather give them a covering of salt hay or other loose, warm material. The plants will be more advanced in the spring and will transplant much more satisfactorily for the extra trouble of potting.

Alpine plants are easily grown from seeds, sown in the coldframe during July, so long as any fine garden soil. Cover very lightly—not more than a quarter of an inch—and never allow the soil to become dry. Protect from the sun either by cheese-cloth screens, or white-washed glass, the sashes being raised to a good height to admit plenty of air.

New York. T. S. ORCHARD.

The New Method of Killing the San Jose Scale

A SOLUTION THAT IS BOTH EFFECTIVE AND INEXPENSIVE
IN DESTROYING THE PERNICIOUS SAN JOSE
SCALE, PSYLLA, ETC.

This new preparation supplements the lime-sulphur wash with its bothersome preparation, boiling of ingredients and danger of serious injury to the clothes and hands.

The following is an extract concerning it from the January 15th, 1906, Bulletin issued by Professor S. A. Forbes, State Entomologist, Urbana, Ill.

"The time and labor necessary to the preparation of the sulphur wash may be greatly saved by using as a substitute a spray of soluble petroleum, made by diluting one part of the commercial preparation known as 'Scalecide' with nineteen parts of water. This material, made by the B. G. Pratt Company, No. 11 Broadway, New York City, while more expensive than the sulphur wash, may be used to advantage in a small orchard or in a town lot."

The above estimate by Professor Forbes was probably based on small retail quantities, as will be seen by the following extract from the Rural New Yorker, January 20th, 1906, page 51, reporting the N. J. State Hort. Society Meet:

"The soluble oils are cheap and convenient, requiring only mixture with a proper amount of water, and make ideal applications from the sprayer's standpoint. A comparative trial made by the Pennsylvania Railroad Company in spraying fourteen miles of Osage orange hedge showed the soluble oils to be cheaper than lime and sulphur when all charges for labor and fuel, as well as first cost of materials, were reckoned up."

For further information, reports of Experiment Stations and samples, address

B. G. PRATT CO.,
11 Broadway, New York City

1840 Old 1906 Colony Nurseries

*Hardy Shrubs,
Trees, Vines,
Evergreens
and
Perennials*

A large and fine stock of well-rooted plants, grown in sandy loam. Good plants; best sizes for planting; very cheap. Priced catalogue free on application.

T. R. WATSON, Plymouth, Mass.

SAVE YOUR TREES

from the Ravage of SAN JOSE, COTTONY MAPLE SCALE, PSYLLA, ETC.

ALL YOU NEED IS

"SCALECIDE," Water, AND A GOOD
Simple, more effective and cheaper than LIME, SULPHUR and SALT.

For sample, testimonials and price delivered at your Railroad station, address

B. G. PRATT CO., 11 Broadway, New York, N. Y.



AND AQUARIA SUPPLIES

SEND FOR PRICE LIST

KEENAN'S SEED STORE

6112-6114 Wentworth Avenue,

CHICAGO

Rosedale Nurseries

SPECIAL PRICES ON LARGE ORDERS

We handled one order of 10,200 trees because our previous shipments had been so satisfactory. For the same reason we received from a noted rosarian an order for rose plants amounting to \$1200.

OUR CATALOGUE GIVES SIZES AND PRICES of all the best varieties suitable to adorn a large estate.

ROSES: Hybrid teas, H. P. rugosa, climbers 2 and 3 years.

TREES: Fruit and ornamental up to 20 feet.

SHRUBS AND VINES: In great variety including Rhododendron and Mt. Laurel.

GLADIOLI: America, Choice New Pink, Princess, Groff's Hybrids and others.

DAHLIAS: Best old and new.

HARDY PERENNIALS: Alpine Flowers, Foxgloves, Delphiniums, Peonies, Phlox, Iris, Hardy "minus," Hollyhocks, etc.

Landscap Design a Specialty

S. G. HARRIS, M. S.

Office: 68 Hamilton Place

TARRYTOWN, N. Y.

Waukegan Nurseries



Evergreen
and
Ornamental
Trees,
Shrubs,
Vines,
Etc.

Wholesale and Retail

R. DOUGLAS' SONS

WAUKEGAN, ILLINOIS

There is a Better Way than This



Our Ironing Machine

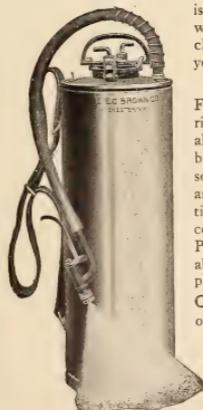
will iron your household linen **better, easier, cheaper,** and in **one-tenth the time.** Simply light the gas in the iron, feed the goods into the machine, turn the handle, and the ironing is done ready for folding.

Reasonable in price. Write for booklet.

AMERICAN IRONING MACHINE CO.

179 Washington Street, Chicago, Ill.

THE "AUTO-SPRAY"



AUTO-SPRAY No. 1

is the one perfect spray pump for hand work. 15 seconds work at its plunger charges it with power enough to run your hose 15 minutes. We make it in

40 STYLES AND SIZES

From hand atomizers up to power rigs. Style No. 1, here shown, is almost ideal for all-purpose work. A brass cylinder holding three gallons of solution and one of compressed air, and two pumpings will discharge entire contents. Solid brass pump, stop cock, nozzles, etc. Our patent Auto-Pop valve controls spray perfectly and absolutely prevents clogging. Complete with hose, nozzle, etc.

Only One Auto-Spray, but numerous imitations. Get the genuine.

Used at State and Government Experiment Stations, on estates of Vanderbilt, Astor, Hill, etc. Ours is the most complete line of hand and power sprayers in America.

Write for free catalog and copy of most comprehensive and valuable spraying calendar ever issued. All our products fully warranted.

E. C. Brown Company, No. 34 Jay St., Rochester, N. Y.



AN HOUR OR SO A DAY IN YOUR GREENHOUSE

Who loves a garden,
Loves a greenhouse too.—Cramer.

TO those who would list to nature's teaching the whole year through, the greenhouse with its never-ending bloom, its never-ceasing interest, adds much to the pleasures of life. The fragrance of the blue-eyed violet, the spiciness of the carnation—not in occasional numbers from the florists—but in continuous bloom from October to April and from April to October, if you but will.

To have nurtured them, cared for them, watched them grow yourself, spending perchance an hour or so a day among your flower friends—to these the greenhouse is indispensable. To those who have not yet tasted the joys, appeals the

U-BAR Greenhouses,

The Best Greenhouses Built.

The best, because of their extreme lightness, durability and adaptability. No type of greenhouse construction so perfectly meets all horticultural and architectural requirements. In their lightness and lines of beauty they are veritable bubbles of glass. Look into the U-Bar construction. Either correspond or let us confer in person.

Pierson U-BAR Company

Designers and Builders of

U-BAR GREENHOUSES

METROPOLITAN BUILDING

4th Avenue and 23d Street,

NEW YORK



Cardinal Flowers as Annuals

I HAVE been successful in growing the cardinal flower *Lobelia cardinalis* from seed, which may be sown any time before April first.

The seeds which I collected from plants growing in a neighboring swamp in the fall of 1903 were sown on the following Feb 15th in a shallow box of soil. The boxes, or flats, I use are easily made, by ripping empty canned-goods boxes—obtained at the nearest grocery for a few cents—into shallow flats, two and one-half or three inches in depth. Several of these I place together on the floor of my potting room, and partly fill them with soil from the compost heap, which has been passed through a half-inch sieve. This soil is composed of three parts thoroughly rotted sods to one of barnyard manure. The surface of each box is finished off with soil sifted through a quarter-inch mesh sieve, smoothed with a piece of board or a trowel, and the seeds sown, a wooden pot-label being previously written for each box. Small seeds, like the lobelias, are simply sprinkled on the surface of the soil, lightly pressed in with a piece of smooth board, and watered by partly submerging the box in a half barrel or tub of water.

I placed the flat containing the cardinal-flower seeds in the middle of other boxes, on a bench in a warm greenhouse, where there was a night temperature of about 65 degrees.

The coarser seeds may be watered with a fine-rose watering pot, but with lobelias and other fine seeds, I always partly submerge the boxes, as the falling water from a watering can, no matter how fine the spray, is apt to dislodge the minute seeds.

The lobelias were very slow to germinate, not showing signs of life for five or six weeks. In a short time after they started, the box was green with hundreds of minute seedlings. No special care was given them after this during the busy spring season, other than watering, and they were quite frequently given a good soaking, direct from the hose.

About the beginning of June, or fully three months from sowing, I transplanted enough of them to fill a bed forty feet long by four feet wide, setting the plants about six inches apart. Our soil is that of an old truck patch, transformed into a flower garden. It is not very deep, but thoroughly prepared by deep digging.

This phrase, "deep digging," or rather the old English term, "bastard trenching," indicates a much different way of digging from that of the ordinary one-spit-deep process. It is briefly as follows:

Beginning at one end of the bed or border, remove all the soil for the space of about a yard wide, and one spade deep, either piling it aside, or wheeling it to the other end of the border. Shovel out all the loose soil, and if your top soil is not very deep, remove a little, but not too much, of the subsoil. The bottom of the hole is then turned over with a spade, or loosened up, if hard, as it often is, with a pick. On this loosened subsoil dump a barrow load of manure, litter, leaves, or any trash you have that will rot and make humus. The topsoil from the next space of

Delicate Skins and Dainty Fabrics
Are more easily—most easily washed with
PEARLINE
The most THAWTY for more DELICATE—the
gentlest of all PEARLINE body
SAVES your skin—SAVES your fabric
ELSE you would not have been concerned enough
to buy a real package.
PEARLINE gives 100%
SERVES' EFFICIENCY

Running Water in Your Country Home

can be had simply by installing the
RIFE HYDRAULIC ENGINE
Operated Automatically

by the power furnished by any brook or stream, however small, providing a constant flow in your house at any distance or any height. As it operates automatically there is absolutely no cost of maintenance and it requires no attention. We make a specialty of equipping country places with a complete water-works system, extending to wells, gardens, greenhouses, etc. Also in successful operation in all climates and estimates on request.

RIFE HYDRAULIC ENGINE CO.
2109 TRINITY BLDG. NEW YORK CITY.

Hardy FOR Old Fashioned Plants Flower Gardens

Including Phloxes, Bell Flowers, Larkspurs, Poppies, Pansies, Iris, Garden Pinks, Day Lilies, etc. Also fine collection of novelties. Catalogue on application.

FREDERIC J. REA

Norwood, Mass.

Baby Rambler Rose

The Everblooming Dwarf Crimson Rambler

BLOOMS daily the entire year if under glass; if out doors it will bloom every day from June until frost. It is the Crimson Rambler in Dwarf Form and with improved color. It seldom grows higher than two feet. It is a tremendous bloomer, 120 individual flowers having been counted on a single panicle. Order some **now**. You will want more later.

Our **Free Nursery Guide Book** describes over 500 varieties of Roses, Shrubs, Fruit Trees, etc., and tells how to plant and care for them.

In order that we may become better acquainted with the readers of THE GARDEN MAGAZINE, we will send you the above book **free** and on the Baby Rambler Rose we will make you the following

SPECIAL INTRODUCTORY PRICES:

Very nice, Well-Rooted Small Plants, 15 cents each, \$1.50 per dozen. Splendid Two-year, Field-Grown Plants, 40 cents each, 3 for \$1.00. Extra choice Three-year, Field-Grown Plants, 60 cents each, 3 for \$1.50. Send your order for **Blossoms and Free Book** today. Representatives wanted to handle our complete line of Nursery Stock.

Emmons & Co., 7 Union St., Newark, N. Y.

MENNEN'S BORATED TALCUM TOILET POWDER



Pure as the Lily

—beautiful and refreshing: that is why MEN-
NEN'S is always used and recommended by
physicians and nurses. Its perfect purity and clean-
ness uniformly have won for it universal esteem. In
the nursery it is supreme, unsurpassed for chafing,
nettle-rash, chapped hands, etc. It is soothing,
sanitary and healing. MENNEN'S face on every box—see
that you get the genuine. *For sale everywhere on the main
line.* Sample free. MENNEN'S VIOLET (Borated) TAL-
CUM has the scent of fresh cut violets.

GERHARD MENNEN CO. — NEWARK, N. J.

CRYSTAL Domino SUGAR

A
Triumph
in
Sugar
Making!

Sold only in 5 lb. sealed boxes!

IMAGINATION COULD NOT CONCEIVE OF A HANDIER AND PRETTIER FORM THAN IS PRESENTED IN "CRYSTAL DOMINO SUGAR."
NEITHER COULD THE MOST PARTICULAR PEOPLE ASK FOR MORE PERFECT PURITY OR ECONOMICAL PEOPLE FOR LESS WASTE.

HIGHEST GRADE IN THE WORLD. BEST SUGAR FOR TEA AND COFFEE.

By grocers everywhere.

12 HARDY PERENNIAL PLANTS, \$1.00

NOTHING for the cost will add so much cheer to the home grounds and make them attractive and interesting from early Spring until late in the Fall as Hardy Perennial Plants, yielding, as they do, a wealth of flowers of an almost endless variety of form and color, not only during the year planted, but for many years—from a single planting. They supply flowers to brighten and embellish the dining table, the parlor and the sickroom, as well as the garden and lawn. They flourish in almost every soil, need but little care and require no special knowledge to succeed with them. That those who have never ordered of me may, at a small outlay, learn of the excellence of my Hardy Perennial Plants, I offer the following special collection by mail, postpaid; all well developed plants that will bloom freely the first season:

1 clump	Stokera Cyanaea,	Regular price	\$.15
1 "	Galbaria Grand,		.15
1 "	Coreopsis Lancolata,		.15
1 "	Hardy Phlox,		.15
1 "	Hedysarum (new),		.15
7	other choice and popular hardy plants of the latest introductions,	1.00	

12 Plants postpaid worth \$1.75 for \$1.00

Don't wait for seeds to grow when you can get these hardy clumps that stay in the ground Winter and Summer, that will flower for the next ten years with plenty of beautiful flowers. This fine collection is the best offer ever put on the American market; don't miss it. Send at once for this grand offer. Postage stamps not acceptable. Address

HOME CITY FLORAL CO., SPRINGFIELD, OHIO



A HAMMOCK THAT'S RIGHT

The only hammock made that combines Quality, Durability, and Beauty with Comfort. Can be used indoors or out. For further particulars write

QUEEN HAMMOCK CO.

188 West North St. Kalamazoo, Mich., U. S. A.

SWEET PEAS INOCULATED
with nitro-culture produce magnificent flowers on soil habitats found unfavorable. Inoculated seed. Eckford's finest varieties mailed or in cents per ounce.
BINGHAMTON SEED CO., BINGHAMTON, N. Y.

JAPANESE GARDENS MAULE'S SEEDS LEAD ALL
and plants. Extensive nurseries in Japan and America.
HINOUE FLORIST COMPANY, Whiteston, Long Island
Illustrated Catalogue free
W. H. MAULE & CO. 11 E.
1701 Filbert Street, Philadelphia, Pa.

IF ANY DEALER OFFERS YOU A SUBSTITUTE, INSIST ON HAVING THE GENUINE

The **Velvet Grip**

Never Slips
nor Tears

EVERY PAIR
WARRANTED

HOSE CUSHION
BUTTON
SUPPORTER

Sample pair, Mex. size.
Silk, 50c. Mailed on
receipt of price



GEORGE FROST COMPANY, Makers, Borton, Mass., U. S. A.

LOOK FOR THE NAME
ON EVERY LOOP

A City Water Supply For Your Country Home

If you live in the country there is a way for you to enjoy all the comforts and conveniences of a city water supply, without a penny for water tax. It is accomplished by the **Kewanee System**. With the **Kewanee System** you get even more than city service, because, in addition to every benefit the latter affords, you may have—
—Soft water in your bathroom and laundry.

The old-fashioned gravity system meant pumping water up in order to get it down again.

Now, to give the necessary pressure for fire protection and service, the elevated tank must be located on top of a tall tower. This is expensive, unsightly, and unsafe.

The water freezes in winter, becomes warm and stagnant in summer, and repairs are a big item of expense. The attic tank doesn't give sufficient pressure for fire protection. Its weight is apt to crack the plastering, and when it leaks (as it is pretty sure to do) your house is flooded. Just one such expensive accident may cost you many times the price of a **Kewanee Outfit**—

—Which cannot flood the house, because the tank is resting on solid ground, where it can do no damage.

The installation of a **Kewanee Pneumatic Tank and Outfit in the cellar (or in the ground)** means:

- Plenty of pure, fresh water.
- Cool water in the summer.
- No freezing water in winter.
- Absolute protection from fire.
- Decrease in insurance rates.
- A plant that will last a lifetime.
- No expensive repairs—
- It solves the country water problem completely.



The **Kewanee System** will take care of all your needs—for home, garden, lawn, stables, poultry houses, etc.

Our **Kewanee Outfits are complete**. Not an engine only—which in itself cannot give you a water supply—nor a tank only, which is useless unless you have some form of pumping power—

—But, we furnish the whole thing—a complete system of water supply.

Our engineering department is prepared to solve your water problem—no matter how difficult that problem may now appear.

Kewanee Outfits are made in sizes, suited to the smallest cottage or largest building—or group of buildings.

We guarantee every **Kewanee Outfit** to give perfect service.

Send for catalogue No. 16, giving names of users in your state—free if you mention this paper.

KEWANEE WATER SUPPLY CO.
Drawer S, Kewanee, Ill.

ground is now turned over upon this litter, and the surface finished off. The operation is repeated until the end of the border is reached. The last trench is filled, and finished with the soil removed from the first one. In this way long manure from the stable, leaves, and all the dead plants I can get, are used up. No litter is burned, but everything that will rot, even wood chips, are used, and help to keep the soil open. Remember that manure used in this way is not buried, and away from the plant, but is covered in, not more than one foot from the surface, and where it is within easy reach of the plants.

The lobelia seedlings were shaded during the hot summer months by stretching and tacking a width of the light shade cloth, sold by seedsmen for the purpose, over a light framework of wood. They were watered as often as necessary. That fall (1904) many of them flowered, and almost as well as the half-dozen parent plants at the end of the bed, which had been transplanted from their native swamps not quite one year before.

Were I to grow more, I would sow the seed as soon as collected, in a coldframe, and shut it up for the winter, awaiting developments in spring.

Pennsylvania. ALEXANDER MACFLEW.



How We Sold 80,000 Bulbs to
School Children

PROBABLY in no city in the country has there been such an extensive and successful bulb culture in connection with the public schools as in Cleveland, Ohio. It had its great impetus in the prizes which were offered for the flower shows. In 1904 the schools were divided into four groups, according to size and location. A first prize of \$10 was offered for the best show in each group; and \$5 for the second best. In addition to this, Judge Dellenbaugh presented a thousand bulbs for outdoor planting to every school which had a creditable flower show and offered prizes for the best home gardens in each ward. These prizes were:

Class A: for best flower garden in each ward, plot 30-foot front or less; first prize, 200 tulip bulbs; second prize, 100 tulip bulbs;

Class B: for the best flower garden in each ward, plot 30 to 50 foot front, first prize, 300 tulip bulbs; second prize, 100 tulip bulbs;

Class C: for the best window boxes in each ward, first prize, 100 tulip bulbs, and second prize, 100 crocus bulbs.

Large numbers of bulbs, of crocuses, tulips, narcissus, daffodils and hyacinths were ordered from Holland, and sold to the teachers

The Hardest and Best Rhododendron known is

CATAWBIENSE

The True Carolina Mt. Species, grown only at HIGHLANDS NURSERY (3,800 feet elevation), Saginaw, N. C.

SMALL LOTS OR CAR LOTS

The most unique and beautiful plant catalog published (exclusively Native Plants) to those interested.

HARLAN P. KELSEY, Owner, Salem, Mass.



REAL PARISIAN LIFE

TALES MORE FASCINATING AND EXCITING
THAN BALZAC OR FRENCH COURT MEMOIRS

I have secured the sets of Paul de Kock which were awarded the Gold Medal at St. Louis. Rather than rebound them—they are slightly rubbed through handling—I will sell them at *Aud's* price as long as they last and upon small monthly payments.

PAUL DE KOCK

The Merriest French Humorist

has written sparkling, witty, amusing, riveting novels—antidotes for melancholy. The stories, literally translated, race merrily along, nothing didactic or dull; as original as Boccaccio, as mischievous as Gil Blas, more fascinating than Sterne or Smollett.

SHORT FASCINATING STORIES

"Paul de Kock is a tonic in books instead of bottles." *Max O'Rell*. "His charming characters seem to be under the influence of champagne." *Charles Lever*. "He has kept France laughing for years—the Smollett of France." *Boston Herald*. I dislike the superlative but I believe this the best and richest book value ever offered. The set contains the most delicate and artistic French illustrations made special for this work by Glacques, Sinan, Wéaël, Steiner and many other famous artists.

ILLUSTRATED BOOKLET FREE

giving you full particulars and sample pages of this rare set of books, but you must write to-day, stating whether you are interested in cloth or half morocco binding.

CLINTON T. BRAINARD, 425 Fifth Ave., New York. (G. M. Apr., '06)

Please send me particulars. I am interested in the..... binding.

Name.....

Address.....



New Sweet Peas

For 25 Cents we will mail, postpaid, one regular retail packet each of:
The New Gigantic "Orchid-flowered" JOHN INGMAN, the best and most beautiful rose-crimson, as shown on *Colored Plate* in our New Catalogue; **FLORA NORTON**, the best clear light blue,—and **JANET SCOTT**, largest and most lovely deep bright pink.

Also one full-size packet (seventy to ninety seeds) each of **DOROTHY ECKFORD**, the largest, white,—the famous pink-edged white **BURPEE'S DAINTY**—the lovely blended pink and buff **AGNES JOHNSTON**—the largest pure red **KING EDWARD VII.**—and a large packet of the unsurpassed special new **Giant-flowered BURPEE'S BEST MIXED FOR 1906**.

Each of these Collection Bases we include our up-to-date *Leaflet on Culture*, and also one packet of a beautiful new special strain of the Annual *Cissampelos*—the lovely green and white which the graceful daisy sprays impart such an attractive appearance to a bouquet of Sweet Peas.

Buy the Complete Collection of New Packets for 25 Cents postpaid. Five Collections mailed for \$1.00.

For 50 Cents we will mail all the above and also one regular packet each of *Burpee's Reselected "Earliest of All"*—the new *Marichissima* of Cabot's seedling, best buff and pink,—*Mrs. George Higginson*, Jr., the charming new "Sky Blue,"—*Mrs. Willmott*, large orange-pink,—*Burpee's Navy Blue*, the best dark blue,—*Burpee's Sweetest Selection*, and a large packet of the New Gigantic "Orchid-flowered" Seedlings of *Conquest Spencer*. In all, 10 packets, for 50 cents, a truly *Gigantic Collection*.

For One Dollar we will send all the above and also one regular fifteen-cent packet each of the *True Conquest Spencer* and *Helen Lewis*, shown on *Colored Plate*, also *David K. Williamson*, and the remarkable *Burpee's Earliest White*, now first offered, also a ten-cent packet each of the new *Hebe Pierce*, *Scarlet Gem*, and *Burpee's Earliest Snowbuns*—also a regular packet (75 to 100 seeds) of *Justa Cultivation*—*Mrs. Mrs. E. Keeney*—*Mrs. Dugdale*—*Othello*—*Eckford's Sadie Burpee*, and *Prince of Wales*.

In all these Twenty-nine Packets, at regular rates for 1906, amount to \$2.40, but all are included in this Special DOLLAR BOX,—mailed postpaid, to any address in the United States.

Mention THE GARDEN MAGAZINE and we will include another Grand New Variety, making 30 pkts. in the Box, worth \$2.40 for only One Dollar. If not already received, be sure to ask for the NEW THIRTIETH ANNIVERSARY EDITION of

BURPEE'S 1906 Farm Annual

Long known as "The Leading American Seed Catalogue,"—this is now brighter and better than ever before. An elegant book of 216 pages, it tells the plain truth about the Best Seeds That Grow.

WRITE TODAY! This advertisement will not appear again.

W. Atlee Burpee & Co., Philadelphia

COMPLETE ELECTRIC LIGHT PLANTS RICHARDSON ENGINEERING CO. HARTFORD CONN.

POULTRY SUPPLIES

We sell everything the poultryman needs. Incubators, Brooders, Feeders, Fountains, Feeders, Feeding Cutters, Egg Boxes, etc. Write to-day for a free copy of our Poultry Supply Catalogue. You'll be surprised how much you can save by buying all your supplies from one place.

JOSIAH YOUNG,
 23 Grand Street, Troy, N. Y.

Improve Your Dairy

No matter how good a herd of cows you have, or how well they are taken care of, or how carefully they are fed, your efforts are more or less wasted if the milk, the result of it all, is not taken care of in the best way possible.

Before cream or butter can be obtained the milk must, of course be skimmed, and to do the skimming most effectively you need a

U.S. Cream Separator

in your dairy. If the gravity or setting method is now used, a U. S. will increase your butter yield from 1-4 to 1-2. This is, if the skimmed milk from the old way was to be run through a U. S. Separator it would take out from 1-4 to 1-2 as much cream as was obtained by hand skimming.

Now there are other cream separators which will effect a saving over gravity system, but because the U. S. Separator holds the **World's Record** for clean skimming, it is a greater saver and bigger money-maker than any other.

We want to tell you how this record was made, and what it means—our attractive new catalogue will do it, and at the same time fully explain the construction of the U. S. We'll be glad to mail you a copy on request. Write us now, addressing,

U. S. Separator run by Electric Motor

VERMONT FARM MACHINE CO., Bellows Falls, Vt.
 Eighteen centrally located distributing warehouses throughout the U. S. and Canada.

"HORICUM" L. S. & S.

TRADE MARK

THE SAN JOSE SCALE KILLER

For Fall or Spring use

We aim to kill scale and not trees. One spraying will not kill all the scale. Many of them get under the rough bark. They are very minute, but their multitude makes the San Jose Scale a plague like the plagues of Egypt.

"Horicum" is simple, strong, and Ready For Use

SOLD BY SEEDSMEN. SEND for pamphlets on Bugs and Blights, worth having, to

HAMMOND'S SLUG SHOT WORKS

FISHKILL-ON-HUDSON, NEW YORK

The Problem of Spraying

SEND for Leggett's Spray Calendar, illustrated, a free booklet to those interested, showing the whole subject at a glance: what to apply and when to do it. This concise information will be of the greatest value to any grower. A postal card will bring you the booklet. The

DUST SPRAYERS

are the most effective, easiest and swiftest for all vegetables and fruits. Two acres of potatoes per hour; no barrel of water to haul; does the work of a power machine; dusts two rows as fast as a man can walk; adjustable. Will not get out of order and will last for years.

LEGGETT & BRO., 301 Pearl Street, New York City

CLEMATIS FOR SPRING PLANTING

The most gorgeous flowering vine for porch and trellis. It will festoon the veranda with a profusion of large, white red or purple flowers.

We can supply fine 2-year-old, strong, heavy field-grown roots which will blossom next August.

VARIETIES: *Henryly* (white); *Madam Andre* (red); *Jackmannii* (purple). Price 50c. each; \$6.00 per dozen.

Get OUR GARDEN COLLECTION of SMALL FRUITS for \$2.75 by mail to any address, enough to plant a large garden 68 strong plants, *Grapes, Currants, Berries*, etc.

Send for catalogue.

H. S. WILEY & SON, Drawer 47, CAYUGA, N. Y.



TAKE THEM DOWN FROM THE HOOKS

Spring is a dangerous time for furs, for that is when moths, damsones and dust are at their worst. Protect your clothing in a

Piedmont Cedar Chest

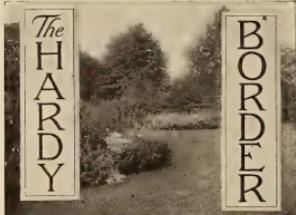
No need to use "moth-balls" or "camphor trunks!" The Piedmont Cedar Chest gives us absolute protection from the ravages of moths and all injurious insects, as would cold storage, which nearly equals in a year the price of a chest. Lasts a lifetime and keeps articles sweet, clean, fresh and ready for immediate use. The Piedmont, with its delicious, enduring cedar odor, is both **fast and new in proof**. Made in several sizes, of fire-resistant Southern Red Cedar, fitted with handsome trimmings. An ideal Wedding or Birthday Gift.

You run no risk. If not perfectly satisfied with the chest return it in five days at our expense and get your money back.

They are shipped direct from factory to your home, freight prepaid.

Write for booklet with full info, mention and factory prices.

Piedmont Furniture Company
Dept. W., Statesville, N. C.



A Perennial for Late Summer Flowers

THE turtle head (*Chelone Lyoni*) is one of the best of hardy border plants. It forms in one season, a handsome, compact-growing plant, three to four feet high, with bright attractive foliage, which is crowned with close-growing spikes of deep rose-purple flowers resembling a turtle's head. It continues in bloom for several weeks during August and September.

A more common form is the white turtle's head (*Chelone glabra*). It has a more slender growth, and does not possess that compact, symmetrical habit of *C. Lyoni*.



MASSED RHODODENDRONS ON A NEW ENGLAND ESTATE

We Can Save You Money

on
Rhododendron Maximum and Kalmia Latifolia

Write us for prices on hundred, thousand or carload lots. We guarantee the quality of the plants to be the finest obtainable. Our nurseries of over 100 acres contain a stock of Shrubs, Trees and Evergreens which cannot be surpassed. Send us your list of wants.

New descriptive catalogue on application.

THADDEUS N. YATES & CO.
Mount Airy Nurseries
Philadelphia, Pa.

ORCHID PLANTS

(Easily Grow)

The ten most popular varieties which will flower the first season, together with directions for growing them, \$20.00.

Catleya Labiata	Cologene Citrata
Catleya Citrina	Ocotelepossum Citrosium
Laelia Anceps	Dendrobium Nobiliss
Laelia Autumnalis	Cypripedium Insigne
Laelia Albida	Ocicidium Cavandishianum

ORCHID PEAT AND MOSS

SIEBRECHT & SON,

Rose Hill Nurseries, New Rochelle, N. Y.



The red turtle head (*Chelone Lyoni*) flowers during August and September in a moist shady place!

Some growers give a very heavy mulching of manure during the summer months, and, as the plants are very gross feeders, this is no doubt beneficial, but I have always successfully grown turtle heads without it. They will sometimes grow in an open, exposed position, but their leaves are generally burned, and their blooming qualities greatly reduced. Turtle heads grow very readily on all soils where moisture and partial shade are given.

The blooming period may be extended one month, and their height reduced nearly one half by cutting back in the spring.

The plant may be increased by division in the spring (March to May). Each small piece of the crown that can be taken off with a root attached will make a flowering plant by October. Seeds may be sown as soon as they are ripe in late summer.

Connecticut. HERBERT GREENSMITH.

PLANT A PATCH OF PEANUTS



Dixie Giant. (Natural Size.)

These are varieties of peanuts adapted to every section of America. We will send a quart of the two varieties (large and small) best adapted to the section in which they are to be grown, together with our illustrated treatise on "PEANUT CULTURE" and the "A.C. Nut Journal," a year for \$2.00, the regular price of the Journal alone. Write at once.

AMERICAN NUT JOURNAL, PETERSBURG, VA.

STRAWBERRY PLANTS

Virginia and Chesapeake, winners of \$500 GOLD PRIZE offers; also Cardinal Commonwealth, North Shore, Gals Early, New York, Jean Mary, Stevens Champion, and so others; best list, good stock, reasonable prices. Descriptions: Luscious and Austin's "Cabbage" New Volga and so other.

SEEDS Cucumber: Pennsylvania, Illinois Prize.
Allen's Pride of the Market, Arlington Spine, Shumrock, etc.
Cantaloupes: **Allen's First Choice,** True Rocky Ford, **Tomatoes:** **Luscious's Choice, Allen's Best,** Chalk Jersey, **Stevens' Earliest,** Earliest, etc. **Kansas King,** Eighty Day Yellow Dent, Maryland Queen, **Field Corn,** Best new and standard Garden, Field and Flower Seeds, **Asparagus Roots,** Special Agricultural Appliances, etc. **50 PAGE CATALOGUE FREE.** Send address on postal NOW. It tells about lots of good things for the farm and garden and where to get them.

W. F. ALLEN, Dept. 42, Salisbury, Md.

BURT'S SUPERB DAHLIAS

Grand Prize—St. Louis Gold Medal—Buffalo

Highest Possible Honor at Both Expositions.

H. F. BURT Taunton, Mass.



SUN-DIALS

with or without PEDESTALS

Send for Illustrated Price List

Hartmann Bros. Mfg. Co.

New York Office, 1123 Broadway Mt. Vernon, N. Y.

GLADIOLI



FROM
WILLOW
BANK
NURSERY

NEWARK,
Wayne Co.
New York
Stephen Fish Sherman
Proprietor

Send 50 cents

and receive 12 Bulbs of the "SILVER SELECTION" post paid to any place in United States or Canada.

Dept. G.

Catalogue Free

10 ROSES \$1.20

IMPORTED stock of dwarf, hardy varieties, fresh from Holland, ready for planting now.

One variety in each bundle of ten—no assortment. One dozen assorted varieties, your own selection, for \$2.00.

We sold 5,000 like these last fall, and received plenty of compliments from our customers as well as many duplicate orders.

Here are the varieties. Send your orders promptly to avoid disappointment.

Gloire de Dijon, salmon and yellow.
La France, silvery.
General Jacqueminot, brilliant crimson.
Caroline Testout, lilac monthly.
Ulrich Brunner, cherry red.
Duke of Edinburgh, bright crimson.
Gloire de Margottin, lively red.
Fisher Holmes, velvety crimson.
Baroness Rothschild, light rose.
John Hopper, rose, crimson center.
John Laing, soft pink.
Magna Charta, lovely pink.
Anna de Diesbach, lively carmine.
Prince Camille De Rohan, deep velvety crimson.
Mme. Clas. Wood, reddish crimson, very free.
General Washington, red shaded crimson.
Perle des Blancches, pure white.
Crimson Rambler, crimson.
Paul Neyron, dark rose.
Mme. Plantier, white.
Géant de Batailles.
Frua an Teplitz, crimson red.
Grand Karl Druschki, pure white (and a good one).

STANDARD OR TREE ROSES
6 in a lot, \$1.45

All the above colors strong standards.

HARDY RHODODENDRONS
75c.; Doz., \$7.80

Prince Camille de Rohan, white with rose.
Herbert Parsons, violet.
Parsons' Glorious, rosy white.
Catawbiense Alba, white.
Roseum Elegans, rosy purple.
Cunninghami, white.
Ponticum, tinged white.

CLEMATIS

6 in a lot of one variety, \$1.25

Jackman, rich royal purple.
Gypsy Queen, rich purple.
Fairy Queen, pale flesh, pink bar.
Gnie, lavender blue.

Azalea Mollis, orange yellow flowers, 50c.; per dozen, \$4.86.

Single Tuberous Begonias, crimson, white, pink and salmon, 60c. doz.

Double, same colors, 50c. doz.

Gloxinias, spotted and mottled, \$1.00 doz.

Hydrangea paniculata grandiflora, dwarf, 20c.; \$15.00 per 100.

Hydrangea p. g., tree shape, good heads, 50c.; \$5.00 per doz.

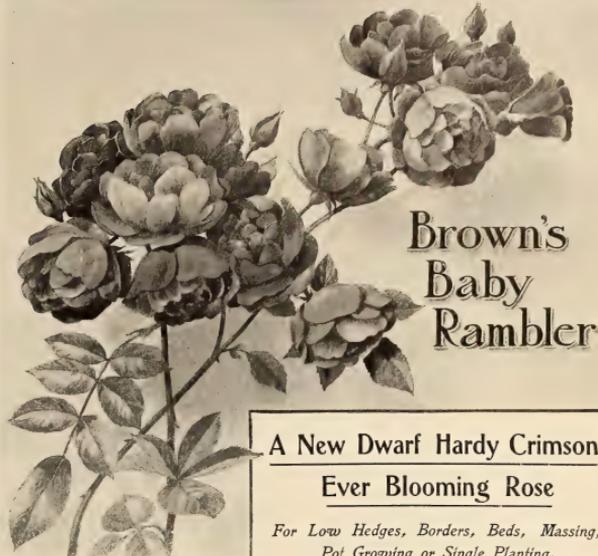
PRIVET FOR HEDGING

	AGE	HEIGHT	PER 100	PER 1,000
Strong	1-year-old,	15 to 24 inches.	\$2.50	\$250.00
"	"	24 to 30 "	3.50	350.00
"	"	30 to 60 "	5.00	500.00
Selected	"	30 to 42 "	6.00	60.00

We are holding auctions every Tuesday and Friday at 11.30 and would be pleased to mail you our lists.

Address Auction Dept.

WM. ELLIOTT & SONS
215 Fulton Street, New York



Brown's Baby Rambler

A New Dwarf Hardy Crimson Ever Blooming Rose

For Low Hedges, Borders, Beds, Massing,
Pot Growing or Single Planting.

NEVER before has such a rose been produced. Covered all summer long from June to frost out-of-doors, and every day of the year indoors, with clusters of crimson flowers. Grows only about 2 ft. high. Needs no support, perfectly hardy. We can scarcely convey an idea of the beautiful effect of long borders of this rose along fences or shorter hedges and formal beds or masses in suitable places. It is the famous crimson rambler dwarfed and made richer in color.

We discovered this rose 3 years ago in France. We secured exclusive control of it for America. We have carried our plants through the past two severe winters in Rochester without protection. We have placed specimens with all U. S. Experiment Stations to whom we would respectfully refer. The owners of large estates will find many uses for Baby

Rambler. We would be pleased to have our landscape gardeners make suggestions for you.

Express Paid Anywhere in the U. S.

DORMANT PLANTS

Extra Strong,	3 years,	each	\$2.00;	per doz.	\$20.00
"	"	"	1.50;	"	15.00
"	"	"	1.00;	"	10.00

POTTED PLANTS

Strong pot plants, 12 to 18 in. high, in full bloom, \$1.00 each, \$10.00 per dozen.

Strong plants, smaller size, in leaf, will bloom freely all summer, 50c. each, per dozen, \$5.00.

Order Some of these Roses NOW; you will want more later. CATALOG FREE.

Brown Brothers Nurseries

Growers of all kinds of Fruit and Ornamental Trees, Shrubs and Hardy Perennials, Suggestives for Parks, Grounds, Estates, *Forced on request.*

ROCHESTER, N. Y. The Flower City

Representatives Wanted Everywhere.





A PART OF THE ESTATE

Bees and Honey

Are you fond of raising your own eggs, fruit and vegetables? Why not enjoy the luxury of pure honey, comb or extracted, as you prefer, raised under your own supervision, by your own bees, right near your door. You can do it with less trouble than is required for any of the above mentioned, and besides there is a pleasure in it peculiarly its own. Italian bees of the right strain are not cross, but are handled for months at a time without a sting.

Shall we help you to how to raise your own honey? First get a good book, good hive and good bees.

Outfit No. 5

1 "A B C of Bee Culture"	\$1.00
1 year's sub. to "Gleanings in Bee Culture" .....	.50
1 Junior Cornell smoker .....	.50
1 No. 2 bee-veil .....	.35
1 brood-comb .....	.25
1 pair bee-lives .....	.25
1 colony of Italian bees in 8-frame hive	2.00
1 tested red-clover queen for same	2.00
2 hives for new swarms, painted and painted, with comb-honey super	5.70
Total	\$18.05

This outfit is particularly intended for those just beginning bee culture, who have neither bees, hives nor any equipment. Write for "Outfits for Beginners' list."

The A. I. Root Company

Medina, Ohio
New York City, Box 1037
Chicago, Ill., 144 E. Erie
Philadelphia, Pa., 10 Vine St.
Washington, D. C., 1100 Maryland Ave.

Wanted GARDENER who is thoroughly equipped to take extra charge of plants, lawns, lawns, and who is well versed in landscape gardening, maintenance with small plant material. Only strictly first class men need apply. Married men preferred. A permanent place with good wages and pleasant hours for right man. Address, giving full particulars with references, TRANS. P. O. Box 822, New York City.

MONEY IN FARMING AND GARDENING

When you grow **Hardy Northern Grown Seeds** produced on our great Minnesota Seed Farms. Renowned for being extremely hardy, of the most vigorous growth, early maturity, and great productiveness. Rare novelties of unusual merit in Vegetable and Flower Seeds, in Seed Corn, Seed Potatoes and Seed Potatoes. Large illustrated catalog with full descriptions free of send 10c for one packet each of our New Peerless Tree Tomato and Fire Bell Atom with catalog. 25 4th Street, Fairbault, Minn.



Children's Play Garden Bridges,

Towers, Castles, Mills, (with wheels that go), fountains, seats, etc., architecturally designed and built to stand weather. Stock patterns or made to order in any size.

See Child's Garden article page 27, February number of THE GARDEN MAGAZINE. Sketches and prices on application.

W. S. DODD, Twinflower Farm, E. CORINTH, VERMONT

BVLB DEPARTMENT

Starting Cannas and Dahlias

CANNAS and dahlias for next summer should be started during the latter part of March or early in April.

Cannas are usually increased by division of the rootstock, seeds being used only when raising new varieties. The roots which you saved last fall can be divided into pieces having at least one bud. If you have plenty of material it is better not to divide the plants closely, three or four buds to a piece are better.

Put the pieces of roots in pots, using a rich, well-drained soil, and place in a hotbed or warm place in the house. They will soon start, and with ordinary care they will be strong plants by planting-out time.

Harden them off before planting in the open. They cannot stand frost.

Division of the roots is by far the easiest and most satisfactory method for the amateur to use when reproducing dahlias. The potato-like tubers are separated from each other but care must be taken to secure with each tuber a piece of the crown. The tubers do not have buds as do potatoes, so are unable to develop plants without a piece of woody crown which buds.

Another good way is to put the whole root in the gentle heat of a hotbed, covering it with soil. When the plants start they can then be divided. By this method the inexperienced operator can see just what he is doing when making the division.

Although the chief reason for growing dahlias from seeds is to secure new varieties, many people who wish a mass of color and not the finely formed blooms grow many this way each year. Seeds should be sown in March; such plants will give a good show of flowers before frost. Treat them as annuals as described elsewhere in this number.

The first bulbs of gladioli should be planted as soon as the ground is fit to work. These will bloom in July and August. The season may be prolonged until frost by making successive plantings every two weeks until about July 1st.

If you grew gladioli last year you will probably find on looking them over that they are now in clusters. Separate them, or the plants will be crowded this year.

Avoid fresh stable manure, and, instead, use 600 to 1,000 pounds of a complete commercial fertilizer per acre, or 1 or 2 oz. to a square yard.

Plant the bulbs two inches apart and four inches deep and, while it is not necessary, it is better to set them right side up.

It takes three years to grow bulbs of flowering size from seed.

N. T. BARNES.

How to Build a Telephone Line to Your Farm

FREE We have just published several new books, which we will send free to parties interested. They tell you just how to proceed to build a telephone line to your farm; how to increase your neighbors; how to organize the company; and how easily and cheaply such a line can be built. One of the books describes

Stromberg-Carlson Telephones

the kind that makes rural lines successful. Write for booklet "How the Telephone Helps the Farmer," and also for the book, "How to Build a Rural Telephone Line." They will furnish you valuable information you can get in no other way. Simply drop a postal card asking for the books and for any other facts you may desire. Do it today and save delay.



Lawn Fertilizer

SHEEP MANURE is unequalled for top dressing the lawn in early Spring. It makes a complete fertilizer and is especially rich in nitrogen. Spread on evenly while the ground is still frozen; the Spring rains will wash in the fertilizing elements ready for the young roots immediately growth starts. There is no danger of carrying in weeds since sheep manure is used.

Vegetable Garden and Orchard

promoting a steady, rapid growth. It is non-odorous, is cleaner, and richer than stable manure.

It is also excellent for fertilizing the

10 lbs. ... \$0.35 100 lbs. ... \$1.50
50 lbs. ... 1.00 Per ton ... 25.00

CAIRNSMUIR FARM, New City, N. Y.

MONADNOCK

OLD-FASHIONED FLOWER GARDEN

The sweet old-fashioned flowers grandmother used to plant are again coming into prominence. Nothing so sweet and pretty for cut flowers as those of olden times. A corner of your garden devoted to them will be a delight the whole season through. For cash or on stamps, we will mail you postpaid our "Grandmother's Flower Garden," with full cultural directions. Consists of 50 full-size packets of seed of these beautiful flowers. Don't miss this opportunity for securing hours of enjoyment.

This offer we can afford to make only as a means of introducing ourselves to new customers. We send with the collection our 72-page illustrated catalogue describing the best things in flowers and plants. Housed, truthful descriptions with no exaggeration, therefore no disappointments.

Send in-day before our supply of collections is exhausted
MONADNOCK GREENHOUSES
KEENE, N. H.

GREENHOUSES

The Three Most Fashionable Shrubs

The three hardy flowering shrubs that society discusses at Newport and other fashionable resorts are Rhododendron, Azalea, and Mountain Laurel. And no wonder, for while they lack the fragrance and sentiment of the rose they are immeasurably superior to the rose in the variety of colors, in size of flower clusters, and above all, in the magnificence of their background for no other plants of any kind have their flowers set off by so rich and dense a mass of broad, glossy dark green leaves. Even in Winter they are full of hope and cheer and promise, with their evergreen foliage topped by huge flower buds.

Superb effects are obtained by planting in the woods, along the drive leading to the house on an estate, or in the shady locations close to the house, and for lawn specimens on shady lawns.

Thousands of dollars have been squandered on Rhododendrons by people who have planted them in sunny positions or in the wrong kind of soil, or without the proper mulch.

In order to prevent these enormous losses I have written a book on Rhododendrons, Kalmias and Azaleas, which I prefer not to sell because I want to make it a contribution to American Floriculture. I will gladly send this to anyone who is interested.

We control the largest collecting area in America, comprising 30,000 acres, and are able to supply the very choicest stock of these evergreens in any size and quantity. There is, we believe, not a more extensive single stock in the world. In addition to these evergreens we have a fine stock of Trees, Shrubs and Hardy Plants. Our illustrated catalogue describes these in detail.

READING NURSERIES

J. Woodward Manning, Prop., Reading, Mass.



10 EVER-BLOOMING ROSES 25¢

All strong growing & free flowering. My Surprise Rose Collection contains only the choicest varieties. Are grown on their own roots and will bloom freely this Summer, either grown in pots or planted out in the garden.

ORDER NOW. DON'T WAIT
Send for free Catalog.

- 10 ROSES 25 CENTS My Bargain Plant Collectors**
- 10 Chrysanthemums, Prize-winning varieties, . . . 25 cts.
 - 10 Geraniums Odore, Charming hybrids, . . . 25 cts.
 - 10 Mammoth Flowering Verbenas, all colors, . . . 25 cts.
 - 10 Gladiolus, the loveliest and prettiest of all, . . . 25 cts.
 - 5 Assorted Plants, for garden or pot culture, . . . 25 cts.
 - 5 Broad-leaved Dwarf Paul Robersons, . . . 25 cts.
 - 5 Splendid Flowering Fuchsias, for drops, . . . 25 cts.
 - 5 Splendid Flowering Geraniums, double and single, . . . 25 cts.
 - 5 Carnation Pink, the Divine Flower, assorted, . . . 25 cts.
 - 5 Gladiolus Flowering Aquinas, assorted, . . . 25 cts.
 - 5 Gladiolus Flowering Canas, . . . 25 cts.
- SPECIAL OFFER** Buy 5 Sets for \$1.25, or the entire lot for \$3.25 postpaid.
- MISS MARTHA HISEK, Box 40, URBANA, ILL.



LELAND & HALL CO.

WORKERS IN STONE

557 FIFTH AVENUE
NEW YORK

STUDIOS: PIETRASANTA, ITALY
LONG ISLAND CITY

WORKS: BARRE, VT.

Invite special attention to their unequalled facilities for designing and executing the highest grade of garden adornments, man-

gels, tables, statuary, altars, fountains, monuments and mausoleums, in marble, granite and stone.

Also invite inspection of the pieces in stock. Designs and prices sent upon request.



FOR THE HARDY AND TENDER GARDEN

HARDY PERENNIALS MAY NOW BE PLANTED

We Offer a Choice Collection

especially in PHLOX, HARDY SUNFLOWERS, PEONIES, IRIS, etc. Also the BEST CHRYXANTHEMUMS, CARNATIONS, CANNAS, GERANIUMS, and OTHER TENDER STOCK.

Send for "Profusely Illustrated Catalogue, containing Many Special Offers—and ORDER STOCK NOW!"

NATHAN SMITH & SON

42 W. Maumee Street, - - - - Adrian, Michigan

Ornamental Fixtures for Country Grounds



- Lawn and Park Fountains
- Aquaria and Aquarium Fountains
- Drinking Fountains
- Flower Vases in Cast Iron and Bronze
- Statuary, Settees and Chairs, Tree Guards
- Railings and Entrance Gates
- Gas and Electric Light Posts and Lamps
- Stable and Cattle House Fittings and Weather Vanes

We issue separate catalogue of each of the above, which will be sent on request. Address



Copyright, 1903, by the J. L. Mott Iron Works.

ORNAMENTAL DEPT.
The J. L. Mott Iron Works, 84 to 90 Beekman Street, NEW YORK

Shrubs for Continuous Bloom

THE usual shrubby border is without flowers from June until the advent of the charming Hydrangea in September.

We can tell you how to have your grounds gay with flowers from April through to November. We can make you a plan of carefully selected shrubs that massed on the lawn or border will give you exquisite masses of color all season through, culminating in Autumn with brilliant foliage and berry effects. There will be no gaps in mid-summer when you want to enjoy your garden most.



Altheas (Rose of Sharon) planted as a hedge. A shrub that flowers all Summer.

We can suggest for such early bloom a perfect shrub that is covered with beautiful starry white flowers three inches across, toward the end of March—*Magnolia stellata*, totally unlike the common Magnolias, because of its exquisite star-like flowers. And do you know that rare and interesting shrub, the Purple Callicarpa, which has brilliant flowers in August and September?

It will be a pleasure for our landscape department to assist you, without charge, in suggesting effective landscape arrangements, and help you solve any difficult problems you may have. With a nursery complete in every particular we can supply every variety of Shrubs, choice Blue Spruce, Evergreens and Conifers, Ornamental Shade and Weeping Trees, Hedge Plants, Native Rhododendrons and English Hybrids. Roses, Hardy Vines, Hardy Ferns and Grasses, Old Fashioned Hardy Flowers, Trained and Other Fruit Trees, Small Fruits, etc.

These are all described in our New Illustrated Catalogue which we shall be glad to send to serious inquirers. Our Landscape Department will be pleased to correspond with parties intending to lay out or improve their grounds. The general supervision of private estates, and old-fashioned gardens a specialty.

Visitors to our Nurseries are always welcome.

BOBBINK & ATKINS,

Nurserymen, Florists and Landscape Gardeners.

RUTHERFORD, N. J.

DREER'S SPECIALLY... PREPARED ROSES

for Garden Culture

All carefully selected 2-year-old field-grown stock that will produce a full crop of flowers this year. In our GARDEN BOOK we offer over 150 of the choicest Hybrid Perpetual, Hybrid Tea, Tea, Moss, Sweet Brier, Climbing and other Roses. We especially recommend our collections as under:

TWELVE BEST HYBRID PERPETUALS

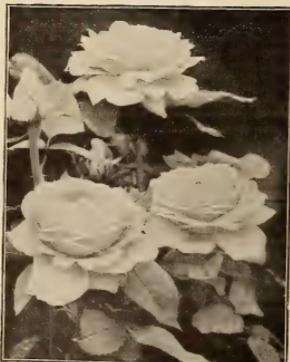
Anna de Diesbach, Baron de Bonstettin, Baroness Rothschild, Gen. Jacqueminot, Gloire Lyonnaise, Magna Charta, Margaret Dickson, Mrs. Crawford, Mrs. Laing, Paul Neyron, Prince Camille de Rohan, Ulrich Brunner. Price \$4.00 per doz., strong 2-year-old.

TWELVE BEST HYBRID TEAS

Killarney, Belle Siebrecht, Bessie Brown, Cap. Christy, Caroline Testout, Ideal, Kaiserin Augusta Victoria, La France, Souv. de Wooten, Gruss an Teplitz, Helen Gould, Viscountess Folkestone. Price \$5.00 per doz., strong 2-year-old.

All are fully described in our GARDEN BOOK, which is acknowledged to be the finest and most complete catalogue of Seeds, Plants and Bulbs published. A copy will be sent FREE to those who mention this magazine.

HENRY A. DREER, 714 Chestnut Street, Philadelphia, Pa.



A Record-Breaking Nasturtium

I HAD an unusually large plant of dwarf nasturtium last season. It was so large that it crowded out all the other plants in its vicinity.

On the twelfth of May I put ten seeds of a dwarf nasturtium in a row in the garden between two rows of vegetables which were four feet apart. The seeds were one foot apart in the row.

The soil and the exposed location seemed just suited to their needs, for they thrived from their first appearance above ground. The one which proved such a wonder was extra large and thrifty from the start, and especially attractive, as the foliage was a delicate apple green. Before long the plants on either side began to be crowded by the growth of this one, so I pulled them out; two or three weeks later it became necessary to dispose of the next pair of plants; then the vegetables on either side fell before the onslaught. Drought had no effect in checking the spread; for when small bushes near it withered and died during a hot spell when I was away and no one took sufficient interest in them to water them, this one seemed undisturbed and devoted its energies to covering ground.

On the second of October when the photo-



The dwarf nasturtium (*Tropaeolum minus*) is one of the best hardy annuals for quick results. This one grew 22 inches high and six feet in diameter

graph was taken, the plant was twenty-two inches high and five feet across. There were at that time but few blossoms, all the energy had apparently gone into leaves, but it was full of buds. By the twentieth of the month it was a mass of bloom and had increased to six feet in diameter. A week later it was killed by the frost, but had shown no signs of diminished ardor. A whole flower bed eighteen feet around is a large one, and when one thinks of a single plant occupying so much space it seems incredible.

The bush shown in the photograph, immediately by the side of the big one, is six feet in circumference and is unusually large for a dwarf nasturtium, but seems a veritable pigmy in comparison with its huge neighbor.

No unusual attention was paid to this plant, except on the first of August I dug up the ground about it and piled the earth firmly about the roots; after that it was left alone and it has no water except the rain. No fertilizer was applied except the regular top dressing that had been scattered over the entire garden in the spring; so the bush is not the outcome of a forcing process.

Long Island.

GRACE L. WEEKS.



CACTUS DAHLIA.

DAHLIAS FOR THE GARDEN

Flowers from July to Late Frost

We offer this magnificent collection of the four most important types, decorative, show, cactus and single, with an astonishing range of colors; all blooming first season.

- Mrs. Roosevelt** (Decorative)
Immense flower of the most exquisite delicate rose.
- Clifford W. Bruton** (Decorative)
Finest canary yellow.
- Henry Patrick** (Decorative)
Pure waxy white, pointed petals.
- Wm. Agnew** (Decorative)
Finest glistening scarlet-crimson.
- A. D. Livoni** (Show)
Soft clear rose, great bloomer.
- Kriemhilde** (Cactus)
Exquisite shell pink, twisted petals.
- General Buller** (Cactus)
Rich velvety crimson, each petal tipped white—splendid.
- Perle de la Tete d'Or**
Grandest white decorative, resembling a rich, white chrysanthemum.
- 20th Century**
Grandest single variety, rosy crimson tipped white, changing to almost pure white.
- Zulu**
Jet black changing to deepest maroon.

SPECIAL: We furnish, EXPRESS PREPAID, strong field roots of any one of above for 20 cents, or six for \$1. The collection of 10 will be sent prepaid for \$1.50.

We also offer Dahlias, choice assortment of colors, in strong undivided field roots per dozen \$1.00, per 100, \$6.00, not prepaid.

Our March offer, page 162 THE GARDEN MAGAZINE for March, holds good for April.

With every collection we send free a package of rare Dahlia seed.

On application we mail you our 28th ANNUAL CATALOGUE of flower seeds, bulbs, plants, etc.

H. H. BERGER & CO., 47 Barclay Street, New York City

Send for our new
**Special Dahlia
Catalogue**



Mrs. Roosevelt blooms are 6 inches to 8 inches



A snapshot of our young apple orchard seven years old. One tree produced one and a half bushels the third year. Some trees with over one barrel this year.

Are You Waiting For Advice?

If So, Write Us

Experience is the best teacher. We have had years of it and will give the benefit to you. Let us be of assistance. . . .

GET YOUR ORDER IN NOW

We have a full assortment of choice Nursery Stock in Fruit, Forest and Ornamental Trees ready for Spring planting, also Shrubbery, Roses, Asparagus, Vines, Small Fruits, Herbaceous Plants, and California Privet. Everything for the Ornamental Planting of Avenues, Parks, Lawns, Flower or Fruit Gardens, etc. Large Tree Planting and Landscape Gardening a specialty with us. Send for our Free catalogue. Address

The STEPHEN HOYT'S SONS CO.,
NEW CANAAN, CONN.

Telephone, 148-2 South Norwalk, Conn.



An exquisite effect produced by massing Foxgloves.

Hardy Flowers for the Old-Fashioned Garden

Charming Foxglove for massing in the shrubbery; stately Iris, Campanulas, Columbine, Phlox, Golden Glow, Trilliums, and all good Hardy Herbaceous Perennials for the garden border

Native Perennials for the Wild Garden

Our stock of native plants is based largely upon the rich, wild flora indigenous to this soil. Having been given nursery treatment, they are now unequalled for making beautiful wild gardens. Have you ever tried a wild garden? Located in some secluded spot, it will prove a continuous delight to you. Let us help you make one this year.

Catalogue sent on application. Expert advice, plans, etc.

SHATEMUC NURSERIES
BARRYTOWN, DUTCHESS COUNTY, NEW YORK



Rhododendrons Carefully Planted in Varying Size for Mass Effect, and A Fringing Border of Deutzias

We have one of the most complete nurseries in the country, where we grow **Trees, Shrubs and Hardy Plants** in endless variety. Landscape Gardening and Contracting. Planting plans and estimates submitted. Where planted by us we guarantee our stock to grow. Write for our handbook, "The Beautifying of Country Homes."

ROSE HILL NURSERIES, Siebrecht & Son

Nurseries: New Rochelle, N. Y.
Fifth Avenue and 38th Street, New York

Shrubs Always in Bloom

By the proper selection of shrubs you can have a gorgeous display of flowers in the shrubby border or massed on the lawn from April until November. There are so many shrubs of varying merit that it is often difficult for the amateur to make proper selection. From our extensive stock, which embraces every good variety, we have made a careful selection of the best for continuous bloom. They number twenty-two, and are as follows:

APRIL AND MAY	JUNE AND JULY	AUG. AND SEPT.
2 Magnolias, pink and white	2 Silver Bells (Halesia)	1 Aralia Spinosa (Hercules Club)
2 Forsythia (Golden Bell), yellow	4 Lilacs, pink, white, purple and mauve	3 Berberis in colors, red berries all winter
2 Dogwood (Cornus florida)	2 Lonicera (Bush Honeysuckle)	1 Clethra alnifolia, pink and white
3 Spirea, white, three varieties	1 Asarum nodiflorum	1 White Pepper (Pepper Bush)
3 Deutzias, pink and white, three varieties	4 Weigela, pink, white, red and crimson	1 Hibiscus, Rose of Sharon, white, pink and crimson
1 Flowering Almond, double pink	1 Hawthorn, white, red and pink	
1 Calycanthus floridus	4 Syringas (Mock Orange, Philadelphia), orange blossoms, four varieties	
	1 Golden Chain (Laburnum), yellow	
	1 Snow Bells, Viburnum	
	3 Japanese Rosa Rugosa	

We offer this superb collection of fifty fine shrubs, which will bloom this year, for \$25

RHODODENDRON MAXIMUM

This species of Rhododendron is rapidly becoming popular, and justly so, for it is the most ornamental hardy evergreen plant in cultivation. It gives immediate and permanent effect and is beautiful every season of the year. We have given the Rhododendron more study and attention than has perhaps any other nursery, and we have solved the problem of transplanting Rhododendron Maximum with success. Our stock is grown in the open, where it becomes full and compact and is set well w/ buds. We have under our sole control nearly 3,500 acres. We book orders by the carload, f. o. b. your station. We have now booked nearly 100 cars for April deliveries. Special prices on carload lots.

RHODODENDRON—HARDY HYBRID

We have the largest collection of strictly hardy Hybrid Rhododendrons in America. Not half hardy, but only such as will stand the winter without protection. We have them in all sizes and varieties. Prices on application.

Nurseries: New Rochelle, N. Y.
Fifth Avenue and 38th Street, New York

"BONORA" "Nature's Plant Food"

"The Elixir of Plant Life"

THE MOST WONDERFUL AND EFFICIENT CONCENTRATED QUICK ACTING FERTILIZER EVER PREPARED. USE "BONORA" IN YOUR GARDEN AND ENJOY

READ THE ANALYSIS

Nitrogen	17 per cent.
Equal to Ammonia	20 per cent.
Potash	4 per cent.
Phosphoric Acid	6 per cent.

"BONORA" is put up in dry and liquid form as follows (one gallon makes 100 gallons when diluted with water):

1, 2, 5 and 10-gallon kegs, per gallon,	\$2.00
Barrels (cont. 50 gals.)	1.50

Put up in dry form in all size packages as follows:

1 lb., making	28 gals.,	postpaid	\$0.65
1/4 lb.,	65 pints	"	.30
5 lbs.,	140 "	"	2.50
10 lbs.,	280 "	"	5.00
40 lbs.,	1,120 "	"	20.00
100 lbs.,	2,800 "	"	42.50
200 lbs.,	5,600 "	"	70.00

TENDER, JUICY, EARLY VEGETABLES

QUALITY in vegetables is the result of quick growth—the less time from planting to table the better they are—but to assure this rapid growth and development they must have an abundance of Nitrogen. "BONORA" contains 17 per cent. of this necessary element, much more than any other fertilizer, in a perfectly soluble state, so that the plants absorb and use it as soon as "BONORA" is applied. The result is an abundant yield of finest quality much earlier than is possible without its use. "BONORA" is not only especially strong in Nitrogen, but is a well balanced, quick acting, all around plant food, and should be used on all flowers, shrubs, berries, small fruits, etc., etc.

GREEN, VELVET LAWNS

Which will remain so throughout the Summer, may be produced by the application of "BONORA" now. The Nitrogen forces a quick, healthy growth of grass, while the Phosphoric Acid and Potash, which it also contains, makes strong, vigorous, deep roots. The fact that "BONORA" is used on the *Capitol Grounds* at Washington, by the Parks of Greater New York, and on hundreds of the most beautiful country estates, is ample proof of its efficiency as a lawn maker. Here are the names of a few upon whose country homes "BONORA" is used, not only upon the lawns, but in the greenhouses and conservatories as well: Hon. Jos. H. Choate, John D. Rockefeller, Jr., Hon. Cornelius N. Bliss, A. G. Vanderbilt, J. P. Morgan, etc., etc. Would they buy it if it was not the best?

You need "BONORA." Even a small package will convince you of its value.

BONORA CHEMICAL CO., 584 Broadway, New York
OR ALL SEEDSMEN

Plant for Immediate Effect *Not for Future Generations*



A large Juniper being burlapped, preparatory to shipping—the ball has been combed out to show the fine fibrous roots.

Start with the largest stock that can be secured! It takes over twenty years to grow such Trees and Shrubs as we offer.

We do the long waiting—thus enabling you to secure trees and shrubs that give an immediate effect.

A FEW SPECIAL ITEMS FOR SPRING PLANTING

IN EVERGREENS

Nordman Firs	up to 10 feet
Retinosporas	" 10 "
Arbor Vitae	" 12 "
Blue Spruce	" 8 "
White Spruce	" 10 "
White Pines	" 10 "
Hemlocks	" 10 "
Norway Spruce	" 10 "

IN DECIDUOUS TREES

Norway Maples up to 25 ft. and up to 10 in. diameter	Purple Beech . . . up to 18 ft. with spread of 14 ft.
Horse Chestnut " 16 " " 4 " "	American Elms " 18 " and up to 5 in. diameter
Tin Oak . . . " 16 " " 5 " "	Oriental Planes " 18 " " 4½ "
American Lindens up to 20 ft. and up to 6 in. diameter	

ANDORRA NURSERIES

WM. WARNER HARPER, Prop.

SPRING PRICE LIST NOW READY

CHESTNUT HILL, PHILADELPHIA, PENNA.

Every good store is a tree
where you may pick

The Tooth-Brush Tree

The tooth-brush was brown, brown alike in handle and bristles, and its shape was uncouth.

"It is a home-made article," said its owner. "It grew on a little tree, a tooth-brush tree. They have a tooth-brush tree in Jamaica. As we go out and pluck a peach or a pear, so the Jamaican goes out and plucks a tooth-brush."

"Literally, of course, he doesn't pluck a tooth-brush. He cuts off a twig and ravel's out one end into bristles. The wood, you see, is somewhat sponaceous, like slippery elm, and it has an aromatic flavor like dentifrice. It makes a tooth-brush of good quality."

"The bark of this singular tree is often ground into tooth-powder. Here is a box of the ground bark. It smells good, doesn't it? Though it makes no lather it keeps the teeth very white."

"Jamaica is undoubtedly the only country in the world where you can go out and pick not only your tooth-brush but your dentifrice from a tree."

—House Beautiful.

Pro-phy-lac-tic Tooth Brushes

Are demanded by all who are particular
in their habits.

The yellow box is the guarantee, not only that the brush has been sterilized, but that it has not been lying exposed in a dealer's show-case tray to be fingered by anyone who comes along. The Prophylactic after being sterilized knows no hand but yours. Each brush has a hook on which it can be hung to dry in the free air,—therefore, the Prophylactic is not only clean when you get it, but is kept clean while you use it.

The long crown tufted bristles instead of simply slipping over the flat surfaces, as does the ordinary brush, penetrate every crevice, reaching completely around even the backmost teeth. The curved handle makes it as easy to reach the inner as the outer surfaces.

LOOK FOR THE YELLOW BOX

The Prophylactic is made in two styles—"Prophylactic" rigid handle, and "P. S." (Prophylactic Special), new flexible handle; and in three sizes—Adults', 35 cents; Youths', 25 cents; Child's, 25 cents. All these in soft, medium and hard bristles, as you prefer. Any good dealer will supply your exact choice. **C** Send for the Prophylactic literature, FREE, telling more about these superlative brushes. We will send them postpaid if your dealer does not keep them and will not get them on your request. Insist.

FLORENCE MANUFACTURING COMPANY, 181 Pine Street, Florence, Mass.
Makers of Pro-phy-lac-tic Tooth Brushes, Hair Brushes, Nail Brushes, Military Brushes.



MAY

1906

Hardy Flowers
Fragrant Annuals
Home Grapes

Exhibition Chrysanthemums
Flowers After Frost
Tomatoes for Preserves

Spireas
A New Rose
Wall Fruit

10c.
\$1.00 a Year

THE GARDEN MAGAZINE



The World's Work



Country Life in America



Farming

NEW YORK
133 East Sixteenth Street

DOUBLEDAY, PAGE & COMPANY

CHICAGO
1515 Heyworth Building

UNDERWOOD'S DEVILED

ORIGINAL HAM



"BRANDED WITH THE DEVIL, BUT FIT FOR THE GODS."

NOTHING LIKE IT IN THE WORLD.

Underwood's Original Deviled Ham makes sandwiches that fairly melt in your mouth, and is delicious as a relish to fish and game cooked over the camp fire. Made only of the finest sugar-cured ham and the choicest of spices—always the same. If you want pure deviled ham, call for Underwood's, and look on the can for the little red devil.

Some kinds of so-called Deviled Ham retail for 10 cents per $\frac{1}{2}$ lb. can—Underwood's sells for more than twice as much. **Try it and you will see why!**

No sham in Underwood's, but **All Ham.**—That's the reason.

Avoid imitations: buy the genuine Original Red Devil Brand, for sale by all first-class grocers. If your grocer does not keep it, send his name and 15 cents and we will send you a $\frac{1}{4}$ lb. can.

WILLIAM UNDERWOOD CO.,

Boston, Mass.

TIFFANY & CO.

DIAMOND AND GEM MERCHANTS
STRICTLY RETAILERS NO AGENTS

For June Brides

Upon receipt of satisfactory references from any National Bank or responsible business house, Tiffany & Co. will send on approval selections from their stock to any part of the United States

Gold Wedding Rings

Engravings showing style, width and thickness sent upon request Prices according to size and weight

18-karat	- - - -	\$5.00, \$6.50, \$7.00 upward
22- "	- - - -	\$5.75, \$7.75, \$8.50 "

Fork and Spoon Chests

Tiffany & Co.'s copyrighted patterns of Sterling Silver Forks and Spoons, 925/1000 fine, in sets of 5 to 18 dozen and upward Prices include handsome, compact, hardwood chests, with lock and key

Cuts of Patterns Sent Upon Request

5 doz. Sets, Table and Dessert Forks; Table, Tea, and Dessert Spoons, }	-	\$100 to \$200
6 doz. Sets, Like 5 doz. Sets, with Breakfast Knives, }	-	\$140 to \$250
7 doz. Sets, Like 6 doz. Sets, with Table Knives, }	-	\$175 to \$300
8 doz. Sets, Like 7 doz. Sets, with Dessert Knives, }	-	\$250 to \$350

Fifth Avenue New York

37th Street

Formerly at Union Square

Tiffany & Co. always welcome a comparison of prices

Wedding Stationery

Marriage announcements, invitations for house or church weddings, admission cards, etc.

Mantel Clocks

Tiffany & Co. 8-day movement gilt-bronze frame, glass panels; striking hours and half-hours on Cathedral gong. Height, 10 to 14½ inches Photographs upon request \$20, \$35 and \$55 upward

Tiffany & Co. 1906 Blue Book

A compact catalogue, without illustrations—530 pages, with an alphabetical side-index affording quick access to Tiffany & Co.'s stock, with the minimum and maximum prices. Patrons will find this little book filled with helpful suggestions of artistic merchandise suitable for wedding presents and other gifts

Blue Book sent upon request without charge



OUTDOOR AND PRACTICAL BOOKS

For any information concerning any publications, address

GARDEN BOOK DIRECTORY, THE GARDEN MAGAZINE
No. 153-157 EAST SIXTEENTH STREET, NEW YORK CITY.



GOOD GARDEN BOOKS

THE GARDENS OF ITALY

Being a series of Illustrations from Photographs of the most Famous Examples of The Gardens of Italy by CHARLES LATHAM With descriptive text by E. MARSH PHILLIPS. With 300 beautiful half-tone illustrations. 2 vols., folio, \$48.00 net. A superbly illustrated work, treating most completely the deservedly famous and beautiful Gardens of Italy, fascinating alike to the lovers of Gardening, Architecture, Art, and History.

GARDENS OLD AND NEW—First Series

Profusely illustrated. 4to, \$12.00 net. "We could not, if it would, over praise the charm of this beautiful book. It is an example of the beautiful in books, it is a long time since we chanced on anything so noteworthy as 'Gardens Old and New'"—Birmingham, [Eng.] *Daily Post*.

GARDENS OLD AND NEW—Second Series

Containing Additional Examples, Beautifully Illustrated, of the "Country House and Its Garden Environment." 4to, *Profusely illustrated.* \$10.00 net.

THE ENGLISH FLOWER GARDEN

And Home Grounds. Design and arrangement shown by existing examples of Gardens in Great Britain and Ireland, followed by a Description of the Plants, Shrubs and Trees for the special Garden and their culture. By W. ROBINSON, English Edition. *Profusely illustrated.* 8vo., \$6.00 net.

ROSES FOR ENGLISH GARDENS

By MISS GERTRUDE JEXVILL and MR. E. MAWLEY. A Complete Rose Manual. Treatise of The Old Roses of English Gardens; New Roses for Free Fricolour Use, including Bowers, Arches and Pergolas; Roses in Gardens Formal, and Free on Houses, Walls, etc. *Profusely illustrated.* 8vo., \$3.75 net.

CHARLES SCRIBNER'S SONS
PUBLISHERS, 153-157 FIFTH AVENUE, N. Y.

PICTORIAL GARDENING SERIES

A wonderful new library of indispensable little volumes that go to the heart of modern gardening in a comprehensive way. Most convenient for carrying into the garden.

"The least experienced can read and understand them and put their teaching into actual and safe practice—those who are inexperienced will discover much that is of value and interest."—*Journal of Horticulture*.

Pictorial Practical Carnation Growing	\$0.60
(Profuse Illustrations)	
Pictorial Practical Rose Growing	.60
(100 Illustrations)	
Pictorial Greenhouse Management	.60
(100 Illustrations)	
Pictorial Practical Vegetable Growing	.60
(100 Illustrations)	
Pictorial Practical Gardening	.60
(140 Illustrations)	
Pictorial Practical Fruit Growing	.60
(100 Illustrations)	
Pictorial Tree and Shrub Culture	.60
(100 Illustrations)	
Pictorial Practical Flower Gardening	.60
(100 Illustrations)	
Pictorial Chrysanthemum Culture	.60
(100 Illustrations)	
Pictorial Practical Bulb Growing	.60
(100 Illustrations)	
Profitable Home Farming	.50
How to Manage a Horse	.50

(A practical "Black Beauty," everybody should read it)
Each 5 x 7 1/2, strong cloth binding, about 150 pages

SPECIAL OFFER

These twelve necessary volumes will be sent to any one address for \$6.00. Your choice of any six titles for \$3.25. *Prepaid on receipt of price.*

CASSELL & COMPANY,
LIMITED
43 and 4 East 19th Street, New York



Boys' Summer Camp

"Wilderness" in the Maine Woods (Sebago Lake Region)
The kind of vacation that does good. Mountain climbing, canoeing, fishing—the life a boy loves. Coaching trip through the White Mountains. Supervision and companionship of college-bred leaders and masters. Tutoring if desired. Seventh session begins June 28. Booklet on request.
IRVING V. WOODLAND, Jr.,
Adelphi Academy, Brooklyn, N. Y.

Classics, "for a Song"

Handfuls of the world's best at 1c. to 5c. Big list free.
"Bargains in World Wide Books," big catalogue free. Any book supplied lowest price anywhere.
"Where is it?" A unique index to everything: 10c., postpaid.
"The Best Hints," 1c. For pamphlets, zines, size, 10c.; 50c. size, magazines, 5c.; the best article at any price.
"Library of Universal Literature," all times, all languages, translated.
The best, less than one-fourth the cost of others.
The best of the largest, all times, all made, and best for use at any price, at one-third the cost of any rival.

ALDEN BROTHERS, Publishers, 413 Bible House, N. Y.

HAVE YOU SEEN THE OFFER OF GARDEN BOOKS ON PAGE 198 OF THIS MAGAZINE—FREE AS PREMIUMS.

Common Sense Gardens

By Cornelius V. V. Sewell

The author maintains that the flower garden is one of the most important rooms of the house, and that the planning and planting of it should be carried out under the personal supervision of the owner, and should reflect his or her individuality as much as the library or drawing room. The book aims to help the owners of small country places to lay out their grounds and make their gardens in an inexpensive as well as effective way.

Profusely illustrated

Large 12 mo., 400 pages, handsomely printed and bound. Price, \$2.00 net. (Postage 20 cents.)

JUST READY

THE GRAFTON PRESS PUBLISHERS
70 FIFTH AVENUE, NEW YORK

House & Garden

A Monthly Magazine

embodies the best efforts of the world's leading architects, landscape designers and writers on house and garden topics. Every number is finely illustrated with a wide range of photographs and plans—beautiful country places, garden scenes and other interesting subjects.

\$3.00 Yearly 25 cents a Copy

Cut out this advertisement and send it to us with your name and address and \$1.00 and it will pay for a five months' trial subscription. Very special so write to-day.

THE JOHN C. WINSTON CO.,
1008 Arch Street, Philadelphia, Pa.



To Know The Wild Flowers

As every lover of Nature desires to know them the best, quickest and simplest way is by means of

"A" Nature Studies

These enable you to identify each flower at a glance. You have at hand a picture of the plant; its classification and analysis in simple English; its history and its place in legend and poetry. Blank space for mounting each specimen and for making your own memoranda.

Each series of fifteen studies, identifying twenty-five or more different wild flowers, which blossom at about the same season, is complete and self-contained. Each series complete in itself. 25 cents, postpaid.

Attention—"The Wild Flowers of Early Spring" has been revised—"Spring Wild Flowers, April-May" has been revised—"May Flowers"

Send for folder with miniature reproductions of many flowers

The "A" Company
Box 846 H, Philadelphia, Pa.

"How to Do It" Books

Edited by PAUL N. HASLACK

Strong, neat cloth binding, size 4x7. 160 pages.
50 cents each, postpaid. Any five volumes prepaid
for \$2.00.

A Series of 27 Practical Manuals, each profusely illustrated and chock full of practical advice. Among the titles are:

Taxidermy—108 Engravings and Diagrams.
Skinning, stuffing and mounting birds, mammals, fish. Preserving skins, insects, birds' eggs, etc.

Photography—70 Illustrations.

Cycle Building and Repairing—New and Revised Edition. 100 Illustrations.

Wood Finishing—Staining, Varnishing, Polishing, etc. Engravings and Diagrams.

Sewing Machines. Their Construction, Adjustment, and Repair—177 Illustrations.

Violins and other Stringed Instruments—180 Illustrations.

House Decoration—Whitewashing, Paperhanging, Painting, Etc. 79 Engravings.

Harness Making—107 Engravings.

Saddlery—99 Engravings.

Upholstery—162 Engravings.

Beehives and Bee Keepers' Appliances—155 illustrations.

A list of all the titles and contents mailed free.
You may return any book if not satisfied.

CASSELL & COMPANY, Limited

43 EAST 19th STREET NEW YORK

Two New Indispensable Volumes Comprising

The American Horticultural Manual

In Two Volumes

By PROFESSORS N. E. HANSEN and J. L. BUDD

Send for catalogue and circulars of many of the best books in Horticultural Science. Free on application

JOHN WILEY & SONS, Publishers
43 and 45 East 19th Street, New York

BEAUTIFUL GROUNDS

We furnish professional advice and thorough plans for the artistic and economic development of landscape without the usual prohibitive commissions. We have a corps of competent superintendents and foremen, four sizes of the most modern tree-moving machines and a 110-acre collection of specimen trees, shrubs, evergreens and garden plants, the most progressive facilities of any nursery in the country.

COTTAGE GARDENS COMPANY
Queens, Long Island, N. Y.



A NOVEL FEATURE

THE MAY CENTURY

FIRST GARDEN NUMBER
OF THE CENTURY

SPECIAL GARDEN ARTICLES

NELLY CUSTIS IN THE MOUNT VERNON GARDEN

A beautiful colored frontispiece by Anna Whelan Betts of "Nelly Custis in the Mount Vernon Garden," gives distinction to the first "Garden Number of the Century."

THE OLD GARDEN AT MT. VERNON

By Francis E. Leupp. A brief sketch of Washington's garden, which was laid out with the precision so characteristic of him. Illustrated by Guérin. Also an account of a visit to Mount Vernon in the time of Washington, with plan of the grounds.

WHERE TO PLANT WHAT

By George W. Cable. A study in effects to produce a harmonious whole, taking into consideration natural and artificial surroundings, soil, light etc. Illustrated.

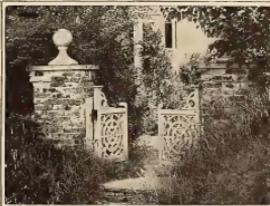
THE GARDEN OF THE SUN

By the late William Sherr, describing the charm of this new Mecca of the traveler, Sicily. Profusely illustrated by Jay Hambidge, who made a special trip to Sicily to make the pictures.

REFLEX LIGHT FROM AFRICA

By Charles Francis Adams. After studying English methods at Cairo and at Khartoum, and the African at home, Mr. Adams changed his views in regard to the Negro Problem in America. He states his reasons and conclusions with great force.

The second article de-



THE GARDENS OF CORNISH

By Frances Duncan, author of "Mary's Garden," showing the places of Stephen Parrish, Maxfield Parrish, Charles A. Platt, Norman Hapgood, Augustus Saint-Gaudens, Kenyon Cox and many others. Profusely illustrated.

AN ANCIENT GARDEN

By Helen Everton Smith. A delightful account of a garden at Sharon, Conn., that was planned or "sketched in" at the close of the Revolution. The narrative is full of the personal element and beautifully illustrated by Guérin.

THE ARCHITECTURAL TREATMENT OF A SMALL GARDEN

After conversations with Mr. Charles A. Platt. How to make the garden an effective supplement to the house to secure an artistic whole.

OTHER GREAT FEATURES

THE TRAINING OF THE HUMAN PLANT

By Luther Burbank. A powerful and significant article by the California wizard on the possibility of training the human species to gain the same remarkable results obtained in the vegetable kingdom, particularly in this country owing to the enormous immigration. Food and environment greater factors than heredity.

The Great Serials
Short Stories
Poems
Pictures in Color
Departments, etc.

Landscape Architects

WILLIAM PLUMB LANDSCAPE ARCHITECT

31 James Hill, New York City

Is prepared to undertake the construction and equipment of estates, parks, etc. Plans and estimates classified furnished free or on small plan. All operations under personal supervision. Twenty-five years' experience. Absolute satisfaction guaranteed. Correspondence solicited.

The Agricultural Experts Association

GEORGE T. POWELL, President

120 Broadway, N. Y.

DEVELOPMENT OF Country Places; Examinations made of Land with full reports and Suggestions for Improvement; Advice on General Management; Policies Outlined; Location of Buildings; Landscape Work; Orchard Development; Care of Forest Land and Live Stock. Correspondence invited.

JOHN NOLEN
LANDSCAPE ARCHITECT
HARVARD SQUARE CAMBRIDGE
MASSACHUSETTS

Ellsworth & Kirkpatrick
LANDSCAPE ARCHITECTS
Rural, Hydraulic and Sanitary Engineers
18 Dwight Street, Holyoke, Mass.

EMORY A. ELLSWORTH, M. Am. Soc. C. E., Consulting Engineer

Evergreens FOR EARLY MAY PLANTING

You have wanted evergreens and here is the best opportunity to get them. These are the kinds that will thrive on dry hills, cover land too poor for grass, and cheaper than mowing. They are beautiful, make quick growth, make efficient windbreaks, screens, hedges. They are low in price, abundant, easy to make grow hardy. Plant the smaller evergreens in beds, mulch to keep down weeds, and they grow at minimum expense. Plant some among the shrubs and on the lawn. Larger evergreens for immediate effect in quantity which we move by the best method.

White Pine	Prices 10 100	Densiflora Pine	Prices 10 100
2", 1 yr. seedlings,	.50	4 1/2", 2 yr. transpl.	1.00 8.00
3 1/2", 2 yr.	.75	1 1/2",	1.50 15.00
5 yr. transpl.	.50 4.00		
Fitch Pine		Bhotan Pine	
6 1/4", 2 yr. seedlings	.50	7", 1 yr. seedlings,	3.00
6 1/4", 2 yr. transpl.	.40 3.50	White Spruce	5.00
Scotch Pine		1 1/2", 1 yr. seedlings,	\$0 7.00
6 1/4", 2 yr. seedlings,	1.00	4 1/2", 2 yr. transpl.	1.50 10.00
6 1/4", 2 yr. transpl.	.50 4.00	1 1/2",	1.40 12.00
1 1/2",	1.50 8.00	Norway Spruce	2.00 20.00
Austrian Pine		Colorado Spruce	2.50 20.00
2 1/2", 1 yr. seedlings,	.50	2 1/2", 2 yr. transpl.	1.50 10.00
4 1/2", 2 yr. transpl.	1.00 8.00	Englemans' Spruce	2.50 20.00
6 1/4",	1.00 10.00	2 1/2", 2 yr. transpl.	1.50 10.00

General Nursery Stock **PACKING AT COST**
 Shade and Evergreen Trees up to 30 ft. high shipped by the carload
Old Fashioned Flowers

Send for Catalogue, "Trees for Long Island," and price list

12 Tree-movers for various types of trees and soil, carrying trees up to 8 ft. diam., 10 ft. high by 45 ft. wide, with the full natural root system spreading 30-40 feet. The permanently successful method.

ISAAC HICKS AND SON, Nurserymen and Scientific Tree-movers

WESTBURY STATION, LONG ISLAND N. Y.

Telephone 75W

NOVELTIES & RARITIES

How to Get Any Plant You Want

EVERY flower-lover who has tried to get a complete collection of any one group of plants, as lilies, peonies, columbines, campanulas, etc., has found that the rarer kinds must be imported from Europe. Nearly everyone who has imported hardy perennials in small quantities has had a costly and discouraging experience. The young plants are generally weakened beyond recovery, because they have not had special care on the steamer, and they lie around in the customs while the man wanting them is unable to get them. Often 90 per cent. is lost.

This unhappy state of affairs has held back the scientific side of floriculture in America, because the skilled amateur cannot afford to import complete collections, such as are required for the "Little Monographs" series in THE GARDEN MAGAZINE.

The hardship has been also felt by amateurs who wish to get only one plant at a time—particularly of novelties. There are half a dozen European catalogues of hardy perennials containing two or three times as many entries as the largest American catalogue. It is tantalizing to read of some bell flower, pyrethrum, gentian, larkspur, or peony that is said to have larger flowers than any hitherto known. After you have spent three evenings searching American catalogues for it in vain, you are in a mood to appeal to the President of the United States.

As a matter of fact, most of the "rare plants" that amateurs "can't find anywhere" could be found by some such simple device as getting a packet of postal cards, and asking all the nurserymen and seedsmen who advertise in THE GARDEN MAGAZINE for catalogues, or if they have the plant.

Anyone who has tried this and failed is welcome to write to THE GARDEN MAGAZINE for further assistance, as we are in touch with many unusual sources of supply, and can often help our readers.

The Brugmansia as a Houseplant

THE Brugmansia will thrive in any good garden soil with ordinary care, and I don't know of a better subject of the like habit for a house plant; it is a welcome change from rubbers, ferns and palms. By the middle of February or earlier the plant always shows indications of being in need of a well-earned rest; one by one the leaves turn yellow and drop off. It is then watered sparingly until it starts into life again, late in April, and puts on a new lot of leaves.

Michigan

HUGO ERICHSON.



MASSED RHODODENDRA 3000 ON A NEW ENGLISH ESTATE

WE CAN SAVE YOU MONEY

on Rhododendron Maximium and Kalmia Latifolia

Write us for prices on hundred, thousand or carload lots. We guarantee the quality of the plants to be the finest obtainable.

Our nurseries of over 100 acres contain a stock of Shrubs, Trees and Evergreens which cannot be surpassed. Send us your list of wants.

New descriptive catalogue on application.
THADDEUS N. YATES & CO.
 Mount Airy Nurseries, Philadelphia, Pa.



LAWN HOSE "THE KIND THAT LASTS"

This is the kind that you get when you buy them wearing our name and brand. You can make a positive saving of 50 per cent or more in cost of Lawn Hose by buying the genuine BULL-FROG BRAND SEAMLESS TUBE.

Because "BULL-FROG" BRAND costs no more and lasts over twice as long as the ordinary lapped tube kind. Nine-tenths of all hose trouble is because of faulty seams. (See Cut.)

SPECIAL OFFER—To widely distribute "BULL-FROG" BRAND. We will, if your dealer does not handle it, ship you, upon receipt of price on 50 Days' Free Trial, 1/2 in. 3-ply with brass couplings and nozzle complete for \$5.00 express prepaid East of the Mississippi River and North of the Tennessee line; equalized beyond. Money back if not satisfied. **FREE!** Free repair service both on "BULL-FROG" and other well-worn hose. Dealers should write and learn how they can increase their sales. Direct business, care, Reginald St. 477, TOLEDO, O.

The Toledo Rubber Co.
 Reference may bank in Toledo.

This is the kind you get when you buy them wearing our name and brand. You can make a positive saving of 50 per cent or more in cost of Lawn Hose by buying the genuine BULL-FROG BRAND SEAMLESS TUBE.

Arizona Petrified Wood
 Sections of logs and small specimens, unpolished, very cheap.
 FOR GARDEN ORNAMENTS, ROCKERS AND FOUNTAINS.
 Closing Out Entire Stock
DRAKE CO., Drake Block, St. Paul, Minn.

SUN-DIALS
 with or without PEDESTALS
 Send for Illustrated Price List H
Hartmann Bros. Mfg. Co.
 New York Office, 1123 Broadway Mt. Ver. Co., N. Y.

RIFE AUTOMATIC HYDRAULIC **RAM**
 (Water pumped by water power)
 No Attention No Expense Runs Continuously
 COUNTRY HOMES—FORMAL GARDENS
 FARMS, TOWN PLANTS
 RAILROAD TANKS IRRIGATION
 DAIRIES, ETC.
 5000 IN OPERATION
 80% efficiency developed
 Catalog and estimate free.

RIFE ENGINE CO.
 2109 Trinity Building, New York City.

SOME BIG BARGAINS IN HARDY BLOOMING PLANTS AND ROSES

Can be grown by everybody anywhere. Plant where they are to remain.

Special Offer of Six Popular Hardy Plants

The six hardy plants offered below will all bloom this year. We have selected them with a view of making a collection that will do well in all sections; one that we can recommend to give good results the first year. The plants are extra strong, vigorous and sure to bloom this year. They will grow larger and stronger each year. We offer this collection at an extremely low price considering the fine strong plants that will be sent. We have an immense stock and would like all lovers of hardy plants to give it a trial. We will send the six hardy plants, all charges prepaid, for 75 cents, or three collections for \$2.00.

Coreopsis Lanceolata Grandiflora



A very popular, hardy flower. The plant grows 15 to 18 inches high. The flowers are rich golden yellow, produced on stems 2 to 3 feet high. Excellent for cutting purposes. Flowers usually come in June and continue more or less the entire summer.

Price, 15c. each; \$1.50 per dozen; half dozen at dozen rates.

Eulalia Gracilis

A beautiful grass, growing to a height of 4 or 5 feet. It has graceful narrow foliage of beautiful bright green, with mid rib of silvery white. It produces plumes of silver gray, borne well above the foliage. May be used for center of vases, but is usually grown as a single specimen or in groups on the lawn.

Price 15c. each; \$1.50 per dozen; half dozen at dozen rates.

Gaillardia Grandiflora (Blanket Flower)

A very desirable hardy plant, blooming profusely from June until November. Center of flower deep maroon, petals orange, crimson and red, shaded into rings of color. Flowers 3 to 4 inches in diameter and of perfect form. Excellent for cutting.

Price, 15c. each; \$1.50 per dozen; half dozen at dozen rates.

Hibiscus Crimson Eye

A beautiful hardy plant, bearing hundreds of handsome large flowers during summer and fall. The flowers are immense, measuring from 15 to 20 inches in circumference. Pure snow white, with large spot of deep velvety crimson at base of petals. Price, 15c. each; \$1.50 per dozen; half dozen at dozen rates.



Red Hot Uvaria. A plant that will make your garden beautiful during the late summer and fall.

For 10 cents in coin I will send one large packet each of Pansies, Nasturtiums, Sweet Peas and Asters.

Tritoma Uvaria (Red-Hot Poker)

A very attractive plant, throwing up tall spikes of bright orange red flowers very freely during summer and fall. A very effective plant for garden or lawn decoration. (See illustration.)

Price, 15c. each; \$1.50 per dozen; half dozen at dozen rates.

Achillea (The Pearl)

(The Great Cemetery Plant)

A plant that will produce hundreds of flowers the first Summer. It commences to bloom early in July, is a perfect mass of beautiful flowers till frost, the same bloom keeping perfect two or three months. Its flowers are pure white, perfectly double and produced in large sprays, making it one of the finest cut flowers for bouquets, vases, baskets, etc., or for any kind of decoration.

Price, 10c. each; 3 for 25c.; 12 for 70c.

True American Beauty Roses—New

Last year on our immense Rose Farm there were discovered so many new varieties that so far outclassed the old ones that we have devoted our entire attention to putting these on the market and have disposed of all other varieties. Chief among these were four which have caused wonder and amazement among the judges at the latest flower shows. They have been termed the Pink, White, Striped and improved Red American Beauties, because in every way, excepting color, they exactly resemble that World-famed American Beauty Rose, but to the delight of Rose growers have proven to be the most profuse bloomers of any rose yet introduced, and are so hardy will live outdoors the year round in the coldest climates. We discovered them, we named them, and we are introducing them for the first time. We have grown a large quantity of these roses in both sizes, and offer them to you at an extremely low price—less than cost of single bud at the cut flower stores. We will send this collection of roses in two sizes, both strong and well matured plants, all charges prepaid, and guaranteed to arrive in good growing condition.

Price for 1-year-olds, the Red (improved), Pink, White and Striped, 25c. each, the 4 for \$1.00. 2-year-olds, 50c. each, the 4 for \$2.00.

The Grand New Tea Rose

There have been numerous roses sold as tea roses, but never yet have we seen a rose that has given the satisfaction that can be had from this grand new tea rose, "The Giant." This name is rightly given to it because of its strong growing and free blooming qualities. We were much delighted when we discovered this great rose in the summer of 1904, but were still more delighted when we found we were blessed by having it in the three colors, and we called them the "Crimson Giant," "White Giant," and "Pink Giant," bringing to you the richest color to be had in these three colors. Considering the quality of the roses, and the great demand there is for them, we offer them for the first time at an extremely low price. These positively cannot be purchased elsewhere.



The blooms of the new Rose "Giant" in three colors, "three out of bloom."

Price for one-year-olds, 20c. each, the three colors for 50 cents. Two-year-olds, 40c. each, the three colors for \$1.00. All charges prepaid by us.

Some extra good bargains in FINE BEDDING PLANTS of good size,

There is a growing demand for bedding stock, so start your order with a selection from the following and select your borders accordingly. A bed of this kind of stock will give you bloom from early summer until Jack Frost lights upon them.

SPECIAL OFFERS

- Fine large Geraniums in any color desired per doz., 75 cents
- Fine large plants of Coleus in 12 varieties per doz., 75 cents
- Fine collection of Cosmos in all kinds per doz., 75 cents
- Fine large Verbenas in all colors per doz., 75 cents
- Fine large Salvia in four varieties per doz., 75 cents
- Fine large collection of Yellow Coleus to border any bed per doz., 75 cents

I will send the above collections (six dozen plants in all) postpaid for \$4.00, or six of each collection (three dozen in all) for \$2.00. No postage stamps accepted on any of the above offers.

N. C. BANGHAM FLORIST, NURSERYMAN & SEEDSMAN **Springfield, Ohio**

In order to introduce a new Aster and Pansy, I will send a packet of each free with each order



Rhododendrons on grounds of Walter H. Haineswell, Wellesley, Mass. (Frontispiece of Monograph on Rhododendrons)

IF YOU ARE INTERESTED IN RHODODENDRONS AND MOUNTAIN LAUREL

In their selection; in their planting or their care, you should read the Monograph "Hardy Rhododendrons, Azaleas and the Mountain Laurel" by J. Woodworth Manning, who has probably spent more time in their study than any other person in the country, and is a specialist in growing them. Mr. Manning undertook the writing of this Monograph because so many people have suffered serious losses in the improper planting of Rhododendrons due to the utter lack of knowledge concerning the right varieties to plant under different conditions. His desire was to make his contribution to practical horticultural literature. It is one of the most comprehensive treatises on the subject that has been published in this country. Among the many interesting chapters are the following:

Hardy Rhododendrons	A Six of History
Tender or Showy Varieties	Growing
Varieties of Doubtful Hardiness	American evergreen species
The Inbred List (with descriptions)	Other evergreen species
Propagation	Azaleas
	Mountain Laurel
CULTURAL REQUIREMENTS	
Soil	Micro-organisms
Exposure	Watering
Fanning	Fertilizing
Protection	

A copy of this Monograph will be sent to the readers of THE GARDEN MAGAZINE who are ready interested, on receipt of four cents to cover postage.

A need also the Reading Nurseries. We control the largest collecting area in America, comprising 30,000 acres, and are able to supply the very choicest stock of these evergreens in every size and quality. There is, we believe, not a more extensive single stock in the world. We have also the best grades of Hybrid Rhododendrons and Azaleas in New England, obtained from the most trustworthy sources, based on fifty years experience in the important of these plants.

THE READING NURSERIES

J. Woodworth Manning, Prop. READING, MASS.

In addition to these evergreens, we have a fine stock of Trees, Shrubs and Hardy Plants. Our illustrated catalogue describes these in detail.



Competent Gardeners

The comforts and products of a country home are increased by employing a competent gardener; if you want to engage one, write to us. Please give particulars regarding place and say whether married or single man is wanted. We have been supplying them for years to the best people everywhere. No fee asked. PETER HENDERSON & CO., Seedsmen and Florists, 35 and 37 Cortlandt Street, New York City.

Gardeners' Register

High-class men, with good records, can be obtained at VAUGHAN'S SEED STORE, 14 Barclay Street, New York City. No fee 84 Randolph Street, Chicago.



Fertilizers

Fertilizing the Home Garden
THE practical fertilizer questions that the amateur wants answered are just these: What to use, in what quantities?

Most of the articles and all the books on fertilizers lay special stress upon the food values and costs. Though of great importance to the farmer, these details are only of minor interest to the amateur. The great problem for the home gardener is how to get earlier, larger, better fruit, vegetables and flowers.

There are three great plant foods: nitrogen, phosphoric acid, and potash.

The one most likely to be deficient in the soil is nitrogen. The trouble is that the salts that are available for the plant are so soluble that they are quickly washed out of the soil. Stable manure gives nitrogen in small quantities over a comparatively long period, and is valuable on that account. Its vegetable matter (giving humus and holding water), is also an important factor, rendering it especially valuable on light or sandy soils.

Many people have a notion that a black soil must of necessity be a rich one. But, on the contrary, it may be almost devoid of nitrogen, and so stands in need of some fertilizer. Whilst it is true that garden soils in general have a sufficiency of both potash and phosphoric acid in them, the chances are that these two food materials are to a certain extent "locked up"—that is, they are not immediately available to the plant, and are only taken out by slow degrees.

Therefore, the amateur gardener will find that the best all-round fertilizer for him to buy is one with an abundance of nitrogen, and moderate quantities of the other two substances. Of course, for large operations, special compounds of fertilizers are an economy, and, while the same thing holds good in theory on the small scale, yet in practice, as the amount involved is so little, it is wiser to have one all-round fertilizer. Succulent vegetables particularly will thrive on nitrogen. It makes them grow rapidly, and that means tenderness. Potash is used to improve the quality. Phosphoric acid helps to build the tissue of the plant. What a fertilizer contains can always be ascertained by reading the analysis which must accompany it. Look only for those three terms. Don't regard anything else.

How much to use? Of course, the answer largely depends on the grade of fertilizer. Stable manure can be spread on three inches thick. A pound of nitrate of soda is sufficient to cover from eighty to one hundred square feet. B. B.



ANOTHER SIDE TO GREENHOUSES

It's the pleasure side of a greenhouse that makes it such an interesting proposition.

The pleasure of taking seemingly dead bulbs and seeds, nursing them to life, watching them grow daily into strong, healthy plants, and then to reap the enjoyment of this pleasure-work in luxuriant blooms and perfect fruits and vegetables.

Just because you yourself have grown these flowers, fruits and vegetables seems to add to them an indefinite something which more than repays the really little time you have devoted to them.

We make small greenhouses as well as big, and conservatories of all sizes.

HITCHINGS & COMPANY Greenhouse Builders and Designers

Manufacturers of Heating and Ventilating Apparatus

1170 BROADWAY, NEW YORK

40,000 PEACH TREES

That must be sold; all clean, thrifty, healthy, beautiful trees. Prices right. Apple, Plum, Cherry and Pears, Asparagus Roots, Strawberry Plants. FREE catalogue has valuable Spraying Chart. Send to-day.

ARTHUR J. COLLINS,

Box N,

Moorestown, New Jersey.



The Hardy Border

We have a fine collection of Hardy Phlox and other Hardy plants. Collected Laurel and Rhododendron, Evergreens, Shrubs and Trees.

See our stock or send us list of wants for prices.

Competent men furnished and advice given regarding the proper arrangement of large or small estates. Excellent references.

DUMMETT & WAGNER

Office, Conservatories and Nurseries at MOUNT VERNON, N. Y.

Telephone, 845 Mount Vernon.

Increase the Yield of Your Garden

by using the **IGOE TOMATO AND PLANT SUPPORTS**. They will mean a more abundant crop of Tomatoes of superior quality, and more heavy and success of your heavily flowered plants, such as *Ponies, Dahlias, Golden Glow, Chrysanthemums, etc.* *The best and strongest support made.*

REPAY THE COST MANY TIMES OVER IN A SINGLE SEASON

MADE STRONG AND LIGHT OF HEAVY GALVANIZED WIRE

PRICES
 Per dozen \$1.75
 Per 50, \$7.00; per 100, \$12.50

THE IGOE CARNATION SUPPORTS are equally important for the success of your Carnations. 2-ring, \$3.50 per 100; 3-ring, \$4.00 per 100.

FOR YOUR ROSES: The **Igoe Rose Stakes**, made of galvanized wire, take the place of the old-fashioned insect-harboring, decaying, wooden supports. They are neat, strong, and will not rust. Made in all sizes (and prices), looped and straight, 65c. to \$1.65 per 100.

You also need some **Tying Wire** which does not rot nor untie. No. 18, galvanized, 12 lbs. for 85c.; No. 19, \$1.00.

IGOE BROTHERS
 228 North 9th Street Brooklyn, N. Y.

DON'T DIG WEEDS

Kill them with "Thistleine;" spray the walks, driveways and gutters with **THISTLEINE**. One spraying will keep them free from weeds and grass the entire season.

Kills dandelions, burdock and Canada thistles

5 lb. can of **THISTLEINE** will make sufficient solution to spray 40,000 sq. feet. Price, \$2.00. If your dealer doesn't keep it, send money direct to

The LINDGREN CHEMICAL CO.
 26 Scribner St., Grand Rapids, Mich.

TWENTY YEARS AGO

we were the first of American Nurseries to realize that American gardens and grounds could not be laid out and planted under our severe climatic restrictions without a practical and expert study of plant life and conditions, especially where advice and sound judgment in determining results were needed. We have worked twenty years on this basis, and many hundreds of the most attractive estates in all parts of this country, planned by us, prove that we were right. We can refer to them.



Thousands of plans are made on paper, but real success requires a practical experience, which comes only with a life study of the relative value of every tree, shrub and flowering plant.

We offer this experience as plantmen to secure for every client, no matter where, a finished and beautiful result, and at comparatively small cost.

We not only prepare plans for every form of garden and grounds, through the medium of sketches sent by mail, but send promptly men of experience at reasonable rates to advise upon every leading feature of landscape work.

We call special attention to our catalogues, which are hardly equalled for detail, cultural advice and thoroughness. Our large catalogue is regarded as the very best practical work in this country.

Our Nurseries are among the largest in the United States, and we sell at exceptionally reasonable prices. We offer every known hardy form of **Trees, Shrubs, Rhododendrons, Evergreens, Herbaceous Plants, Vines, Bulbs** at prices with quality, which will command your attention.

We will be prompt in taking up any garden problem, or will advise upon the smallest question which any one interested in this work may wish to bring to our attention.

Write us early and get our special views or advice or prices.

SHADY HILL NURSERY COMPANY, BEDFORD, MASS.
 BOSTON OFFICE, 135 MILK ST., COR. BROAD ST.

\$1.00 IN TIME SAVES MANY BACKACHES

OUR SPECIAL OFFER FOR MAY

IT COSTS YOU ONLY \$1.00 and EXPRESS CHARGES

Adjustable Garden Cultivator

The most useful hand garden tool on the market. A one-dollar bill, mailed to-day will bring this labor saver to you without delay.

It will pull out the weeds, pulverize the ground thoroughly, leaving it level. Works where other implements fail. It will work *between* the Rows or the Center Row and can be removed, and *straddle* the Row if desired. It is *adjustable* in width by sliding the *Iron Plate*. It is the *Lightest*, weighing but a few pounds complete with long handle, and the *Strongest* as the blades are forged out of a solid steel rod. Wise gardeners will pass no more miles of early...

Catalogue "N" containing over 600 illustrations of the best Tools and Implements made for the Field, Farm, and Garden, mailed free, if you mention THE GARDEN MAGAZINE.

J. S. WOODHOUSE, 91-195 Water Street, NEW YORK

WASHINGTON AS A COUNTRY GENTLEMAN

Letters and Recollections of George Washington

BEING HIS CORRESPONDENCE WITH TOBIAS LEAR AND OTHERS, TOGETHER WITH A DIARY OF WASHINGTON'S LAST DAYS, KEPT BY MR. LEAR

This volume is no less than a revelation of the home life at Mt. Vernon, so much does it contain of information as to property, farm, methods of handling servants and the like. Illustrated with rare portraits, etc.

(\$2.75 postpaid.)



COUNTRY LIFE IN AMERICA **THE WORLD'S WORK FARMING** **THE GARDEN MAGAZINE**

DOUBLEDAY, PAGE & Co. NEW YORK.

TO SUBSCRIBERS

WE HAVE made some attractive new coin cards, to carry fifty cents securely through the mails. A description of the practical usefulness of THE GARDEN MAGAZINE is printed on the reverse side, also a blank for a new subscriber to write his name.

May we not send you a few of these cards—you simply to hand them to your friends who are interested in gardening or in beautifying their home grounds?

Each card that comes back to us, (the card is numbered and we identify it) secures for you a premium without one cent of expense to you.

Four cards entitle you to a Dollar Book, prepaid by us.

One card counts as 25 cents toward any of the following premiums—our best publications. Thus eight cards will secure \$2.00 worth of books. We prepay all express charges.



A List of the Premiums

How to Make a Flower Garden (Fullerton), \$1.60.

How to Make a Vegetable Garden (Fullerton), \$2.00.

The First Book of Farming (Goodrich), \$1.00.

Farming—a year's subscription, \$1.00.

How to Keep Bees (Comstock), \$1.00.

Roses and How to Grow Them, \$1.00.

Country Life in America—one year, \$4.00 (6 months, \$2.00).

The Dog Book, price per part—subscription, \$1.10.

THE GARDEN MAGAZINE, \$1.00 a year (sent to any address).

The Poultry Book (3 Vols.), \$13.60, subscription.

How to Plan the Home Grounds (Parsons), \$1.00.

Also a long list of popular novels and other books—list on application.

Two yearly subscriptions to THE GARDEN MAGAZINE (your own renewal and a new subscription from a friend, not a renewal) sent in at any time this month or next with \$2.00 remittance, will count as four cards toward any of the above premiums.

You would undoubtedly like to own one or more of these practical books, and probably you would be interested to tell your friends about THE GARDEN MAGAZINE. Will you not drop us a postal card, or fill out this coupon, so that we may send you some of the cards now, at the time when your friends will be most benefited by the magazine?

Let us send you six, a dozen, or a hundred or more cards.

DOUBLEDAY, PAGE & CO.

133-137 East 16th St., New York.

DOUBLEDAY, PAGE & CO., G.M. 5 '06
133-137 East 16th St., New York.

You may send me
coin cards, postage prepaid, without any expense to me whatever.

Yours truly,

Address _____

Practical Books for the Garden

Ferns and How to Grow them

By G. A. WOOLSON.

An authoritative little hand-book, dealing with the growing of hardy ferns both in the garden and indoors. Profusely illustrated. Net, \$1.10. (Postage 10c.)

Roses and How to Grow them

A very practical volume, uniform with the above. Profusely illustrated. Net, \$1.10. (Postage 10c.)

How to Make a Vegetable Garden

By EDITH L. FULLERTON.

A real necessity for a suburban or a country home. 250 beautiful photographic illustrations. Net \$2.00. (Postage 20c.)

How to Make a Flower Garden

A charming and practical book by experts on every branch of the subject. 219 beautiful photographic illustrations. Net, \$1.60. (Postage 16c.)

How to Make School Gardens

By H. D. HEMENWAY.

Illustrated, (\$1.10 postpaid.)

How to Plan the Home Grounds

By SAMUEL PARSONS, JR.

Illustrated. (\$1.10 postpaid.)

A Plea for Hardy Plants

By J. W. ELLIOTT.

Beautifully illustrated. (\$1.76 postpaid.)

ALL ABOUT POULTRY

YOU can learn all that is known about the raising, breeding, care and sale of every kind of feathered product in **The Poultry Book**. It is the most complete and authoritative book on the subject ever printed in America. Superbly illustrated, in color and black-and-white, by HARRISON WEIR.

(\$13.60, sold by subscription)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.

SPECIAL NOTICE TO SUBSCRIBERS

Reprinting Volume One The Garden Magazine

SO many orders for Volume One of **The Garden Magazine** have remained unfilled the few weeks past, it has been deemed advisable to print new editions of several issues which have long been out of print. ¶ If your file of the magazine is incomplete, this is your opportunity.

VOLUME ONE (for \$2.00), Sent Express Prepaid for \$2.32

(February to July, 1905, inclusive)

VOLUME TWO (for \$1.35) Sent Express Prepaid for \$1.67

(August 1905 to January 1906, inclusive)

¶ Remember these beautiful bound volumes contain much of the best practical information extant on many branches of gardening. They are completely indexed for immediate and handy reference, and are in themselves an inexhaustive garden library to be added to year by year at comparatively slight expense.

¶ IF WE BIND YOUR OWN COPIES the charge is 75 cents (or \$1.07 including the express charges for return of the volumes to you.) ¶ Or, if we send the cover (for permanent binding) to you for your own binder to stitch on, the charge is 50 cents (62 cents including postage).

BACK NUMBERS 10 CENTS EACH, prepaid, excepting October and April which are 25 cents each, prepaid. Any copies of incomplete files which are returned to us prepaid (with no duplicate numbers) will be credited on an order for bound volumes at 10 cents each. ¶ Indexes for volume one and volume two sent free on request to those who bind their own volumes.

IN RETURNING COPIES MARK YOUR NAME AND ADDRESS PLAINLY ON THE PACKAGE

----- This Coupon is supplied for Your Convenience -----

DOUBLEDAY, PAGE & COMPANY,
133-137 East 16th Street, New York City.

G.M. 5 '06,

Enclosed find \$_____ Also credit me \$_____ for copies (at 10 cents each) returned, prepaid, to you to-day for the following months (no duplicate):

Send me the following:—

Cross Out	Volume One, bound complete (\$2.00), express prepaid, \$2.32
Lines	Volume Two, bound complete (\$1.35), express prepaid, \$1.67
Not	Volume One, bound with copies returned to you to-day,
Needed	75¢ prepaid
	1.07
	Volume Two, bound with copies returned to you to-day,
	75¢ prepaid
	1.07
	One Permanent Cloth Cover for Volume One, prepaid ...
	\$0.62
	One Permanent Cloth Cover for Volume Two, prepaid ...
	\$0.62

Total of my order, covered by above cash remittance, and credit \$_____

Yours truly,



COUNTRY LIFE IN AMERICA THE WORLD'S WORK FARMING THE GARDEN MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.

Poultry Directory

DEPARTMENT, THE GARDEN MAGAZINE, 133 East 16th Street, New York.

Information about the selection or care of poultry will be gladly given. Address INFORMATION



We win At the late Madison Square Garden show, New York, in the S. C. Buff, Black and White Orpington classes as follows: 7 firsts, 4 seconds, 4 fourths and 5 fifths (with one in the strongest class of Orpingtons ever put together, there being 370 birds competing). We also won National S. C. Comb Silver Cup for best black female. Also Cup for best white male and Cup for best white female. It was a clean sweep, nothing ever approaching it. We won the most prizes of any breeder in these same classes.

One week later at Boston with a smaller entry we won thirty-one prizes and one week later at Newark, N. J., upon twenty-six entries won 13 firsts, 11 seconds and 2 thirds and also the Ivory Soap \$25.00 Silver Cup for whites bird in show. We have the stock and established winning breeding lines. But buying high grade stock eggs cannot safely be done upon the strength of the mere arguement a breeder has room to advance in his advertisements.

Now we want you to send for our catalogue, testimonial book and a very elaborate sixteen-page mating list, describing over forty different breeding yards and prices of eggs from same. We also want you to send us your farm are taken from real photographs and are not sketches of an imaginary plan. Do not be fooled or misled by mis-advancing but come to the fountain head to get your stock.

WILLOW BROOK FARM, Berlin, Conn., U. S. A.
W. L. Davis, Prop.

GEDNEY FARM POULTRY YARDS

S. C. BUFF ORPINGTONS CORNISH INDIAN GAMES
S. B. BUFF MINORCAS WHITE WYANDOTTES

We breed the prize winners and can sell you birds that will enable you to do the same.

At Madison Square Garden we won first and Club special on S. C. Buff Orpington pen—14 pens competing. Also third pullet—39 pullets in the class.

At Albany, N. Y., we made a clean sweep. Our Buff Orpingtons won every regular prize offered, except one third—44 birds competing. Also eight specials, including silver cup for best display—all varieties competing. On C. I. Games we won two 1st, four 2d and three 3rd at the same show. Our Black Minorcas are best for egg production and shown for exhibition only. Stock and eggs for sale at right prices. Satisfaction guaranteed.

FRANK W. GAYLOR, Mgr.,

White Plains, N. Y.



POULTRY

and Almanac for 1906 contains 200 pages, with many fine colored plates of the best of the birds of all classes, their care, diseases and remedies. All about hatching and how to succeed there. All about poultry houses and how to build them. It is really an encyclopedia of information. You need it. Price early 15 cts. C. C. SHOEMAKER, Box 457, Freeport, Ill.

Rhode Island Reds

WHITE AND BARRED ROCKS,
WHITE WYANDOTTES AND
LEGHORNS, LIGHT BRAHMS
Hardy, prolific, firm bred, pure stock.
FOR BIRDS (moderate prices), "EGGS"
HATCH "at eight cents each, write
WALTER SHERMAN
Meadow Brook Farm, New York, N. Y.

Dr. Payne's Sanitary Poultry House
Has given universal satisfaction. Plans complete for building
Self cleaning Roosts. Sanitary Nests for \$1.00.
SANITARY POULTRY SUPPLY CO.,
195 Franklin Avenue, Brooklyn, N. Y.

Chick Diseases

are prevented by dry, comfortable quarters,
and are cured by the right remedies.

Our Illustrated Poultry Supply Book tells about these various curers as well as Cyphers, Incubators and Brooders and other poultry supplies.

JOHNSON & STOKES 217-219 Market Street Philadelphia

POULTRY SUPPLIES

We sell everything the poultryman needs. Incubators,
Brooders, Feeds, Tools, Fences, Feeds,
Cutters, Egg Boxes, etc. Write today for a free
copy of our Poultry Supply Catalogue. You'll be
surprised how much you can save by
buying all your supplies from us.

JOSHIA YOUNG,
23 Grand Street, Troy, N. Y.

Frog Raising.

A business which requires small investment and brings large returns. Our book, "How to Breed, Feed and Raise Frogs," gives you the practical knowledge.
Price postage \$1.00.

Meadow Brook Farm, Altitude, N. Y.



Originators of all the Orpington Fowls



WM. COOK & SONS

Box 33, South Plain, New Jersey
(also of England and S. Africa). Est. 1871

If you want the best Orpingtons, any of the ten varieties, it is natural that you need send us to these originators, for them. Winners of over 8,000 cups and prizes. Largest winners wherever we show.

EGGS from the first Orpingtons in the world, \$10.00 setting; from exceptionally fine stock, \$4 per setting. All guaranteed.

ORPINGTON Poultry JOURNAL, 5 cts.; yearly, 60 cts. met.
We have thousands of Orpingtons mated up.
Inspection of poultry farms cordially invited. Visas met.
Advice free.

BUFF WYANDOTTES

All purpose fowl, ideal broiler, winter layer. Eggs \$2.00 per 15.
200 Head Stock for Sale Reasonable.

MARION FARM, - SMYRNA, GA.

BRED TO LAY BRED TO WIN



The Triumph Strain of White Wyandottes

LINE-BRED for fifth of a century. For heavy BROWN EGG production and SHOW ROOM HONORS this STRAIN is to-day recognized as the leader. Choice cockerels and pullets yet to appear. Finely illustrated catalogue free. Write our way to HARRY W. BRITTON, Moorestown, N. J.

BEAUTY AND 242 EGGS

I can prove I have the greatest strain of Brown Leghorns in the world. Lay to 242 Eggs to a pullet. Big Birds, and Largest Eggs of any Leghorns. Brown Rocks and Single Combs, and White and White Wyandots, Barred and Buff. Rocks—Eggs \$2.00 per 15; \$3.00 per 45. Catalogue.

W. W. KULP, - Pottstown, Pa., Box 22.



EVERY HOME should raise SQUABS as well as eggs. SQUABS are a delicious table delicacy ready to eat in only 4 weeks. No care, fine feeding, easily prepared—raised for 15 cts. per pair, and marketed for \$5 to 80 cents. LARGE PROFITS are made raising them for market. Send today for free circulars; enclose stamp.
Bay State Squab Co., Dept. G, Wakefield, Mass.

Kennel Directory



Cairnmaur Fox Terriers

MAJOR G. M. CARNOCHAN
NEW CITY, ROCKLAND CO., NEW YORK (N. Y. office at New York), offers young puppies either wire or smooth haired to be shipped as soon as weaned. DUSK BIL, BITHES \$10. This is an excellent opportunity to obtain the Cairnmaur blood at very reasonable prices. Purchasers should send cheque with order, stating sex and variety. Growth dogs and offer puppies for sale at all times. Also Welsh terriers.

Beautiful Collie Puppies

I offer four white ones, beautiful, all white but around the ears, \$10 and \$15 each. Five sable and white, all beautiful, marked with white, including collar, \$10 each. I have four that are as near perfect in markings as man can breed, \$15 each. Several grayed females \$10 each, all from two to five months old. Fully pedigreed and the finest blood. Send for catalogue.

W. W. KULP, Box 22, Pottstown, Pa.

COLLIE PUPS HANDSOME VIGOROUS FARM RAISED

Sable and white and tri-color pups, from eight weeks to eight months old. All are eligible for registration, being very highly pedigreed and containing the blood of the present day winning strains with that of practically all of the famous collies of the past. Price from \$10.00 up, according to age and quality. Correspondence invited, but please state wants specifically.

MARVALE FARM KENNELS, Midland Park, N. J.

THOROUGHBRED BOSTON TERRIERS

Puppies from Registered Stock

P. HERBERT REEDER MELROSE, MASS.

Setters For Sale

Four setter dogs, broken on game. Good watch dogs.

W. GEO. SMITH, MARYDEL, MD.



Scottish Terriers

Offered as companions. Not given to fighting or roaming—Best for children's pets.

NEWCASTLE KENNELS
Brookline, Mass.

AIREDALE TERRIERS

MOORESTOWN KENNELS

Pups and a few grown dogs for sale. Winners and full brothers and sisters of winners. Champion Culler Monarch and Champion Master Briar blood.

W. F. REEVE

31 MARKET STREET CAMDEN, N. J.



AND AQUARIA SUPPLIES

SEND FOR PRICE LIST

KEENAN'S SEED STORE

6112-6114 Wentworth Avenue, CHICAGO

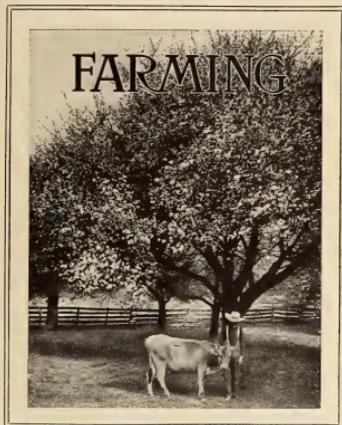
B E E S

Few people realize the interest and profit in keeping bees. My business is to supply bees and Apianian material. I have prepared a little booklet on bees, giving details of management, and the profits to be derived from them. Sent on receipt of 10 cents, including catalogue. Bees require little care, increase rapidly and each hive produces from 30 to 50 lbs. of honey a year.

I. J. STRINGHAM, 105 Park Place, N. Y.

APIARIES Glen Cove, L. I.

THESE letters are from people who have each paid \$1.00 for a year's subscription to our new magazine.



“FARMING”

is an illustrated home magazine of the living and growing things on the farm.

“I wish to congratulate you upon the advent of a clean, wholesome and dignified farm paper that an intelligent hired man can read without feeling degraded and insulted by the insinuation that it is published for an ignorant and narrow-minded class. Your advertising pages are delightful.”—*F. B. D., Monona Farm, Madison, Wis.*

“The first number is the finest in that line of anything that I have seen; and I wish to order another for one of my friends.”—*J. R. A., Mount Vernon, Iowa.*

“Am much pleased with your latest paper and consider it a credit to your presses. One of our neighbors saw the paper and at once wanted it sent to his brother on an Indiana farm.”—*(Mrs.) J. R. M., Joist, Ill.*

“It is simply excellent for the farmer, the first number alone being easily worth the dollar, and I have read it through with pleasure and will do all I can to extol its usefulness and worth.”—*W. F. J., San Francisco, Cal.*

“I am much pleased with the first number of FARMING. I believe you will make a great success of it.”—*F. A. M., The Home Correspondence School, Springfield, Mass.*

“I believe that it is destined to take its place alongside of *Country Life in America* and *The Garden Magazine* in popular opinion, as well as supplying the direct need of those especially interested in farming.—*Thomas Havens, The C. E. S. Co., New York City.*

“This paper is bound to be a success.”—*H. R. S., Batavia, N. Y.*

“To those who have told you ‘that farmers will not pay the price’ just send them the February number of FARMING in which one article, ‘The Ideal Farm Home and How to Have It,’ is well worth a year's subscription.—*S. G. H., Tarrytown, N. Y.*

WITH this testimony perhaps you will risk a DOLLAR for a year's subscription, especially as we promise that the magazine will be a great improvement upon the first numbers, and we will return the dollar if you are dissatisfied.

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

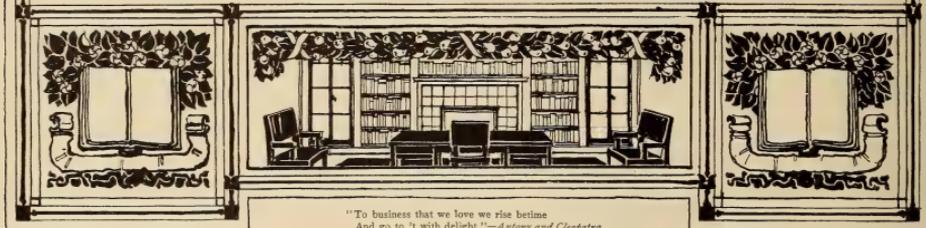
-----CUT OFF HERE-----

DOUBLEDAY, PAGE & Co.,
133-137 East 16th St.,
New York City.

G. M., 2, '06.

Enclosed find \$1.00 for a year's subscription to FARMING, beginning with the May number, to be sent to

THE TALK OF THE OFFICE.



"To business that we love we rise betime
And go to 't with delight."—*Antony and Cleopatra*

"THE GARDEN MAGAZINE"

A striking evidence of the permanent value and of the popularity of THE GARDEN MAGAZINE is the demand for bound volumes of it. This demand is greater than any that we before have experienced. We have been obliged to reprint the February and April numbers, and by the time this reaches our readers we expect to be able to supply all the numbers of Volume 1.

The same interesting story is told by letters like this from a subscriber in Haverford, Pa.—and we are receiving many such:

"In sending another subscription for a friend, I want to say that there is nothing printed that is so full of practical help to those who want to enjoy the benefits of a good garden. I would not take \$50 for my April number, if I could not replace it with another copy."

The June number will contain a notable article on the glorious family of magnolia, the most stately and beautiful of all the early flowering trees. The proper tillage of the orchard will be discussed in all its details. The Eastern vegetable gardener will read with interest about the difficulties and strange problems that confront his brother in the prairie states. There is yet time to plant chrysanthemums for late flower, and two important articles are devoted to the subject. An entirely new scheme for making a garden of grasses will be explained with superb illustrations of the most suitable kinds for use as garden plants.

"FARMING" FOR MAY

There is necessary work to be done on the farm at this season of the year. The care of the live stock, field and orchard and the other departments of farm activities are carefully covered by men who are authorities in their lines.

The May number of *Farming* tells how the farmer may produce pure milk, how he may reduce the number of bacteria in a teaspoonful from twenty million to less than a hundred; and how cleanliness enormously increases profit.

"Black Rock" the grand champion steer at the International Live Stock Show, and the great hornless beef-producing breed that he is a representative of—the Aberdeen Angus—are discussed—with a noble photo-

graph; also what kind of stock to raise and how to feed them.

New inventions in farm implements, harrow-carts, cultivator seeder, etc.

The large profits in growing early tomatoes, the kind to grow, and how to grow them.

A government warning against indiscriminate inoculation of the soil.

"The Woman's Workshop" shows her how to make life easy in the kitchen, not by the expenditure of a large amount of money, but by a few labor-saving devices that will make what is ordinarily drudgery almost a pleasure.

The usual departments are included: Poultry and Pigeons—Wood Lot and Forest—Dairy Notes—Bees—How to Keep Well—Government Land—Farm Implements and Co-operation—Horse Flies and How to Suppress Them.

"COUNTRY LIFE IN AMERICA" FOR MAY

is an issue of springtime fullness. It covers the whole range of country life in spring. Here are some of the articles:

The Beautiful Garden at Bar Harbor, Maine, of Dr. Witt Clinton Blair, Esq.

A Garden Made Perfect in its Second Season by Skillful Planting.

How We Plant Fruit Trees for Beauty? With five superb full-page illustrations. An account of the character and effect of fruit blossoms and the true value of fruit trees for ornamental purposes.

Love and War Among the Blue Birds, by John Burroughs. A charming account of a double mating and a double duel.

The Songs of Nature. With two magnificent full-page illustrations from photographs by Henry Troth. Five more of Henry Van Dyke's selection of the sixty best nature poems ever written.

What it Costs To Run an Automobile. The testimony of two owners. Expert information of great practical value, with itemized expense sheets.

Raising a Horse. Wild Foods of the United States in May, by H. H. Rusby. Things Worth Knowing About Oriental Rugs, by George Leland Hunter.

A Bird Garden, by Frank M. Chapman, photographs by the author. How food, drink, and a nest site may be provided. How to attract and hold the birds.

Raising Thoroughbred Poultry as a Business, by H. H. Fike.

"THE WORLD'S WORK" FOR MAY

tells the extraordinary story of the way in which diseased meat is sold from the Chicago packing houses—a menace to the health of

the whole people. There are three articles—one by Dr. Jaques, formerly in charge of the local inspection, who shows that the local inspection is ineffective; another by T. H. McKee, a New York lawyer, whom the magazine sent out to investigate the subject, and who shows that the Federal law does not cover the meats and meat products used in the United States—that the federal law is, in fact, used by some of the packers as a deceptive advertisement; and the third article by Dr. Hedger who practises medicine in Packerstown and shows the unhealthy conditions of living there. All these articles are published to point a way to a remedy for this national scandal and danger to health. The remedy is plain, and sorely needed.

Mrs. Fraser has written from Japan an account of the private life of the emperor—the first time that a study of this remarkable man has been published in the outside world. She makes clear the relations of this ruler to his people as never done before.

BOOKS FOR THE GARDEN

The enlarged edition of the "New Encyclopedia of Horticulture," edited by Professor Liberty H. Bailey, in six large quarto volumes, containing 2,100 pages, 4,357 illustrations, by 450 expert writers, 2,800 illustrations, besides 146 beautiful full-page plates, is an inexhaustible mine of practical information. Every man and woman who wishes really to know outdoor life must use it. Ask for the offer that we make of it.

"How to Make a Fruit Garden" is for those who wish to grow quality fruits in the home garden, rather than the kinds which they can procure in the ordinary markets. There has been nothing of the sort available until Professor S. W. Fletcher's volume gave just the information necessary. His vast experience as a practical horticulturist in both Eastern and Western states has peculiarly fitted him for the task. It is a beautiful book, too, full of striking illustrations; not merely of portraits of varieties of trees, but portraying in a vast, comprehensive manner those little practical details of manipulation which the professional fruit-culturist always seems to assume that everybody knows by instinct. *Ready in May.* (About 200 photographs—\$2.00 net.)



MAY, 1906

COVER DESIGN—The Wellesley Rose; a New American Hybrid Tea. (See article on page 238.)		N. R. Graves	
	PAGE	PAGE	
THE GARDENER'S REMINDER	205	THE MOST FRAGRANT ANNUAL FLOWERS <i>Florence Beckwith</i>	226
ALL THE SPIREAS WORTH GROWING	206	A PORTABLE TOMATO TRELLIS	228
<i>Photographs by Webster and Albee, Henry Troth, and N. R. Graves</i>		<i>J. R. Bettis</i>	
FLOWERS AFTER THE FALL FROSTS	210	<i>Photographs by the author</i>	
<i>Herbert Greensmith</i>		TOMATOES AS A WALL FRUIT	230
<i>Photographs by N. R. Graves, and others</i>		DODGING THE CUTWORM	230
HARDY FLOWERS FOR THE SUBURBAN GARDEN	212	A SURE WAY TO HAVE GRAPES FREE FROM BLEMISH	232
THE ART OF GROWING EXHIBITION CHRYSANTHEMUMS	213	<i>S. W. Fletcher</i>	
<i>I. L. Powell</i>		INVESTIGATORS' CLUB	236
<i>Photographs by N. R. Graves and A. Radclyffe Dugmore</i>		A NEW TYPE OF AMERICAN ROSE	238
GROWING GOURDS FOR FUN	218	THE FASTEST GROWING VINE	240
<i>E. E. Willcox</i>		<i>J. N. Gerard</i>	
<i>Photographs by the author</i>		ANSWERS TO QUERIES	242
SUPERIOR HOME-GROWN GRAPES	220	<i>Photograph by the author</i>	
<i>Photographs by the author, Michigan Agricultural College, and C. E. Walter</i>		FERTILIZING THE HOME GARDEN	
UNUSUAL TOMATOES FOR PRESERVES AND PICKLES	223		
HOW TO GET ANY PLANT YOU WANT			

WILHELM MILLER, EDITOR.—COPYRIGHT, 1906, BY DOUBLEDAY, PAGE & COMPANY

Entered as second-class matter January 12, 1905, at the post-office at New York, N. Y., under the Act of Congress, March 3, 1879.

IRONING DAY



Don't Do Your Ironing This Way

It is a hard, hot, tedious task to iron with flat irons near a hot stove. Don't do it.

There Is a Better Way

The "Simplex" Ironing Machine, heated by gas (or gasoline) for less than one cent per hour, will iron all the household linen easily in one-tenth the time—

A Whole Day's Ironing In One Hour

Popular in price. Write for booklet

AMERICAN IRONING MACHINE CO.

179 E. Washington Street, Chicago, Ill.

We have everything to make your grounds beautiful and garden useful

Bay Trees and Boxwood



We have a grand collection of these popular decorative trees in both Standard and Pyramidal forms.

**Blue Spruce,
Evergreens
and Conifers
in Tubs and Baskets**

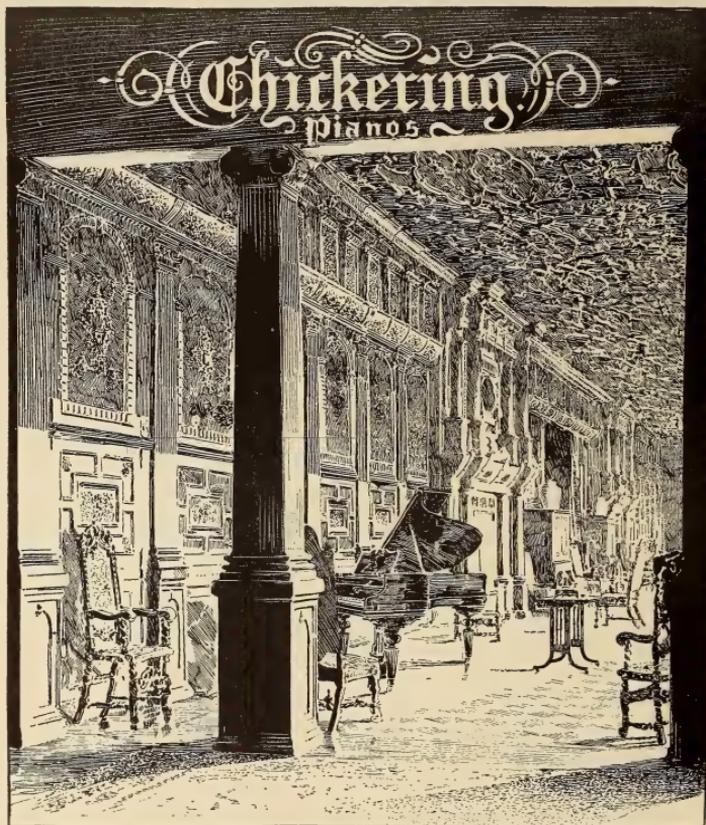
Pot-grown Roses, both Standard and Bush form, English Ivy in all sizes, Clematis and other Vines, Japanese Maples from 1 to 6 feet, in pots and tubs.

It will be a pleasure for our landscape department to assist you, without charge, in suggesting effective landscape arrangements, and help you solve any difficult problems you may have. With a nursery complete in every particular, we can supply every variety of Shrubs, choice Blue Spruce, Evergreens and Conifers, Ornamental Shade and Weeping Trees, Hedge Plants, Native Rhododendrons and English Hybrids, Roses, Hardy Vines, Hardy Ferns and Grasses, Old-fashioned Hardy Flowers, Trained and other Fruit Trees, Small Fruits, etc.

These are all described in our New Illustrated Catalogue, which we shall be glad to send to serious inquirers. Our Landscape department will be pleased to correspond with parties intending to lay out or improve their grounds. The general supervision of private estates and old-fashioned gardens a specialty. Visitors to our Nurseries are always welcome.

BOBBINK & ATKINS

Nurserymen, Florists and Landscape Gardeners RUTHERFORD, N. J.



CONCERNING THE "QUARTER (1/4) GRAND"

ITS Tone Quality is superior to that of an Upright. ☪ It occupies practically no more space than an Upright. ☪ It costs no more than the large Upright. ☪ It weighs less than the larger Uprights. ☪ It is a more artistic piece of furniture than an Upright. ☪ It has all the desirable qualities of the larger Grand Pianos. ☪ It can be moved through stairways and spaces smaller than will admit even the small Uprights. ☪ Catalogue upon request.

CHICKERING & SONS, 827 Tremont Street, Fenway Station, BOSTON

Established 1823

The Garden Magazine

VOL. III.—No. 4
PUBLISHED MONTHLY

MAY, 1906

ONE DOLLAR A YEAR
TEN CENTS A COPY



Good News for Late Beginners

ON April 15th, when this number appears, practically all the old subscribers to THE GARDEN MAGAZINE will have finished their planting plans and the actual work will be started under better auspices than ever, because of the "Planting Tables" and other features of the Spring Planting Number.

But on May-day thousands of people will be moving to the country or suburbs and, by the time they are settled, they will be two or three weeks late in planting their gardens.

Several thousand people who read this number of THE GARDEN MAGAZINE will not have seen a copy before.

It is fair to assume that most of these new friends, who will have rented places and will, therefore, want to have the best possible gardens for the least money.

Also we shall assume that everyone of them has had no previous experience in gardening.

Are you one of this goodly company? If so, we welcome you to the ranks of a most unselfish and good-natured brotherhood of honest outdoor enthusiasts.

Every gardener loves a beginner. It will be a pleasure if we can be of service to you. If you cannot find what you want in the magazine, do not be afraid to ask specific questions. We are never too busy to help beginners, and if you will write at the top of your letter "*Beginners' Troubles*," you may be sure of a prompt reply.

A CLEAN-CUT, PRACTICAL PROGRAM

The whole work of making a garden consists of just about fifty operations of the first importance, which are duly numbered and listed in the April (Spring Planting) Number. After each item you will find a reference to an article about it.

The cheapest way to make a garden, therefore, is to buy that number. It costs twenty-five cents, and will certainly save much strength, expense and vexation of spirit that comes from consulting many books when a man has no time to apply principles.

What the belated beginner wants to know is, how deep to plant, how far apart, when to thin or transplant and how, when the crop should be ready, etc.

We give you our word of honor that never before have these questions been answered so well as in these April "Planting Tables."

PLANTING PLANS WORTH \$300

If you can afford to spend \$5.00 on gardening this year (and we will show you that it will pay you to do it) the best investment you can make is to buy the first two volumes of THE GARDEN MAGAZINE.

These bound volumes, containing 596 pages of practical information for the amateur, with 886 pictures, will cost you \$3.35 and they will save you more than their cost in one season, because they will enable you to raise crops worth \$3.35 with which you would otherwise fail.

Moreover these volumes contain planting plans that would cost you \$300 if you got them in the regular way from a landscape gardener.

FOR EXAMPLE

If you have a 50 x 100 lot, you will find a diagram on page 139 for April, 1906, showing exactly where to place each tree, shrub and flower. That would cost you \$100.

If you have only 25 x 35 feet in your back yard, you will find four original designs in January, 1906, page 271, which would cost you \$25.

If you want a 6 x 50 border of hardy perennial flowers you will find a detailed plan in this May number that is worth \$50.

If you want a combination vegetable and flower garden of one acre, half an acre, one-third of an acre or 60 x 60 feet, you will find the most detailed instructions you ever saw in January, 1906, page 265. A landscape gardener would charge you \$100 for such plans and they would not be as good as these.

If you can only spend ten minutes a day, by all means make your vegetable garden 15 x 30 and follow the directions on page 71 of the March number. You can raise \$12.55 worth of vegetables—sixteen kinds—at a cost of \$1.00 and save a fee of \$25.

If you have only three in your family and have plenty of time, make your vegetable garden 22 x 34, follow the plan on page 268 of January, 1906, and your garden should yield \$25 worth of vegetables—three cents a square foot! Isn't that plan worth \$25?

HOW TO SAVE ON TOOLS AND FERTILIZERS

For a spraying outfit, see Volume I, page 32.

For two outfits of tools, see Volume I, page 134.

For fertilizers, buy the chemicals men-

tioned on page 236, Volume I, which will cost you about \$2.00 if bought separately. They might cost you more if bought in the form of ready-made, complete fertilizers sold under a brand. Do not forget, however, that analysis does not convey all that lies in a fertilizer and if you know of a brand that gives adequate results on your soil, by all means use it again.

NINETY DOLLARS FOR ANYTHING BETTER

Everybody knows that ready-made plans are not all that could be desired. Original, personal things are best.

Granting that all the bitter things you feel like saying about ready-made garden plans are true, how can you get anything better for the beginner?

Anybody can improve on any plan after one year's experience. "Improvement" is merely adaptation to your personality and your own conditions. There is no special credit in that.

We will gladly pay \$50 for any illustrated article by a beginner telling how he started his garden after May 1, 1906 on an original plan conceived on or after April 15th, provided the information is as practical and detailed as any of the planting plans mentioned above.

To experienced gardeners who are inclined to scoff at the "ready-made" idea we make this offer: Send us the planting plan for the best vegetables or flower garden you ever made, *even if you do not think it generally adaptable*, and we will gladly pay \$40 for the article, provided it is as interesting and accurate as the one entitled "A Complete Garden for a Family of Six" on page 265 of January, 1906.

HINTS TO OLD SUBSCRIBERS

There are twenty-six things to be done in May, after the fifty things mentioned in the April Gardener's Reminder have been done.

These you will find in the Gardener's Reminder for May, 1905, at page 169.

Can you think of any important items that should be added?

IF FROST THREATENS

1. Cover tender vegetables and flowers.
2. Rake the litter back upon the strawberry patch if the plants are in blossom, or on a small patch cover with cheesecloth—a very slight covering will do wonders.
3. Spray plants with cold water from the hose at dusk. Early next morning see if anything important is touched by frost. If so, cover it from the sun and let it thaw out as slowly as possible. Spraying with ice cold water will nearly always save a slightly frozen plant.

All the Spireas Worth Growing—By John Dunbar, ^{Rochester,} N. Y.

ARTICLE VII. IN THE "LITTLE MONOGRAPHS" SERIES, A PROTEST AGAINST THAT TIME-HONORED FRAUD THE "ALPHABETIC ARTICLE" WHICH MAKES A BRAVE SHOW OF LEARNING BUT IS OF NO USE

THERE are fifty species of *Spiraea* in cultivation in this country, but there are probably only fourteen whose horticultural merits can be set forth in the English language with sufficient vividness and attractiveness to induce anyone to grow them. These are the subject of the present article. If anyone can show that any other species is better than any of these, or can give some clear-cut reason that justifies its addition to this list, the pages of this magazine are open to him, and he is invited to furnish a picture to prove his point.

The fifty species in cultivation are classified in the "Cyclopedia of American Horticulture" according to a scheme that the ordinary person can never grasp, for no one buys a plant because its leaves are entire or serrate, and only the botanist understands the distinctions between umbels, panicles, racemes and corymbs.

To go straight to the heart of the matter, the fourteen species worth cultivating belong to two great natural groups; the early bloomers, which are white-flowered; and the late bloomers, which are some shade of pink, with only two exceptions. The first group needs to be pruned in June; the second in winter.

THE FIVE TYPES OF FLOWERS

There are five styles of flower cluster in spirea that any man can see at once; if botanical dust has not been thrown into his eyes;

1. Small flat clusters
2. Large flat clusters
3. Ropes of bloom
4. Dense narrow cones
5. Loose feathery pyramids

Exactly what these words mean is shown by the five pictures on page 207.

The early-blooming kinds have mostly branches and branchlets diffused into a fine spray, and the main stems arching and spreading. The late-blooming kinds have no spray, and their usually upright or erect stems give them a somewhat stiff appearance, but their showy flowers are very useful in the shrubbery in midsummer, for we have few good shrubs in flower after June.

THEIR CULTURE—SIMPLICITY ITSELF

Any of the spireas* can be planted successfully in either spring or fall, but my own experience is that in the more northern parts of the country results are more certain from fall planting, because the plants start into growth so early in the spring that they become established before the summer drought.

*When used as an English word it is proper to write spirea, following the analogy of peony, but when used in scientific language it should be spelled *Spiraea*.



The very soul of beauty in the early-blooming spirea is in these long ropes of bloom and therefore these branches ought never to be cut back. But the ignorant laborer will do it every time, the only beauty he sees is a compact, round bush. All that is necessary is to cut out the old wood. (*Spiraea Thunbergii*)



First type, the small flat cluster. Example *Spiraea Van Houttei*, "the best all-round spirea"

out the old flowering shoots, to leave room for the younger ones to grow and form their buds for the following season's bloom. I do not advise any more attention until the winter, when surplus branches in crowded bushes can be cut out.

The late-blooming kinds flower on the growth of the current year, which is made in the spring and summer. If the shoots are cut back one-fourth or one-half during the winter, they will flower all the more strongly in the summer. They may even be cut right to the ground, but if the bushes are healthy, there is nothing to be gained by this treatment. Remove the flower clusters as soon as the blooming season is over.

THE TWO EARLIEST SPIREAS

Thunberg's spirea (*Spiraea Thunbergii*) is the earliest to bloom, beginning at the end of April, and is usually at its best with me about the fifth or sixth of May. It grows about five feet tall, and forms a dense, spreading, graceful bush, with the numerous branchlets at the ends of the branches forming a fine spray, thickly covered with white



Second type, the large flat cluster, of which the most famous (or infamous) example is Anthony Waterer. This is *S. albiflora*, another late blooming species of upright habit, very different from the arching grace of the first type

flowers. Throughout the season, when not in bloom, this spirea, with its delicate olive-green foliage, which in the fall turns to orange red, is perhaps the most ornamental of the entire family. No wonder it is a favorite where it succeeds, but unfortunately it is not quite hardy in Western New York and the tips of the branches are sometimes injured in severe winters.

Blooming two or three days later than Thunberg's spirea when they are grown side by side, and as a garden plant perhaps far better, is the large-flowered hardy *Spiraea arguta*, a hybrid from Thunberg's spirea. In general appearance, when young, the plant resembles its parent, but it has a stiffer and more erect habit of growth, and in time reaches a height of from five to seven feet. The leaves, too, are larger, and deeper green. The flowers are produced in the same manner in both plants, but the individual flowers of the showy *S. arguta* are larger. Another advantage is its perfect hardiness, and when the branches are clothed to the tips with white blossoms, they look like



Fourth type, the dense narrow pyramid. At left *S. Lemoinei*; at right *S. Omenensis*

a mass of floral ropes. With all these advantages, however, Thunberg's spirea is the better plant when out of bloom.

THE BEST DOUBLE-FLOWERED SPECIES

There are only two double-flowered spireas in cultivation. The very popular one known as Bridal-wreath (*Spiraea prunifolia*, var. *flore-pleno*) is better than the double form of *S. Cantonensis*. Indeed there is no good reason for growing a second. It is usually in full flower about the tenth or twelfth of May. It grows from six to eight feet tall, and in rich soil on Long Island I have seen it ten feet in height, but that is unusual. The branches are slightly arching, and the individual white flowers in clusters along the branches look like miniature buttons. The best effect of a well-grown specimen of this spirea is at some distance from it; then it looks beautiful indeed. At close range there is not



Fifth type, the loose pyramid of which *S. alba* is an example. This is *Spiraea arsaefolia* of the nurseries, which should now be called *Schneidmuis discolor* var. *arsaefolia*

Any common garden soil, light or heavy, wet or dry, it seems, will answer for the spireas—the one essential condition being that it contain sufficient humus to preserve an ordinary supply of moisture. They are sometimes bothered by green or black fly, which must be fought with kerosene emulsion, or other suitable insecticide. (See March GARDEN MAGAZINE, page 65). These aphides are persistent pests, and spraying must be done several times. Scale will sometimes be found on the late-blooming kinds, for which I have found a 20 per cent. mixture of crude petroleum or kerosene sprayed on in late winter is thoroughly effective.

HOW TO HAVE THE MOST FLOWERS

The early-blooming species (those that will flower before the middle of June) bear their flowers on the young wood which is formed the previous season—therefore if you prune these species in early spring you throw away a lot of flower buds. Immediately after they are through blooming, cut



Third type, ropes of bloom. Example, *S. anguta* showier but less common than *S. Thunbergii*, of which it is a hybrid.

much attractiveness in the individual blossoms. The leaves are shining dark green throughout the season, and assume a rich claret red late in the fall, so it is a worthy shrub even for a small garden.

THE BEST ALL-ROUND SPIREA

Spiraea Van Houttei is the most useful, hardy, showy spirea, as far north as Ontario. It comes into bloom about May 20th, and occasionally, in late seasons, will be in bloom the first of June. It generally grows from six to eight feet tall. The stout, curving stems are diffused into numerous pendent branchlets, which are thickly covered with small, flat flower clusters, and they form a showy panoply of gracefully drooping festoons. As a single individual on the edge of a lawn, showing the graceful outlines when in bloom, it can hardly be surpassed.

ITS SOUTHERN RIVAL

A close rival of Van Houtte's spirea, where it proves hardy, and flowering about the same time, is Reeves's spirea (*S. Cantoniensis*, usually catalogued as *S. Reevesiana*) a most beautiful shrub, but unfortunately not hardy in western New York. It is sometimes mistaken for Van Houtte's spirea, but can always be distinguished from the latter by its oblong, lance-shaped leaves. Also the individual flowers are larger, and a purer, better white. Further south there is undoubtedly little to choose between the two. I have seen it in Baltimore in handsome bushes, seven to eight feet tall, whereas it seldom exceeds three and a half feet with us. The lower branches, that are sometimes buried beneath the winter's snow, and entirely escape injury, are exceedingly beautiful, festooned to the tips with the pure white flower clusters. About New York city Reeves's spirea is a favorite lawn shrub, and well-established plants are gorgeous sights.

A WORTHY DWARF SHRUB

A neat little shrub is the scollop-leaf spirea (*S. crenata*) which seldom exceeds two and a half feet in height, and blossoms two or three days after Van Houtte's spirea. The branches are somewhat spreading on the top, and give the bush a flattened appearance. The small, flat and slightly globular clusters are produced in great profusion along the branches, but the flowers are duller than those of Van Houtte's spirea. It is excellent for foreground planting, in connection with groups of other shrubs, and for small front yards is about the most satisfactory early-flowering shrub one can plant.

ATTRACTIVE WHEN OUT OF BLOOM

The round-leaved spirea (*S. bracteata*, but known to nursery men as *S. rotundifolia*, var. *alba*). It is a robust-growing, intricately branched shrub, with the young shoots yellowish brown in winter. It is readily distinguished from all others of the family by the almost round leaves, slightly tapering toward the base, very dark green above, bluish green beneath, which is of thick, leathery texture. It comes into bloom about

the first week in June, and is usually in good flower until June fifteenth. The small, flat flower clusters are slightly cone-shaped. It is a very characteristic ornamental shrub when out of bloom, and retains its foliage green and fresh looking until quite late in the fall.

PINKISH FLOWERS ALL SUMMER

If it were not for the magenta-pink color of its flowers, there could be no possible shadow of an objection to *Spiraea Bumalda*. Magenta is not bad in itself as many think, but it is used too much and in combination with its enemies, yellow and red. It is an erect, compact, neat shrub, from two to three and a half feet tall, with large flat clusters of deep pink flowers, which are quite showy, and after all, it is perhaps the most useful pink-flowered spirea in this section. Commencing to bloom about June fifteenth, it continues more or less in flower throughout July, and if the dead flower clusters are cut off, this useful little shrub will produce a second crop of blossoms, and continue it fully until frost arrives. A marked charac-

teristic of this spirea is that on all individuals there are a few leaves with strikingly clear variegations or markings of pinkish yellow.

The form of it that you see everywhere is *S. Anthony Waterer*, a smaller variety, with brighter, darker crimson-red flowers; it is much used in small plants for edgings and borders.

A DWARF SHRUB WITH PURPLE SHOOTS

The purple-tipped spirea (*S. Japonica*, found in many trade lists under the name of *S. callosa*) which comes into bloom toward the end of June, or first of July is easily recognized in early spring by the bright purplish-red color of the young unfolding leaves. Moreover, they are larger than in the other species, usually one and one-quarter inches wide, and three inches long. The large, flat pink clusters at the ends of the branches are much divided on strong shoots, and occasionally as many as twenty-seven clusters will form a broad, loose, almost flat, top. It grows from three to four feet tall, with stiff, erect, brownish stems in



A universal favorite: the bridal wreath (*Spiraea prunifolia*, var. *flora-plena*). The single form is so much less showy that people do not grow it. The best double spirea

winter. There are a number of varieties of this species in cultivation differing in the deeper pink flowers, broader leaves, etc., but they do not appear to be any improvement on the type.

THE LATEST OF ALL SPIREAS

Another woolly-leaved one is the hardhack (*Spiraea tomentosa*), which is also the latest blooming of all their great family, coming into bloom about the end of July or first of August, and continuing to bloom until the first of September. The purple-pink flowers are produced in dense cones at the ends of the branches. The leaves, like those of *Spiraea Douglasi*, are densely downy beneath, but are brownish yellow instead of white.

THE LARGEST DROOPING PINK TASSELS

There is one spirea not commonly in cul-

tivation which deserves more attention from planters because it has the largest pyramidal clusters of the pink-flowered spireas.

This is Billard's spirea (*S. Billardii*) of which *Lenneana rubra* and *Californica* are garden forms. It differs from other spireas in its own class by its drooping or arching branches, particularly when in full bloom; an effect which is due to the large and dense flower clusters. On the left-hand side of the illustration, and partly in the center, the drooping branches of the form known as *Spiraea Lenneana* may be observed. It is in full flower about July fifteenth.

TWO LATE WHITE-FLOWERED SPECIES

The late white spirea (*S. albiflora*, usually old under the name of *Spiraea callosa*, var. *alba*) is, I believe, the only late-flowering spirea with flat clusters, and as such may be easily recognized. It forms a neat little

shrub, with upright stems and grows from one and a half to two feet tall. The largest clusters terminate the branches, with a number of smaller ones lower down. It comes into bloom about July first, and continues flowering until the early part of August, giving fully six weeks of color. As it is not quite hardy, it should be planted in a sheltered situation—a very slight protection will suffice to keep it safely, and in most shrubberies this little attention can be given very easily.

Its companion in season of bloom but with flowers in pyramids is the meadow-sweet (*Spiraea alba*), which is conspicuous among the late-flowering spireas because it is the only late white-flowering kind that is free from every trace of pink. It grows from four to six feet tall, with upright stems, and comes into bloom about July first. The flower clusters are in broad, loose pyramids. On stout stems the clusters are sometimes much branched, and form large candelabra-like heads. It is a good-natured sort of a plant, too, and though it does well in damp, badly-drained situations, which seem to be its natural preference, it also does well, as the illustration shows, in a light, dryish, sandy loam.

ONE WITH NARROW CONES

Among the late-flowering spireas with narrow cones of flowers is the Douglas spirea (*S. Douglasi*), which blooms throughout the month of July and has deep pink flower clusters in narrow—hardly ever broad—cones or pyramids. It is said to grow eight feet tall, and perhaps it does, somewhere else, but with me it never exceeds four feet. No other spirea has the under side of the leaves so densely covered with white down. It spreads rapidly by suckers, and if planted in a group with other shrubs must be given constant attention to keep it within its prescribed area, or it will crowd and rob its neighbors.

A KEY TO THE SPIREAS

This shows in the least possible space how each species differs from every other. If you have a specimen in flower and want to be sure of its name choose first between A. and AA. Suppose your flower comes under AA. Then choose between B. and BB. and so on until you are directed straight to the name of your specimen.

But this is unlike any other key you ever saw. It has nothing to do with herbarium characters. If you want those, go to the "Cyclopedia of American Horticulture." This is a guide to the horticultural value of the species.

- A. Blossoming early on last year's growth. (Prune after flowering).
 B. Clusters in ropes along the branches, stalkless.
 C. Blossoming in April and May; flowers single.
 D. Branches arching; lvs. bright green.
 DD. Branches only slightly arching; leaves dull green.
 CC. Blossoming in May; flowers double.
1. Thunbergii
 2. arguta
 3. prunifolia, var. flore-pleno



This is typical of millions of flowering shrubs that go without thinning for ten or fifteen years. It ought to be a solid mass of bloom. Cut out the old wood and give the younger canes a chance

- BB. Clusters small and flatish stalked
- C. Height 6-8 ft.
- D. Foliage attractive all year: lvs. round..... 4. *bracteata*
- DD. Foliage less attractive: lvs. lanceolate..... 5. *Van Houttei*
- CC. Height 3-4 ft.
- D. Blooming May: lvs. $\frac{1}{2}$ -1 $\frac{1}{2}$ in. long..... 6. *crenata*
- DD. Blooming May and June: lvs. 1-2 $\frac{1}{2}$ in. long, green till late fall..... 7. *Cantoniensis*
- AA. Blooming late on this year's wood: (Prune in late winter or early in spring, before growth starts)
- B. Clusters large and flat:
- C. Color of flowers, white..... 8. *albiflora*
- CC. Color of flowers, pink or deep pink
- D. Height 2-2 $\frac{1}{2}$ ft. unfolding lvs. not purple-tipped... 9. *Bumalda*, var. *Anthony Waterer*
- DD. Height 4 ft.: lvs. 1 $\frac{1}{2}$ inches wide; unfolding leaves purple-tipped..... 10. *Japonica*
- BB. Clusters broad, loose pyramids or narrow cones.
- C. Color of fls. white..... 11. *alba*
- CC. Color of fls. pink to purple
- D. Height 4 ft.: lvs. velvety brown beneath..... 12. *tomentosa*
- DD. Height 6-8 ft.
- E. Color bright pink: lvs. usually grayish beneath... 13. *Billardi*
- EE. Color deep pink: lvs. velvety white beneath..... 14. *Douglasi*

INDEX

- Species in black face type; synonyms in *italic*;
- varieties in roman
- | | |
|-------------------|------------------------|
| alba—11 | <i>crenata</i> —14 |
| albiflora—8 | Douglasi—16 |
| Anthony Waterer—9 | <i>Japonica</i> —10 |
| arguta—2 | <i>Lenneane</i> —13 |
| Billardi—13 | <i>prunifolia</i> —3 |
| bracteata—4 | <i>Rosvigniana</i> —7 |
| Bumalda—9 | <i>rotundifolia</i> —4 |
| Californica—13 | <i>rubra</i> —13 |
| callosa—10 | Thunbergii—1 |
| Cantoniensis—7 | tomentosa—12 |
| Van Houttei—5 | |

Flowers After the Fall Frosts—By Herbert Greensmith Conn.-ecticut

THREE INGENUOUS METHODS OF SECURING BLOOMS ON MICHAELMAS DAISIES, PINKS, LARKSPURS, AND SNEEZEWEED, AT A TIME WHEN THE AVERAGE GARDEN IS DEVOID OF COLOR—GOOD REASONS FOR LATE DIVISION OF HARDY PERENNIALS

A COMMON source of trouble with most amateurs' gardens is that the first frost sees the end of all floral brightness except, perhaps, for a few hardy chrysanthemums.

By manipulation I have been able to secure flowers from some of the hardy herbaceous perennials much later in the season than they are accustomed to blossom and at a time when there is nothing else in flower.

The Snowflake aster ordinarily grows three or four feet high and two feet or more across, with flowers in early September, but I have been able to retard and dwarf it.

DELAYING THE ASTERS

After the plants have commenced to grow in the spring, when three or four inches high, they are dug up, and divided, and in very small pieces at first, then placed in three-inch pots, set aside in a frame, and watered sparingly until they get thoroughly established. Then they are again shaken out, and this time are divided into single stems, with a few roots attached to each, placed in two-inch pots, and kept growing until the latter part of June, when they are planted in the open ground where wanted. Should they commence to throw up flower stems before this, pinch them off. After planting in the border encourage them to grow, if need be, by an occasional watering. The two distinct checks given them, combined with the late planting, retard their growth. When full grown the plants are not more than a foot high, about eighteen inches to two feet across, and are completely covered with snow-white blossoms, long after most of the other late-flowering asters have gone, and the sharp frosts have carried away the tender-flowering plants. Many other asters will yield to similar treatment, but not with such good results.

There are two asters which ought to be found in every garden where late flowers are desired; namely, the showy aster (*Aster grandiflorus*), which grows from two to four feet high, with small, bright, clean foliage, and a sturdy, upright, non-spreading habit, and yielding in November and December a mass of gold and purple flowers that hard frosts seem to have no effect on: and the beautiful

three-nerved aster (*Aster trinervis*), which sometimes in sheltered positions will flower later still. I have seen it from late division and planting, a mass of flowers in late November. Another native species, the heart-leaved aster (*A. cordifolius*), may be had equally as late.

BLOOMING FROM SEED

A large amount of bloom is in store for the one who will sow, in liberal quantities, in late March or early April, seeds of the New England aster (*Aster Nova-Angliae*), the yarrow-leaved aster (*Aster plarimicoides*) and the great lobelia (*Lobelia siphilitica*), giving them careful attention and keeping them

greatly prefer a good-sized bed, planting them in masses, as then they are much more effective. Before the cold nights have arrived it may be necessary to place a sash or some other protection over the lobelias as the constant freezing by night and thawing by day are apt to damage the foliage and flowering stems; but when given this protection the fall, if continued good weather reigns, will be far too short for the crop of flowers. The asters, being of a much hardier nature, will not need any protection, and both will survive the winter.

SECOND BLOOM OF LARKSPURS

It is well known that the larkspurs (*Delphinium*), if not allowed to produce seed, but have their stems removed immediately when through blooming, produce a second crop of flowers. These are not so large as the first, but are very acceptable in late fall.

Another way, which I like better, and by which good spikes of bloom may be had, is to sow seed late in April, or very early in May. They soon germinate, and can be easily transplanted or potted up singly, and grown on until the latter part of June, then placed in the border, wherever there is an opening. You will be rewarded by a crop of delightful flowers. The showy larkspur (*Delphinium formosum*) is best adapted for this purpose.

BLUE FLOWERS TILL SNOW COMES

The Chinese larkspur (*Delphinium grandiflorum*, var. *Chinensis*), pretty both in foliage and flower, though not nearly so robust as the former, may be sown at the same time in the border, and the first year, if not too crowded, will give flowers of delicate blue, until smothered by snow.

The large-flowering fleabane (*Erigeron grandiflorus*), which flowers in June, if cut back will produce another crop of equally large flowers in late fall. Villars's fleabane (*Erigeron Villarsii*), from spring-sown seed, will be in its prime during September and October, and is a very presentable plant, both in the color of its flowers and in its habit.



The tender flowers of the Japanese anemones (*A. Japonica*) will be produced for several weeks after frost in places where slight protection can be given.

growing, which is not at all difficult. If a coldframe is at hand so much the better, as seed can then be sown much earlier, and the transplanting and care of the seedlings is made much easier; but all three species are very easily managed without the frame, needing only ordinary care in sowing the seed, transplanting to the nursery row when large enough, and again to the border or bed. I

The yellow-flowered foxglove (*Digitalis ambigua*) from seed sown in the open ground in early April, and transplanted into its flowering quarters as soon as large enough to handle, and shaded for a few days until it gets established, will give both variety, tone, and color to the border not usually found at this season of the year.

The fall-blooming sneezeweeds (Helenium) treated in the same way as the asters, will also be much later in coming into bloom; while the early-flowering forms, if their old flower heads are cut away as soon as they are through flowering, will give lovely heads of bloom which are very acceptable both in the border and the house in late fall months if encouraged into new growth by stirring up the soil around them, giving a little mulch and an occasional watering.

EARLY BUDS PINCHED OUT

The old-fashioned garden pinks usually flowering so abundantly in June, and giving us beautiful grassy mounds of foliage the rest of the season, are now being superseded by the new, everblooming ones, which give us flowers from June till frost, and plants of these are now to be had at trifling cost.

CARNATIONS TILL FROST

The Napoleon III. carnation (*Dianthus Caryophyllus*, var. *Napoleon III.*) is especially to be recommended as a perpetual

bloomer; but if a large crop is desired after frosts have carried away the tender plants, the flower buds should be removed as fast as they appear until August, which will cause the plants to increase in vigor and size, forming tufts of beautiful green foliage, and afterward such a wealth of deep rich crimson flowers the like of which is not to be found in any other member of this useful and interesting family.

Seed of *Dianthus latifolius* should be sown in early April, and the best and brightest forms selected and planted in the border, picking off all dead flowers in this case, not allowing them to go to seed, and flowers will be produced until snow comes.

The hardy pompon chrysanthemums and perhaps a few of the very early large-flowering forms should find a place in every garden; for if grown outside, they prepare themselves to resist the early frosts by hardening their wood, and will cheer both the garden and home in the dark, sombre autumn days.

PLANTS NEEDING SHELTER

The Japanese anemones (*Anemone Japonica*) are indispensable, and should be grown where they can be temporarily protected during severe frosty nights, as the flowers are very easily damaged. These exceedingly beautiful but frail flowers can, by a little protection, be prolonged for several weeks.

In a partially shaded spot, where its foliage is kept from being burnt during the summer months, the Japanese bugbane (*Cimicifuga fatida*, var. *simplex*) is one of the most lovely of the autumn flowers. It withstands our early frosts exceedingly well, pushing out its spikes of creamy white bloom amidst its bright, glossy green foliage in the most pleasing manner.

TOAD-LILIES IN OCTOBER

The lovely purple-spotted flowers of the toad-lily (*Tricyrtis hirta*) commence to unfold during the latter part of September, but it must be grown in a somewhat shaded position, or the sun will burn its leaves, which makes it unsightly, and impairs its flowering qualities. I have found that by dividing it every year as late as possible in the spring, and replanting in single crowns about four inches apart each way, it grows only twelve to eighteen inches high—about half its normal height—and its flowering period is retarded, making it last until the closing days of October.

OTHER POSSIBILITIES

Other plants, such as coreopsis, gaillardias, gentians, inulas, trolius, hardy phloxes, kniphofias, rudbeckias, eryngiums, physostegias, can be made to bloom into late autumn, adding lustre and beauty to the fast-fading glories of the autumn landscape.



The larkspur (*Delphinium*) will flower in late fall from early sown seed. Old plants, which bloom naturally in July, will produce a second crop in October, if cut back as soon as the first flowers are over



The native shrubby asters or Michaelmas daisies will yield a wealth of flowers in October and November from late propagated or late divided plants. The best one to grow in this manner is the Snowflake. This one is *Aster confosius*

Hardy Flowers for the Suburban Garden—By I. G. Tabor, New York

HOW A STRIP 4½ x 50 FEET CAN BE MADE A PERFECT COLOR HARMONY, WITH AN ABUNDANCE OF FLOWERS TO CUT FROM AT ALL TIMES

Sketches by the author

THAT your garden is a small one is no excuse for having a nondescript border. A great deal can be done in very little space by giving a little thought. This planting plan, for a border 4½ x 50 feet has been arranged with reference to the height of the plants, season of bloom, and color harmony. The taller growing plants are placed at the back, this border having been planned for use against a fence or wall. The charts showing season of bloom and color harmony are necessarily somewhat unreal. Firstly, as to seasons: Each period has some flowers that carry over from the preceding or that lap upon the following one. The Christmas rose, for instance, may blossom all winter, under the snow, but in the chart it is shown as a spring bloomer. Secondly, as to color: The terms used on the charts and in the planting table are generic, not exact.

EXTENDING LARGER GARDENS

If the border given in the plan is not sufficiently long for the situation to be planted, an extension may be made by beginning again and repeating as much as is necessary. For instance, the plan shows a clump of phlox (No. 34) and plantain lily (No. 15) at one end, with *Lilium auratum* (No. 26) and peonies (No. 31) at the other end. These may be placed alongside of each other, and the border continued to the right with Turk's cap lily, The Pearl achillea, and Christmas rose (Nos. 28, 1, 19) etc.,

WHITE THE HARMONIZER

Many groups of white flowers are scattered through the plantings. These reconcile otherwise impossible colors, and hold together the whole as nothing else can. Without the free use of white, a mixed border is bound to be a tiresome, disjointed mass of striking colors, no matter how carefully it is planned.

COLOR IMPRESSIONS

Yellow is a color that will quarrel with almost everything within reach, yet it is the happiest of all in its right place. It has a glow of warmth and cheer that nothing else equals, and nature uses it profusely.

Nearly always we must put white alongside, and lead off from it gradually. Some of the irises are good next to it, because of the touches of yellow that nearly always mark the iris flowers.

Blues, lavender, and grays are the restful cooling colors for warm weather, consequently our planting is done to have those hues, with the invaluable white to keep them in harmony, predominate in the midsummer flowering plants.

The shades of pink and red are welcome at any time, but one needs to be careful in their grouping, to avoid the magenta shades.

Lavenders are the middle colors between pinks and blues, and in the right selections will blend with both, at the same time harmonizing with some of the delicate yellows.

The general principle of arrangement of colors is based upon the fundamental opposition of the three primary colors. These—pure red, pure yellow, and pure blue—never

PLANTING LIST

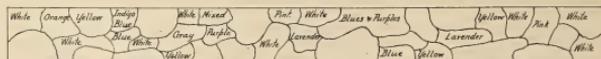
COMMON NAME	STANDARD AND TRADE NAMES	COLOR	HEIGHT IN FEET	MONTH OF BLOOM
1. Double chervilwort	<i>Achillea Ptarmica</i> , var. <i>The Pearl</i>	white	2½	July to Aug.
2. Queen Charlotte anemone	<i>Anemone Japonica</i> , var. <i>Queen Charlotte</i>	pink	2 to 3	Sept. to Nov.
3. Whirlwind anemone	<i>Anemone Japonica</i> , var. <i>Whirlwind</i>	white	2 to 3	Sept. to Nov.
4. Michaelmas daisy	<i>Aster Nova Angliæ</i> , var. <i>roseus</i>	rose	3 to 5	Sept. to Oct.
5. Catch-leaved bell flower	<i>Campanula persicifolia</i>	blue	1½	June, July
6. Carpathian bell flower	<i>Campanula Carpathica</i> , var. <i>alba</i>	white	4	July, Aug.
7. Pompon chrysanthemum	<i>Chrysanthemum Indicum</i>	yellow	2	Sept. Oct.
8. Shasta daisy	<i>Chrysanthemum vulginosum</i> , var. <i>Shasta</i>	white	1½ to 2	June to Sept.
9. Siberian larkspur	<i>Delphinium grandiflorum</i>	blue, purple	6 to 7	June to Aug.
10. Showy larkspur	<i>Delphinium formosum</i>	indigo	2 to 3	June to Aug.
11. Yellow foxglove	<i>Digitalis ambigua</i> (<i>D. grandiflora</i>)	yellow	2 to 3	June, July
12. Woolly foxglove	<i>Digitalis lanata</i>	white	2 to 3	June to Aug.
13. Common foxglove	<i>Digitalis purpurea</i>	purple	2 to 3	June, July
14. White Sweet William	<i>Dianthus barbatus</i>	white	1½	May, June
15. Plantain lily	<i>Funkia borciata</i>	white	1½	July, Aug.
16. Lemon lily	<i>Hemerocallis flava</i>	yellow	2	June
17. Goldflower	<i>Hespericum Moserianum</i>	yellow	3	July, Sept.
18. Swamp marsh mallow	<i>Hibiscus Moscheutos</i>	pink	4 to 5	Aug. to Oct.
19. Christmas rose	<i>Helleborus niger</i>	white	2	Feb. to April
20. White hollyhock	<i>Ailcea rosea</i> , var. <i>flora pleno</i>	white	4 to 5	June to Aug.
21. Pink hollyhock	<i>Ailcea rosea</i> , var. <i>flora pleno</i>	salmon-pink	4 to 5	June to Oct.
22. Single hollyhock	<i>Ailcea rosea</i>	red to white	4 to 5	June to Aug.
23. Pale blue iris	<i>Iris pallida</i>	lavender	3 to 4	May, June
24. Silver King iris	<i>Iris Germanica</i> , var. <i>Silver King</i>	white	2 to 3	May, June
25. Juliette iris	<i>Iris Germanica</i> , var. <i>Juliette</i>	yellow	2 to 3	May, June
26. Gold banded lily	<i>Lilium auratum</i>	white, banded	2½ to 3	July, Aug.
27. Madonna lily	<i>Lilium candidum</i>	white	6	June
28. American Turk's-cap lily	<i>Lilium superbum</i>	orange	3 to 6	July, Aug.
29. Forget-me-not	<i>Myosotis palustris</i> , var. <i>semper flores</i>	blue	1	April to June
30. Iceland poppy	<i>Papaver nudicaule</i>	yellow	1	May to July
31. Mad. Chamy peony	<i>Paeonia officinalis</i> , var. <i>Mad. Chamy</i>	rose-pink	2 to 3	May, June
32. French-leaved peony	<i>Paeonia tenuifolia</i>	crimson	2 to 3	April, May
33. Large-flowered Chinese peony	<i>Paeonia albiflora</i> , var. <i>festiva</i>	white	2 to 3	May
34. Jeanne d'Arc phlox	<i>Phlox paniculata</i> , var. <i>Jeanne d'Arc</i>	white	3	July to Oct.
35. Japanese bell-flower	<i>Platyodon grandiflora</i>	blue	2	June to Oct.



Complete planting plan for the 4 1/2 x 50 foot border. The exact location of each plant is shown



Flowering chart for spring: Peony, irises, Christmas rose, forget-me-not, Sweet William



In the heat of summer the blues and lavender are abundant. Tall larkspurs, canterbury bells chiefly; also pale iris, foxgloves. Pearl achillea, day lily and phlox for white harmonizers



Late flowering plants—September to November—include Japanese anemone, gold flower, Shasta daisy, native asters, hardy chrysanthemums and swamp mallow

can harmonize, or be made to live peaceably as near neighbors.

COLORS WHICH DO NOT BLEND

Avoiding combinations of the primary colors, the step from one to another is made by means of the secondary color. For instance, pass from yellow to red by means of orange, from blue to yellow by means of green, and from blue to red by means of lavender or purple. This is not the easiest thing to do when planting; even a skilled colorist, working with paints on canvas, finds it hard, and it would be hopeless for the gardener to attempt, were it not for the ever obliging and convenient white. Use white flowers freely, for they offer the only practicable color foils for the garden.

ESSENTIALS OF CULTIVATION

Success in growing hardy perennial plants of any sort rests upon the thoroughness of

the preparation of the bed before they are planted.

The ground must be well dug. Two feet is none too deep to go, and into the loosened soil, thoroughly work well-rotted horse or cow manure—a layer six inches deep will not be excessive. Make the earth firm, with no hard lumps. If grass has been growing on the place where the border is to be, chop the sod into small pieces and spade it under with the manure.

PLANT EARLY

Planting should be done in April, if possible, or very early in May at the latest.

Set each plant deeply—right up to the crown, but not covering it—and press the earth firmly around the plant. Make no mistake here: set them so firmly that a good pull with one hand will not dislodge the plant.

The border being once planted and es-

tablished, the first attention it needs each spring, as soon as every plant has shown even a tiny bit of its green head, will be the loosening of the top soil by a light hoeing. In this process the manure which it is usual to spread in the fall may be worked under. This done, the border takes care of itself, except that weeds must be pulled and water given. A light cultivation after rains (after the surface is dried a little) will also help wonderfully. Late afternoon is the proper time to water, but give water at any time, rather than let the plants suffer.

ALL SNUG FOR WINTER

In the fall, after the very last blossom has passed, cut off the dead tops of everything to within three inches of the ground, and cover with a mulch of manure or dead leaves. This feeds the plants, and also protects the roots from heaving through alternate freezing and thawing.

The Art of Growing Exhibition Chrysanthemums—By I. L. Powell

A MANUAL FOR THE PRODUCTION OF MAMMOTH BLOOMS UNDER GLASS—MAY 1st THE LATEST DATE FOR STARTING CUTTINGS, IF YOU WOULD WIN HONORS AT THE NOVEMBER SHOWS

[EDITOR'S NOTE—The author is superintendent for Mr. Samuel Thorne, at Millbrook, N. Y., and has a long record as a successful grower of exhibition chrysanthemums. He grew and exhibited what good judges have declared to be the most perfect specimen plant ever seen in America. It measured nine feet in diameter and four feet high, and carried at one time 324 good blooms.]

TO GROW large specimen blooms of chrysanthemums, cuttings can be made and started any time between January 1st and May 1st. With most varieties, those that are started during March will give the best

large box, about ten inches deep, boring holes in the bottom, for drainage, putting in three or four inches of sand, and after the cuttings were in, covering the top with glass, which could be removed, or raised, for ventilation, as the occasion required. The sand should be pounded firmly, before inserting the cuttings. Propagate from healthy growths only, and place the cuttings in water as soon as they are removed from the stock plant, never allowing them to wilt. A good cutting should be from two to three inches long, having the two or three lower leaves removed, and the remainder somewhat shortened. Insert in the sand to a depth of 1 to 1½ inches, water thoroughly, shade from bright sunshine, and ventilate sufficiently to keep the air sweet. Cuttings should be well rooted in from three to four weeks, and should be potted as soon as the roots are from one half inch to one inch long.

When the plants are ready to be shifted from their first pots, they may be planted in the place where they are to be grown and flowered. This may be in benches, boxes, or six-inch pots, although plants for growing in six-inch pots are better for being started about the middle to last of April. For the amateur or private gardener, boxes about four feet long, that will accommodate from six to ten plants, are very convenient. By growing only one variety in a box, the plants may be taken to a cool house or storage room when the blooms are perfectly developed, and cut as needed, whereas if grown in benches, as soon as the blooms reach their growth, they must be cut, or they will spoil.

All pots, boxes, or benches in which chrysanthemums are to be grown, must be pro-

vided with thorough drainage. This is very important. For the bottom of the smallest pots, a pinch of moss, or rough material of any kind, will do, but at the second, and all subsequent pottings, broken crocks or coal clinkers should be used liberally. Two inches of such material will not be excessive for the largest size of pots, boxes, or on the benches.

The soil to be used for cuttings at the first potting should consist of one-fifth clean sand



The way to raise exhibition blooms. Single stem plants growing on a bench, one bloom to a plant

blooms, although good results may be had from cuttings made as late as April 15th.

STARTING THE CUTTINGS

Propagation demands a bed of clean, sharp sand, in a fairly light situation, where a reasonably close atmosphere, with some ventilation, and a temperature of 45° to 55° can be maintained. The regulation north-side propagating house is good. I have made: an excellent propagating frame from a



A prize-winning "standard" on exhibition. Cuttings for these largest plants should be rooted in January



An excellent example of a specimen bush plant. A. J. Ballour, pink



The pompons are not often grown as specimens. Many blooms, but small

one-fifth leaf mold, or old well-decayed manure and three-fifths fresh loam, thoroughly mixed.

The mechanical condition of the soil in which chrysanthemums are to be grown is of as much, or even greater, importance than its richness. Sand, muck, or clay are not good. What is known as a friable clay loam is the best. This should be prepared in the fall, previous to the time that it will be needed, or if not convenient to get it in the fall, it must be prepared very early in the spring. If possible it should be taken from the surface of an old pasture, or field. Removing the sod and three or four inches of the surface soil, this should be placed, grass side down, in a flat pile in layers alternating with a layer of good cow manure, if it can be had, using one part of manure to three parts of soil. Fresh manure may be used in the fall; but if the compost is not prepared until spring, fairly well-rotted manure will be better. Horse manure may be used if cow manure cannot be obtained, but it must be well rotted. After the soil and manure have been collected and piled, the whole should be chopped down with a spade, thus thoroughly mixing the soil and manure. This

mixing should be done twice, and three times will be better, allowing about two weeks interval between the mixings. Before the final mixing, add good bone meal at the rate of one half peck to each cubic yard of compost. This compost, if properly prepared, is all that will be required for subsequent pottings, or for filling boxes or benches for growing cut blooms.

The soil for potting or planting should always be in a moderately moist condition, so that, when taken in the hand and pressed firmly, it will when released retain the imprints of the fingers, and yet fall apart readily. Such soil is in ideal condition. In potting, the soil should be made reasonably firm, and the lighter it is, the firmer it should be made.

WHEN TO REPOT

Plants should always be repotted as soon as the roots have made such growth that the ball of earth is full of fibres, and the roots are showing outside, which may be determined by knocking out one ball, to examine it. This "shifting" is done successively, as necessary. Do not let them remain until nothing but a mass of roots can be seen when

the plant is turned out of the pot. This condition is what is termed "pot bound." In the pots or boxes, ample room should be left from the surface of the soil to rim of pot for water. This will vary from one-half inch for the small pots to one inch in the six-inch size.

WATER AND HEAT

The chrysanthemums require an abundance of water during the growing season, which is until they are through flowering, and if thorough drainage has been provided in the potting, there is practically no danger of over-watering. When watering plants that have been recently repotted, be careful to apply the water sparingly, as otherwise the soil will become sour before the roots have had time to penetrate.

Chrysanthemums thrive best in a temperature ranging from 45° to 50° at night to from 60° to 75° during the day. During the summer, of course, it is much warmer than the temperatures given, and every effort should be made to keep the temperature as low as possible, by abundant ventilation at all times. For this reason the best sort of house is one where both top and side ventilation can be given. Syringe the plants freely



Loosely incurved bloom. Evidently from a crown bud—the stem is bare



A good example of the Japanese type. Madame Paul Galade. Foliage up to the flower—from terminal bud



A reflexed Japanese—Madame Carnot, white, one of the largest flowers. Has a very weak stem



The "anemone" type. Useful in small sized bush plants, for house decoration. Garza, white

during the growing season, and, in extremely hot weather, syringe them overhead two or three times during the heat of the day. Also, frequently dampen the walks and walls of the house, by means of the hose.

The main stems of plants which are to give specimen blooms must not be stopped, and all side shoots should be removed.

SYRINGING ROUTS RED SPIDER

If syringing is done thoroughly and consistently, there will be no trouble from red spider; but otherwise this pest may become a serious menace. Green and black fly, or aphids, and thrips, will be more or less troublesome. These can be kept in subjection only by eternal vigilance, aided by one of the many available insecticides, referred to in the April issue of THE GARDEN MAGAZINE. Tobacco stems or dust, or the various special nicotine preparations on the market may be used for fumigating. Spraying with whale-oil soap in solution, at the rate of one pound of soap to ten gallons of water, is also effective. Grasshoppers are sometimes troublesome, and can be fought only by hand picking.

Mildew will attack the plants at times, particularly after the nights begin to get cool in the fall. Careful attention to ventilation, avoiding draughts as much as possible, and dusting the plants with flowers of sulphur, will generally keep it within bounds.

SUMMER FEEDING

About July 15th if the plants are healthy and growing vigorously, they will be ready for special feeding. Use a weak liquid manure at first. Make it by soaking about a bushel of good fresh cow manure in a 50-gallon barrel of water allowing it to stand 24 hours before using, and then diluting with one half its bulk of clean water. In applying liquid food of any kind, be sure that the roots are not dry when it is applied. It is good prac-

tice to water the plants with clean water before applying the liquid manure. Every second day is often enough to give liquid fertilizer, and the form in which it is given should be changed at least once a week. Nitrate of soda, and sulphate of ammonia in solution at the rate of one half ounce to two gallons water, may be given alternately, and any good commercial fertilizer can be used in the same proportion. Surface dressings of wood ashes, partly decomposed cow manure, bone meal and commercial fertilizers will prove beneficial.

Surface dressings may be used to better effect on plants grown on benches than on those grown in pots.

THE CRITICAL TIME, "TAKING" THE BUD

It is in the early part of August that the chrysanthemum grower, makes or mars his year's work. No matter how carefully the preliminary work has been carried out, all hopes of raising prize blooms will be easily shattered by an error of judgment. The matter of "taking" the bud is now para-

The time for "taking" crown buds from August 1st to 15th for the very early varieties, such as Lady Fitzroygram, J. E. Lager, Kate Brown, Polly Rose, Glory of the Pacific, and Soliel d'Octobre.

For exhibition blooms, crown buds that form before August 20th are generally of no value and should not be "taken," as they will at best make rough, ill-formed blooms. In case of buds that form as early as August 20th it will be well to allow the young terminal branches to remain for a few days, removing them one at a time. After August 25th crown buds may be "taken" with the assurance that they will generally develop into first-class blooms.

RADICAL DIFFERENCES IN ONE VARIETY

The blooms from crown buds and terminal buds are radically different in the same variety. Those from terminals are invariably smaller, not nearly so full, but more regular in form, and with a weaker stem. Generally the foliage is closer to the bloom, and in case of pink varieties, the blooms are of better color. The difference in size, form and fullness is generally very decided, so much so that, other things being equal, the blooms from crown buds will almost invariably prove winners on the exhibition table. There are no secrets connected with the matter, however; it is only a question of watching the plants closely at the time when they are forming their buds, and caring for those that appear at the right time.

BUILDING UP EXHIBITION BLOOMS

As soon as it has been decided which buds are to be "taken" or left, all other buds must be removed. At this time special effort should be made to keep the plants free from vermin of all kinds; for, if red spider or aphids are allowed to remain on the plants they will find their way into the blooms which will be ruined. Great care must also be exercised after the blooms begin to open to keep the air as dry as possible. If moisture is allowed to condense on the petals during



Specimen blooms on exhibition. William Duckham pink, from crown buds. Compare with illustration on opposite page showing blooms from terminal buds

mount. Taking, in this sense means retaining. About August 1st, sometimes earlier, but generally a little later, the growing tip of the plant will push out from the axils of the young leaves, generally three branches, and in these will appear a small elongated bud. This is a "crown" bud. If the time is right for "taking" this crown bud the three or more young branches must be carefully removed without damaging the "crown" bud. Should the time not be right for "taking" the "crown" bud, let these young branches grow for a few days and then remove all but the best one. Three or four weeks later another bud will appear at the end of this growth, this is the "terminal" bud. It will be surrounded by several other small buds. Should this late set of buds be removed, there will be no bloom from the plant, as this cluster of buds terminates the season's growth.



One of the very earliest chrysanthemums, Baronne Brailles, white, one of the few large flowered varieties that does well outdoors

the night, and the sun comes out bright in the morning, the tips of the petals will be scalded, and the blooms ruined. All syringing must be discontinued, and necessary watering done as early in the day as possible. After the blooms begin to show color all feeding must stop.

After the blooms are partly developed, should there occur a period of warm, humid weather, many petals on some of the finest varieties will appear to rot. This at times

December 1st or as late as February 1st. If started too early, some of the plants may make flower buds in March in which case all hopes of growing show plants must be abandoned. My own preference is to take cuttings during January, putting in two or three batches, so that if one lot fails I have another to depend upon.

After the plants have become well established in their first pots, they should be "stopped" that is, the point of the growth

shoots grow to a length of three or four inches, and then tying down the point of the shoot in an almost horizontal position, by means of stakes. Stopping should be continued until the first week of July. The tying may also be continued if in the judgment of the grower it is required. Upon the proper performance of these two operations depends the form and symmetry of the future plant. Care must be exercised, however, in tying the shoots down, as they break very easily. After the plants have made several breaks, the stopping should be done every two or three days, as there will be a few shoots that will need to be stopped nearly every day, and it is better to stop a few at a time than to let them go until there are so many to stop that the plant is likely to receive a check.

Repotting must be done as required, shifting the plants from 4-inch pots to 6-inch, from 6-inch to 8-inch, and from 8-inch to 10-, 12- or 14-inch as desired for flowering the plants. If the plants are doing well a 14-inch pot is not too large, as plants can be grown that will carry two to three hundred blooms. At the last potting some fresh sod should be placed over the crocks in the bottom of the pots, and a small amount of some kind of fertilizing material may be added to the soil. If everything has gone well, by July 1st to 15th, the plants will be ready to take some special feeding as already described. Whether this is required must be determined by the grower.

TRAINING AND STAKING

After the plants have been grown all summer the next operation of importance will be supporting and tying the blooms in position. There are two good methods: one is by tying to stakes of bamboo or other light material, and the other is tying to a wire frame. Objection has been made that wire frames give the plants a stiff, formal appearance. Nothing could be farther from the real facts. There may be other objections to the use of the wire frames, but the one mentioned will not hold for a moment. Should you desire to use the frames, proceed as follows:

For large plants use stakes made from $\frac{3}{4}$ -in. rods. For smaller plants No. 8 galvanized wire will do. The stakes should be from 24 to 33 ft. long according to the size of the plants. If they are made with a loop at the top they will be more convenient. Place one stake as nearly as possible in the centre of the pot driving it firmly in the soil. Now divide the circumference of the rim of the pot into five equal parts, and place a stake at each of the divisions at an angle of 50 or 60 degrees, driving them firmly into the soil, then wire them fast to the rim of the pot, by means of light wires fastened to a heavier wire placed beneath the rim of the pot. If this work has been well done two men can, by taking hold of the stakes, lift the plant and carry it without difficulty. Now take a piece of No. 12 or No. 14 wire and make a circle about the plant fastening it to the ends of the stakes that have been placed at an angle. Next take some short pieces of the same size wire and fasten one from the centre stake to each of the side stakes, also one



William Duckham, pink, one of the best of the incurved class. This bloom is from a terminal bud

becomes quite serious, and is very discouraging. There is, however, no known preventive, except keeping the atmosphere as cool and as dry as possible, and carefully removing the decaying petals to prevent them from touching and damaging others.

GROWING LARGE SPECIMEN PLANTS

For large specimen plants carrying a quantity of blooms a start must be made very early. Cuttings may be made as early as

should be pinched out with the finger and thumb. This will cause three to five branches to start lower down.

When ready for repotting, use four-inch pots using the regular potting soil that has been described. As soon as the plants are established in these pots and the branches that started after the "stopping" have made two or three leaves, they should be again stopped. A good base can be formed for the future specimen by letting the young



Large flowered anemone varieties are rarely grown. They are not so showy as the other types, but worth growing because the blooms cannot be bought

from the centre stake to the wire circle, midway between each two side stakes. This will form an umbrella-like frame with ten divisions.

Now count the number of blooms on your plant, divide the number by ten and place the corresponding number of blooms in each division. Some of the blooms can be tied to the wires, others can be tied to pieces of green smilax twine, tied between each two wires. If this entire operation has been properly performed you will have a plant that is by no means stiff yet neat looking.

The treatment for standard plants is the same as for specimen plants except that instead of stopping the plants while in their first pots, they are grown with a single stem to the desired height, say 20 to 30 in. then stopped and the same treatment given as to the specimen plants and the same method of supporting the blooms may be adopted, except that a stout wood stake must be used for the centre of the plant, and the wires fastened to this stake.

VARIETIES FOR SPECIMEN PLANTS

Among the few varieties for this are:

White. Polly Rose: earliest good white; reflexed. Ivory: early midseason, small and compact, one of the best Japanese incurved. Mrs. J. W. Trantor; Mrs. H. Weeks; rather tall growing, but can be grown to a beautiful plant; Japanese incurved.

Pink. Miss A. Dalskov: pink sport from Ivory, with all its parent's good qualities. A. J. Balfour: the best of its color; Japanese incurved. Vivand-Morel: will make one of the best bush plants; Japanese reflexed. Dr. Enguehard: incurved; one of the novelties.

Yellow. Col. D. Appleton: rather tall, but a good grower; large blooms; Japanese incurved. Clinton Chalfont: Chinese in-

curved. W. H. Lincoln: strong grower, one of the very best; Japanese incurved.

Red. George W. Childs: will make good plants if not overfed; Japanese incurved. The Bard: one of the best. Red Warrior. John Shrimpton: good foliage, will not make a large plant; Japanese reflexed.

Bronze. Charles Davis: sport from Vivand-Morel. Kate Broomhead: rather tall, good grower.

VARIETIES FOR CUT BLOOMS

White. Mrs. H. Weeks: one of the best varieties when properly handled; Japanese incurved. Mrs. H. Robinson: the best early white; Japanese incurved. Merza: dwarf, good foliage, good for six-inch pots; Japanese incurved. Mrs. D. V. West: an excellent new variety; Japanese reflexed. Nellie Pockett: a prominent prize winner at many exhibitions. Timothy Eaton: very large, coarse, but a good grower and long keeper; Japanese incurved. Beatrice May: one of the latest introductions, and promises to be one of the best of its class; Japanese incurved. Alice Byron: a splendid variety, very refined effect, but not of the largest size; Japanese incurved.

Pink. W. Duckham: the best midseason variety of its color; Japanese incurved. Leila Filkins: dwarf grower, fine blooms; Japanese reflexed. A. J. Balfour: the finest color of all pink varieties; Japanese incurved. F. A. Cobbold: strong grower.

Yellow. Col. D. Appleton: the standard of its color, and an excellent variety. F. S. Vallis: dwarf grower, splendid blooms; Japanese incurved. Mrs. Wm. Knox: a promising new variety; Japanese reflexed. Golden Wedding: the best color of this class, good useful sort; Japanese. Chrysanthemist Montigney: lemon yellow, large and fine.

Red. Mrs. J. A. Miller: very large. Merstham Red: dwarf grower; medium size; Japanese reflexed.

Crimson. John Shrimpton: Japanese reflexed. Merstham Crimson: large blooms, a new and very promising variety; reflexed. S. T. Wright: a good standard variety. Maynell: with bronze reverse, very large blooms; reflexed.

Bronze. Mary Inglis: very large, good grower. Mrs. George Hearnie: a new and fine variety; dwarf grower; Japanese. Kate Broomhead: a good standard variety; Japanese incurved.

Flesh pink. Ben Wells: a splendid flower, and good grower; Japanese. T. Richardson: new, and very promising.

Other colors. Mrs. John E. Dunne, pinkish terra-cotta; new, promises to be a remarkably fine variety; reflexed. W. R. Church: purplish crimson, massive blooms; Japanese incurved. Mrs. Henry Partridge: purple with bronze reverse, new and promising.

WINTERING THE OLD PLANTS

To have good plants or good blooms the succeeding season, make preparations as soon as the flowers are well developed, in the current year. Decide what varieties you wish to grow again. Mark such plants "stock," giving the name of the variety. As soon as the flowers are cut, store these stock plants away in some cool house, or cold-frame, where they can be freely ventilated, and receive a fair amount of light. Light frost will do them no harm, provided they are not subjected to bright sunshine while frozen. I winter my stock in a deep coldframe. Plants are taken out as needed for propagating, and put in a cool greenhouse, where the temperature ranges from 45 to 60 degrees. Here the plants soon start into growth, and an abundance of cuttings may be secured.



The ripe gourds hanging from the branches of a tree give a weird effect in the garden. The bottle gourd grows two feet long



Gourds of all shapes and sizes! Hercules' club, sometimes reaching a length of five feet, is the longest; the smaller varieties are exquisitely colored

Growing Gourds for Fun—By E. E. Willcox, New Jersey

A MULTITUDE OF DECORATIVE POSSIBILITIES THAT ARE OFFERED BY THE ORNAMENTAL GOURDS—THE EASIEST AND SUREST WAY OF COVERING WASTE PLACES AND AFFORDING AMUSEMENT FOR THE CHILDREN

I KNOW of nothing that grows more freely and produces more blossoms in return for so little work than a gourd vine, and the curious fruits hanging in clusters, scattered over trees, or drooping from arbors

add novelty and attractiveness to the garden. The vines have a thrifty growth and results are obtained the first year, as the plants are annuals.

Gourds are grown in the same manner as pumpkins, squashes, or cucumbers.

They are tender—are injured by frosts—so that seed should not be planted until about May 10th in the neighborhood of New York. If larger crops are wanted seed may be started in pots in the house, in March, and transferred to the open when all danger from frost is past.

They must be trained on some support, such as arbors, fences and trellises or even allowed to run over a brush-heap (if the large-fruited varieties are used), and trained so that the gourds will hang clear. All the large ones except Hercules' club must have supports underneath the fruit. Pinch off all shoots near the supports, so that the fruit will hang clear when it is once formed. When it turns yellow you may know it is properly developed. If the gourds appear to be rotting, it is best to remove the insides at once, and allow them to hang in the sun, or near some artificial heat.

The best results are obtained from planting fully exposed to the sun. A tree-top is an excellent thing to train them over. Go into the woods or fields and find a small tree or an old top as long as you can handle, nail any old limbs, roots or sticks on in irregular fashion, but not too close together, and plant a few nest-egg gourds at its base. If you want to cover a fence, or some objectionable place, use the small varieties, such as miniature bottle, dishrag, spoon, mock orange, lemon, or any that in case of a wind-storm will not be damaged, as would the larger varieties.

When a gourd is once scratched, the blem-

ish will always remain, no matter how small it may be; and if the puncture is large, the fruit will rot or blast. Advantage may be taken of this, and a little engraving done on the gourd when it is small.



A dead tree is an excellent framework for a vine. Plant close to the support



The tree two months later. Use small fruited varieties in situations exposed to high winds



The Hercules' club must hang clear from obstruction

Hercules' club must be grown so as to hang clear, and when the fruit is well formed the stems must be tied to some support. If



The nest-egg gourd may fool the fowl

you wait until it shows signs of breaking, the stem is likely to crack lengthwise, causing early decay. Large bottles and sugar-troughs



Large gourds must be supported from below



Rustic supports are easily made from dead branches

must have a box to rest on; or, if high up, a rude stand can be placed to support them. If this is not done, the first wind will undo all your summer work, and your fruit, if large, will be torn away from the parent vine. Dipper gourds need no such support, and if trained high, will be very attractive.

Gourds may be used in many ways. With a little ingenuity many ornaments as well as useful things can be made from them, and as souvenirs of your garden work they are interesting. The dipper gourd can be used as its name suggests, when half the bowl is cut away; or as a vase, or when, with a small opening in it, it is hung up in the bushes near your house, it will be sure to hold a blue bird's nest in the spring.

Sugar-troughs can be used as jardinières and as work-baskets. Nest-eggs will deceive the old hen and the city boarders. They can be used as ornaments, or to serve as supports to the bottoms of the large, round



The dipper gourd is ever useful



Tie the young gourd vine to its support

varieties. Hercules' clubs, with their beautiful pure-white blossoms, are the most pleasing. If grown properly, the "clubs"



—but this is too much to swallow!

will be from two to five feet long. The vine grows to a great length, with a host of side shoots bearing beautiful foliage.



Turk's Turban is one of the flat type



The way many backyard grape vines look—a tangle of canes. Such vines bear small bunches of inferior quality. Get a few strong canes, and reduce the number of buds to 25 to 50



The grape arbor. Put only strong growing varieties like Concord, Herbemont or Scuppernon upon it. A judicious thinning of crowded canes and renewal would help to distribute the vines over the arbor more evenly than this

Superior Home-Grown Grapes—By S. W. Fletcher, Michigan Agricultural College

WHY THEY SHOULD BE THE PERFECT GARDEN FRUIT, BUT NEVER ARE—PRUNING AND TRAINING RULES THAT RESULT IN A TABLE TRIUMPH—FEWER BUNCHES BUT BIGGER AND BETTER

USUALLY there is little or no choice about the place to plant, for the site of the home fruit garden is determined by the site of the house, and the vines will naturally be planted close to the house. However, if there is an opportunity to choose between several sites, give preference to one that is sunny and well drained. It need not necessarily be the south side of a steep hill, as many people still suppose. However, it should have sufficient slope to provide good air and water drainage.



On left, short cuttings of one joint. On right, long cutting of short jointed variety. Single eye cutting in middle

slopes need it. Grapes love warmth, and are impatient of wet soil.

While preference should be given to a southern or eastern exposure, it makes no great amount of difference whether the grapes get the "morning sun" or the "afternoon sun."

There is also much latitude possible in the selection of soil. If possible, put the home vineyard in a warm and porous soil, rather than on a cold and heavy one, but any soil of moderate fertility and fair texture will grow good grapes under careful management. Avoid a soil rich in nitrogen, such as deep, black bottom land. If this stimulating plant tonic is near in large quantities, grapes are apt to "run to wood."

Put the land in mellow condition by deep and thorough plowing and fitting. If only a few vines are to be planted, it will pay to dig a very large and very deep hole for each one—four feet each way is none too much. A half-peck of old bones in the bottom of the hole will make rich feeding for the vines later on, and the hole filled with compost, or rich soil. If there are to be several rows of vines trained to a trellis, run the rows north and south, as the foliage then shades the stem and roots.

The distance between the plants depends upon the variety grown, the location of the garden, and the strength of the soil. Strong-growing varieties, like Concord and Niagara are commonly planted in the North in rows nine or ten feet apart, with plants eight feet in the rows. In the same region, for short-growing varieties, such as Delaware and Elvira, seven feet apart each way is sufficient on light soils. In the South grapes are commonly planted farther apart than in the North. The Herbemont and Post Oak grape hybrids usually need to be twelve to fifteen feet apart in the row, with rows ten feet apart. In California, the vinifera varieties are planted about eight by eight feet.

VARIETIES

In selecting varieties remember that those which have sprung from species native to your section will be most likely to succeed best. Thus, for the North, varieties of *Vitis Labrusca*; for the South, the muscadines, varieties of the native *V. rotundifolia*; and in the Gulf states the Post Oak hybrids. Hybrids between the native and the European grapes are especially interesting to the

amateur because of their very high quality and he can forgive their weak growth and susceptibility to disease. (See March *Country Life in America* for recommendations on varieties.)

BUYING AND PLANTING THE VINES

Grapes can be propagated at home easily and cheaply, but young nursery plants cost so little—not over 10 cents each, for standard varieties—that it is better for the average man to buy them; and they are apt to be more thrifty than those propagated at home, unless the home fruitgrower is an adept. Buy first-class—not second-class—one-year-old plants. In buying two-year-old plants, you are liable to get the culls left over from last year, and very little is gained in earlier fruiting.



In summer, rub off suckers that start from the roots or main stem. Train the renewal canes for next season, pinch back others. Keep canes from dragging on ground by tying

Heel the plants into soil as soon as received from the nursery. If possible, plant on a cloudy day or in the cool of early evening. The hole should be dug as broad and deep as if a large three-year-old apple tree were to be planted, instead of a small grape vine, one year old from the cutting. Mound up the dirt into a cone in the bottom of the hole so the roots will hang down over it naturally. Cut back the top to three or four strong buds, and trim in the roots slightly. Use rich dirt around the roots. Plant firmly. When the soil is leveled off the buds should be above ground. If planting in the fall, which is rarely advisable, mulch the plant with straw manure. This is a good plan after spring planting, also.

CARE THE FIRST SEASON

Force all growth into one cane; keep all suckers from the roots rubbed off, and nip off the ends of side shoots that would deflect growth from the main cane. The first season is the most important in the growth of the vines. In most systems of training the vine is cut back to three or four strong buds at the end of the first season.

TRAINING AND PRUNING

Grapes are pruned to reduce the amount of wood, so that the quantity of fruit borne will be limited, and also to keep the vines in a small space, so that they can be managed easily. All methods of training seek to hang the vines up in the air and sunshine, so that the fruit may ripen well. A novice will not go far astray if he remembers that fact. The fruit is borne only on shoots of the present season, which develop from buds borne on the shoots of last season. From each of the large, brown winter buds may come a shoot from one to several feet in length, bearing from one to four bunches of grapes. Only the largest and strongest of these winter buds have in them the possibilities of grapes; the weaker ones become shoots.

Vines of our common native varieties, over four years old should bear only from twenty-five to fifty clusters. This means that there will be left on the vine after pruning from twelve to twenty-five strong buds. The most common mistake of amateurs is to allow the vines to retain too much bearing wood, so that there is a waste of energy in producing a large number of very small



A two-year-old and one-year-old plant of Concord. The two-year-old plant will give quicker results, but the one-year-old plant will be more likely to live, since it has more roots.



Prune in this way before planting

bunches. Do not hesitate to cut off two-thirds of the vine, if this is necessary to give it a reasonable amount of bearing surface.

The aim of the grape pruner should be to get as much bearing wood as possible in the smallest space. This means that there must be some method of securing, from time to time, new canes from near the base.

The *Vertical Trellis* is the most common method of training. It need not be erected until the second season. The posts should be of the most durable wood obtainable, about 8 feet long, 6 to 8 inches thick, and the ends that are to go in the ground

should be charred or tarred. These precautions will save much vexation from rotten posts, which are apt to give way when the vines are laden with fruit. The end posts of a row should be braced on the inside with a 2 x 4 scantling about 8 feet long, one end fitting into a notch in the post and the other against a wooden stub in the ground. Put one post to every three vines or ordinarily about 26 feet apart. Set them at least 18 inches deep. Make a perfectly straight row; the wire will stretch easier. Plant the vines on the lee side. One, two, or three wires may be used. The three-wire trellis is most common, the wires being placed about 24, 36, and 48 inches from the ground, respectively.

The vines are distributed over a vertical trellis chiefly in two ways—by the renewal system and by the spur system. The renewal system is especially valuable for strong-growing varieties of the Concord type. It is one of the simplest to practise and since it usually gives a high grade of fruit, it is especially desirable for the amateur, particularly in the North and East. Renewal may be by single-arm, or double-arm, method.

In the first method but one wire is needed. A single cane is trained to the wire the second year, and is tied there making the trunk. The next year a single cane is allowed to grow from near the top of this trunk, to a length of 8 to 10 feet, when it is checked. All the canes on a row of vines are trained the same direction. The following year, while this cane bears fruit, another single cane is started from nearly opposite the first and in the opposite direction. At the end of the season the cane that has borne fruit is cut off completely at the head, leaving but one cane which will bear fruit the next year. Subsequent training and pruning is a repetition of that of the fourth year. The single-arm renewal system gives a limited amount of very choice fruit.

More fruit is secured from the double-arm renewal, which is exactly similar to the preceding, except that two new canes are grown each year instead of one, so that two canes fruit each year. It is necessary to use at least two wires in this system. The two new canes are trained one each way, on the lower wire; they are carried to the upper



The vertical trellis with vines pruned on the four arm spur system. In pruning the drooping shoots will be cut back to one or two buds which will send out bearing shoots next year



Make the hole at least deep enough to accommodate the roots when they are extended downward. Let the top of the original cutting appear just above the ground. Spread out the roots naturally and filter dirt over and between them with the fingers



Spur system on single wire trellis, before pruning, (wire five feet from the ground). The arms must be renewed every few years



Same vine with bearing wood cut back to spurs, each one bearing one or two large buds, from which will come a bearing shoot

wire for fruiting when the old canes are taken out. The horizontal double-arm renewal system is, all things considered, one of the best for the home fruit grower when varieties that lend themselves to it are grown.

The *Horizontal Trellis* differs from the preceding chiefly in the method of spreading out the vine. A single line of posts is set as for the vertical trellis. Across the top of each post, and at right angles to the row, is spiked a 2 x 4 cross piece about 2½ feet long. From three to five wires, usually three, are stapled to the upper side of this cross piece. The vine is grown the first season on a stake and is carried to the middle wire, where it is tied. At this point it is ripped back and two branches formed, which are tied in each direction, on the middle wire, becoming permanent arms. These arms should be shortened at the end of that season. They are extended the second season until 3 to 6 feet long. The bearing wood arising from these arms is treated as in the spur system or a modified renewal system may be practised. The important point about the horizontal trellis or "canopy" system, however, is not that either spurs or renewals are used in fruit bearing, but that the fruiting shoots are not tied, but hang loosely, drooping from the wires toward the ground. This makes horizontal trellis training very easy and the least expensive to manage, although the first cost of the trellis is slightly larger. A form of it popular in the North, is known as the "Kniffen" system; in the South a modification of it known as the "Munson" system, in which the centre wire is several inches lower than the two outer wires, is meeting general approval. The chief advantages of the horizontal trellis are that it is cheap, no expensive summer tying being necessary, and that the vines shade and protect the trunk and roots. For the latter reason it is an especial favorite in the South. A disadvantage is that the vines cannot be sprayed so easily. The horizontal trellis with drooping shoots is certainly the easiest way to handle grape vines in many parts of the country, and the quality of fruit produced is fully up to the standard of the vertical trellis under a renewal system. It is more satisfactory for strong-growing, than for weak-growing, varieties.

The *Arbor*. Oftentimes grapes can be made both serviceable and ornamental, especially near the house or garden, by being trained on arbors or porches. Even in such cases, it is not usually best, however, to let the vines run so much at random as is common. They should be trained to the arbor, porch, fence or wall just as though it were an upright trellis. Permanent arms, with many renewal canes leading from them, can easily be secured and the foliage effect will not be injured, while the fruiting value of the vines will be much enhanced. Many grape arbors have little value but for shade, when they might just as well produce a quantity of fairly good fruit. Keep the number of canes reduced and prune as rigidly as possible without making the arbor thatch too thin. The Scuppernon and other varieties of the muscadine type it is not best to touch at all when grown on arbors. These varieties often do excellently if trained to an upright trellis and severely pruned according to either the spur or renewal systems in the fall after the leaves have dropped. As a rule, however, they do best when allowed to ramble unchecked over an arbor about 7 feet high.

If grapes are trained upon a building, the vine should be securely fastened to it with

strips of leather or it may be trained upon woven wire fencing which is stretched a foot or more away from the side of the building.

PRUNING AND TILLAGE

Grapes can be pruned any time after the leaves drop until the buds open, but it is best not to prune when the wood is frozen, or after the sap flows. The "bleeding" that follows late-spring pruning, while not as injurious as is commonly supposed, is certainly somewhat detrimental to the plant. Fall pruning, after the leaves have dropped, is recommended. Burn the prunings and put the ashes around the vines. A little summer pruning and training is necessary. Rub off all suckers from the roots and other shoots that are not wanted. Especially during the first two summers it will pay to keep a sharp lookout for these robbers—they start and get a lead in a very short time. Pinch off the side branches of the canes you wish to save for next year, so as to throw growth into the ends. When these canes have reached the right length pinch off their tips. Keep them tied snugly to the wires as they grow, if the vertical trellis is used; heavy winds are apt to tear them loose. Next year's canes, on which another crop depends, are apt to get lost in the mass of foliage unless they are hunted out and favored. After a bearing shoot has set two bunches of grapes, it is commonly thought best to pinch it off about 10 inches beyond the second bunch. This starts the lateral buds of these shoots into growth, but these small shoots need not be pinched.

It is best to till grapes, yet it must be said that grapes will stand neglect better than most fruits. They are rather shallow-rooted plants, hence the plowing and cultivating an should not be deep. In the home grounds vines planted along the border or close to a building may often be mulched, instead of tilled. Stop tillage when the fruit begins to weight the vines close to the ground. A catch crop sowed at this time, will keep the rain from splattering dirt upon the bunches and will add humus.



The horizontal trellis. The bearing shoots hang down, not tied. Requires less labor than other methods. Popular in the south



A common mistake. Too many old canes. Start out one or two new canes from the roots, to renew the top

Unusual Tomatoes for Preserves and Pickles—By I. M. Angell, ^{New York}

OLD-TIME FAVORITES THAT ARE USUALLY PASSED OVER NOWADAYS IN FAVOR OF THE LARGER SALAD SORTS, BUT WHICH ARE BETTER FOR COOKING AND PRESERVES BECAUSE THEY ARE STRONGER FLAVORED

Photographs by the author and L. Barron

A HUNT through more than a dozen seed catalogues last spring enabled us to grow a strangely interesting collection of fifteen different pickling or preserving tomatoes. There was a good deal of fun and curiosity in raising them and in testing the fruits later. They are worth while only for that reason; as salad tomatoes the ordinary kinds are of course much better, but there is a richness of flavor in these small currants and eggs that stands well the trials



The best way to grow tomatoes for the amateur with a small garden

of cooking. For sauces these little fruits are unsurpassed.

Here is the full list: Yellow Cherry, Red Cherry, Yellow Peach, Red Peach, Yellow Pear, Red Pear, Yellow Plum, Red Plum, White Apple, Red Currant, Husk, Yellow Egg, Burbank Preserving, Large Yellow, Diadem (streaked).

A glance at the illustrations will show the relative sizes of the various varieties. The white dishes used being seven inches in length.

THE SMALLEST OF THE HOST

The smallest fruit of all was the currant tomato, three-eighths of an inch in diameter. It grows in long, slender, string-like bunches similar to its namesake, a

dozen or so to the stem and sometimes as many as forty "strings" to a plant; a really pretty object in the garden. A good-sized Ponderosa tomato, the largest of the salad kinds, placed beside a currant tomato shows a surprising comparison. It is hard to believe that they are the same sort of vegetable. This was the only one of the entire collection that was not worth bothering with. It is too small and too seedy to be seriously regarded. The plants are somewhat different from the common tomato, being more vine-like, with delicate stems and foliage.

The yellow cherry was next in size, three-quarters of an inch in diameter. A teacup will hold forty of these yellow cherries. They are desirable plants for the children's garden. Their small size, beautiful color and good flavor would be appreciated by the younger members of a family. We gathered nearly two hundred from one plant. They grow in many fruited clusters, as do all of these small tomatoes. The red cherries are somewhat larger than the yellow ones, being an inch in diameter, but were not quite so attractive, either in looks or flavor, as the yellow counterparts, although more productive. We picked over 270 from one plant.

The Burbank Preserving tomato grows in thick-set clusters of small red fruit, the proportions of the individual fruit are those of the ordinary tomato, but the size is that of the red-cherry tomato, or even smaller. The clusters sometimes take the form of a bunch of grapes. They lacked acid and were generally pronounced insipid; we did not like them. Perhaps we did not get the best results from the plants, for the *Cyclopaedia of American Horticulture* speaks of "the cherrylike, exquisite-flavored Burbank's Preserving tomato." The plants belong to the dwarf-growing type and were only one-foot high when ordinary tomato vines had made three feet of growth. The foliage is strong, thick-set and somewhat like that of a potato.

Next larger in size are the "pear" and "plum" sorts each of which is two inches

or less in length. The kind advertised as egg tomato seems, in every way, identical with the plum. These are wonderfully prolific; we counted 260 fruits on one plant. The yellow plums are among the best flavored of the small tomatoes, and the most used for culinary purposes and as a fruit to eat out of the hand. Pear tomatoes are attractive in color, shape and flavor, but their hold on the stem is so slight that they drop to the ground when the plant is jarred. While this makes them bothersome to gather, yet they are productive enough to make up for it. One plant yielded almost two hundred pears.

The Diadem tomato is peculiarly streaked and blotched with yellow. It is meaty and of good size and flavor, but its odd markings seem to penetrate the skin; the flesh adheres tightly in the lighter places so that it is not easily peeled. We had some of these eleven inches in circumference.

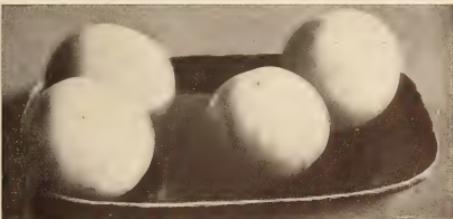
The white apple is a curious sort, round and solid, with little acid, and practically tasteless; and moreover it bore but a light crop. The largest of all in this collection of out-of-the-common tomatoes was the Golden Sunrise. This sometimes almost reached the proportions of the giant Ponderosa. It has a good flavor and for color and good even appearance has never been surpassed by any of the family that we have grown. One good-sized fruit measured thirteen inches in circumference.

A GOOD DESSERT FRUIT

As a dessert fruit, to be eaten out of hand the peach tomato is by far the best. The red sort has the shape, color, size and even bloom of the real peach; the flavor is more sweet and fruity than that of most of the tomato family. One great advantage is that the skin, so tough in some kinds, is in these very thin and tender, almost like a peach skin. It has the reputation of being very prolific; but ours did not bear more than a hundred to a plant. It is spoken of by others who have tried it as "firm and well-



These small, old-time varieties are generally named from their shape. Egg tomatoes, one and one-half inches long. Deficient in flavor



The white apple tomato has so little acid as to be insipid. It bore a very light crop. Fruit pale pink, solid flesh

flavored, with few seeds." It will stand a rainy season better than some kinds and one fall was the mainstay for canning, a long fall rain having rotted the ordinary sorts.

Green peach tomatoes are excellent for pickles, because they are so firm and chop well, and because the vines are generally loaded when picking time comes.

THE HUSK-TOMATO FAMILY

An odd, fruitlike vegetable, to which has been given the name of "tomato," is the physalis, sometimes called ground cherry, husk tomato, cape gooseberry, strawberry tomato, Chinese lantern plant and other names, according to the variety or locality. I have raised the common yellow-fruited garden sort (*P. pubescens*) and cooked the berries like preserves. They are very good eating. It is claimed, too, that they make excellent pies. The plant seems to be not particular as to soil, although rich and sandy ground gives the best results; for it grows very easily and comes up each year from self-sown seed. The season can be lengthened by starting indoors. The fruit will keep till the holidays if stored in a cool dry place with the husks left on. It is recommended for putting into cakes, when dried like figs. The red-husked sort (*P. Alkahengi*) makes a showy Christmas decoration, if picked with long stems and dried carefully. It is a troublesome plant in a flower garden, however, as it spreads by underground stems and soon overruns its own space.

ECONOMY OF THE SEED

A package of seed of each of these varieties of tomato is not at all an expensive investment and will repay amply for all the attention of raising the seedlings. You do not have to sow all the seed at once, either. It is long lived and can be relied upon to produce plants for several years. The ordinary packet will contain a great deal more seed than one is likely to need in one year.

A sufficient quantity of tomato plants to supply an ordinary family can be started in one ten-inch flower-pot in a sunny kitchen window. Young seedlings must not be overwatered, but full-grown plants in the open garden call for a good supply of moisture. Ours were started in a sunny window, on various dates, from March 1st to April

11th, and were set outdoors when safety from frost was assured. For succession crops we had some self-sown plants that ripened fruit the first part of September. Some seeds were sown in the open ground the first of May and the plants began to yield just four months later. On July 4th as an experiment we planted some seed for a pickling crop which gave us green tomatoes over eight inches in circumference in October. As a usual thing the earlier plants will provide all the green tomatoes wanted for pickles, but in case of a belated garden it is better to sow a few seeds than to depend on an uncertain crocer for green tomatoes. As we did not attempt to raise an extra early crop, the bearing season was shortened to two months, the season might as well have been even three times as long, by starting some plants with a view to extra early bear-



The so-called husk tomatoes are kinds of physalis. They make an excellent fig-like preserve.

ing, and then at the end of the season bringing plants and picked tomatoes under shelter, where they would have ripened till the holidays. In other years we have thus lengthened the season from October to the first week of January.

The first pruning and training were given about the middle of July, and after that there was no rest; for the plants grew so fast that we could not catch up with them.

STARTING INDOORS

Seeds should be sowed indoors six or seven weeks before planting-out time, and the young plants not put outside until all danger of frost is past; nor should the work be done during cold, dry, windy weather. Two or three weeks from sowing, the seedlings may be set into other boxes indoors, three or four inches apart. Repeated transplanting and pruning back will not give the best results in the long run, if plants are wanted for producing throughout the season. One trans-

planting when very small, and after that a constant and steady growth, is the best treatment for tomatoes in the home garden.

The best ground for a tomato patch is soil that has been richly manured the previous year, but, if it is necessary to fertilize it the season of planting, be sure that the added material is very thoroughly mixed with the soil. A commercial fertilizer containing nitrogen and potash (less of the former than is required by potatoes) will agree with the tomato. This may be worked into the ground when setting out the plants, reserving a third of the supply to work in a month later. Manure must not touch the plants, but the ground must be rich enough or they will not give the best results. On the other hand, an oversupply of nitrogen will show in a growth of vine at the expense of fruit. I think, too, that excessive drought results in irregular and wrinkled fruits. Tomatoes require an open spot, exposed to the sun, and warm soil.

SPECIAL POINTS FOR AMATEURS

The amateur should grow the plants on some sort of support rather than let them spread over the ground. It means earlier fruit of better size and color. Training to a single stem is recommended by the best authorities for "fancy" results, but, as the pinching and pruning will be almost constant, an otherwise busy gardener will probably be satisfied with some less strict method. A leaning trellis or rack to support the vines above the ground will be found to help the development of the fruit and reduce liability to rot. A steady growth from seed to harvest is desirable as any check affects unfavorably the quantity and quality of the fruit.

If training to a single stake, watch the plant for the first bunch of blossoms and prune off all side branches starting below it. Above the blossoms the plant will divide and these two main stems, or only one, as preferred, can be left to grow. They must be tied frequently, as the growth increases, to keep the plant upright and all later lateral branches must be cut off. To avoid disease plant in a well-drained oil.

Cultivate early and often, so that the plants will have the mellowest soil possible. Begin this treatment the day after the young plants are set out and keep it up till they



Diadem red with yellow splashes. The skin adheres tightly to the flesh



Golden Sunrise, a large, yellow fruit is excellent as a salad



Generally said to be very sweet, but which with us was insipid. Burbank preserving. The plant is dwarf, and needs no support. Fruit one inch across

The currant tomato in red or yellow. Remarkably prolific and highly flavored but it has too many seeds in proportion to size

reach full growth, but do not cultivate deeply after the roots have spread through the soil.

For extra earliness the rules for the best flavor and size are set at naught, but, for home use, size and quality are of more importance than earliness.

A FIG-LIKE CONFECTION

The yellow-pear tomato may be made into a confection resembling figs. By the following rule: Scald and remove the skins of ripe tomatoes. Put a layer of tomatoes in a porcelain kettle and sprinkle thickly with sugar. Put over a slow fire and cook slowly until the sugar penetrates the tomatoes. Lift each one separately and flatten on a shallow dish. Stand in hot sun, screened from insects, for a couple of days to dry. During this time sprinkle several times with granulated sugar. When dry pack in jars with layers of sugar between. Of course, they must not be exposed to rain or dampness while drying. As our tomatoes were very juicy, we kept them in a cool oven or on the warming shelf over the stove for several days, until they reached the gummy stage, and then put them up in jars as a sort of preserve.

EGG TOMATO PRESERVE

The ordinary egg-tomato preserve is prepared thus: Select smooth egg tomatoes, not overripe, scald, peel, and weigh. To each pound of fruit put one pound of sugar, the juice and rind of a half lemon and a small

piece of ginger root cut into thin slices. Put altogether into a porcelain kettle and cook very slowly for three hours. The tomatoes must not cook long enough to lose their shape, but must be clear and tender. Put them into jars and stand them where they will cool, after which tie them up with two thicknesses of tissue paper moistening the top with white of egg. These tomato "plums" are very popular with some of our friends.

We have also tried pickling small tomatoes. They were looked upon as quite a

looking dish. Scald and skin whatever quantity is wanted, put them in a porcelain kettle and cook thirty minutes. Then put in the same quantity of grated pineapple as you have of tomatoes. To each pound of this mixture add one pound of granulated sugar. Cook slowly for one hour and jar as directed for egg tomato preserves.

For a dish called tomato honey a good authority gives this recipe: "Select ripe yellow tomatoes, weigh them, cut them into pieces, and put into a porcelain kettle; for each pound allow the grated rind of one lemon. Simmer very gently for thirty minutes, then drain and press through cheese-cloth. Measure the liquor and pour back into the kettle, and for each pint allow one pound of sugar, granulated, and four table-spoons of lemon juice. Boil twenty minutes or more till a thick syrup. Put in bottles or tumblers.

Green peach tomatoes make a first-class pickle. First chop them into pieces, then squeeze off the juice, salt them, and let them stand over night. Chop some cabbage, salt it and set aside also. Do the same with a few onions. The next day press out all the brine and put the chopped vegetables into an earthen jar, and pour over them the following mixture: heated vinegar enough to cover, to which has been added a little sugar, some small pieces of horse-radish, a little celery seed, some black pepper, a red pepper, chopped, and some mustard seed. The pickles will be ready to use in a week.



The peach tomato is a good dessert fruit; delicate in flavor, and having a "bloom" on the skin. Well worth growing

novelty when used for picnics. Choose small "fancy" green tomatoes of desired size and shape; prick them with a pin to prevent bursting. Put them in glass or stone jars, add a half cup of nasturtium seeds and cover with cold cider vinegar. In two weeks they can be used or will keep all winter if closely covered.

Yellow tomato marmalade will appeal to some people and certainly is an attractive-



Cherry tomatoes, one inch in diameter. Very prolific and just the right size for one mouthful. Red and yellow varieties



The pear tomatoes are one and one-half inches long and are the best flavored of these small types. They drop from the vine as soon as ripe

The Most Fragrant Annual Flowers—By Florence Beckwith ^{New York}

INCONSPICUOUS-FLOWERED PLANTS THAT SHOULD BE SOWN IN OBSCURE CORNERS OF THE GARDEN, TO EXHALE THEIR ODORS UNSEEN—SUGGESTIONS FOR A SUBTLE AND CHARMING FEATURE

Photograph by the author

THE night-scented stock (*Matthiola bicornis*) is a hardy annual with a small unpretentious pink flower which gives off a delicious odor at night. It was one of the pleasant surprises of last year's gardening.

The seeds were sown in the open ground in the early spring, just as soon as the soil was in a fit condition to work. The plants came up thickly; and later they were thinned somewhat, though not so much but that they grew in a rather compact mass. They are naturally rather weak stemmed and need support, so this did not prove to be a disadvantage. Up to the time of blooming, the plants, with their inconspicuous, grayish-green foliage, gave little promise of the pleasure they held in store, so, when the earliest blossoms opened, a slight feeling of disappointment was experienced; for they were not, at first sight, very attractive, being single and of an unobtrusive pinkish-lilac color. One of the family expressed the opinion that the flowers were no prettier than radish blossoms, to which, it must be con-

fessed, they do bear some resemblance, only they are larger. But when evening approached, the rather sprawling plants seemed to stiffen and straighten, and the flowers, which until then had been utterly without fragrance, suddenly exhaled a most entrancing odor, as charming as it was unexpected.

It was particularly interesting to watch the plants as evening approached and wait for the coming of the fragrance. One moment the flowers were scentless, the next a fragrance was distilled that filled the garden with a delicious, spicy odor, not in the least heavy or cloying, but which seemed to overpower that of every other flower in its neighborhood.

So very modest is this night-scented stock that its merits are not fully appreciated, and it is not listed in some catalogues. It is one of the sweetest, most charming evening bloomers. It will make no show in the garden, and therefore it is best planted in a mass in some retired spot, or, preferably, near the verandah where you are accustomed to

sit at evening: the delightful fragrance will lend an added charm to the twilight hour.

The maze flower (*Schizopetalon Walkeri*) deserves to be better known. It is a hardy annual about a foot high, with white flowers, and makes a welcome addition to the garden because of its delightfully spicy odor, resembling that of almonds. The curiously cut petals remind one of the maze occasionally seen in old-fashioned gardens. The seed should be sown where it is to flower, as the plant is very impatient of any meddling with its roots.

The well-known mignonette (*Reseda odorata*) is a very pretty annual, giving off an odor that reminds one somewhat of the sweet-scented blue violets—penetrating, yet light and agreeable.

Seeds may be sown out-of-doors at any time after April 1st, and successional sowings, made every three weeks, will continue the bloom until frost. Seeds sown in July will make good flowering plants for the window garden next winter.



There appears to be much confusion about this night-scented stock (*Matthiola bicornis*). It is an annual with a straggly habit and inconspicuous pink flowers. Scentless by day they suddenly become very fragrant at night. The plants are limp during the daytime, becoming rigid and standing erect at night.

New Book

On wood-finishing,
cleaning and polish-
ing for the home

Sent FREE



Every home should have this book. It eclipses everything ever published on this subject. Brimful of valuable ideas and suggestions

We have just printed a brand new edition of our popular book, "**The Proper Treatment for Floors, Woodwork and Furniture.**" It is decidedly more elaborate and larger than our previous editions—illustrated from life and printed throughout in colors.

This book tells how you can easily and inexpensively beautify your home. It explains how you can produce all the latest wood-finishes and polishes. How to make soft pine look like beautiful hardwood. It is the advice of a wood-finishing expert of over 23 years' experience. The nominal price of 25 cents has been placed on it, but for the present at least we shall send this book FREE to anyone on request. Don't delay—send today, coupon below.

Printed in six colors to give true color effects on wood. Much larger pages and more of them than our last book

Write Today

Use coupon below.
Do it now, and
you'll be pleased

Johnson's Prepared Wax

"A Complete Finish and Polish For All Wood"

Unequaled for Woodwork, Furniture and Floors

Applied with cloth to bare or finished wood, it produces a lasting, artistic, sanitary finish to which dust and dirt will not adhere. It will not crack, blister, peel off, show laps, scratches or heel marks. Johnson's Wax is far superior to any other; one reason is that it contains the most polishing wax to the pound. Fine for preserving and polishing oil-cloth and linoleum. Just try it.



Johnson's Prepared Wax is **sold by all dealers in paint.** Half-pound can, 30 cents; one and two-pound cans, 60 cents per pound; four, five and eight-pound cans, 50 cents per pound.

Send coupon today for book, or write and mention edition G.M. 5.



G.M. 5
Coupon

To
S. C. Johnson
& Son,
Racine, Wis.

Please send me FREE
your illustrated book,
"The Proper Treatment for
Floors, Woodwork and Furni-
ture," as per your offer.

S. C. JOHNSON & SON

RACINE, WIS.

"The Wood-Finishing Authorities"

Name _____

Address _____

The Solution of Perfect Sanitation



is exemplified in the SY-CLO Closet, the construction and action of which ends at once all the subtle dangers of disease arising from improper cleansing; the escape of sewer gas; the absorption of poison by the material of which common closets are made (iron for instance); and

the gradual discoloration of those interior parts which furnish a prolific breeding-ground for millions of death-dealing bacilli.

The action of the SY-CLO is two-fold. Besides the copious flush of water, there is an irresistible syphonic action, which, like a powerful pump, literally pulls the contents through the outlet channel, cleansing, scouring, polishing as it goes, leaving the INSIDE of the pipe as clean and smooth as a china bowl. And this is a truism because the SY-CLO is solidly constructed of china—*pure white china*—without joint or break or rough place inside or out to furnish lodgment for dirt or disease germs.

Examine your closet; if it is made of enameled iron or has just an ordinary flush, discard it at the first opportunity for a SY-CLO. *Your doctor pays the bill.* If you are building a house or buying one, insist on SY-CLO Closets with the trade mark name burned in the china. The fact that

Sy-CLO

TRADE MARK

Closets cost but little more than other closets—that, with ordinary care, they will last as long as the house in which they are installed, leaves no further excuse for sewer sickness. Ask the plumber. A book on "Household Health" mailed free if you send the name of your plumber.

Lavatories of every size and design made of the same material, and on the same principle, as the SY-CLO.

**POTTERIES SELLING COMPANY,
Trenton, N. J.**



**SY-CLO
Closet cut
in half
showing the
interior
construction**

**Note the
deep water
seal, making
the escape
of gas
impossible**



A Portable Tomato Trellis

THE TOMATO trellis which I am using in my garden is superior to the one described in the November issue of THE GARDEN MAGAZINE in that it is portable.



Tomato plants trained on a trellis of this pattern are properly exposed to the sun. It should be run east and west. Fifteen feet long, cross piece one foot apart, accommodates five plants on each side.

It is an A-shaped frame with horizontal bars. The uprights are 1 x 3 inch strips, 5 feet long, and a pair is fastened together at the top by a 2½-inch bolt. There are three of these pairs of uprights placed about five



Five years old and as good as new. When winter comes the trellis is taken up and stored until the next season.

33 Years Selling Direct

Our vehicles and harness have been sold direct from our factory to user for a third of a century. We ship for examination and approval and guarantee safe delivery. You are out nothing if not satisfied as to style, quality and price.

We are the Largest Manufacturers in the World selling to the consumer exclusively. We make 200 styles of Vehicles, 65 styles of Harness. Send for large free catalogue M.



No. 221. Canopy Top Surrey. Price complete, \$65.00. As good as sells for \$25 more.



No. 647. Top Buggy. Price complete, \$25.00. As good as sells for \$25 more.

Elkhart Carriage & Harness Mfg. Co.

Elkhart, Indiana.



BEAUTIFYING YOUR GROUNDS

It would be difficult to conceive a plant that would add more to the beauty of your grounds than the enviable

"BABY RAMBLER"

It has been planted in all parts of the country, and has never failed to develop into a bushy and sturdy plant. It grows from 24 to 30 inches in height and blossoms continuously from early June to severe frost; think of roses every day from June to November. As many as 120 individual flowers have been counted on a single plant. The foliage is of a fine polished dark green. Every plant we ship is exceedingly sturdy and is guaranteed to be healthy and perfect in every respect.

Our landscape department is complete in its various departments. Can it be of service to you? Our beautiful catalogue illustrating ornamental trees, vines, shrubs, flowering and fruit-bearing plants is sent free on application.

T. J. DWYER & CO., Box 4, Cornwall, N.Y.

Don't Raise Bugs

in your orchards and gardens but get rid of them the by using

DEMING SPRAY PUMPS

Hand or Power Outfits, Century, Success, Knapsack. Good for all kinds of spraying and whitewashing.

Everything for WATER SUPPLY
Pumps, Wind Mills, Tanks, Gasoline Pumps, Pneumatic System.

Write for Catalogue.

R. B. CARTER CO., 47 Day St., New York

Lambert's Pure Culture Mushroom Spaw

Produced by new grafting process from selected and prolific specimens thoroughly acclimated, has never failed to run. Sold by Leading Seedmen. Practical Instructions on "Mushroom Culture" mailed free on application.
American Spaw Co., St. Paul, Minn.



Carefully Examine your plants Early

KILL the bugs before they get a chance to destroy your plants and flowers. Do it now—with **THOMPSON'S ROSE-NICOTINE**! *(Derived from tobacco)*. It will be harder if you let them get a start. It is colorless, odorless, stainless, and quickly kills insects and vermin wherever found—on plants, vegetables, fruits, on cats, dogs, fowls, on human hand or body, in clothing, carpets, furniture, bedding or woodwork, benches, and hallways. Sold by druggists, etc. and soc. cases; the **Rose-Nicotine Fungicide**, 25¢, convenient for household and fire-house fumigation to kill vermin. No odor after ward.

If you send us the name of your druggist, we will send you a valuable booklet (10 pages) "How to Destroy Fleas, Lice and Vermin." Also, you may request one, 50c, can of Fungicide free, in lots, etc. If you druggist won't supply you, (not available).

F. A. THOMPSON & CO., Mfg. Chemists,

320 Tremont Ave., Detroit, Mich.



THE KEYSTONE

Of good house paint is OXIDE OF ZINC—without the keystone an arch cannot stand. To a certain extent and with due limitations, it matters less what other ingredients a paint may contain than that it shall consist largely of OXIDE OF ZINC and pure linseed oil. Some house-paints are composed of zinc and lead, some of zinc and an inert material, some of all three, and in every case such paints are better than any paint than can be made without the ZINC. OXIDE OF ZINC in a paint insures a finer lustre, purer tints, greater covering power, vastly increased durability—it also insures greater permanence of lustre and tint.

A Suggestive Pamphlet,
"Paint: Why, How and Where,"
FREE to owners."

The New Jersey Zinc Co.

71 Broadway, New York

We do not grind zinc in oil. A list of manufacturers of zinc paints sent on application.

ATTRACTIVE BUNGALOWS NEAR N. Y. CITY

A gentleman having a farm in Westchester County, with acreage greater than he needs and wishing to secure good neighbors, is selling a portion of his land—at moderate price—to desirable parties for the erection of country homes. He also has a few bungalows for rent. The farm is situated on high, well drained land in the vicinity of four golf clubs, within easy commuting distance of N. Y. City with choice of two railroads.

Address: HOLMLEA FARMS, Care of THE GARDEN MAGAZINE



RUNNING WATER IN THE GARDEN

Is a convenience and all you want can be obtained by installing a

NIAGARA HYDRAULIC RAM

Will work wherever there is a spring or running stream. Costs less than a windmill or gasoline engine and has no whirriges to get out of repair. Requires no fuel, attention or expense of maintenance. Fully automatic and will pump a large or small amount, according to size. Used and endorsed by United States Government and Pennsylvania Railroad.

Catalog free. Correspondence invited

NIAGARA HYDRAULIC ENGINE COMPANY.

Factory: Chester, Pa. 140 NASSAU STREET, NEW YORK.



REX FLINTKOTE ROOFING

This Cut Shows the Roof of the St. Louis Music Hall. It is Covered with Rex Flintkote

Here's the why: The roof has a large unbroken surface and had to be absolutely leak-proof in rain or snow. * The builders build for the future—they wanted a roofing that would wear as long as the walls, something that would not rust like tin, or warp, crack and blow off like shingles. * It must be fire-resisting—they could not take chances with fires from falling sparks or brands. * It must be easily laid—labor forms a large item in an extensive roof like this.

Rex Flintkote Roofing filled these requirements better than any other roofing, irrespective of name or price.

WE SEND SAMPLES FREE

Test it yourself and see why it has set the standard of quality easily commands the highest price. We will also mail you free a book showing all kinds of buildings which are standing testimonials of Rex Flintkote excellence.

Look out for substitutes—preparations consisting tar or paper that are made to sell at big profits for the dealer and possible loss to you.

Look for the Boy on every roll.

J. A. & W. BIRD & CO.

29 India St., Boston, Mass.

Agents Everywhere





KELLER'S exquisite CAMPANULAS

Hardy Garden Flowers No. 4

DO YOU know the Campanulas or Bell Flowers? That charming family that includes the Blue Bells of Scotland as well as the towering Chimney Flower that bursts into bloom way above its fellows? Nothing can surpass in beauty the grace of the clusters of delicate blue or white flower bells which distinguish the Campanulas. The dominant color of this extensive and exquisite family is blue, but there are also white varieties and a few run to shades of purple. Blue is the rare color in flowers and is the most desirable for the garden, especially in mid-summer, and the bell flowers bloom then. In the Campanula family there is as great a range of planting possibilities as there is in size, for there is a blue flower for every possible situation, from the cool, moist, shaded location to the exposed, sun-baked position.

The following varieties are the most popular, and we have an exceedingly choice stock:

NAME	COLOR	TIME OF	HEIGHT	PRICE	per doz.
C. albertaefolia	White	June and July	2 ft.	15 cwtch	\$5.00
C. Carpatia	Clear blue	All summer	8 in.	15 "	2.00
C. " var. alba	White	All summer	8 in.	15 "	1.00
C. " var. cristata	Light blue	All summer	7 in.	15 "	1.00
C. Garganica	Light blue	June	15 to 16 in.	15 "	1.00
C. glomerata (Clustered Bell Flower)	Light blue	July and August	18 in.	15 "	1.00
C. " var. Daburii	Deep blue	July and August	2 to 2 ft.	20 "	2.00
C. medium in variety (Casserothy Bell)	Vermilion	July	2 to 3 ft.	15 "	1.00
C. persicifolia	White	June and July	18 to 24 in.	15 "	1.00
C. " var. alba	White	June and July	18 to 24 in.	15 "	1.00
C. " var. Rose-pleno	Blue	June and July	18 to 24 in.	15 "	1.00
C. " var. alba Rose-pleno	White	June and July	18 to 24 in.	15 "	1.00
C. " var. Backhousei	White	June	2 to 3 ft.	15 "	1.00
C. " var. Marchetti pluncea	White	June and July	18 to 24 in.	15 "	2.00
C. pyramidalis (Chimney Flower)	Blue	September	4 to 5 ft.	15 "	2.00
C. rotundifolia (Blue Bells of Scotland)	Blue	June to August	12 in.	15 "	1.00
C. Saranatica	Purplish blue	July	2 to 3 ft.	15 "	1.00
C. trachelium	Violet blue	June	2 ft.	15 "	1.00
C. punctata	White spotted rose	May and June	10 in.	15 "	1.00

Are you planting a hardy garden this Spring? If not, you will miss the beauty of the Iris, the Larkspur, the Anemone, the Foxglove, the Hollyhock, and all the old-fashioned flowers of character and beauty which follow in succession and give you bloom from earliest Spring until frost.

We are specialists in hardy perennials and grow a superb stock of all the kinds.

Send for our 1906 illustrated catalogue of northern grown hardy perennials.

J. B. KELLER SONS, Rochester, N. Y.

feet apart. The horizontal pieces are 1 x 1 1/2 inch strips, fifteen feet long, and they are placed one foot apart and to which the plants are tied as they grow.

This frame will accommodate five plants, one each side, if they have been set three feet apart in the row. The soil beneath it is easily reached to cultivate with a hoe. My frame has the advantage of being light and easy to move about. In the fall, when the crop is finished, it is stored under cover for the winter. It is just as good to-day as it was five years ago when it was made.

It has another excellent point: the vines are held at a slant so are more readily accessible for removing side-shoots and picking fruit and the fruits are better exposed to the sun than on an upright trellis.

Missouri J. R. BETTIS.

Tomatoes as Wall Fruit

ACROSS the middle of our garden is a retaining wall 5 feet high and 45 feet long with the earth on the upper side level with the top. Early in the spring a row of holes was dug about a foot square and a foot deep, three feet back from the wall and filled to the top with fresh cow manure. As early as the weather would permit a row of tomato plants was set halfway between that and the wall with the idea of training the vines down over the wall instead of staking them up. The manure pits were kept well watered, but no water was applied to the surface of the ground. The idea was that the water from the manure pits would find its way to the roots of the vines. The vines grew thrifflily and unusually vigorously and naturally went down over the wall. They soon reached the bottom and bore great clusters of tomatoes. The foliage entirely hid the wall and the effect of the great bank of vines with the ripe tomatoes peeping out was pleasing. The sun shone directly against the wall for many hours each day and as a result we picked the first ripe tomatoes June 15th.

Ohio CHARLES A. HARTLEY.

Dodging the Cut-worm

FOR many years I have been successful in saving my tomato plants from the ravages of cut-worm by simply wrapping around the stem of the plant a piece of paper of such width as to cover it an inch or so below the surface of the ground and the same distance above. The paper affords complete protection and does not at all bind the stem in its growth. It is important to have it well above the surface as the worm will sometimes cut quite a distance above. Sometimes when the precaution has been omitted, a ring of pasteboard, forced into the ground around the plant and extending a little above the surface, has served the purpose.

Sometimes the plants have become, before planting, too tall to stand up if planted with only the root below ground. In such case lay the stem in a trench, turning up the end sufficiently to make a top that will answer and cover with the paper when in that position. The plant will root in the trench and will be all the better for the additional feeding surface.

New Jersey J. A. ANDERSON.

THE "AUTO-SPRAY"



AUTO-SPRAY No. 1.

Write for free catalog and copy of most comprehensive and valuable spraying calendar ever issued. All our products fully warranted.

E. C. Brown Company, No. 34 Jay St., Rochester, N. Y.

is the one perfect spray pump for hand work. 15 seconds work at its plunger charges it with power enough to run your hose 15 minutes. We make it in

40 STYLES AND SIZES

From hand atomizers up to power rigs. Style No. 1, here shown, is almost ideal for all-purpose work. A brass cylinder holding three gallons of solution and one of compressed air, and two pumpings will discharge entire contents. Solid brass pump, stop cock, nozzles, etc. Our patent Auto-Pop valve controls spray perfectly and absolutely prevents clogging. Complete with hose, nozzle, etc.

Only One Auto-Spray, but numerous imitations. Get the genuine. Used at State and Government Experiment Stations, on estates of Vanderbilt, Astor, Hill, etc. Ours is the most complete line of hand and power sprayers in America.

HOME STUDY COURSES



JOHN CRAIG

Professor of Horticulture in Cornell University

who would ever have the pleasantest homes.

Every reader of THE GARDEN MAGAZINE who is interested in these matters is invited to send for a free copy of our eighty-page catalogue and full information in regard to our home study courses.

EVERYONE interested in farming or gardening, everyone who owns or who expects to own a suburban or a country home, should know about the Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture, which we offer under Prof. Wm. P. Brooks of the Massachusetts Agricultural College and Prof. John Craig of Cornell University.

There is money and pleasure, too, in farming and gardening, in the growing of fruit and of flowers, for those who understand the ways how and the reasons why of modern agriculture. A knowledge of landscape gardening and floriculture is indispensable to those

THE HOME CORRESPONDENCE SCHOOL

Dept. 8, SPRINGFIELD, MASS.

A Complete Manual of House Building in the Country

THE COUNTRY HOUSE

BY
CHARLES EDW.
HOOPER

THIS volume gives competently and in detail, yet without technicalities, all the information necessary in the building of a country house.

Its practical value is unlimited. 380 illustrations. Net, \$3.00. (Postage, 30 cents.)



DOUBLEDAY PAGE & CO.

133-135-137 EAST 16TH STREET, NEW YORK

CLIPPER

Hand and Pony

Lawn Mowers

will cut short grass,
tall grass and weeds.

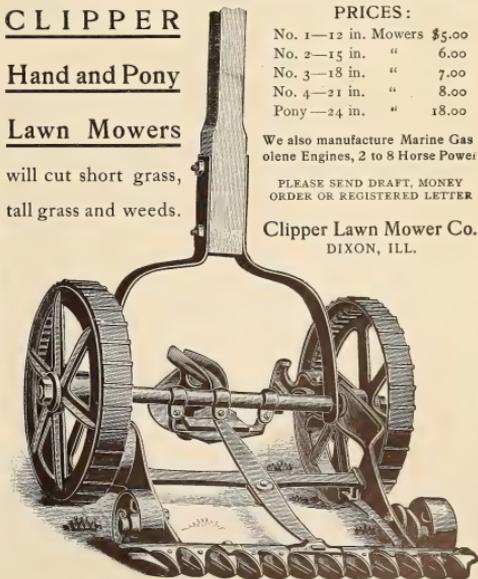
PRICES:

No. 1—12 in. Mowers	\$5.00
No. 2—15 in. "	6.00
No. 3—18 in. "	7.00
No. 4—21 in. "	8.00
Pony—24 in. "	18.00

We also manufacture Marine Gasoline Engines, 2 to 8 Horse Power

PLEASE SEND DRAFT, MONEY ORDER OR REGISTERED LETTER

Clipper Lawn Mower Co.
DIXON, ILL.





Delicate Women—Delicate Laces
—BOTH need PEARLINE'S help.
LACES—because PEARLINE's soaps
SAFELY—QUICKLY—Without Rubbing.
WOMEN—because PEARLINE makes certain
things easily washed by Delicate Women and
Delicate things safely washed by Strong women.
Ask your Neighbour whether she uses Washing Powder
the best. Brightness of the Millions of uses of
Pearline.

Delicacy Demands Pearlina

Used by U. S. Signal Corps

Geneva Superior Binocular \$15

Our handsome book, *The Near
Distance*, sent free on request.

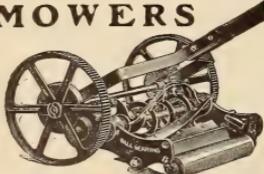
Its magnifying power, field view
and clearness of definition is
seldom equalled. Price \$15, delivered. If not sat-
isfactory, return at our expense.
We refund your money.

GENEVA OPTICAL COMPANY
51 Union Street, Geneva, N. Y.

Exclusive Sales Agents:
H. C. Watts, Syracuse, N. Y.
F. G. Wilson, Ithaca, N. Y.
Buffalo Optical Co., 522 Main Street, Buffalo, N. Y.
E. E. Hauch & Son, E. Main Street, Rochester, N. Y.
C. H. Wood, 1133 Washington Street, Oakland, Cal.



TOWNSEND MOWERS



TOWNSEND GAVE TO THE WORLD

The Ball-Bearing Lawn Mower

His mowers are more imitated than
any others.

We make more high-grade mowers
than any other firm and they are all
ball-bearing.

We make the best Lawn Mower in
the world.

We make the best Roller Lawn
Mower in the world.

We make the best Roller Mower in
the world.

We repair and sharpen all kinds of
Mowers.

S. P. Townsend & Co., - Orange, N. J.



A Sure Way to Have Grapes Free From Blemish

IMEDIATELY after the grapes have blossomed, cover the bunches with two- or three- pound manila grocers' bags, according to the size of the variety. This is preëminently a fruit-garden method, although commercial growers often use it. It is the surest and often the most practical way of securing perfect bunches. Tie or pin the mouth of the bag firmly; leave no opening to catch water. Cut a small piece off the lower corner of the bag, so that no water will stay in it. Leave the bag on until the fruit is ready to pick. It gives almost complete protection from the berry moth, black rot, mildew, the depredations of birds and wasps, and preserves the bloom. The flavor of the fruit is slightly improved by bagging. The total cost, including bags and labor, is about half a cent a pound, which is very little to pay for immunity. Bagging grapes has been very successful in many parts of the country, and is often the most expedient method for the man who has only a few vines. It may take the place of spraying, but it will usually pay to spray twice, once before the buds burst, and again just before the bags are put on.

SOME OF THE CHIEF TROUBLES

The enemies of the grape are really not so numerous or so virulent as to keep anybody from growing grapes at home. The most serious troubles are easily controlled by three to six sprayings during the season, of Bordeaux mixture. On the whole, no other fruit is benefited so much by Bordeaux spraying as the grape, especially since the vines are close to the ground where they can be sprayed very conveniently. It costs, on an average, from three to five cents per vine to protect grapes from their fungous enemies. In the humid parts of the country, especially in the South, black rot and mildew ruin many promising crops of grapes in the home garden. A few inexpensive sprayings will prevent most of this loss.

THE FIVE SERIOUS INSECTS

The *phylloxera* is a root-louse that is very destructive only to the European varieties. This insect, and the downy mildew are chiefly responsible for the failure of the European varieties in the East, and threatened at one time to wipe out the grape industry of Europe. The *phylloxera* destroyed 2,500,000 acres of grapes in France alone. Most of our native grapes are immune to the attack of this insect. Hence the practice of grafting the European varieties



Beautiful Lawns

Are the pride of the home; why disfigure with ugly clothes posts?

Hill's Lawn Clothes Dryers

hold 100 to 150 feet of line, take small space, quickly removed when not in use. Make a neat and tasty appearance, last a life-time.

More than 2 million people use them. No traveling in wet grass. No snow to shove. The line comes to you. Also.

Balcony and Roof Clothes Dryers.

If not found at your hardware store write

HILL DRYER CO.

239 Park Ave., Worcester, Mass.
Write for Cat. No.



A HAMMOCK THAT'S RIGHT

The only hammock made that combines Quality, Durability, and Beauty with Comfort. Can be used indoors or out. For further particulars write

QUEEN HAMMOCK CO.

188 West 9th St. Kalamazoo, Mich., U. S. A.



Hardy Trees, Plants and Seeds

A 1000 acre nursery in Minnesota, founded in 1888 and devoted to hardy Fruit and Ornamental Stock, Flower and Vegetable Seeds. 3 complete FREE Catalogs. 50-page book of horticultural Brochures free on application. Frost moderate. 2 year guarantee with all stock. Reliable agents wanted.

THE JEWELL NURSERIES

Box 26 Lake City, Minn.

All the plates used in

THE GARDEN MAGAZINE

are made by

The **GILL** Engraving
Company

140 Fifth Avenue New York



NITRATE OF SODA
for **LAWN and GARDEN**

NO FORM OF NITROGEN

is so quickly available, or so positive in its results for the vegetable garden, on the lawn, for shrubbery or trees as a top dressing of

NITRATE OF SODA
(THE STANDARD FERTILIZER)

Send your name and address on **Post-Card** and we will send you

"Food for Plants"

a most valuable book of 272 pages dealing with the use of Nitrate of Soda as a fertilizer, giving detailed information covering a list of trials at Agricultural Experiment Stations throughout the United States and on all sorts of crops.

NITRATE PROPAGANDA

Room 125, 12-16 John Street, New York

SWEET CORN

WOULD YOU LIKE TO RAISE THE MOST DELICIOUS CORN EVER GROWN?

Then you should plant none but **ORDWAY'S GOLDEN**, because this wonderful variety has the leading qualities of the ideal corn which win favor at every well-ordered dinner table—early, tender, juicy and sweet. Testimonials from a large number of customers verify the assertions we make, and assure us that we cannot praise **ORDWAY'S GOLDEN** too highly. Carefully selected seed of this variety sent by return mail on receipt of price. Trial packet containing enough seed for thirty-five hills, 10c; half-pint, 20c; pint, 35c; quart, 60c.

O. P. ORDWAY,

SAXONVILLE, - - MASS.

"What Shall Our Boys Do for a Living?"

is the title of **CHARLES F. WINGATE'S** book—the result of twenty years' study and investigation. Not only does the author set forth a line of conduct for young men who would succeed, but he has interviewed hundreds of successful Americans on this subject and quotes their opinions and suggestions.

A book of real value.
(\$1.00)



DOUBLEDAY PAGE & CO.

125-127 East 16th Street, New York





ADD TO YOUR SUMMER COMFORT

by buying one of our rustic adjustable Hammock Seats. It is convenient, attractive, ornamental, and the slight motion immeasurably increases the pleasure of the occupant. It is larger, stronger and more comfortable than others, and the back may be adjusted to any position. With the addition of a few pillows makes an ideal hammock which will not sag in the center.

SUPERIOR QUALITY LAWN FURNITURE

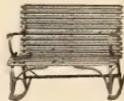
always makes the home attractive and summer life more enjoyable at a minimum of expense. Discriminating people, those who want the best material; truly comfortable, durable designs; sensible, attractive finish—such as only skilled mechanics, men who know by experience how to make things correctly, can produce, should ask the dealer for **SUPERIOR QUALITY** stock. It is the acme of perfection in all these points. It represents the very finest quality and greatest intrinsic value at prices all can afford.

We make all kinds of Summer Furniture. so designs to choose from. Every genuine article bears this mark. It is your guarantee. Do not allow the dealer to substitute other furniture.

OUR NOVELTY RECLINING TETE-A-TETE SWING

makes life worth living; so cool, comfortable and soothing in warm weather. Any position from upright to horizontal may be obtained without effort. Words cannot describe the ease and pleasure of this clever idea. If you invest in a swinging motion the possibility of enjoying this movement while in a slightly reclining position multiplies the pleasure tenfold. We can furnish with it swaying if desired and also produce this reclining feature in six other forms adapted for outdoor life and invalid use.

If your dealer cannot furnish, our **SUPERIOR QUALITY** furniture write us for prices and catalog No. 22, in colors. Cut out this "ad" as it will not appear again.

KALAMAZOO SLED CO.
932 Third Street
KALAMAZOO - - MICHIGAN

\$43.75



Buy This Rubber Tire Wagon

Union Quality. Fully Guaranteed. Best hickory wheels, 3/4 in. Rubber Tire, long distance, dust proof, high arched axles; oil tempered springs. First quality material and finish. Worth nearly double our Factory Price. We ship for your examination, without a cent in advance, if desired and allow

30 DAYS FREE TRIAL

Money refunded on all purchases not satisfactory. You save dealer's profits. We build 150 styles of Vehicles, from \$45.00 to \$150.00. 50 styles Harness, \$5.00 to \$20.00. Write to-day for our 200-page Illustrated Style Book. Free for the asking.

UNION BUGGY CO., 32 Saginaw Street, PONTIAC, MICH.



CRYSTAL Domino SUGAR

A Triumph in Sugar Making!

Sold in 5 lb. sealed boxes!

IMAGINATION COULD NOT CONCEIVE OF A HANDIER AND PRETTIER FORM THAN IS PRESENTED IN "CRYSTAL DOMINO SUGAR." NEITHER COULD THE MOST PARTICULAR PEOPLE ASK FOR MORE PERFECT PURITY OR ECONOMICAL PRICE FOR LESS WASTE.

HIGHEST GRADE IN THE WORLD. BEST SUGAR FOR TEA AND COFFEE.

By grocers everywhere.

SOLD BY SEED DEALERS FROM MAINE TO CALIFORNIA



My Grandfather used
Mr. Hammond's Slug Shot
for Potato Bugs. So does my
father, and my Mother puts Slug Shot on
hers.



"SLUG SHOT" Used from Ocean to Ocean

A light, composite, fine powder, easily distributed either by duster, bellows, or in water by spraying. Thoroughly reliable in killing Currant Worms, Potato Bugs, Cabbage Worms, Lice, Slugs, Sow Bugs, etc., and it is also strongly impregnated with fungicides. Put up in Popular Packages at Popular Prices.

For Blights, Rots or Mildews

Hammond's Solution of Copper—Dilute with 100 parts of water. French Bordeaux Mixture, genuine. True Blue and Butterfly—dilute 25 or 50 gallons with water. Grape Dust for mildew on roses, violets, carnations, gooseberries or grapes.

For Scale

Horicum kills San José Scale. Thrip Juice No. 1, used for the past 20 years on orange trees, kills all sorts of scale. Dilutes 50 to 1,000 times with water.

For Gypsy Moth

Kerosene Emulsion No. 2, arseniated. (This would knock Sata on if you could catch him.) Kerosene Emulsion greatly recommended for very many things.

For Hotbeds, Greenhouses, &c., good as gold
Tewmow's Old English Liquid Glazing Putty. Hammond's Greenhouse White Paint—original and genuine. Tewmow's Green Stain.

Send for pamphlets worth having to

Hammond's Paint and Slug Shot Works, Fishkill-on-Hudson, N. Y.

☞ Ask the man who sells your seeds for these goods.



ORCHIDS

Largest importers and growers of
ORCHIDS in the United States

LAGER & HURRELL
Orchid Growers and Importers
SUMMIT, N. J.

Hardy Plants FOR Old Fashioned Flower Gardens

including Phloxes, Bell Flowers, Larkspurs, Poppies, Peonies, Iris, Garden Pinks, Day Lilies, etc. Also fine collection of novelties. Catalogue on application.

FREDERIC J. REA

Norwood, Mass.

Our Greatest ROSE OFFER

Every year we offer a remarkable collection of fine roses at an exceptionally low price. Our 1936 offer includes as a special attraction the famous BABY RAMBLER shown in illustration—the rose that blooms every day in the year. For fifty years we have been cultivating Roses. With over seventy greenhouses and stock of over one million plants, we may fairly claim to be the LEADING ROSE GROWERS OF AMERICA. This year we offer

18 D. & C. ROSES for \$1.00

Superb, strong, hardy, ever-blooming kinds; no two alike. All on their own roots. Sent by mail post-paid anywhere in the United States. Satisfaction and safe arrival guaranteed. Each variety labeled. Will bloom continuously this year. Other famous Roses in this collection are the KEYSTONE the only hardy, ever-blooming Yellow Climbing Rose, also PINK MAMAN COCHET, the queen of all pink garden Roses. Orders booked for delivery when directed.

If you mention this magazine when ordering, we will send you a return check for 25 cents which we will accept as cash in a future order. Free to all who ask for it, whether ordering the above collection or not, the 7th annual edition of Our New Guide to Rose Culture for 1936—the Leading Rose Catalogue of America. 116 pages. Tells how to grow and describe our famous roses and all other flowers worth growing. Orders at lowest prices a complete list of Flower and Vegetable Seeds.

THE DIMICK & CONARD CO., Westfield, Pa.
79 Greenhouse Established 1850

upon "resistant roots" of native grapes has become necessary. This method has saved the grape growing industry of Europe and of California.

The grape cane-borer attacks the young shoots in the spring, causing them to droop suddenly or break off. A brown beetle will be found in a channel leading from a small hole which is above the base of the withered shoot. This insect is especially troublesome in the South, often killing a large part of the new growth. It breeds in old and diseased canes. The preventive is to promptly burn all diseased wood and all prunings, and to cut out and destroy injured shoots as soon as seen.

The grape berry moth is the parent of a minute worm which burrows into the pulp of the grape when it is still green, but of full size, making a discolored spot. Often several of the shriveled and discolored berries are stuck together. All varieties are attacked, especially the tender-skinned sorts. The insect is destructive to grapes all over the country. Bagging the bunches is the best preventive in the fruit garden. All rubbish, prunings, and fallen leaves should be destroyed.

The borer, a worm about one and one half inches long, works in the roots and often destroys the vines. Bank soil around the base of the vine. Dig out the borers.

The rose beetle, a light brown bug about three-fourths of an inch long, often attacks grapes, feeding upon all parts of the plant. It is most common on sandy land and is very difficult to handle. The simplest method practicable when only a few vines are grown is hand picking. Spraying with kerosene emulsion is of considerable value. Poisons are rarely effective. Clean tillage helps to keep the insects from breeding. Bagging the fruit is beneficial.

THE COMMON FUNGUS DISEASES

Black rot. This disease attacks berries nearly full grown, making them hard, dry, shriveled and black. Burn all diseased prunings, rotten fruits, etc. Spraying with Bordeaux is successful. The first spraying is made after the fruit has set and from three to six applications follow. It may be preceded by a spraying before the buds burst. Bagging the fruit may be more feasible in the small garden.

Dormy mildew. This disease makes brownish-white patches on the under side of the leaves and the rotting of grapes is mostly caused by this disease. The berries do not become shriveled, as in black rot, and are brown or gray instead of black. It is worse on Delaware, Roger's hybrids and other thin-leaved varieties and hybrids. The treatment suggested for black rot controls this also. Another rot similar to the ripe rot of apples is also managed in the same way.

Anthraxose. This fungus makes deep pits and scars on the old or young shoots and canes and discolors the leaves. Spray with copper sulphate, 4 pounds to 50 gallons, before the buds burst. The spraying with Bordeaux, suggested for black rot, gives good results.

Michigan S. W. FLETCHER.



The
Synonym
of Protection

The sense of security afforded by the possession of a reliable revolver is worth many times its cost. And when called upon, you can depend on an

H & R Revolver
"The reliable kind."

Absolutely SAFE. Sold by leading dealers everywhere. Write for catalog.

Harrington & Richardson Arms Co.
373 Park Avenue, Worcester, Mass.

PURE FOOD

No destructive chemicals ever used in the cure of

FERRIS HAMS AND BACON

They will stand rigid inspection under all pure food laws

INSIST UPON THE BEST

Take a
Good Man's
Word

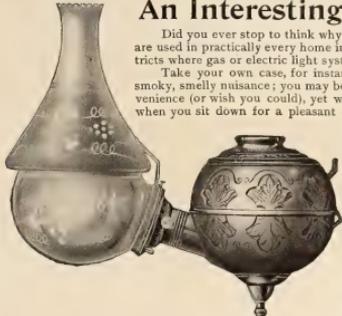
A PROMINENT GARDENER AND FLORIST OF IRONDEQUOIT, N. Y., WRITES AS FOLLOWS:

"When I placed an order with your agent for some of the Dormant Sod Brand Pulverized Sheep Manure I made an arrangement with him whereby I should try a small sample before taking the entire shipment, as I had never used any of this fertilizer before. I wish to inform you that I have used this sample on new planted lettuce in my greenhouse and I can say that it is the best fertilizer I have ever gotten hold of. I commenced to see the benefit of a little sprinkling of it soon after planting, and shall make use of my full order in the near future."

Price \$4.00 per large barrel full Pulverized Sheep Manure; equal in fertilizing strength to two wagon loads of barnyard manure. Delivered to any point in the United States (east of Denver) freight prepaid. Special prices on larger quantities. Write for booklet.

DORMANT SOD COMPANY
19 EXCHANGE AVENUE
Union Stock Yards Chicago, Ill.

An Interesting Fact About Lighting



Did you ever stop to think why from one to a dozen kerosene (or coal oil) lamps are used in practically every home in the United States—not only in the country districts where gas or electric light systems don't reach, but in the cities as well.

Take your own case, for instance. You may consider the ordinary lamp a smoky, smelly nuisance; you may be using gas or electricity because of their convenience (or wish you could), yet we venture to state that the first thing you do when you sit down for a pleasant evening at home is to light up that good old kerosene lamp.

With all its faults, you stick to the oil lamp light because you simply can't replace it. For neither gas, electricity, gasoline, acetylene, nor any other illuminant has yet been invented which can begin to compare with common kerosene in soft, rich, restful brilliancy of light or in small cost to burn—two of the three most important features of any lighting method. That's a fact, isn't it?

Now we want to tell you about a lamp that supplies also the third feature—convenience. We want to send you our catalog "41," which tells why

The ANGLE LAMP

combines kerosene light and kerosene economy with the convenience of gas and electricity, which explains how, by employing an entirely new principle of burning oil, all the smoke, odor and bother of ordinary lamps has been so completely done away with, that such people as Ex. Pres. Cleveland, the Rockefeller, Carnegies, Cookes, etc.—people who would not think of using ordinary lamps—have chosen THIS oil-burning lamp in preference to gas, electricity, gasoline, acetylene, or any other system for lighting their homes and estates. And when you have read this catalog and found that it describes exactly the lighting method which for years you have been seeking, we offer to prove our statement by sending you a lamp you select on **30 DAYS' TRIAL**.

If you are interested in SATISFACTORY ILLUMINATION—and by "satisfactory illumination" we mean not merely one that gives a brilliant light but one that combines brilliancy with soft, rich, restful quality, that is convenient as gas, safe as a candle, and yet more economical than even the troublesome oil-style lamp. If you are interested in that kind of satisfactory illumination, write for catalog "41" at once.

THE ANGLE MFG. CO. -- 78-80 Murray Street -- NEW YORK

Free to Intending Builders The Book of 100 Houses

Containing over 100 photographic reproductions of handsome houses in all parts of the country designed by leading architects and stained with

Cabot's Shingle Stains

Small houses, large houses, cheap houses, and expensive houses, full of suggestions to those who contemplate building and seek an artistic result.

SAMUEL CABOT, 1 Oliver Street, Boston, Mass.
Agents at all Central Points.



A. W. LONGFELLOW, JR., ARCHITECT, BOSTON.

OLD HICKORY SPINDLE BACK CHAIR \$1.75



Guaranteed most serviceable, comfortable, attractive Chair for Porch and Lawn use ever sold at this remarkably low price. Will stand all sorts of weather. Solidly constructed of genuine white hickory with bark on. Seat 18 inches long, 16 inches deep; height over all 40 inches. Price, \$1.75, freight prepaid east of Mississippi River. 120 other styles of Chairs, Settees, Tables, etc., \$1.50 up.

"The furniture purchased from you arrived safely, several days since. It is simply grand, and we are more than pleased with it." L. E. McLAINE, Canton, Ohio, Colo.

"The Old Hickory Chairs reached us O. K. last Saturday, and to use Mrs. Wiles' expression 'We are tickled to pieces' over them. They are the pride of the neighborhood. I think I shall want another piece of your artistic furniture later. Many thanks for your favor to me." ERNEST P. WILES, Muncie, Ind.

"We are more than delighted with your furniture. Please send catalogue to my cousin, Mrs. Geo. Hull, Tuxedo Park, N. J." MRS. HOWARD TRACY, Evanston, Ill.

"Chairs arrived O. K. We think they are fine and cannot be equalled anywhere." J. W. STUART, Bradock, Pa.

Be sure to get the "Old Hickory" Furniture and see that our trade-mark is on every piece. If your dealer will not supply you, remit direct to us. Ask for new 48-page illustrated catalogue and our

Special Introductory Offer FREE.

THE OLD HICKORY CHAIR CO.,
125 Cherry Street, - - - - Martinsville, Ind.

"The Original 'Old Hickory' Furniture Manufacturers."

Style No. 24.

Coldwell Lawn Mowers

HAND, HORSE AND MOTOR POWER

Over 600 in use on the parks of GREATER NEW YORK
where they have been used exclusively
FOR OVER TWELVE YEARS



COLDWELL'S MOTOR LAWN MOWER

We make all styles, sizes and grades. If your dealer does
not sell them we will quote you special
prices and terms.

SEND FOR CATALOGUE

COLDWELL LAWN MOWER CO.

30 Coldwell Street Newburgh, N. Y.

ROSES grown in **FREE** from all
new houses new houses
10 large two-year-olds, \$4. 4 for 50c. 1 Postpaid
24 strong young plants, \$4. 1 for 50c.
Best sorts, vigorous roots, true labels, free booklet.
THE LEEBLE FLORAL CO., Springfield, Ohio.

MAULE'S SEEDS LEAD ALL

Illustrated Catalogue free
WM. HENRY MAULE
1701 Filbert Street, Philadelphia, Pa.

Bridgeman's

HIGH GRADE

Vegetable, Farm
and Flower Seeds

GARDEN TOOLS
and HORTICUL-
TURAL BOOKS

Descriptive illustrated catalogue
mailed free on application

BRIDGEMAN'S SEED WAREHOUSE

37 East 19th Street, New York City

TO produce fine flavored, highly
colored fruit, sufficient **POTASH**
must be used in fertilizers for
orchards or vineyards.

One thousand pounds of fertilizer
per acre, containing ten per cent. of
POTASH, is the standard.

Our practical books on successful fertilizing sent free of cost or
obligation, to any farmer who will write us.

Address, **GERMAN KALI WORKS,**
93 Nassau Street, New York.



More Garden Problems that We Want to Solve

IN the November number, page 180, and
in the January number, page 282, we
mentioned thirty-five problems which would
make delightful studies for amateurs. Here
are some more. We offer \$5.00 for the best
answer to any of these questions. For con-
ditions, see the November number.

36. How can we get rid of the spots that
ruin the foliage of a tulip tree without an
expensive spraying outfit?

37. How can we get a substitute for the
snowball, which is cheaper than the Japanese
variety and is naturally resistant to plant
lice?

38. What amateur has produced any
variety of fruit, vegetable or flower that is
naturally resistant to insects and disease, so
as to make spraying unnecessary?

39. How can you keep a collection of
columbines, true to name, for ten years or
more, with the least trouble and expense?

40. Who can prove that he has naturalized
trumpet daffodils?

41. Who can show the best record for
home propagation of tulips?

42. Who has grown a collection of all the
available species of crocus, and can tell us
what inducement there is to grow each one?

43. Who has had a satisfactory experience
with a big colony of winter aconite (*Eranthis
hyemalis*)?

44. Who has naturalized lotus and solved
the muskrat problem?

45. Who has had a satisfactory experience
with hardy cyclamen (this does not mean
the shooting star, dodecatheon, which is
sometimes called wild cyclamen)?

46. Who has saved \$200 on a \$1,000 green-
house, or done anything in greenhouse con-
struction comparable to such a feat?

47. Who can show the cheapest way to
maintain a small greenhouse without a gar-
dener?

48. Is it possible to have a successful gar-
den in the Japanese style, but with lots of
flowers in it?

49. Has anyone ever grown Indian pipes?
50. Who has kept true peonies a very long
time and had them bear bigger flowers than
the herbaceous kinds?

51. Who has made a genuine success of
growing any hardy native orchids other than
Cyrtopodium spectabile?

52. The catalogues offer a large number of
perennial species of larkspur. What are
their individual differences which make them
valuable for growing in the garden?

MENNEN'S

BORATED TALCUM
TOILET POWDER



Welcome & Refreshing

as the first flowers of Spring in the soothing touch of MENNEN'S. Gives immediate and positive relief from FRICKLY HEAT-BURNING, SUNBURN, and all skin troubles. Mennen's face on every box, see that you get the genuine. For sale everywhere, or by mail 25c. Sample free.

Gerhard Mennen Co., Newark, N.J.
Try Mennen's Violet (Borated) Talcum.



Jasco Coffee

Delicious beyond expression.

A blend that will please you even if you are the most critical connoisseur. Jasco Coffee is blended from a selection of choicest coffees into a harmony that will delight you. Sold at the price of ordinary coffee.

Put up in straight screw-top tins that preserve the aroma and keep the coffee perfectly fresh until used.

5 lb. CAN, \$1.60 Express prepaid.

Ground, pulverized or bean.

Our broad guarantee—Your money back if not satisfactory. Send for a sample carton, mailed free if you mention *The Garden Magazine*.

A. J. SHELDON CO., Importers, 100 Frost St., New York.

THIS

SUN DIAL PEDESTAL

IS A DIRECT REPRODUCTION FROM ORIGINAL IN THE VATICAN

Pompeian Stone, Height 46 in., Price \$65.00
Marble, " 46 in., " \$300.00

HENRY ERKINS & COMPANY

6 West 15th Street, New York

MAKERS OF
Garden,
Conservatory and
Hall Furniture
Fountains, Statu-
ary, Columns, Per-
golas, Balustrades,
Standards, Sun
Dials, Pedestals,
Benches, Tables,
Vases, Lions,
Sphinxes, etc., in
Marble, Bronze,
Stone and Pom-
peian Stone that
successfully with-
stands the Ameri-
can weather.



A City Water Supply

For Your Country Home

If you live in the country there is a way for you to enjoy all the comforts and conveniences of a city water supply, without a penny for water tax. It is accomplished by the Kewanee System. With the Kewanee System you get even more than city service, because, in addition to every benefit the latter affords, you may have—
—Soft water in your bathroom and laundry.

The old-fashioned gravity system meant pumping water up in order to get it down again.

Now, to give the necessary pressure for fire protection and service, the elevated tank must be located on top of a tall tower. This is expensive, unsightly, and unsafe.

The water freezes in winter, becomes warm and stagnant in summer, and repairs are a big item of expense. The attic tank doesn't give sufficient pressure for fire protection. Its weight is apt to crack the plastering, and when it leaks (as it is pretty sure to do) your house is flooded. Just one such expensive accident may cost you many times the price of a Kewanee Outfit—

—Which cannot flood the house because the tank is resting on solid ground, where it can do no damage.

The installation of a Kewanee Pneumatic Tank and Outfit in the cellar (or in the ground) means:

- Plenty of pure, fresh water.
- Cool water in the summer.
- No freezing water in winter.
- Absolute protection from fire.
- Decrease in insurance rates.
- A plant that will last a lifetime.
- No expensive repairs—
- It solves the country water problem completely.



The Kewanee System will take care of all your needs—home, garden, lawn, stables, poultry houses, etc.

Our Kewanee Outfits are complete.

Not an engine only—which in itself cannot give you a water supply—nor a tank only, which is useless unless you have some form of pumping power—

—But, we furnish the whole thing—a complete system of water supply.

Our engineering department is prepared to solve your water problem—no matter how difficult that problem may now appear.

Kewanee Outfits are made in sizes, suited to the smallest cottage or largest building—or group of buildings.

We guarantee every Kewanee Outfit to give perfect service.

Send for catalogue No. 16, giving names of users in your state—free if you mention this paper.

KEWANEE WATER SUPPLY CO.
Drauer S. Kewanee, Ill.

The Celebrated Furman Boilers



As an Investment, Furman Boilers return large Dividends in improved Health, increased Comfort and Fuel Saved.

SELLING AGENTS:

E. S. DEAN, Bloomington, Ill. E. K. BARR, La Crosse, Wis.

Valuable Catalogue and Booklet "Warmth" mailed free. Address: The Herendeen Manufacturing Company, 8 Plant Street, Geneva, N. Y. NEW YORK Office and Show Room 206 Pearl Street.

Improve Your Dairy

No matter how good a herd of cows you have, or how well they are taken care of, or how carefully they are fed, your efforts are more or less wasted if the milk, the result of it all, is not taken care of in the best way possible.

Before cream or butter can be obtained the milk must, of course, be skimmed, and to do the skimming most effectively you need a

U.S. Cream Separator

in your dairy. If the gravity or setting method is now used, a U. S. will increase your butter yield from 1-4 to 1-2. That is, if the skimmed milk from the old way were run through a U. S. Separator it would take out from 1-4 to 1-2 as much cream as was obtained by hand skimming.

Now there are other cream separators which will effect a saving over gravity system, but because the U. S. Separator holds the **World's Record** for clean skimming, it is a greater saver and bigger money-maker than any other.

We want to tell you how this record was made, and what it means—our attractive new catalogue will do it, and at the same time fully explain the construction of the U. S. We'll be glad to mail you a copy on request. Send for our big handsome catalogue No. 71. Write us now, addressing,

U. S. Separator run by Electric Motor

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Eighteen centrally located distributing warehouses throughout the U. S. and Canada.



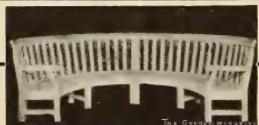
Gillett's Ferns and Flowers

For Dark, Shady Places

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Peonies, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the HARDY WILD FERN AND FLOWERS of New England. These have been studied and growing for 25 years, and can help you in your selections. They are adapted for a great many places, and selections can be made for beautifying the dark corner by the porch, the shaded wall or hedge, shady hillside, wet places in both open sun, deep shade, dry woods and rocky places. Brilliant lobels for planting in small brooks; dainty gentians for planting by brookside. Also Rhododendrons and other American shrubs.

Send for my Illustrated Descriptive Catalogue of over 50 pages, which tell about this class of plants.

EDW. GILLETT, Southwick, Mass.



OLD ENGLISH

GARDEN SEATS AND RUSTIC FURNITURE

in a variety of sizes and designs.

Old English Garden Seats are much used in gardens and estates in England. They are finished in both white and green. Send for Catalogue.

NORTH SHORE FERNERIES Beverly, Mass.

STAR FRUIT BOOK
shows in NATURAL COLORS and accurately describes 216 varieties of fruit. Send for our liberal terms of distribution to planters—Stark Bro's, Louisiana, Mo.

Amateur Dahlia Growers

FOR SALE—100 of the best and finest Cactus Dahlias growing. Prize winners.

H. PREST, Providence, R. I.

BUIST'S

Garden Seeds

Farm Seeds

Grass Seeds

MOST RELIABLE TO SOW

as they will produce the most profitable crops, all being grown from

SELECTED SEED STOCKS

SPECIAL PRICES ON APPLICATION

Send for our Garden Guide and Price Lists. Mailed free

ROBERT BUIST COMPANY

PHILADELPHIA, P.A.

A New Type of American Rose

THE new rose, Wellesley, is one of a type which professional rose growers are at present endeavoring to perfect. The problem which presents itself to the hybridist is to produce a perpetual-flowering rose which shall have all the good points of the tea family, and at the same time the wide range of beautiful colors found only in the hybrids. The hybrids, which, as a rule, blossom only once a year, include nearly all the brilliant colors, the pinks and the reds. The teas, on the other hand, are perpetual flowering, but, unfortunately, they embrace only the lighter shades. The logical sequence is to cross the two races, thereby producing what have been named hybrid teas.

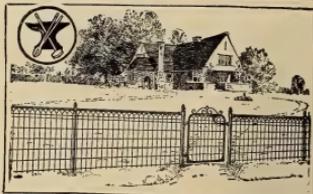
Progress along this line has been very slow. While some very good pink hybrid teas were early produced, it was not until recent years, when the beautiful crimson rose, Liberty, was presented to the world of rose lovers, that the rosarian has been able to make satisfactory progress in the darker shades. But even Liberty, good as it is, is not the ideal rose which the grower of cut flowers has in mind, and it will be necessary to get still more tea blood into it before we can approach the standard which has been set.

Bridesmaid, which is a tea rose, is, in the estimation of the majority of professional rose growers, the one which most nearly approaches the perfect forcing type. Many extravagant claims have been made for various new sorts which have come and gone, but Bridesmaid-to-day is still the best.

Having in our greenhouses two such beautiful roses as these, why not use them as the progenitors of a new race, which shall combine the best features of each? It was early observed that Liberty would make a good seed bearer, but, on the other hand, Bridesmaid, although we had hundreds of blooms in our greenhouses, produced scarcely a grain of pollen. This condition is probably accounted for by the continual forcing to which this rose has been subjected, year after year, whereby the stamens were gradually deformed, and reappeared in the shape of additional petals. In the spring of 1900, sufficient pollen was gathered however to fertilize a flower of Liberty.

The seeds were carefully sown, and, just a year from the time the cross was made, one little seedling pushed its way up through the soil. At this stage, the tiny plant makes its struggle for existence: on the one hand it is exposed to the attacks of mildew and various other fungi, and if it survives these it is liable to be eaten in a single night by one of the many little bugs which are always on the lookout for such a rare and delicate little morsel. In a year from the time that the plant first made its appearance above ground, we had concluded that it had sufficient points of merit to ask rose lovers to make a place for it in their gardens.

Wellesley is a good beginning in the direction named. It is a strong growing rose, the petals very light pink inside but a much deeper shade on the outer surface. To those who know La France it may well be likened to that rose but lacking its peculiar lilac tint. Massachusetts. A. MONTGOMERY, JR.



Fences?

THIS is one of the many beautiful Lawn Fences we make—strong, beautiful, durable and very inexpensive—considering the quality. Made of heavy woven netting, with the patented Anchor Post Construction—a patented and galvanized Post that keeps the fence in perfect alignment forever, and fully protects it against rust.

We also make and erect—on one contract—all kinds of Iron and Wire Railings, Fences and Gates, for Lawns, Gardens and Farms. Original Designs and Estimates free. If you really want the highest possible quality, write for Catalog No. 32A. ANCHOR POST IRON WORKS 40 Park Row, N. Y.

OUR VICK'S

(JAMES)

BULBS produce blooms which are verily "Queen of the May." Remember this when you again order bulbs.

VICK QUALITY SEEDS
the standard for over fifty years, will make themselves evident this year more than ever in

FRAGRANT FLOWERS DELICIOUS VEGETABLES LUSCIOUS FRUITS

It is not yet too late for your order to be filled promptly. Send for free catalogue.

JAS. VICK'S SONS
362 Main Street, Rochester, N. Y.

DICKINSON'S SEEDS

SURE AS SUNSHINE

THE BEST IS NONE TOO GOOD.
My Challenge
BRANCHING ASTER
White, Pink, Lavender, Crimson, Purple is the Best.
Pkt. 250 Seeds 15c. ea.
1/2 doz.
Mixed 500 Seeds, 25c.
O. H. Dickinson,
Seedman
Springfield, Mass.

LAWN FENCE

Many designs. Cheap as wood. 12 page Catalogue free. Special prices to cemeteries and churches.

COILED SPRING FENCE CO.
Box 360 Winchester, Ind.

The Ideal Garden Fertilizer
FOR GARDENS, LAWNS AND VEGETABLES

Blatchford's Plant Grower and Land Renovator

Composed only of Pure Rose Growers' Bone Meal, Nitrate Soda, Peruvian Guano, Sulphate Ammonia, Sulphate Potash and Gypsum of the best qualities and in the correct proportions. As a complete plant food it has never been surpassed. A sample 100 lb. bag shipped on receipt of \$2.75. Address:

Blatchford's Calf Meal Factory
And Agricultural Works
WAUKEGAN, ILL.

ESTABLISHED AT LEICESTER, ENGLAND, IN 1800



ON THE INSIDE OF OUR GREENHOUSE POTTING ROOMS

We have told you of the charms of our little greenhouses, their delightful possibilities, how they are joy and health giving—but perhaps you have wanted to know about the work room, how the boiler was located and all that sort of thing. So here is an interior view of a plain working proposition.

The boiler is in the open cellar, down the stairs at the right. This cellar is just large enough for the boiler, the coal and plenty of elbow room for yourself. A shake out and coal up in the morning, more coal at night—not complicated, this matter of heating,—if you have the right boiler.

Placing the work bench beneath the casement windows makes an opportunity for a pleasant outlook. Under the bench you would always have a bin of rich dirt and leaf mold, another bin for pots, and the third for odds and ends.

Some, also, shelter their garden tools in these little houses.

We keep these potting houses as simple and inexpensive as possible. Frequently it is feasible to attach the greenhouse to the garden tool shed or some other building you already have; so much the better, for then you can put all your money in the greenhouse.



LORD & BURNHAM CO.
Greenhouse Designers and Manufacturers
1133 Broadway, Cor. 26th St., N. Y.
Boston Branch: 819 Tremont Building.



The Fastest Growing Vine

A HARDY, ornamental, twining climber to cover unsightly places, or to climb over verandahs is the Kudzu vine (*Pueraria Thunbergiana*, known in the trade as *Dolichos Japonicus*). There is probably no other hardy vine which will make as much growth in a season as this attractive plant when once it has become well established.

I do not know the extent of its powers of growth when cultivated in rich soil, but my root, planted in a clay bank, produces an almost incredible amount of stems and foliage, and, being rather unusual, attracts much attention, as it is trained to the second story of the house and around the sides. The stems are not hardy here, being killed back to within three or four feet of the



The kudzu vine, because of its rapid growth, has a remarkable covering capacity. Good for growing on porches, trellises, pergolas, and over unsightly objects

ground each winter; but, once started, they grow very rapidly.

The stems are thick, rounded, and brownish, bearing three-parted large leaves on long stems, about a foot apart. A subsidiary stem starts in the crotch formed by each leaf stalk and, as each of the main stems grows to forty feet or so in a season, its covering capacity will be seen to be very exceptional. It does not flower here, in this latitude.

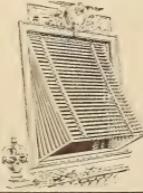
This plant is one of Mr. Thomas Hogg's introductions from Southern Japan, where it is much grown. It does not seem to be well distributed, or in general cultivation owing perhaps to some difficulty in propagating it from cuttings, and seeds do not seem to be available. It can be propagated in the spring before growth starts by division or cuttings of the roots, but these go to such a depth as to discourage an ordinary seeker after new stock. It may, however, be increased in August by layering the stems, preferably in pots. As the young plants do not make new roots rapidly, the first winter they should be kept in a frost-proof place.

New Jersey.

J. N. GERARD.

GARDEN TOOLS Spray Pumps, Spraying Mixtures, a full line of Nursery Stock, Trees, Plants, Vines, etc. Write for a catalogue; contains valuable Spraying Chart, etc.
ARTHUR J. COLLINS, Box N, Moorestown, N. J.

WILSON'S OUTSIDE VENETIAN Blind and Awning Combined



The most unique, practical and satisfactory solution of the awning problem yet devised. Easily operated. Very durable and artistic. Pulls up out of sight when desired. Illustrated leaflet and testimonials mailed free. Models on view at salesroom.

JAS. C. WILSON MFG. CO.
5 W. 29th St. New York

Also manufacturers of Rolling Steel Shutters and 1/2 wood and steel Rolling Doors and Patent etc.

Leggett's Dusters

DISTRIBUTE
INSECTICIDES
IN DUST FORM

saving Fruit and Vegetable Crops when other methods fail.

NO BARREL OF WATER TO HAUL

TWO ACRES OF POTATOES DUSTED PER HOUR.



LEGGETT'S
CHAMPION
DUSTER

SEVERAL STYLES FOR
**GARDEN, FIELD
OR ORCHARD**

Our Spray Calendar gives concise information regarding spraying, and about Dusters and Materials. Send for it. Mailed free on request.

Leggett & Bro., 301 Pearl St., New York

GLASS

We carry a complete stock of best

Hotbed and Greenhouse Glass

Don't fail to write us before buying . . .

SHARP, PARTRIDGE & CO.

22d and Lumber Streets - - Chicago

New Baby Rambler Roses in bud and bloom, 50c. each, \$5.00 per dozen. Small plants 25c. each, \$2.50 per dozen.

30,000 Rudbeckia Golden Glow \$4.00 per hundred, \$50.00 per thousand.

20,000 Helium Autumnale, \$5.00 per hundred, \$50.00 per thousand.

5,000 Helium Grandcephalum Striatum, \$6.00 per hundred, \$50.00 per thousand.

10,000 Rudbeckia Fulgida, \$5.00 per hundred, \$50.00 per thousand. Any of above 75c. per dozen.

A collection of 15 varieties of hardy plants for \$1.00.

Send for Catalogue.

NORTH SHORE FERNERIES
BEVERLY, MASS.

Ornamental Fixtures for Country Grounds



Copyright, 1903, by the J. L. Mott Iron Works, ORNAMENTAL DEPT.,

The J. L. Mott Iron Works, 84 to 90 Beekman Street
NEW YORK

- Lawn and Park Fountains
- Aquaria and Aquarium Fountains
- Drinking Fountains
- Flower Vases in Cast Iron and Bronze
- Statuary, Settees and Chairs, Tree Guards
- Railings and Entrance Gates
- Gas and Electric Light Posts and Lamps
- Stable and Cattle House Fittings and Weather Vanes

We issue separate catalogue of each of the above, which will be sent on request. Address



Like this, from my Book of Bungalows, or one equally beautiful in a different style? Then Buy your Plans of me. My Designs are Original, Artistic and Economically planned. My Plans and Specifications are Full and Complete. And I can design you just the house you want, for the least possible money, if you prefer to have one specially designed.

DO YOU WANT A BEAUTIFUL HOME?

Let me hear from you. My books are:

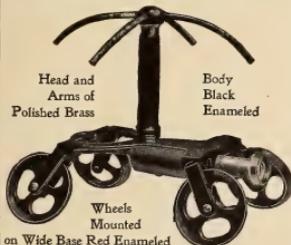
- A BOOK OF BUNGALOWS, A Unique and Artistic book, containing Designs for One and One and One-Half Story Bungalows in various styles, from \$2000 up. Price by mail, \$4.00.
- NEW PICTURESQUE COTTAGES, Containing Original and Beautiful Designs for Suburban Homes, from \$2000 to \$5000. Price by mail, \$4.00.
- PICTURESQUE SUMMER COTTAGES, Vol. III, Designs for Stone, Shingle and Rustic Summer Cottages and Bungalows. Price by mail, \$4.00.

E. E. Holman, Architect
Espen Building Philadelphia, Pa.



The New Century Lawn Sprinkler

Revolves freely with any pressure. Equal spray over circle from three to fifty feet in diameter.



Head and Arms of Polished Brass
Body Black Enameled

Wheels Mounted

on Wide Base Red Enameled

SIMPLE AND DURABLE

Your money back if not entirely satisfactory. Sent express prepaid anywhere in United States east of Rocky Mountains for only \$2.50. Descriptive circular free.

THE YOST ELECTRIC MFG. CO.,
Toledo, Ohio., U. S. A.



LELAND & HALL CO.

WORKERS IN STONE

557 FIFTH AVENUE
NEW YORK

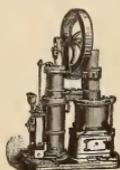


STUDIOS | PIETRASANTA, ITALY
| LONG ISLAND CITY

WORKS: BARRE, VT.

Invite special attention to their unequalled facilities for designing and executing the highest grade of garden adornments, mantels, tables, statuary, altars, fountains, monuments and mausoleums, in marble, granite and stone.

Also invite inspection of the pieces in stock. Designs and prices sent upon request.



WATER

A supply of water for country residences, hotels, schools, etc., being a necessity rather than a luxury, the importance of having the supply 'constant', as well as easily procured, is self-evident. Before the invention of the



Rider and Ericsson Engines

this question of water supply was a vexed one, and not often satisfactorily solved. Since the invention of these engines many thousand residences, schools, hotels, stock farms, etc., have had a constant daily supply of water without danger, complication or material expense. Many of the largest colleges, such as Harvard, Cornell, Columbia, University of Michigan, and many others have the engines in their mechanical laboratories as being the standard machine for illustrating to their students. Thousands of the most prominent citizens of this country, as well as other countries, use them; many of the rulers of other countries, including King Edward VII and the Khedive of Egypt, have the engines in their palaces. The heads of the greatest engineering establishments in this country, such as the Baldwin Locomotive Works, Westinghouse Machine Works and Allis-Chalmers Company, pump the water at their country places with Rider or Ericsson engines. Almost every public school in New York City has one or more of the engines supplying water for the use of the students. Many of the most prominent stock farms in this country pump all of the water for their fine cattle with Rider or Ericsson engines. These facts may not be conclusive, but to the average mind are important. Such people do not buy inferior machines if better ones are in existence. The celebrated Captain Ericsson, of Monitor fame, the inventor of the Ericsson Hot-Air Pumps, considered the Ericsson pump the most important, from a utilitarian standpoint, of all his inventions. A boy who can build a fire in an ordinary stove is competent to take entire charge of a Rider or Ericsson Pump, and the cost of running them, with any kind of fuel, is practically nothing. Their absolute safety under all circumstances is not an unimportant consideration. Owing to the recent reduction in the price of many materials we are able to make a discount of 10 per cent. from our present list prices without in any way affecting the quality of the engines. In writing to any of our stores for information delay will be saved by stating the conditions under which a pump would have to work.

Catalogue U free on application to nearest store.

Rider-Ericsson Engine Co.

35 Warren Street, New York
239 Franklin Street, Boston
234 Craig St. West, Montreal, P. Q.

40 Dearborn Street, Chicago
40 North 7th Street, Philadelphia
22 Pitt St., Sydney, N. S. W.

Teniente-Rey 71, Havana, Cuba.

G. H. PETERSON

ROSE AND PEONY SPECIALIST

(Catalogue on application)

FAIR LAWN NEW JERSEY

OVERLOOKING SAUGATUCK VALLEY AND LONG ISLAND SOUND

90-acre Farm on gentle sloping hill, beautiful views—an ideal site for country home. Good farm buildings. Only 1½ hours from New York. An exceptional opportunity in rapidly improving locality. Address

J. N. NICKERSON, REDDING, CONN.,
or Edward Descon, Bridgeport, Conn.

A Surplus Stock Native Rhododendrons

(Rhododendron Maximum)

The best broad leaved evergreen and the most satisfactory plant grown for massing. I have a surplus of about 20,000 plants, well budded, bushy, thrifty and strong; in sizes from 2 to 20 feet in height. Tell me how many you could use and I will send prices that will please you. The month of May is the right time to plant Rhododendrons.

C. E. PERSONS - - - Westfield, N. Y.

Largest and most complete Stock of Hardy Plants in America

Catalogue on Application

ELLIOTT NURSERY CO., PITTSBURG, PA.



TREES AND SHRUBS FOR CALIFORNIA

Q. Will the flowering magnolia, the common barberry, the purple barberry, and Schwedler's maple do well in Southern California?

A. Our climate is generally too dry for any of these plants, although in a few cases they do fairly well. High altitudes or near the sea shore will suit them best. If planted inland they should be wholly or partially in the shade of tall trees or buildings. Low damp lawns, where stagnant water is present at times, does not seem to disagree with them.

California ERNEST BRAUNTON

KEEPING BULBS AND ROOTS

Q. What is the best way to keep over winter these roots and bulbs: Japanese iris (*Iris levigata*, known in the trade as *I. Kämpferi*), St. Bernard's Lily (*Anthericum Liliago*), Japanese anemone, and tuberous begonias? They are expected to arrive from Holland too early for spring planting and too late for fall.

London, Canada M. F. H.

A. Begonia tubers should be kept in a dry place at a temperature of 40° without any covering. The others can be loosely packed in damp moss at a temperature of 35° to 40° or else covered with earth and placed in a fairly dry cellar at a temperature of 30° to 35°.

New York City W. E. M.

PLANT BREEDING AS A BUSINESS

Q. Would you advise me to go into plant breeding as a business?

Decatur, Ill. A. R. W.

A. No, sir. You'd starve to death. Get your living some other way and make plant breeding a back-yard hobby outside of office hours.

PRUNING SHADE TREES

Q. When is the best time to prune shade trees that were planted last fall?

Jamaica, N. Y. R. S. T.

A. The trees should have been pruned when planted and if it was properly done at that time they will not need further attention for three or four years. But if, before then, limbs are found rubbing against one another, injuring the bark, cut out one of them. In young trees the head should be kept long and narrow rather than short and broad. Pruning had best be done in March before the sap runs as then the wound will heal quicker except in the maples which should be pruned in summer after sap stops flowing.

New York City P. B. T.



Perhaps you have been thinking

about having a greenhouse—one that would give you not only flowers and fresh vegetables all the year round, but a pleasant pastime as well—a pastime that brings you double satisfaction by also adding to the pleasure of those about you.

A greenhouse is a scientific affair, not a mere house of glass. To grow plants successfully, economically, your house must be constructed to meet every need of plant life.

U-Bar Greenhouses are the Best Greenhouses Built

because they are constructed to meet all these requirements. No other form of construction gives to the plants as much light—none are so durable—none so adaptable, or conform so pleasingly with any surrounding. The U-Bar is a patented construction. Before building know about the U-Bar.



PIERSON U-BAR COMPANY

DESIGNERS AND BUILDERS

U-BAR GREENHOUSES

Metropolitan Building

Fourth Avenue and Twenty-third Street
NEW YORK



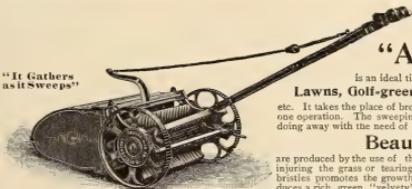
GLADIOLI for the GARDEN

If you want a garden of rich colors and a variety of exquisite shades you should plant Groff's Hybrid Gladioli. There is no flower of such easy culture, embracing the great range of color with endless combinations and varieties, as these Hybrid Gladioli. The graceful stalks with their burst of gorgeous coloring make the garden a veritable fairy land. Every shade or combination of shade can be produced. I am the United States representative and grower of Groff's Hybrids. Awarded the Grand Prize, World's Fair, St. Louis, 1904.

SEND FOR CATALOGUE

ARTHUR COWEE, Meadowvale Farm, BERLIN, NEW YORK

"It Gathers
as It Sweeps"



THE

"Apollo" Sweeper

is an ideal time and labor-saving machine for the care of
Lawns, Golf-greens, Porches, Walks, Barn-floors;
etc. It takes the place of broom and shovel, sweeping and gathering all in one operation. The sweepings are carried into the box attached, (see cut) doing away with the need of basket or cart for collecting the sweepings.

Beautiful Lawns

are produced by the use of the "APOLLO" sweeper, because instead of injuring the grass or tearing it up as a rake does, the action of the fine bristles promotes the growth of the turf, makes the grass thick and produces a rich, green, "velvety" appearance, instead of a dull gray or brown color. It removes every particle of cut and dead grass, leaves, twigs, manure, dirt, etc. If your dealer cannot supply you, write us and we will send a sweeper on 10 Days Approval. Booklet Free.

THE GREENE MFG. CO., 34 Sycamore St., SPRINGFIELD, OHIO. (Good Canvasers Wanted.)

YOUR GOOD TASTE BESPEAKS A COPY OF

The International Cook Book

By ALEXANDER FILIPINI

Formerly of Delmonico's

Author of "The Table"



HIS is the world's cook book. It is replete with rare and deliciously original dishes, drawn from the author's wide experience and years of travel here and abroad. There are nearly 3,500 recipes in all—a veritable encyclopedia representing countries all over the globe.

Two washable bindings, white seal grain and red morocco grain. Net, \$4.80 (postage 48 cents).

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

The Elm City Nursery Co.



**Desirable
and
Beautiful**

DECIDUOUS TREES

Japanese Magnolias in variety, in balls, 3 to 7 ft.
Flowering Dogwood, white, pink, red, 3 to 8 ft.
Japanese Maples in variety, from pots, 1 to 4 ft.

EVERGREEN TREES

Japanese Umbrella Pines, in balls, 1 to 5 ft.
Japanese Yew (Cuspidata), in balls, 1 to 2 ft.
Koster's Blue Spruce, in balls, 1 to 5 ft.

DECIDUOUS SHRUBS

Azaleas in great variety, in balls, 1 to 4 ft.
New Fern-leaf Sumach (Staghorn), 1 to 6 ft.
Choice Lilacs in great variety, 1 to 6 ft.

EVERGREEN SHRUBS

Rhododendrons, hardy named sorts, 1 to 3 to 10 ft.
Rhododendron Maximum (also car-load lots), 1 to 10 ft.

Kalmia or Laurel (also car-loads), 1 to 5 ft.

HARDY VINES

Actinidia, new and desirable, 1 to 6 ft.
Wistaria Multijuga, rare, 2 to 10 ft.
Clematis in variety, strong roots.

GARDEN ROSES

Killarney, strong dormant plants.
Frau Karl Druschki, strong dormant plants.
Baby Rambler, dormant plants and pot grown.

HERBACEOUS PLANTS

Hardy Chrysanthemums in variety, in pots.
Japanese Anemones in variety, field grown.
Shasta Daisies (Alaska), strong field grown.

FORMAL TREES IN TUBS

Specimen Bays (Laurus), a grand lot.
Specimen Box, standard and pyramidal.
Specimen Hydrangeas (large), for summer use.

HEDGE PLANTS

California Privet, large stock, 1 to 6 ft.
Japanese Barberry (Thunbergii), 1 to 3 ft.
American Hemlock (Tausa), 1 to 3 ft.

FRUIT TREES, ETC.

Apples, Pears, Cherries, Peaches, Quinces,
Plums, etc., 4 to 8 ft.
Grape Vines, Berry Bushes, Asparagus
Plants, etc., large stock.

"Just a few" of the many desirable things to be obtained at our Nursery are noted above. All of them are listed with sizes and prices in our NEW CATALOG just issued. You should have a copy of this NEW CATALOG, and we will gladly send you a copy promptly on request; there is no charge.

The Elm City Nursery Co.

New Haven Conn.
Visitors always welcome at the Nursery.

THORBURN'S SEEDS

THE BEST AND MOST RELIABLE. If you are interested in gardening send for our beautiful GARDEN ANNUAL. Mailed free. J. M. THORBURN & CO., 36 Cortlandt St., New York

THE WATSON
Four Row Potato Sprayer
Covers 50 to 60 acres per day. Sprinkles rows, 4 ft. to 6 ft. in a time. Weeds do not get different widths. Sprays to any desired depth and covering of pump to wheel.

It does not give any pressure desired. Automatic distributor and suction valve releases. A short spool follows the disc. Free instruction pamphlet shows the famous Garfield, Empire King, Orchard seeds and other Sprayers. Write for it.

FIELD FORCE PUMP CO., 45 Eleventh St., Elmira, N. Y.

PROPAGATION OF SPIREAS

Q. We have some spireas in our yard from which we would like to secure some young plants. How shall we go about it?

J. M. P.

A. Cuttings of *Spiraea Van Houttei*, *Cantonensis*, *crenata*, *Bumalda*, *Japonica* and *alba* should be taken in the fall, using the young, pliable, but ripened, wood of the same year's growth. These are made into lengths of ten inches or so, tied in bundles, and buried in sand or well-drained soil, then early in the spring they are planted with their tip only appearing above ground.

S. *Thunbergii*, *arguta* and *prunifolia* will root from cuttings of the growing wood taken in June, and placed in shaded hotbeds, but they require close attention. They will root more readily from cuttings of the growing plants forced in the greenhouse in winter, and placed in the propagating bench.

If seeds are sown, as soon as ripe, in flats, and placed in coldframes, they will germinate the first or second year after ripening, when the seedlings must be slightly shaded for a short time.

Rochester, N. Y.

J. DUNBAR.

ELM BARK BORERS

Q. Our elm trees are being girdled by borers. Can you suggest a remedy which will kill them?

Massachusetts,

E. T. N.

A. The elm borer is a rather difficult insect to control, because the destructive larvae (worms) work under the bark, where they can not be easily reached. I would advise the immediate removal of all the dead wood and some of the more badly infested limbs, provided the trees are not in such a bad condition that the latter can not be cut away without serious damage. Should this be the case it will probably be wiser to cut and burn the worst infested trees rather than to attempt to restore them to a healthy condition.

The pruning might be followed by carefully shaving down the bark over the other infested portions, which can not be cut away, removing the tissues till the grubs are nearly exposed, and then paint with a strong kerosene emulsion or a carbolic-soap wash prepared according to this formula: In six gallons of saturated solution of washing soda, dissolve one gallon of soft soap, add one pint of carbolic acid, mix thoroughly, slack enough lime in four gallons of water so that when added to the mixture a thick whitewash will result, then add half a pound of Paris green. This is also valuable to prevent egg-laying on bark. It may be necessary to make two applications at intervals of a week or ten days and then the injured parts should be protected by a thick plaster of fresh cow dung and lime, held in place, if necessary, by burlap. This treatment should result in the destruction of considerable numbers of the grubs, and, if judicious pruning has been given, the trees should recover, provided there is a fair opportunity for growth.

It might be advisable to supplement the above measures by digging around the trees for a distance of some ten to fifteen feet, depending upon their size, and manuring heavily.

E. P. FELT.

TIGER SKINS
LEOPARD SKINS
BEAR SKINS
WOLF, FOX, ETC.

GAME HEADS
ROBES
AND
MATS

Special Offer: 3 foot So. American Tiger Cat, dressed, \$4.00



To introduce my direct importations of **SPECIAL MOTH PROOF FURS**

If you will apply for my new catalogue I will send to you a beautifully mounted

CHINESE LEOPARD SKIN
(average 7 1/2 feet)
London quotation £15, for \$35.00

A similar introductory offer for mounted

Game Heads on application.

Large Soft Drivern Virginia Deer Skin, \$35.50

FRANKLIN C. JONES, Importer

174 FEDERAL STREET, BOSTON, MASS

Herbaceous Perennials FOR THE GARDEN BORDER



Choice Pompon Chrysanthemums and Cactus Dahlias

Send for Catalogue

SHATEMUC NURSERIES
BARTOWN, DUTCHESS CO., N. Y.

IMPORTED —CHOICE—

ENGLISH LAWN GRASS SEED

We are the only exclusive Importers of this fine seed. Anyone desiring a beautiful and luxuriant lawn similar in every respect to the best English lawns and free from weed seeds and coarse grasses, write us. Samples 1 lb. bag, sufficient for 55 sq. feet, sent anywhere in the Central and Eastern States, express paid, on receipt of \$1.50.

Address, Blatchford's Calf Meat Factory AND AGRICULTURAL WORKS

WAUKEGAN, ILL.

ESTABLISHED AT LEICESTER, ENGLAND, IN 1800.

**Standard Steel Posts
Can be Driven**
One-Third Cheaper Than Wood Posts. They Last... Forever...

Can be used with plain, lawn or woven wire fencing. Posts made for all requirements. Hitching, clothes, lawn and field posts. Thousands in use and thousands ready for immediate delivery. Write for Descriptive Circular and Price List.

J. H. DOWNS, 236 Broadway, New York City.



RUSTIC WORK

PRACTICAL plans for picturesque Automobile and Animal Houses, Arbors, Bridges, Summer Houses, Boat Houses, Cabins, Camps, Decks, Furniture for house and garden, Fences, Gates, Lodges, Pergolas, Play houses, Umbrellas and all other kinds of rustic structures for gardens and estates.

Original designs adapted to site. State what you want to build, and describe the site selected. Estimates furnished for rustic construction to be erected by most competent workmen in my employ.

To facilitate business with those living at a long distance from New York, I will send by registered mail or express to any part of the United States or Canada, upon receipt of \$5.00, complete working drawings, as follows:

- Sheet No. 1. Two fence designs with several gateway
 " 2. Summer houses, 12 feet in diameter
 " 3. Bridge designs, adaptable to various heights
 " 4. Chairs and settees in several designs
 " 5. This paper when designed, also veranda, studio, or workshop

Any one sheet of plans for \$1.00. Address

J. H. TROY, RUSTIC BUILDER,
 New Rochelle, N. Y.
 New York City Office, 24 East 34th Street



Shall We Ornament Your Grounds?

That is our business and has been for a great many years. We can show you fine places with beautiful trees and shrubs which we furnished that could not help but please you. We are situated in the center of a fast growing community and are very accessible to many new homes that are being made. This is an advantage, as stock can be planted soon after being dug. Let us visit your place, and see what you need. We can furnish all you wish in the way of

Ornamental Trees, Shrubbery, Hedge Plants, Evergreens, Fruit Trees, Roses, Paconics, Vines and Herbaceous Plants

We have a large collection of the Old Fashioned Perennials and Dwarf Box for Flower Gardens

Also

RARE RHODODENDRONS

The largest to be found in the country, from 10 to 15 feet high with a spread of 12 feet, moved with a ball of earth. Many years of waiting saved in getting these plants. Visit the Nurseries and see our stock; if you cannot come, send for a catalogue, and if you do not find what you want, write for further information. Correspondence solicited.

THE STEPHEN HOYT'S SONS CO.

Telephone 148-2 So. Norwalk, Ct.

NEW CANAAN, CONN.

Andorra's Peonies WILL BLOOM THIS SPRING



Reproduced from photo of Andorra's Peonies.

SPECIAL

WE HAVE purchased the entire stock of Peonies from one of the largest Nurseries, closing them out on this line. The list was originally Kelways and are his introductions. They are four and five year clumps.

SPECIAL OFFER

Per Dozen	\$ 5.00
Per 25	10.00
Per 100	37.50

Ask for Peony Booklet of New and Rare Varieties

ANDORRA NURSERIES

WM. WARNER HARPER, Prop.

Chestnut Hill

Philadelphia, Penna.



Manlove Self-Opening Gate

Always in order. Has been in general use for many years. It is opened or closed by any vehicle without assistance or stopping. By its use runaway accidents are avoided. The gate can be placed at any driveway entrance, attached to ordinary posts, and soon pays for itself in time saved. Machinery is all above ground, and so simple it never gets out of order. It adds to the beauty, value and convenience of any home.

—Address—

MANLOVE GATE COMPANY

272 HURON STREET, CHICAGO



Pres. Roosevelt

C H R Y S A N T H E M U M S
 Our
 Specialty

Pres. Roosevelt—Our Leader for 1906

BEAUTIFUL LIGHT ROSE

Strong Plants 50c. each, postpaid

Twenty years of Successful Culture has given us En-
 vable Prominence in the Chrysanthemum World. Our
 Productions are leaders in every American Collection
 and included in the best European Lists.

Send for Large Illustrated Catalogue

We offer also the Most Desirable Hardy Perennials
 Smith's Chrysanthemum Manual—Second and Revised Edi-
 tion. The Most Complete Treatise on Chrysanthemums in
 America, covering all necessary cultural directions, from Stock
 Plants and Propagation to Staging of Exhibition Blooms.
 Cloth binding—see Page—Profusely Illustrated

Only 40c. postpaid

NATHAN SMITH & SON

25 W. Maumee Street, Adrian, Mich.

A Piedmont Red Cedar Chest

in the home saves the trouble and expense of putting your furs in cold storage.

The cost is about the same as that of a season's cold storage, but the chest lasts a lifetime. Is always in your home and easy to access.

It does all that cold storage does—and more; imparts that delicate odor of the genuine Southern Red Cedar to your furs, and absolutely protects them from moths and insects, which at this season are laying their eggs and preparing their work of destruction on furs and woollens. Furs, blankets, valuable clothing, etc., packed in a Piedmont Red Cedar Chest are perfectly secure from moths, dust and dampness, and kept clean, sweet and fresh. They are always ready to wear. No need of airing to destroy the odor of moth-balls, etc., which do not thoroughly protect.

Made in several sizes and fitted with handsome trimmings.

An Ideal Wedding or Birthday Gift

You run no risk—if not perfectly satisfied with the chest, return it in five days at our expense and get your money back.

They are shipped direct from factory to your home, freight prepaid. Write for booklet with full information and factory prices.

PIEDMONT FURNITURE CO.
 Dept. W. Statesville, N. C.



Lawn Fertilizer

SHEEP MANURE is unequalled for top dressing the lawn in early Spring. It makes a complete fertilizer and is especially rich in nitrogen. Spread on evenly while the ground is still frozen; the Spring rains will wash in the fertilizing elements ready for the young roots immediately growth starts. There is no danger of carrying in weed seeds if sheep manure is used.

It is also excellent for fertilizing the

Vegetable Garden and Orchard

promoting a steady, rapid growth. It is non-odorous, is cleaner, and richer than stable manure.

10 lbs. ... \$0.35 100 lbs. ... \$1.50
 50 lbs. ... 1.00 Per ton ... 25.00

CAIRNSMUIR FARM,

NEW CITY, ROCKLAND CO., NEW YORK.



JAPAN IRIS

The Grand Japan Iris Kaempferi

FLOWERS MEASURE 8 TO 12 INCHES ACROSS
 —MASSES OF BLOOM THE FIRST SEASON

One strong clump, postpaid **25c**
 Six, express paid **\$1.25**

GERMAN IRIS

As Beautiful as Orchids—All Colors of Rainbow

One strong flowering root, postpaid **10c**
 Six strong flowering roots, postpaid **50c**
 Twelve strong flowering roots, postpaid **90c**

Send for our 23th Annual Catalogue

Address **H. H. BERGER & CO.,** c BARCLAY STREET
 NEW YORK CITY

FAIRFAX ROSES

CANNOT BE EQUALLED

Catalogue free

W. R. GRAY,

Box 6, OAKTON, FAIRFAX CO., PA.

SWEET PEAS INOCULATED

with nitro-culture produce magnificent flowers on soil hitherto found unfavorable. Inoculated seed. Eckford's finest varieties mailed for 10 cents per ounce. BINGHAMTON SEED CO., BINGHAMTON, N. Y.

IF ANY DEALER OFFERS YOU A SUBSTITUTE, INSIST ON HAVING THE GENUINE

The **Velvet Grip**

Never Slips
 nor Tears

EVERY PAIR
 WARRANTED

**HOSE CUSHION
 BUTTON
 SUPPORTER**

Sample pair, Mer. spr. Silk, spec. Mailed on receipt of price

GEORGE FROST COMPANY, Makers, Boston, Mass., U. S. A.

LOOK FOR THE NAME ON EVERY LOOP



Amatite

ROOFING

No Repairs. When you first cover buildings with Amatite, your roof costs *all* cost. After it is put on you can forget all about it, for it will require no repairs—painting, patching or tinkering of any sort—for many years. If your Amatite roof costs you \$10.00 to begin with, the cost ends there. And it is all because it is made to *wear* and does not rot, crack or peel off in a few years.

Send to our nearest office for free sample and see for yourself how much better it is than the ordinary kinds. **BARRETT MANUFACTURING CO.,** New York, Chicago, Philadelphia, Allegheny, Kansas City, New Orleans, Cleveland, St. Louis, Cincinnati, Minneapolis, Boston.



twigs from several parts of the tree should be taken so as to show all the leaf forms.

Give all the specimens from an individual tree the same number which should be also attached to the tree, so when the names come you will know to what tree they belong.

Connecticut.

G. P.

SUGGESTION FOR WALLFLOWER GROWING

Q. I have started some wallflowers in my window garden for planting out-of-doors. What position in the garden is best?

Connecticut.

A. B.

A. If you do not get flowers this year, do not be disappointed. The wallflower is a hardy perennial plant which grows one or two feet high, and usually blooms the second year from seed.

The drainage is the most important item in growing good wallflowers. Plant in a slightly shaded situation where the soil is rich and deep. Take out a foot of the soil of the border, put in two or three inches of broken brick and old mortar, and replace the earth. In its native place, the plant is partial to old walls, and grows naturally on the chalk cliffs.

New York.

C. D.

ORCHID PLANTS

Easily Grown

The ten most popular varieties which will flower the first season, together with directions for growing them, \$20.00.

Catleya Labiata	Coelogyne Cristata
Catleya Citrina	Odontoglossum Citrosomum
Laelia Anceps	Dendrobium Nobiles
Laelia Autumnalis	Cypripedium Insigne
Laelia Albida	Oncidium Cavendishianum

ORCHID PEAT AND MOSS

SEBRECHT & SON,

Rose Hill Nurseries, New Rochelle, N. Y.

ANNUAL FLOWER SEEDS

SPECIAL OFFER TO READERS

Six Packets for 20 cents

We will mail free any classified collection of six varieties selected from the April number of THE GARDEN MAGAZINE on pages 139, 140 or 141 for 20 cents in stamps or coin.

When ordering, state which class you wish.

Illustrated catalogue of seeds free for asking, with premium offers.

W. E. MARSHALL & CO.

146 West 23d Street

New York



The Californian's Reminder

HYACINTHS, narcissi and other fall planted bulbs will now be ripening their tops and may be lifted and stored away till next season. These bulbs should be placed in boxes of damp sand, if sand is obtainable and the bulbs will "cure" as the sand dries.

You should have annual flowering plants to put in their places; if not, plant some at once.

Plant another lot of gladioli bulbs.

Dahlia may still be planted.

Fill a box of sand with chrysanthemum cuttings at once if you have none propagated.

If your climbing roses, Cherokee, Banksia, Glazenwood, and Ophir have stopped flowering, prune if necessary.

Watch deciduous shrubs like deutzia, philadelphus, spirea, and weigela and give necessary pruning when past flowering.

The following vegetables may be planted: Beans, cabbage (seeds and plants), carrot, cauliflower (plants), corn (sweet), cucumber, egg plant (seeds or plants), lettuce, melons (musk and water), onion (seeds or sets), peas, peppers (seeds or plants), potato, sweet (plants), pumpkin, radish, spinach, tomato (seeds or plants), turnips.

Garden squashes planted this month give best returns.

Watch sweet corn closely; irrigate and cultivate often.

California

ERNEST BRAUNTON



CHRYSANTHEMUMS FOR EXHIBITION

I make a specialty of handling the very finest exhibition varieties and have all the novelties of the year as well as the standard kinds. Fine, splendid varieties are Morton F. Plant, Mrs. John E. Dunne, Mrs. Geo. Heaume, Mrs. Henry Partridge, Mrs. F. F. Thompson. Send for my complete Catalogue No. 2 of exhibition and hardy varieties.

CHARLES H. TOTTY

MADISON
NEW JERSEY

Rosebald Nurseries

Carriatown, R. I.

LANDSCAPE DESIGN & SPECIALTY
S. G. HARRIS, M. S.

Telephone 201 B

GOLD MEDAL
FLORIST
EXPOSITION
1906

ROSES BARGAIN DAY.

To close out we offer a few choice plants

at 25 per cent from the prices in our catalogue. Stock in prime condition. Selection must be left partly to us. Among

others are Hybrid Teas, Beattie Brown, Killarney, Franz Deegen, Lady Sutherland,

Chateau, Antonio Riviera, Embassador, Grace

Belle Siebrecht, Gladys Harmsen, Grace

Darling, Liberty, Gustave Regis, Edman

Cosmos Hamy, La France, Lady Chamorrisa,

Pres. Carnot and Viscountess Folkenstone.

Frau Karl Deschki, Prince Camille de

Rohan, Ulrich Brunner, and a few others of the

best Hybrid Perpetuals.

L. J. Harris,

Larry Harris

"BONORA"

"NATURE'S PLANT FOOD"

The Greatest Fertilizer Discovery of Modern Times

ADOPTED after test on the Capitol Grounds at Washington, D. C., the Botanical Gardens, Soldiers' Home, on the Parks of Greater New York, Albany, Lowell, Mass., Paterson, N. J., etc. Also used and endorsed by the greatest authority in America—Luther Burbank. Read what he has to say on the subject:

Horticultural Novelties
New Crops in Trees, Fruits and Flowers

BURBANK'S EXPERIMENT FARMS
LUTHER BURBANK
Office and Residence, 204 Santa Rosa Avenue

Santa Rosa, Cal., March 29th, 1906.

Bonora Chemical Company, New York.

Dear Sirs: The keg of liquid "BONORA" which you sent me last fall was received. I have lately made use of it under several conditions and found it a powerful and very convenient fertilizer, especially for plants, greenhouse work, etc., etc.

As to its economy, compared with other fertilizers, I have no means of judging, but from its lack of odor, its immediate effects and convenience, it is, no doubt, a valuable form of liquid plant food. Respectfully yours,

LUTHER BURBANK.

Adopted for use on the private estates of A. G. Vanderbilt, Geo. W. Vanderbilt, John D. Rockefeller, Jr., Senator Aldrich, Hon. Joseph H. Choate, J. P. Morgan, William Astor, M. C. D. Borden, W. F. Havemeyer, and many others.

"BONORA" contains more Nitrogen than any other plant food in existence. Also contains an abundance of Phosphoric Acid and Potash. "BONORA" is a complete fertilizer, giving new life to old plants and new ones as well. It will make your lawn look like velvet. "BONORA" will make your early vegetables tender, juicy and crisp, maturing them two to three weeks earlier. Your fruit trees, grape vines, shrubbery and rose bushes need new life—"BONORA" will give it to them. "BONORA" will make your flowers bloom profusely. Two to three applications will give them a lasting and healthy growth.

READ WHAT EMINENT AUTHORITIES ON THIS CONTINENT HAVE TO SAY

ARDWICK, Md., Oct. 23d, 1905.
Bonora Chemical Company, New York.
Gentlemen: I take the liberty of telling you of my success in growing melons and tomatoes with "BONORA." I was fully three weeks behind my neighbors in planting both, and I was using both tomatoes and melons three days ahead of them. I think "BONORA" is a great thing for vegetables, and intend to use it extensively next season.
Very truly yours,

L. MAHL.

P. S. It was Mr. Duff, Gardener at the United States Capitol, Washington, D. C., who recommended "BONORA" to me.

Bonora Chemical Company, New York.

Gentlemen: Answering your letter about how well I was pleased with "BONORA," I wish to say that it gave us great satisfaction. We tried it sparingly, as we have been fooled with so many different things, and I thought it was best to go slowly with it. It not only highly pleased me, but all those that have seen it notice the great difference between where it is used and where it is not used. I am very sorry I did not get more earlier in the season, as we could use it to great advantage.

I used it on evergreens, trees, lawns, and on flowering plants. Expect to use a large quantity the coming season, and shall send you the order direct, if your representative does not call early enough.
Very truly yours,

C. G. CHADER,

Gardener to J. D. Rockefeller, Jr.

THE COUNTRY GENTLEMAN

OF ALBANY, N. Y.

"BONORA."—A sample of this new fertilizer has been tested for *The Country Gentleman* by the accomplished Superintendent of the Albany Parks, who is also President of the National Association of Park Superintendents, Mr. W. S. Egerton. His report is as below:

The sample of "BONORA" you gave me I handed to the gardener, with instructions to try the solution, in the proportions given, on various plants and seedlings in the greenhouse stock. The gardener reports the following:

Case 1. *Polystichum Hololeptum*. This fern was dormant for two months, with ordinary watering and care. After two applications of the "BONORA" solution growth started and continued with good results.

Case 2. *Crotosus* in variety. "BONORA" solution tried on old plants cut back and dormant. After two weeks' application of solution, growth commenced and continued vigorously, with normal colors emphasized.

Case 3. *Eucharis Amazonica*. Bulbs were sending up delicate, sickly leaves. After the third application of solution there was a decided improvement in the color and size of the foliage.

Case 4. *Aciclypha Macafasna*. After watering twice with the solution there was a decided improvement in the growth and color of the foliage.

Case 5. *Thrinax Parviflora*. This palm was becoming sickly. After watering three times with the "BONORA" solution it began to pick up, and has continued to improve.

Case 6. *Clivia* seedlings that were almost at a standstill, after three waterings with the solution, started growing, and have continued to do so since these applications.

The results speak for themselves without comment.

"BONORA" ON GOLF LINKS

I. S. MACKIE

GOLF PROFESSIONAL FOX HILL GOLF CLUB

STARLETOS, S. I., March 9th, 1906.

Bonora Chemical Company, New York.

Gentlemen: Your greens having been killed off with the frost last winter, we were recommended to try "BONORA," as being a quick and sure reviver. We gave the greens two applications, and had them in perfect shape for the Metropolitan Championship, which took place in the middle of May, and they withstood the summer heat and have come out of this winter in first-class shape. We can recommend "BONORA" highly for starting the young grass and holding same throughout the season.
Yours respectfully,

I. S. MACKIE.

OCEANIA, N. J., Nov. 22, 1905.

Bonora Chemical Company, New York.

Gentlemen: I am using your "BONORA" for the last two years, and the longer I use it the better I get acquainted with it, the more I like it. The ferns I have grown with "BONORA" received prizes at the last show, and the *Chrysanthemums* grown with "BONORA" got first prizes; also the Lettuce I grow my vegetables under glass with the same fertilizer with splendid results; in fact, I would not be without it.

Very truly yours,

N. BUTTERBACH,

Supt. to Hon. Cornelius N. Bliss.

"BONORA" IS PUT UP IN DRY AND LIQUID FORM AS FOLLOWS:

2, 5 and 10-gallon kegs, per gal. \$2.00
Half Barrels (cont. 25 gals.) " 1.75
Barrels (cont. 50 gals.) " 1.50
One gallon makes 100 gallons of fertilizer when diluted with water

Put up in dry form in all size packages as follows:

1 lb., making 28 gallons (by mail)	\$0.65	50 lbs., making 1,400 gallons	\$25.00
5 lbs., " 140 "	2.50	100 lbs., " 500 "	43.50
10 lbs., " 280 "	5.00	200 lbs., " 560 "	70.00

Order direct or through your Seedsman

Bonora Chemical Company, 588 Broadway, New York

How to Start Keeping BEES

Tending bees (after a little experience) is absorbing, attractive work, taking but little time and affording a healthful, out-door occupation coupled with rare pleasure and considerable profit in money. Honey is always in great demand, especially (like fresh eggs), when it can be bought directly from the apary. We know how to start you in this pleasurable business at a small cost. We tell you how to avoid discouraging accidents and mistakes. The first thing you need is

A Good Bee-Book

We recommend the "ABC OF BEE CULTURE" which we show at the left; a book of 500 pages, illustrated with 500 small engravings, and 30 full-page half-tones. Revised 1905. Now in its 100th thousand. Best seller of all bee-books. It is arranged like a cyclopaedia from A to Z and tells everything a bee-keeper needs to know whether beginner or veteran. Costs \$1 with goods or \$1.20 by mail. After

you have read a few articles in this fascinating book you'll need bees, hives, etc. To get started right you must use great caution in buying and

Get Good-Tempered Bees

Our breed of Red-Clover Bees are well-known all over the United States, Canada and in foreign countries for their gentleness. They are the *race par excellence* for honey-gathering, freedom from disease and ease in rearing and handling. They are hardy, vigorous, resist most weather changes without weakening. Consequently they pass cold winters with but very little loss.

Money and Pleasure with Them

With a little experience handling bees you will readily see the great possibilities in profit from the remarkable amount of honey your faithful workers will gather and store. The pleasure and fascination in tending them will extend to the whole family—a little folks and all. In a few weeks the fear of stings will pass away when our gentle, Red-Clover Bees will be understood. We have six different beginners' outfits running from \$13.00 to \$30.00. Outfits Nos. 1 to 4 have no bees; Nos. 5 and 6 list. Send your order to the nearest branch mentioned here. Hives, bees, queens, every separate article is absolutely guaranteed. We will promptly refund every cent you send us if our goods are not just as we claim for them. Our hives, both for workmanship and clearness of stock, cannot be excelled. They are accurate, close-fitting and are no trouble to put together when ordered flat.

Outfit No. 5 for Dove-tailed Hive

1 A B C of Bee Culture	.....\$1.00
1 year's subscription to "Gleanings in Bee Culture"	..... 1.00
1 Junior Cornell smoker	..... .65
1 No. 2 bee-veil	..... .50
1 Bee-lot	..... .35
1 pair bee-gloves (small, medium or large)	..... .25
1 Colony of Italian bees in 8-frame, Dometailed hive with bottom-board and cover and super	..... 7.50
1 Tested Red Clover queen for same	..... 2.00
2 Hives for new swarms, nailed and painted with comb-honey saps	..... 5.70
Total	.....18.95

☞ This outfit is particularly intended for those just beginning bee culture who have neither bees, hives, nor any equipment. More bees can be added to this outfit if desired.

Outfit No. 6 for Danzenbaker Hive

1 A B C of Bee Culture	.....\$1.00
1 year's subscription to "Gleanings in Bee Culture"	..... 1.00
1 Junior Cornell smoker	..... .65
1 pair Bee-gloves (small, medium or large)	..... .35
1 No. 2 bee-veil	..... .50
1 Bee-lot	..... .25
1 full colony of Italian bees in Danzenbaker hive with a bottom, cover and super	..... 8.00
1 Tested Red Clover queen	..... 2.00
2 Danzenbaker hives equipped for comb honey, ready for the bees, nailed and painted, at \$3.10	..... 6.20
Total	.....19.95

☞ This outfit is intended for beginners who wish to adopt the Danzenbaker hive.



THE
BEE-BOOK
You Should Get

This Spring the Time to Begin

April and May are the ideal months for getting everything ready for the summer harvest of honey. You will learn more, your bees will earn more for you if you both get started early. By the time you get your outfit and have studied your new arrivals, it will be time for them to gather pollen and nectar from many blossoms. DO IT NOW.

Beginners Need an Authoritative Bee Paper

where you can ask practical questions and get direct, intelligent answers. "Gleanings in Bee Culture" is a semi-monthly averaging over 1300 pages annually. Giving latest news on bee-keeping from all over the world; printed on good paper, illustrated with half-tones. Forced most bee-keepers and bee-editors answer your questions and contribute wide-awake instructive articles. 30,000 beekeepers read it. Subscription, \$1.00 per year.

6 Months Trial, 25c.

We want every person interested in bees to know how good "Gleanings in Bee Culture" is. So, we make the above trial offer—over 600 pages of live reading matter for merely 25c. Sample copy free.

10c. Bee Books Free

We have six little bee books—intrinsically interesting in a hundred ways—10c. each if bought alone. But we send all six free with a year's subscription or with an order for an outfit. We send one only with trial subscription to "Gleanings." Here are the titles: 1—"My First Season's Experience with the Honey Bee"; 2—"Hatching Honey Bees"; 3—"Bee-keeping for Women"; 4—"A Clergyman and His Bees"; 5—"Facts About Bees"; 6—"Outfits for Beginners." Send in your subscription NOW.

Bee-keeping by Mail

We also have a correspondence course in bee-keeping especially planned for men and women seeking a fascinating, profitable business. It covers thoroughly every practical point in every phase of bee-keeping. Rearing, breeding, handling bees; their anatomy, habits, peculiarities, their diseases, etc. Getting honey, selling it in best markets, etc. Flowers, nectar, pollen, bee-food, etc.—these are but a few of the many important subjects thoroughly taught by our correspondence course. Our synopsis is free. Write for it to-day.

The A. I. ROOT CO. Medina, Ohio. Chicago, Ill., 144 E. Erie St. Washington, D. C., 1100 Md. Ave. Syracuse, N. Y., 1631 W. Gen. St. New York City, Box 1037 Philadelphia, Pa., 10 Vine St. St. Paul, Minn., 1024 Miss. St. Mechanic Falls, Maine.





And in the Sunset Days—KODAK.

KODAK

Pictures are everywhere. Anybody can make them and everybody enjoys them. And the travel pictures are by no means the only ones that are worth while. There is a wealth of photographic subjects in and about every home.

Daylight all the way by the Kodak System. Loading, unloading, developing, printing—all without a dark-room.

Kodaks, \$5.00 to \$108.00. Brownies, \$1.00 to \$12.00.

EASTMAN KODAK CO.

ROCHESTER, N. Y., *The Kodak City.*

Catalogue at the dealers or by mail.

JUNE

1906

Vol. III. No. 5

Important Gardening Work for June

10c.

The Peerless Magnolias—A Flower That Blooms in Three Days—The Gayest Flowers for Late Fall
—Beauty in Garden Grasses—Large Flowered Chrysanthemums Outdoors—Tilling the Home Orchard

\$1.00 a Year

THE GARDEN MAGAZINE



The World's Work



Country Life in America



Farming

CHICAGO

1515 Heyworth Building

DOUBLEDAY, PAGE & COMPANY

NEW YORK

133-137 East Sixteenth St.

BONORA

The Greatest Fertilizer Discovery of Modern Times

BONORA, the new fertilizer discovery which surpasses any fertilizer ever prepared, is a perfect plant food. It contains in the right proportion the elements necessary to plant life. **BONORA** contains more nitrogen, the most essential element to plant life, in larger quantities than any other complete fertilizer, and has also an abundance of phosphoric acid and potash which makes its fertilizing quality complete.

BONORA matures vegetables from two to three weeks earlier, and makes them more juicy, tender and crisp; and in the flower garden, the shrubbery beds and the fruit garden, it produces almost magical effects. The lawn fed with **BONORA** will become green and velvety, and will remain so throughout the summer. **BONORA** forces a quick, healthy growth of grass, and makes strong, vigorous, deep roots.

BONORA has already been adopted for use on the notable private estates of A. G. Vanderbilt, John D. Rockefeller, Jr., Senator Aldrich, Hon. Joseph H. Choate, J. P. Morgan, William Astor, M. C. D. Borden, W. F. Havemeyer, and many others. It has also been adopted, after test, on the Cayton grounds at Washington, D. C., the Botanical Gardens, and many of the great park systems of the country.

The strongest evidence of what **BONORA** does is contained in the following letters from those who have made careful tests:

Remarkable Results on Melons and Tomatoes

ARDWICK, MD., Oct. 23rd, 1905.

Bonora Chemical Company,
124 Broadway, New York.

Gentlemen: I take the liberty of telling you of my success in growing melons and tomatoes with "**BONORA**." I was fully three weeks behind my neighbors in planting both, and I was using both tomatoes and melons three days ahead of them. I think "**BONORA**" is a great thing for vegetables, and intend to use it extensively next season.

Very truly yours,

P. S.—It was Mr. Duff, Gardener at the United States Capitol, Washington, D. C., who recommended "**BONORA**" to me.

Bonora on the Lawn

L. S. MACKIE

Golf Professional, Pine Hill Golf Club

STAYLTON, S. I., March 9th, 1905.

Bonora Chemical Company, New York.

Gentlemen: Our greens having been killed off with the frost last winter, we were recommended to try "**BONORA**," as being a quick and sure revive. We gave the greens two applications, and had them in perfect shape for the Metropolitan Championship, which took place in the middle of May, and they withstood the summer heat and have come out of this winter in first-class shape. We can recommend "**BONORA**" highly for starting the young grass and holding same through the season. Yours respectfully,
(Signed) L. S. MACKIE.

Put up in dry form in packages as follows:

1 lb., making 28 gallons, by mail,	\$0.65	50 lbs., making 1,400 gallons,	\$25.00
5 lbs., " 280 "	2.50	100 lbs., " 2,800 "	42.50
10 lbs., " 280 "	5.00	200 lbs., " 5,600 "	70.00

2, 5 and 10-gallon kegs, per gal. \$2.00	One gallon makes 100 gallons of
Half Barrels (cont. 25 gals.)	1.75 fertilizer when diluted with water
Barrels (cont. 50 gals.)	1.50 fertilizer when diluted with water

ORDER DIRECT OR THROUGH YOUR SEEDSMAN

BONORA was used on the plant to the left! Just compare its vigor and size with the other plant fed with one of the ordinary, good, commercial fertilizers.

BONORA CHEMICAL COMPANY, Dept. A, 584 Broadway, New York



PLEASURE EVIDENCES

TO THE MAN who gives of his best to his family—whose pleasure and reward lies in their happiness, there is one investment which pays a dividend every day in the year in added enjoyment, pleasure and health: that investment is a greenhouse.

How much pleasure there is in visiting a friend who has a greenhouse. No matter the season of the year, we find in every room evidences in fresh cut blooms and plants exhaling their sweet fragrance, so refreshing and so soothing, and if we dine, there is sure to be further evidences of the forethought of our host in out-of-season vegetables and fruits of his own growing. It is these little things that give pleasure not to be measured by a money value.

Suppose you had such a greenhouse? Write to us giving particulars of your requirements.

HITCHINGS & CO.
GREENHOUSE DESIGNERS AND BUILDERS
1170 BROADWAY, NEW YORK

THE SEA TRIP

of the

OLD DOMINION LINE

makes the most attractive route to

NORFOLK
OLD POINT COMFORT
RICHMOND, VA., and
WASHINGTON, D. C.

Steamers sail daily, except Sunday, at 3 P. M. from Pier 26, North River, foot of Beach Street, New York.

For full information apply to

OLD DOMINION STEAMSHIP CO.
PIER 26, N. R., NEW YORK, N. Y.

H. B. WALKER
V. P. & T. M.

J. J. BROWN
G. P. A.

TIFFANY & Co.

DIAMOND AND GEM MERCHANTS
GOLD AND SILVERSMITHS, STATIONERS
AND DEALERS IN ARTISTIC MERCHANDISE

Gold Bangles and Bracelets

Bangles and Bracelets quoted are in 14-Karat Gold

Plain gold bangles, each	\$13.50, \$15.50, \$17.00, \$20.00
Plain gold link bracelets, each	\$15.00, \$17.00, \$20.00, \$25.00, \$35.00
Plain gold engagement bracelets, with permanent locking catch, each	\$18.50, \$27.00, \$28.00, \$36.00

Jeweled Gold Link Bracelets

Carved wreath pattern, with pearls and amethysts, each	\$25.00
Fancy scroll and pansy links set with pearls and sapphires, each	\$32.00
Ornamental links, East Indian effect, with half pearls and square cut amethysts, each	\$38.00
Carved and pierced links with oval peridots, each	\$40.00
Carved scroll links with sapphires, each	\$43.00
Pond lily design in ornamental links with peridots, each	\$48.00

Photographs of above or richer bracelets sent upon request

Tiffany & Co. are strictly retailers They do not employ agents or sell their wares through other dealers

Fifth Avenue New York

37th Street

Formerly at Union Square

Gold Bags

14-karat gold-mesh wrist bags
\$105, \$145, \$165, \$225 upward
Photographs upon request

Tiffany & Co. always welcome a comparison of prices

Stationery Department

Wedding Invitations and announcements correct in phraseology, superior in workmanship and in sizes approved by refined taste. Samples and prices upon request

Jewelry on Approval

Upon receipt of satisfactory references from any National Bank or responsible business house, Tiffany & Co. will send on approval selections from their stock to any part of the United States

Tiffany & Co. 1906 Blue Book

Second edition, 530 page catalogue, without pictures or cuts, but replete with descriptions and prices, sent free upon request

OUTDOOR AND PRACTICAL BOOKS

For any information concerning any publications, address

GARDEN BOOK DIRECTORY, THE GARDEN MAGAZINE
No. 13-137 EAST SIXTEENTH STREET, NEW YORK CITY.

To Know the Wild Flowers

as every lover of Nature desires to know them. The best, quickest and simplest way is by means of

"A" NATURE STUDIES



These enable you to identify each flower at a glance. You have at hand a picture of the plant, its classification and analysis in simple English; its history and its place in legend and poetry. Blank space for mounting each specimen and for making your own memoranda. Each series of fifteen studies, including **twenty-five** or more different wild flowers, which blossom at about the same season, is contained in a specially designed and artistic case, which slips easily into the pocket, and is accompanied by a guide card, with illustrated directions. Each series complete in itself. **25 cents, postpaid.**

SPECIAL OFFER—We will send **four** different series containing **sixty** studies, which identify **over one hundred and twenty** different flowers, together with **twenty-five** blank mounting cards, all postpaid, if you will enclose a dollar bill in an envelope and send to us.

THE "A" COMPANY, Box 846 H, Philadelphia

The Garden Magazine

THE NEW TEMPORARY BINDER

Is very convenient and will hold copies until volume is complete and ready for permanent binding. It is worth its cost several times over each year. You will have the copies together when you need them, and it will last for years for succeeding volumes. Black cloth neatly stamped in gold. Made on an improved pattern.

Price \$1.00 prepaid

DOUBLEDAY, PAGE & COMPANY

133-137 East 16th Street, New York

If your file of the magazine is incomplete, this is your opportunity.

The Garden Magazine

bound volumes contain much of the best practical information extant on many branches of gardening. They are completely indexed for immediate and handy reference, and are in themselves an inexhaustive garden library to be added to year by year at comparatively slight expense.

VOLUME ONE (for \$2.00), Sent Express Prepaid for \$2.32

(February to July, 1905, inclusive)

VOLUME TWO (" \$1.35), " " " " \$1.67

(August 1905 to January 1906, inclusive)

IF WE BIND YOUR OWN COPIES the charge is 75 cents (or \$1.07 including the express charges for return of the volumes to you.) ☛ Or, if we send the cover (for permanent binding) to you for your own binder to stitch on, the charge is 50 cents. (62 cents including postage.)

BACK NUMBERS 10 CENTS EACH, prepaid, excepting October and April which are 25 cents each, prepaid. Any copies of incomplete files which are returned to us prepaid (with no duplicate numbers) will be credited on an order for bound volumes at 10 cents each. ☛ Indexes for volume one and volume two sent free, on request to those who bind their own volumes.

IN RETURNING COPIES MARK YOUR NAME AND ADDRESS PLAINLY ON THE PACKAGE

Doubleday, Page & Co., 133-137 East 16th St., New York.

A Handbook of Information and Instruction for the Amateur

THE SEASONS IN A FLOWER GARDEN

BY
LOUISE SHELTON

Especially prepared for those with small gardens who wish to have a variety of constantly flowering plants from April to November. Arranged in order of months giving a list of flowering plants and practical hints for garden work during each month.

Illustrated. \$1.00 net. Postage 10 Cents.

CHARLES SCRIBNER'S SONS

153-157 Fifth Avenue, New York.



MUSICAL HANDBOOK FREE

to any one thinking of purchasing a musical instrument. Contains illustrations, descriptions and the lowest prices on 25,000 instruments and supplies of artistic musical quality. Also much valuable information. Ornaments for Christmas are here standard.

PIANOS, VIOLINS, MANDOLINS, Horn Instruments, Talking Machines, etc. Everything known in music is sold for us. Write today. **LYON & HEALY, 14 Adams St., Chicago**

ARE YOU FOND OF MOTORING?

Read THE MOTOR PIRATE, and
THE CRUISE OF THE CONQUEROR:

or The Further Adventures of The Motor Pirate.

Prepaid, \$1.50 Each.

L. C. Page & Company, Boston.

"How to Do It" Books

Edited by PAUL N. HASLACK

Strong, neat cloth binding, size 4x7. 160 pages. 50 cents each, postpaid. Any five volumes prepaid for \$2.00.

A Series of 27 Practical Manuals, each profusely illustrated and check-tall of practical advice. Among the titles are:

Taxidermy—108 Engravings and Diagrams. Skinning, stuffing and mounting birds, mammals, fish. Preserving skins, insects, birds' eggs, etc.

Photography—70 Illustrations.

Cycle Building and Repairing—New and Revised Edition. 190 Illustrations.

Wood Finishing—Staining, Varnishing, Polishing, etc. Engravings and Diagrams.

Sewing Machines. Their Construction, Adjustment, and Repair—177 Illustrations.

Viols and other Stringed Instruments—180 Illustrations.

House Decoration—Whitewashing, Paperhanging, Painting, Etc. 79 Engravings.

Harness Flaking—197 Engravings.

Saddlery—99 Engravings.

Upholstery—162 Engravings.

Beehives and Bee Keepers' Appliances—155 illustrations.

A list of all the titles and contents mailed free. You may return any book if not satisfied.

CASSELL & COMPANY, Limited

43 EAST 19TH STREET NEW YORK



Boys' Summer Camp

"Wildmere" in the Maine Woods.

(Sebago Lake Region)

The kind of vacation that does good. Mountain climbing, canoeing, fishing—the life of a boy's life. Coaching trip through the White Mountains. Supervision and companionship of college-bred leaders and masters. Tutoring, if desired. Sewing season begins June 28. Booklet on request. IRVING W. WOODMAN, Ph. D., Adelphi Academy, Brooklyn, N. Y.

The American Horticultural Manual

By Professors J. L. Budd and N. E. Hansen.

Price 75 cents.

JOHN WILEY & SONS,

43 and 45 EAST 19TH STREET, NEW YORK.



SUN-DIALS

with or without PEDESTALS

Send for Illustrated Price List H

Hartmann Bros. Mfg. Co.

New York Office, 1123 Broadway Mt. Vernon, N. Y.

Gardeners' Register

High-class men with good records, can be obtained at VAUGHAN'S SEED STORE, 14 Barclay Street, New York City. No fee. 84 Randolph Street, Chicago.

Service for Readers of The Garden Magazine

The publishers of THE GARDEN MAGAZINE will be glad to give its readers information on points relating to gardening, the country home and grounds, and advise where equipment and supplies not found in the advertising pages can be obtained. Address

READERS' SERVICE DEPT., THE GARDEN MAGAZINE, 133-137 East 16th Street, New York.

FOR THE OPEN AIR READER

Library of Country Life in America

No reader of this magazine can fail to be interested in these volumes, from which he will get as much help as entertainment. Though each is complete and independent, these books are closely connected for outdoor people.

"The Country House," by Chas. Edw. Hooper, 350 illustrations. (\$3.30 postpaid.)

"The Poultry Book." Three great volumes, with 36 color plates and 636 other pictures. (\$13.60 subscription.)

"The Dog Book," by James Watson. In ten parts, seven now ready. (Each \$1.10 subscription.)

"Driving," by Francis M. Ware. 200 photographs, elaborate binding. (\$10.35 postpaid.)

"How to Make a Flower Garden." More than 200 photographs. (\$1.76 postpaid.)

"How to Make a Vegetable Garden," by Edith L. Fullerton. 250 photographs. (\$2.20 postpaid.)

READY BY JUNE TENTH.

"How to Make a Fruit Garden," by S. W. Fletcher. An eminently practical work on the subject of Fruits for the Home. Nearly 200 photographs by the author. (\$2.20 postpaid.)



The Garden Library

This is the first series of low-priced, practical handbooks on home gardening with beautiful illustrations that has ever appeared in America. The volumes will cover every important department of fruit, vegetable and flower growing from the home point of view, and will be written in fresh, crisp and lively style.

NOW READY:

"Roses and How to Grow Them."

In text, practical; in subject and quality of illustrations, beautiful. (\$1.10 postpaid.)

"Ferns and How to Grow Them."

By G. A. Woolson. The growing of hardy ferns both in the garden and indoors. (\$1.10 postpaid.)



IN PREPARATION:

Daffodils and How to Grow Them.

The Water Garden. Lawns. Tulips.

Rhododendrons. Vines. Lilies.

Chrysanthemums. Irises. Annuals.

The Farm Library

We have planned for years a library which should do for the farmer what the NATURE LIBRARY does for the student and lover of nature. The first volume, "COTTON," by C. W. Burkett and Clarence H. Poe is ready, and others are to follow at the rate of two or three a year. Here every farmer, every man who has a country place, every person who has anything to do with the soil, will find an interesting, readable, practical, specific guide to the whole subject. The volumes will be approximately as follows:

- I. SOILS: How to Handle and Improve Them, by S. W. Fletcher. More than 200 photographs. Ready in spring of 1907. 274, \$2.00.
- II. FARM ANIMALS: Cow, Horse, Sheep, Swine.
- III. FARM EQUIPMENT: Houses, Barns, Tools and Planning Home Grounds.
- IV. to VI. FIELD CROPS: Cereals, Forage Crops, Fibre Crops, Tobacco and so on.
- VII. SPECIAL INDUSTRIES.
- VIII. FARMING AS A BUSINESS. Accounts, Law.
- IX. FRUITS AND VEGETABLES. The Farm Home.

NOW READY:

VOLUME V. COTTON.

By CHARLES W. BURKETT AND CLARENCE H. POE.

The only book in existence covering every side of this great subject. Illustrated. (\$2.20 postpaid.)



COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.



Ready to leave Moose Lake camp

Country Life in America

FIFTY VACATIONS

DO NOT READ the June *Country Life in America* if you never intend to take another vacation. It will upset all your plans. You have never known how many delightful ways there are of spending an outdoor vacation.

This magazine is as exhilarating as a draught of mountain air. It carries you to the hills and fields, to the woods and waters.

The June number tells of fifty different sorts of outings—giving all the practical information about them that one wants to know—how to do everything, the costs, where to go, and photographs.

A FEW SUBJECTS

Fishing For the Golden Trout
 A Nine Weeks' English Trip for \$125
 Driving in the Hill Country
 The Abandoned Farm Club
 Building a Practical House Boat
 Two Women Outdoors in Idaho

A Florida Key Cruise
 A Canal Boat Vacation
 An Island Camp in Greater New York
 Twenty Thousand Miles in a Motor Boat
 Mountain Camping in California
 The Wilderness Near Home
 Songs of Nature

Price 35 cents—BUT it is included with eleven other equally interesting numbers in a year's subscription, at \$4.00. Send your name now.

WE APPEND A COUPON FOR YOUR CONVENIENCE

.....CUT OFF HERE.....
 DOUBLEDAY, PAGE & COMPANY, c.m. 6, '06
 133-137 East 16th Street, New York City.
 Please send *Country Life in America* for one year, beginning with the June Vacation Number, to

Name

Address

COUNTRY LIFE IN AMERICA  THE WORLD'S WORK FARMING  THE GARDEN MAGAZINE 

DOUBLEDAY, PAGE & CO. NEW YORK.

"Two days overdue, THE WORLD'S WORK has not yet reached me. Pray make a note of this. I would rather not have to resort to violence."—MARK TWAIN.

ANDREW CARNEGIE

"I think THE WORLD'S WORK remarkable."



Copyright, 1906, by Stearns Bros.

SIR GILBERT PARKER

"I consider it the most interesting magazine in the world."

THE WORLD'S WORK

has never been received with so much favor as now, when there is a rebound from the sensationalism and pessimism of yellow periodical literature; for it has kept its steady course as a magazine of constructive achievement. It aims to build up American character and institutions—it is made for men who believe in our country and have a stake in it.

To take this tide of approval at its flood, we offer subscribers to our other magazines who may wish to test THE WORLD'S WORK also, a special low introductory rate of \$1.00 on these seven months. Use the coupon at bottom.

The "Uplift" Number

The July number will be the annual "Uplift" number, in which the best work in the great departments of higher activity is summarized. Among the contents will be "Our Moral Clean-Up in Financial Life"; "The Greatest Cathedral in the United States"; "The Uplift in Public Life"; "Physical Life of the Greatest Efficiency"; "A Revolutionary Change in Higher Education"; "The Plans and the Spirit of the Rebuilding of San Francisco"; "The Jamestown Historical Exposition in Virginia"; Summaries of Progress in all the Important Departments of Constructive Work, by Experts.

THE WORLD'S WORK has a character, a quality, a method, a flavor of its own. Each number contains:

"The March of Events," which is an editorial explanation of present things set in their right relations. "Your magazine is a guide to my thought," writes one of the best informed and most public spirited men in New England. A New York bank president binds up the "March of Events" and preserves it, as the best history of our time.

An article on "The Making of Investments"—the right use of money in small sums, meant especially for the average man of sound habits and thrifty ambition, making for the building up of character and the discouragement of recklessness in business.

The New Science of Business—Short articles explaining the best modern methods of organization, of time-saving devices and ways—

in a word, of greater efficiency in your business, whatever it may be, written out of the experience of others.

The numbers planned ahead will be especially rich and helpful in finely illustrated articles, of great variety; for THE WORLD'S WORK is as beautiful a magazine as it is helpful. Among them will be "The Wonders of Marine Photography," with photographs more vivid than painting; "Unknown Scenic Beauties of the United States"—with remarkable photographs of western scenery. Another series will give an explanation of our social and economic tendencies by articles telling precisely how the people live in different classes of society and in different parts of the country—"The Life of Luxury," "The Life of Success," "The Life of Poverty," "Life in the Country," "Life in the Small Town," etc.

For reliable news of the world, I have seen no equal to it. Every number is like a new, interesting book; we begin at the beginning and read to the end.—R. R. Cranford, Wellsboro, Ind.

It is clean, to the point, and the best educator I have been able to find among magazines.—Charles Baughman, Latonia, Texas.

I have been reading leading magazines for fifty years. None have interested me more, and but few as much.—W. H. Watkins, Ramseur, N. C.

MESSRS DOUBLEDAY PAGE & CO.,
133 EAST 16TH STREET, NEW YORK CITY.

G. M., 6/56

I am a subscriber now to *The Garden Magazine*. Please find enclosed \$1.00 for which send *The World's Work* for seven months beginning with the July "Uplift" number to

NAME.....

ADDRESS.....

*How to
Buy
Life
Insurance*

By "Q. P."

CONSIDER: This is the only book on *Life Insurance* which treats a policy as merchandise, and tells the man who is thinking of insuring how to buy intelligently. A book that it is a duty to read—and written in words simpler than your policy.

(\$1.30 postpaid.)

DOUBLEDAY, PAGE & CO., 133 E. 16TH ST., NEW YORK CITY



ALL OUT DOORS FOR 3 MONTHS—\$1.00.

DOES the city begin to seem hot, stale and unprofitable to you? Are you one of the increasing thousands who at this time begin to rake, not "muck," but good, honest brown earth—to perform those familiar garden miracles of creating delights for the eye and the palate?

Or do you care for any sort of work or sun under the open sky? We have three open air magazines so comprehensively arranged that no one guilty of outdoor activities, or even longings, can escape.

COUNTRY LIFE IN AMERICA is the most beautiful and sumptuous magazine published. 35 cents a copy; \$4.00 a year.

THE GARDEN MAGAZINE is a practical manual indispensable to every gardener, amateur or professional. 10 cents; \$1.00 a year.

FARMING is the only national, beautiful monthly of up-to-date information for the intelligent man who makes his living from the soil. 10c.; \$1.00 a year.

To convince you that you need them all we will send you all three for three months for \$1.00, a little over half price. Only one subscription to a person.

DOUBLEDAY, PAGE & COMPANY, 133 East 16th Street, New York P. S.—You are invited to visit our library salesroom to examine these magazines and our out-of-door books.

CUT OFF

DOUBLEDAY, PAGE & COMPANY, 133 E. 16th St., New York.

Enclosed find \$1.00 for three months' subscription to COUNTRY LIFE IN AMERICA, THE GARDEN MAGAZINE, and FARMING. Send to

Name.....

Address.....

G. N. 5, '06.

*The first adequate treatment
of the Dog in America*

The Dog Book

By JAMES WATSON

What Others Say:

New York Times

"Author, artist, publishers, have evidently combined their talents, their enterprise, and their patience to make 'The Dog Book' the most magnificent literary and artistic monument ever created in honor and in explanation of 'man's most faithful friend.' A really unequalled publication."

New York Sun

"If any man knows about dogs it is Mr. Watson."

New York Telegraph

"There has been nothing written or published pertaining to dogs which has quite equalled this work."

Boston Transcript

"'The Dog Book' proves itself of the greatest value to every dog lover."

To be in ten parts, eight now ready

Price, each, \$1.10

(Subscription)

Write for special terms and monthly-payment plan, mentioning THE GARDEN MAGAZINE.

COUNTRY LIFE
IN AMERICA

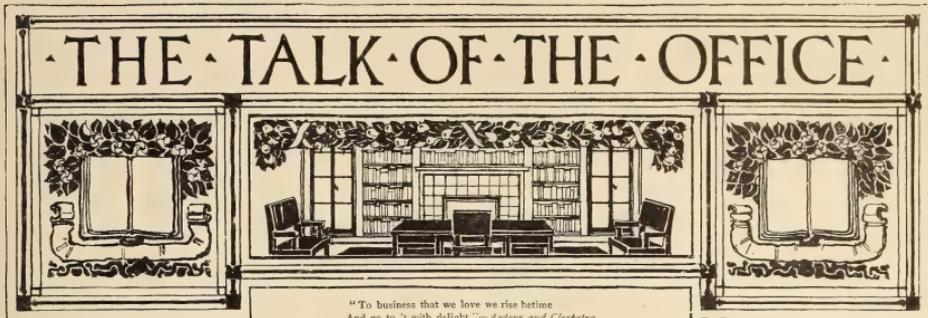


THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.



"To business that we love we rise before
And go to 't with delight.—Antony and Cleopatra

THE GARDEN MAGAZINE FOR JULY

It is not true that the middle of June sees the end of the gardening season, as the July GARDEN MAGAZINE will prove most emphatically. As a matter of fact, the month of July should be a very busy time for anyone who is anxious to have a cellarful of vegetables to carry over the winter. Two articles are especially interesting in this respect; one explains what was actually done in a garden last year, in which nothing was planted before the Fourth of July. The second article takes up the proper succession of crops, where to plant them, and just what kinds to grow, following out the suggestions laid down in the January number. Another reasonable contribution deals with the peppers. Another of Prof. Fletcher's practical fruit talks for the home gardener takes up raspberries, blackberries, and dewberries, which everybody should have so much better than they can possibly be bought—they are so very easy to grow. In the Quality Vegetable series, lettuces are treated, and other articles deal with the day blooming tender water-lilies, and with the delightful companions of the rhododendron, the heaths and andromedas, which have such subtle charms. Every page of this unique summer number teems with practical advice, and is an inspiration for effort toward rich results for next fall and winter.

THE NEW CYCLOPEDIA OF HORTICULTURE
To every reader of THE GARDEN MAGAZINE we offer the new and revised edition

of Professor Liberty H. Bailey's "Cyclopedia of American Horticulture" at \$4 a Volume. The regular price is \$5. The price of the complete set in six volumes is \$30, or \$24 net to the readers of this magazine for the first printing.

THE NATURE LIBRARY

is one other necessary work for country lovers. Here is what one recent purchaser said of the set: "Every volume of the set is so clearly written that it would interest even a small child. The illustrations, true to the nature of the subject, seem to imbue one with a thirst to read and to have it as a reliable guide to the haunts and homes of birds, animals, flowers, etc."

VOLUME I. IN PRINT AGAIN

The demand for the bound volumes of THE GARDEN MAGAZINE has made it necessary to reprint two numbers at a good deal of inconvenience, and at more expense than the numbers will bring. It is a great source of gratification that so many readers want the early issues. For a time at least, now, we can supply any number of THE GARDEN MAGAZINE.

COUNTRY LIFE IN AMERICA FOR JUNE

is the useful and beautiful vacation annual, a manual of where to go and how to manage an unusual summer holiday. It tells of some fifty ways of spending a vacation.

FARMING FOR JUNE

Our new magazine prospers finely. If any reader has a farm or ever hopes to own a farm, we wish he would risk a dollar for a

year's subscription. We will refund the dollar if he is not entirely satisfied. The June number is filled with live articles direct from the experiences of successful men, and covering a wide field of farm activity.

THE WORLD'S WORK

The June issue is like its predecessors, a cheerful record of progress—not alone in America. Among the notable articles that will appear is "Bridging the Gorge of the Zambesi," the story of the cantilever span flung across a canyon 350 feet deep; "The New State of Oklahoma," by Mr. M. G. Cunniff, showing how our new commonwealth has become a full-grown state; "The Scenic Marvel of Idaho," an account of a thousand-mile stream (the Snake River) which flows through the bad lands, over a precipice 50 feet higher than Niagara.

THE SPUR

How Kin Severne, latent literary genius, sells his future to another man to get his chance, and gets it—*with what result?*—is the story of "The Spur" by "G. B. Lancaster." It is a book about which much will be heard. \$1.50.

IMPORTANT FACTS ABOUT LIFE INSURANCE

There has been a mass of literature written on the subject of life insurance, but "How to Buy Life Insurance" is the first book that has been prepared from a purely impartial point of view in the interest of the policy-holder. It is an invaluable work on a subject on which every man should be informed; \$1.30, postpaid.

Use one of these coupons Now to complete your list of DOUBLEDAY, PAGE & COMPANY'S magazines.

CUT OFF HERE

For THE WORLD'S WORK. G. N. 6, 10

Enclosed find \$3.00 for one year's subscription.

Name.....

Address.....

CUT OFF HERE

For FARMING G. N. 6, 10

Enclosed find \$1.00, for one year's subscription.

Name.....

Address.....

CUT OFF HERE

For COUNTRY LIFE IN AMERICA

Enclosed find \$4.00, for one year's subscription.

Name.....

Address.....

G. N. 6, 10

A bathroom equipped with
"Standard"
 Porcelain Enameled Baths
 & One-Piece Lavatories
 is the most satisfactory
 room in the house



Health, cleanliness and luxurious comfort environ every home equipped with the beautiful "Standard" porcelain enameled ware.

Its artistic, simple beauty holds a decorative charm that adds the final touch of elegance to the modern home. Its white purity makes its every use a joy. "Standard" Ware is sanitarily perfect, yet underneath its smooth china-like surface is the indestructibility of iron. Its cost is moderate; its installation the most economical — its comfort-value inestimable. No home can be sanitary, convenient or even moderately pleasant and healthful without "Standard" Porcelain Enameled Ware.

The famous slant seat "Natura" closet is now supplied in "Standard" Ware.

Our book "MODERN BATHROOMS" tells you how to plan, buy and arrange your bathroom and illustrates many beautiful and inexpensive rooms, showing the cost of each fixture in detail, together with many hints on decoration, tiling, etc. It is the most complete and beautiful booklet on the subject and contains two copies.
 THE ABOVE FIGURES NO. "Standard" P-29, cost approximately \$187.00 — not counting freight, labor or piping.

CAUTION: Every piece of "Standard" Ware bears our "Standard" Green and Gold guarantee label, and has our trade-mark "Standard" cast on the outside. Unless the label and trade-mark are on the fixture it is not "Standard" Ware. Refuse substitutes — they are all inferior and will cost you more in the end. The word "Standard" is stamped on all of our nickled brass fittings; specify them and see that you get the genuine trimmings with your bath and lavatory, etc.

Standard Sanitary Mfg. Co. Dept. 37, Pittsburgh, U. S. A.
 Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street
 London, England, 32 Holborn Viaduct, E. C.

READY BY JUNE 10th

HOW TO MAKE A FRUIT GARDEN

By S. W. Fletcher

An eminently practical work on the subject of fruits for the home, the best and most beautifully illustrated book on the subject ever published. Nearly 200 photographs by the Author. (\$2.20 postpaid.)

COUNTRY LIFE
 IN AMERICA



THE WORLD'S WORK
 FARMING



THE GARDEN
 MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.



Mark Twain in HARPER'S WEEKLY:

"A year and a quarter ago Mr. Foley began to do school-boy poems in a fire-new and blood-curdling and criminal fashion of spelling which no self-respecting eye could endure."
 . . . Yet the "public kept on reading the poems in order to cure the spelling, and of course the natural thing happened; familiarity with the spelling modified the reader's hostility to it, then reconciled him to it, and at last made him fall in love with it; and now—well, now Mr. Foley's school-boy is a pet."

Songs of Schooldays

By J. W. FOLEY



These inimitable poems chronicle various romantic and tragic episodes in the life of "henry beamus." For instance:

"Of the Upper Class Girl"

"she gradjevaitis tooday ann says goodbi to skooldays fore she nose it all ann i must see her go far owt upon the way uw life alean wile i kan onley stay fore yeers ann yeers until i reach the spot where she stands now . . . ann then ile be fourgott 'bi hur hoo i have wurshipt awl these yeers in silience." . . . etc.

Illustrated with silhouettes by
 Katharine G. Bulhum.
 (\$1.38 postpaid)

Another Book of Laughter

A Few Neighbors

By HENRY A. SHUTE

A book of irresistible humor by the author of "The Real Diary of a Real Boy," Uniform with "A Few Remarks." (\$1.10 postpaid)

COUNTRY LIFE
 IN AMERICA



THE WORLD'S WORK
 FARMING



THE GARDEN
 MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.

CONTENTS

JUNE, 1906

	PAGE	PAGE
REMINDER - - - - -	265	A VEGETABLE GARDEN IN THE SEMI-ARID REGION - - - 282
ALL THE MAGNOLIAS WORTH GROWING - <i>Wilhelm Müller</i>	266	<i>Viola McCalm</i>
Photographs by H. Troth, A. G. Eldredge and J. Horace McFarland Co.		Photographs by the author
BEAUTY IN GARDEN GRASSES - - - <i>Parker T. Barnes</i>	270	AN OLD PALM RE-DISCOVERED - - - <i>Ernest Brauntton</i> 284
Photographs by H. Troth and N. R. Graves		Photographs by C. C. Pierce Co.
A FLOWER THAT BLOOMS IN THREE DAYS - <i>R. T. F.</i>	273	SOME INSECTS THAT BOTHER THE MELON PATCH - - - 283
Photographs by courtesy of University of Texas		<i>E. Dwight Sanderson</i>
LARGE-FLOWERED CHRYSANTHEMUMS OUTDOORS - - - 274		Photograph by the author
<i>H. G. Taylor</i>		THE CULTURE OF MAGNOLIAS - - - - <i>W. M.</i> 292
Photographs by the author		Photograph by J. Horace McFarland Co.
TILLING THE HOME ORCHARD - - - <i>S. W. Fletcher</i>	276	CARNATIONS FOR CUT-FLOWERS NEXT WINTER <i>P. T. Barnes</i> 294
Photographs by A. B. Haight, John Craig and others		SETTING OUT THE SUMMER BEDDING PLANTS - <i>W. Clark</i> 300
THE GAYEST FLOWERS FOR LATE FALL - <i>Allen French</i>	280	Photographs by N. R. Graves and H. Troth
Photographs by the author		THINGS WORTH TRYING - - - - - 304

WILHELM MILLER, EDITOR.—COPYRIGHT, 1906, BY DOUBLEDAY, PAGE & COMPANY

Entered as second-class matter January 12, 1905, at the post-office at New York, N. Y., under the Act of Congress, March 3, 1879.

The easiest and the pleasanter way to know the trees is through

The Tree Book

By JULIA E. ROGERS

"This is the most valuable, accurate and elaborate book ever published in America on our native trees."—*New York Herald.*

The 350 beautiful photographic illustrations show bud, blossom, full leaf, fruit and wood of all the important species. 16 plates in color. Net, \$4.00 (Postage, 34c.)

Here is one of the most fascinating nature books it has ever been our good fortune to publish:

The Frog Book

By MARY C. DICKERSON

Frogs and toads have been comparatively neglected in nature study, but this book contains a wealth of original observation and pioneer work that is a real contribution to science. It is an ideal volume in the nature series we have long been issuing—a work of reference which is authoritative and complete, yet full of vital interest and as readable as "nature fiction."

16 plates in color and nearly 300 black and white photographs from life by the author. Net, \$4.00 (Postage, 40c.)



DOUBLEDAY, PAGE & COMPANY 133 East 16th Street New York City

"Daffodils, that come before the Swallow dares"

FROM NOW UNTIL

July 1st Not Later

There is no more useful garden material than what are known as Dutch Bulbs, Hyacinths, Tulips, Narcissi, Crocus, etc. They give for a small outlay of time and money an abundance of flowers in the house from December until April, and in the garden almost before the snow is off the ground in the spring until the middle of May. These Bulbs are grown almost exclusively in Holland, and in enormous quantities, where they are sold at very low prices. Usually they pass through the hands of two dealers, and more than double in price before reaching the retail buyer in America.

By ordering from us **now** instead of waiting until fall, you save from 25 to 50 per cent. in cost, get a superior quality of Bulbs not to be obtained at any price in this country, and have a much larger list of varieties to select from. Our orders are selected and packed in Holland, and are delivered to our customers in the original packages immediately upon their arrival from Holland, perfectly fresh and in the best possible condition.

If you wish to take advantage of our very low prices, we must have your order **not later than July 1st**, as we import Bulbs to order only. They need not be paid for until after delivery, or taken if not of a satisfactory quality. (References required from new customers.)

Our import price list, the most comprehensive catalogue of Bulbs published, is now ready and may be had for the asking.

A few of the Prices :

	Per 100	Per 500
Fine Mixed Hyacinths	\$3.25	\$15.75
Fine Mixed Tulips . . . . .	.85	3.75
Fine Mixed Crocus . . . . .	.35	1.50
Narcissus Poeticus . . . . .	.65	2.50
Double Daffodils	1.85	8.50
Narcissus Bicolor Empress	3.85	17.25
Narcissus Emperor	3.80	17.00
Narcissus Golden Spur	2.50	11.00
Narcissus "Extravaganza Hybrids," a superb and exclusive novelty	6.00	27.50

ELLIOTT NURSERY CO.
PITTSBURGH



J. J. Elliott & Co.

The Garden Magazine

VOL. III.—No. 5
PUBLISHED MONTHLY

JUNE, 1906

ONE DOLLAR A YEAR
TEN CENTS A COPY



Not All Sentiment and Roses

LAST year a Hartford editor with a sense of poetry and humor objected because we intimated there was gardening work to do in June.

He said that June was for love's young dream and roses.

We have no objection to love's young dream, but the bugs will eat all the roses, unless you spray them with arsenate of lead—one pound to ten gallons of water.

Also, folks must eat; dreams don't kill weeds; weeds check vegetables, and make woody food for dreamers.

If you use a wheel hoe, you can kill weeds quicker, insure the garden against drought, and gain time for dreaming.

Unhappily, there are no self-thinning vegetables and flowers. They are their own worst enemy. And no substitute for work has been invented. Even dreamers must awake and do things.

The big thing to do in June is to thin out vegetables and flowers. You need a cold, stern heart for thinning, and you need to study pages 155, 156 of the April GARDEN MAGAZINE.

What shall love's young dream feed upon next fall and winter? Wormy apples? Scabby pears?

Without thinning and spraying in June you cannot have quality fruits, vegetables and flowers.

Even if you cannot have L—'s Y—D— you can have the next best thing—garden work in June.

TO THOSE WHO WON'T WORK

Visit the best nurseries and gardens you can hear of, and see them at their best. There are no trees and shrubs to speak of that flower after June.

Start a sensible garden note-book—not a diary. You will tire of that, and of the secret hope of beating "Elizabeth and Her German Garden." No book on gardening, with chapters labelled "June," "July," etc., has ever proved of permanent value.

Instead of a diary, why not note the best

color combinations you see elsewhere; the worst in your own gardens; and make a shift in September.

THE VEGETABLE GARDEN

May 15th, or four days before the last possible frost, sow seeds of tender vegetables: corn, lima beans, okra, and the vines—cucumber, pumpkin, squash, muskmelon, and watermelon.

To get early tomatoes, train to a trellis, and pinch off all side-shoots, so that all the strength will go into one stalk.

Train your pole limas after every rain, rake the garden, to keep the moisture in the ground from evaporating.

Stop cutting asparagus, cultivate, and fertilize. (1:140)

This reference and those that follow refer to the volume and page in THE GARDEN MAGAZINE.

Hand weeding is essential for onions. The young plants are more easily choked by weeds than any other vegetable.

When thinning beets, do not destroy the superfluous little plants. Cut off most of the leafage, transplant, and water, and they will make good beets.

Plow up strawberry beds that have borne two crops, and use the land for celery, or any other late-planted crop.

HOW TO SAVE TIME, TROUBLE, EXPENSE

Lay shingles near squash plants, and kill the bugs under them every morning.

Protect melon and squash plants from bugs by boxes covered with cheesecloth or mosquito netting.

Insure squash vines against borers by layering them. (Press down the joints, and cover with moist soil.)

Keep tomatoes off the ground, and you can avoid rot.

To avoid sandy strawberries, mulch them with grass cut from the lawn.

To avoid wormy cherries and plums, let the chickens run under the trees, and eat the curculios.

If you see gum or sawdust near the base of a peach, plum, or cherry, dig out the borers, or they will kill your trees.

If a strawberry plant collapses, dig it up and kill the white grubs on the roots.

To give all the grape clusters a chance at the light, pinch out lateral growths to one or two eyes.

To save tearing flesh, while tying prickly canes, and the expense of posts and wires, cut out all three-year old canes of berry bushes, pinch out tips of young shoots, when two and a half feet high, and they will make compact, branching bushes next year.

Buy cabbage and cauliflower plants, and

set in rich soil. Cabbages like a well drained clay soil.

Buy plants of tomatoes, peppers, and egg-plants, and set them out the last week of May, or a week after the latest possible date for frost in your vicinity.

FIVE SPRAYING JOBS

Spray all fruit trees and berry bushes twice in June with a combination of Bordeaux mixture and arsenate of lead—never while trees are in bloom.

Spray currant bushes with Paris green before the worms appear and until the fruit is set.

To foil the striped cucumber beetle, spray with Bordeaux mixture, or dust heavily with land plaster or ashes.

Spray asparagus for the beetle.

Look out for scurfy and oyster scale. Use whale-oil soap. (1:234)

Spray tomato vines with Bordeaux mixture, thin the foliage, and keep the vines off the ground, and you will have no blight.

THE FLOWER GARDEN

Prune all the flowering shrubs that bloom before the leaves appear. (1: 225)

Mulch small fruits, young trees, evergreens, and shrubs, to protect them from drought, and save watering.

If drought comes, water at night, and hoe the next morning.

Stake dahlias.

Get some new ideas about veranda boxes. (1: 220)

Lift bedding or April-blooming tulip bulbs and store in the cellar to ripen.

Take cuttings of chrysanthemums, or buy young plants for November bloom indoors.

To extend the season of flowers, pick pods daily—the smaller, the better.

Sprinkle daily, palms and other house plants that are put outdoors for summer.

ROSES

May 17, spray roses with potassium sulphide, to prevent mildew and black spot. (1: 127)

May 24th spray roses the second time with potassium sulphide.

June 1st, or when hybrid perpetual roses begin to bloom, spray for the third time with potassium sulphide.

June 7th and 14th, or when roses are in height of bloom, spray with arsenate of lead, for beetles, commonly called "rose-bugs." (1: 127)

June 21st, spray roses for last time with solution of whale-oil soap, for plant lice.

June 28th, or when hybrid teas bloom, spray with arsenate of lead for beetles.

For other reminders see page 304.



The best white-flowered tree that blooms before the leaves, the white Chinese magnolia—*M. Yulan*. Fragrant white cup-like flowers six inches across in April



The magnolias that bloom before the leaves look best against a house or background of evergreens—not deciduous trees. Grace Church, on Broadway, New York

All the Magnolias Worth Growing—By Wilhelm Miller New Jersey

THE TREES THAT HAVE THE LARGEST FLOWERS, AND WHY THEY SHOULD BE PLANTED NOW, AND NEVER IN THE FALL—WHAT EXCUSE THERE IS FOR GROWING EACH PARTICULAR KIND

[EDITORIAL NOTE.—This is the eighth of the heretical "Little Monographs" which do not parade botanical knowledge but aim to discover the real, comparative horticultural value of every species. No plant is mentioned without telling in plain English what inducement it offers for us to part with our hard-earned cash. These articles contain a new kind of "key," which shows how each species differs from every other—not in terms of dead herbarium specimens, but in live garden characters, such as the color and size of the flowers. Corrections are invited.]

HAVE you never seen in April a small tree in city yards flowering before the leaves, and bearing more than a thousand of fragrant white cuplike flowers six inches across and pinkish outside? Then you have lived in vain, for you have missed the best large-flowered tree in cultivation—*Magnolia Soulangeana*.

This *Magnolia Soulangeana* is the type of a group of hybrids that get all their good points, save one, from the white Chinese magnolia (*Magnolia Yulan*, often called *conspicua*). The beautiful rosy color is derived from a tender shrub that has no other merit—the purple magnolia (*M. obovata*.) Let us get a clear picture of these two parents and we shall appreciate the wonder and beauty of the *Soulangeana* hybrids.

THE WHITE CHINESE MAGNOLIA—YULAN

Look at the photograph of Yulan shown above and imagine a symmetrical tree, 20 x 20 feet, evenly laden throughout with thousands of these white chalice-like flowers that turn to stars just before the flowers drop their petals and make a snowbank on the lawn. Nothing

purper or sweeter can be imagined. But it is a little cold for the time of year. The first flowers of spring are pallid, but when the magnolia blooms, the pink of the peach blossoms is symbolizing the return to life, the joy of youth, the jubilant certainty of spring. Who can make red blood appear in the marble cheek of this flower?

THE SOURCE OF ROSINESS—OBOVATA

All the magnolias are white, or nearly so. Every ruddy tint that any of them shows may be considered a dilution of the color which is found in the purple magnolia (*M. obovata*.) The most splendid of the tender species show this color in the heart of the flower—the filaments of the stamens. *Obovata* is the only species that has it on the petals, and there only on the outside and at the base. No magnolia has the color on the inside of the petals—more's the pity!

Except for its value in plant-breeding I see no inducement to grow *obovata*. While two nurseries as far north as New York manage to grow it in sheltered spots it is essentially a tender species and I fear it is too

purple. The flower has no fragrance and all of its hybrids are better than it.

THE WONDERFUL SOULANGEANA HYBRIDS

From such a source are derived those lovely tints of pink, rose, carmine and crimson that animate the varieties known to nurserymen as *Magnolia Alexandrina*, *Lennei*, *Norbertiana*, *Soulangeana*, *speciosa*, *speciosa nova*, *cyathiformis*, *rustica rubra*, *spectabilis*, *superba* and *triumphans*, the last four of which appear in foreign catalogues. I confess that I cannot sharply discriminate these kinds, but this much seems certain: *Soulangeana* is the cheapest and most popular; *Alexandrina* blooms a week earlier and is one of the largest and brightest of the pinks; *speciosa* is a little smaller and lighter than *Soulangeana* and about a week later; *Lennei* is one of the darkest colored. Judging from the colored plates, the new one, *rustica rubra*, is the best of all.

THE EARLIEST MAGNOLIA—STELLATA

The best white-flowered shrub that blooms toward the end of March is Hall's

magnolia (*M. stellata*, formerly *M. Halliana*.) Unlike all the other magnolias, save Kobus, this has a starry, instead of a bell-shaped, flower. It has twice as many petals as the common kinds (9—18), and they are long and narrow. You cannot get acquainted with this lovely shrub too quickly. It makes a compact, shapely bush, rarely eight feet high. The flowers are only three inches across but the plant has every virtue, including the astonishing trait of blooming freely when only two feet high. It sometimes flowers before the last flurry of snow has gone. Hardy at Boston. It was introduced from Japan by Dr. G. R. Hall of Rhode Island.

A TREE MAGNOLIA WITH STELLATE FLOWERS

Thurber's magnolia (*M. Kobus*) promises to be the hardiest of all magnolias. (The Japanese species grow wild at higher altitudes than the American.) It is a pyramidal tree attaining fifty feet in its native country, and has star-shaped flowers four or five inches across which appear in May. They are not as pure a white as stellata.

No stary magnolia can ever compete for popular interest with the cup-shaped forms, but this species deserves trial everywhere. Some say it blossoms freely and has abundant and showy fruit, and claim that it is the hardiest and quickest-growing magnolia for New England. Others complain that it is a shy bloomer.

BLOOMING AFTER THE LEAVES

SOLD IN THE STREETS—GLAUCA

The magnolia blossoms that are sold by street fakirs in New York and Philadelphia in May are those of the sweet bay (*Magnolia glauca*). These flowers, though small for a magnolia, are two or three inches across, white and fragrant. This species grows in swamps from Florida to Gloucester, Mass. It is a deciduous shrub in the North, but in the South it is a splendid evergreen tree, second only to *Magnolia grandiflora* in beauty, and, in the opinion of some, having the advantage over the latter in odor. You can always tell this species from other magnolias by the powdery white bloom on the under side of the leaves from which it gets its name *glauca*. It is also called the swamp, or laurel magnolia, and its friends declare that it is even showier in fruit than in flower.

THE BEST AVENUE TREE—ACUMINATA

The cucumber tree (*Magnolia acuminata*) gets its name from the fact that its upright fruits, when green, look something like cucumbers. All magnolias have attractive rosy fruits with an astonishing habit of suspending their bright red seeds on incredibly slender threads as shown on page 268.

The flowers of the cucumber tree are inconspicuous—a miserable greenish yellow, only an inch or two across and as a rule partially hidden by the foliage. (They are also peculiar in having upright petals.) As an ornamental tree its chief merit is its fruit, but it has the stately pyramidal habit of its relative, the tulip tree, and is also quick growing and generally free from insect troubles, which cannot always be said of the Liriodendron.

While native no farther north than Southern New York, it is hardy in New England. It is the easiest of all magnolias to transplant and therefore best adapted to use as an avenue tree.

THE SHOWIEST IN FRUIT—TRIPETALA

The umbrella tree (*M. tripetala*), owes its common name to the fact that the leaves are clustered at the ends of the branches in such a way as to suggest an umbrella. Its specific name refers to the three petal-like sepals which are recurved only in this species. This splendid tree has flowers eight to ten inches across, borne in June, but unfortunately they are of a disagreeable odor. The fruits are the largest of any hardy species—sometimes six inches. While this species grows wild no farther north than Southeastern Pennsylvania, it is hardy at New York and Rochester and may perhaps surpass the cucumber tree for avenues. As a lawn tree it is already superior.

FLOWERS A FOOT ACROSS—MACROPHYLLA

The great-leaved magnolia has leaves a yard long and flowers a foot across in June. It is not merely the largest flowered magnolia but the largest flowered tree of any kind that can be grown in temperate regions. A unique feature of the flower is the purple spot at the base of each of the inner petals. It is fragrant, too, but I cannot rejoice over it. It is too big and so are the leaves, which are

ridiculously thin, so that they are whipped into tatters unless sheltered by a windbreak as they are at Dosoris, Long Island.

THE TENDER MAGNOLIAS

Of the two important species that bloom before the leaves, the purple magnolia (*M. obovata*) has been described on page 266.

THREE PURE-WHITE-FLOWERED SPECIES

Magnolia pumila is worth growing though its flowers are only an inch and a quarter across, because there are enough of them and they are set off by evergreen foliage. This shrub seldom grows more than five feet high. It is in bloom nearly all the year and the flowers have the odor of pineapple. Unfortunately, the plant is injured by only ten degrees of frost. It is known to Southern nurserymen as *Talauma pumila*.

The ear-leaved umbrella tree (*M. Fraseri*) is the only magnolia that has the base of the leaf prolonged like the lobes of the ear. Its flowers are six to nine inches across and have enough of a yellowish tinge to be called milky white or even canary yellow. The odor is generally considered agreeable. As it is a native of the Southern Appalachians it ought to be harder than the other Southern magnolias and I have seen one good-sized tree on Long Island behind a windbreak, but whether it can survive north of New York is yet to be demonstrated.



The best March-blooming, white-flowered hardy shrub in cultivation, *Magnolia stellata*. It has flat, star-shaped white flowers three inches across, not cup-shaped but flat and star-like



Detail of *Magnolia stellata*, showing that it has twice as many petals as the others

Magnolia Soulangeana, prototype of the hybrids which have all the virtues of *M. Yulan*, plus color

Magnolia Kobur, perhaps the hardest magnolia that blooms before the leaves, but less showy than others

If so, it must come into competition with *M. tripetala* of which it probably has the advantage only in fragrance. Its maximum height in the wild is fifty feet.

Thompson's magnolia is known to nurserymen as *M. glauca*, var. *major*, but it would better be called *M. Thompsoniana*. This is believed to be better than our sweet bay in some respects. Certainly the flower is twice as large (5-6 inches). It is of garden origin and supposed to be a hybrid between *M. glauca* and *M. tripetala*. It resembles the former in being a shrub or small tree which is evergreen in the South and deciduous North, and it has a little of the peculiar whiteness on the under side of the leaves. The main evidence of tripetala blood, I

suppose, resides in the sepals which are shorter than the petals and yellowish. Fortunately, it does not resemble tripetala in the odor of its flowers. It probably blooms later than its parents (June-July).

FOUR FLOWERS WITH A TOUCH OF RED

The only distinctive merit of *M. parviflora* that I can discern is its pink sepals which are rather large. The flowers are not so very small (3-4 inches). Its rival is Watson's magnolia (*M. Watsoni*). The beauty of both is much enhanced by the brilliant red filaments.

Watson's magnolia has the advantage of a larger flower (5-6 inches) but although it has been much praised it is not generally

available to the public. It has failed in England and I do not know of any American nurseryman who has it. It is to be hoped that one of these species will prove hardy, for we have no hardy representative of the magnolias with the brilliant red centres.

Perhaps *Magnolia hypoleuca* will beat the two preceding species, for it is said to be almost as hardy as *M. macrophylla*, which thrives in sheltered positions near New York. Let us hope so, for it has the largest flowers (6-7 inches) and the noble pyramidal habit of the tulip tree. It attains 100 feet in Japan (whence all these three species come) and is the species from which Japanese sword sheaths are made. Also its charcoal is used in making lacquer work. The name hypoleuca



M. Lenoet, one of the darkest colored flowers among the hybrids that bloom before the leaves



The grandest broad-leaved evergreen tree of temperate regions, the bull bay (*Magnolia grandiflora*)



Magnolia fruits, showing how the berries slip out and hang by threads. *M. Kobur*

leuca means greenish white, referring to the under side of the leaves which is almost as white as in our native *M. glauca*. This species resembles our native umbrella trees in having the leaves bunched at the ends of the branches, while those of the two preceding are scattered along the branches.

THE BEST EVERGREEN MAGNOLIA

"In the bull bay, as it is sometimes called," writes Mr. Nicholson, "the temperate countries of the world have the most beautiful evergreen tree known to gardeners." This grand pyramidal tree grows eighty feet high in the South, and has white flowers seven or eight inches across, with purple stamens. The flowers have a superb background in the broad, thick, dark green, glossy leaves which are five to eight inches long. There is a great difference of opinion about their odor. Professor Sargent has called this species *M. fetida*.

This is the species whose leaves are used for Christmas decoration because of their magnificent evergreen character and the warm rusty red coat that covers the under side of the leaves like felt. I shall never buy these leaves again after learning that the easiest way to gather them for the Northern market is to cut down whole trees. The species ought to be called the great laurel magnolia. It is precariously hardy as far north as Philadelphia, but even in Washington the leaves are often disfigured by freezing.

Mr. Berckmans advises that the leaves of young trees of *M. grandiflora* should be removed before planting, if the trees have been grown in the open ground. With two-year-old pot-grown plants, which are smaller and cheaper, this precaution is not necessary but a four-year-old tree grown in the open will probably bloom a year or two sooner.

Probably the showiest form of *Magnolia grandiflora* is the variety *gloriosa* whose flowers, Mr. Berckmans says, often measure a foot across and sometimes fourteen inches! There are half a dozen varieties offered by European nurserymen. The one called



Sweet bay (*M. glauca*) has flowers two or three inches across. Evergreen tree south, deciduous shrub north.

Exoniensis, which belongs to the group known to botanists as variety *lancoolata*, is said to be more nearly hardy in Europe than the others. The flowers are described as double and the tree is said to bear flowers when only a foot high. The variety *Gallisonieri* is said to be hardy farther north in California than the other varieties of *M. grandiflora*.

THE BIG FISH—STILL UNCAUGHT

It is possible that even *Magnolia grandiflora* may be surpassed, for the botanical explorer, Dr. Henry, has seen one evergreen magnolia tree in the Far East that has leaves two feet and a half long and nine inches wide! Let us hope that some enterprising American will have the honor of introducing this glorious species.

THREE YELLOWISH FLOWERS

How good a yellow is possessed by *M. cordata*, I cannot say, but it is described as canary color which ought to mean a bright, lively hue and not a sickly, greenish apoplexy. This small tree is closely related to the cucumber tree and has been described as a variety of it. The flowers are about four inches across. The leaves not always cordate and then only slightly so. The exact counterpart of this species has not been rediscovered in the wild.

The brown-flowered banana shrub, known to nurserymen as *Magnolia fuscata* is now placed in a separate genus distinguished by technical characters of no interest to the horticulturist. Its proper name is *Michelia fuscata*. It is called banana shrub because of its odor. The flowers are brownish-yellow edged with carmine and are only 1-1½ inches across. Mr. Berckmans says it is one of the most popular shrubs in the South. Its season is from the end of April until June. A Chinese species.

The other important *Michelia* is *M. Champaca*, a tall Himalayan tree with pale yellow flowers two inches across. Whether it has any merit not possessed by *Magnolia cordata* is not clear.

INDEX TO MAGNOLIAS

Species in black face type; synonyms in *italic*; varieties in roman.

acuminata, 7	Thompsoniana, 13
Alexandrina, 1	Thurber's, 4
Banana shrub, 20	Great laurel, 17
Brown-flowered shrub, 20	Great-leaved, 8
Bull bay, 17	<i>Halleana</i> , 3
Campbelli, 10	Heart-leaved, 18
Champaca, 19	hypoleuca, 16
<i>conspicua</i> , 12	Kobus, 4
cordata, 18	Laurel, 5
Cucumber tree, 7	Lennei, 1
cyathiformis, 1	macrophylla, 8
Ear-leaved, 12	Norbertiana, 1
Fraseri, 12	Kobus, 4
fuscata, 20	parviflora, 14
glauca, 5	pumila, 11
glauca, var. <i>major</i> , 13	Purple, 9
grandiflora, 17	<i>purpurea</i> , 9
speciosa, 1	rustica rubra, 1
spectabilis, 1	tripetalata, 6
stellata, 3	triumphans, 1
superba, 1	Umbrella tree, 6
Swamp, 5	Watsoni, 15
Sweet bay, 5	White Chinese, 2

A GUIDE TO THE REAL MERITS OF THE DIFFERENT MAGNOLIAS

- A. The hardy species, *i. e.*, those which will survive the winters of New York.
- B. Blooming before the leaves appear, in April.
- C. Color of fls. pink to purple outside. 1. *Soulangiana*
- CC. Color of fls. white. 2. Yulan
- DD. Shape of fls. bell-like. 3. *stellata*
- DD. Shape of fls. flat, star-like. 4. *Kobus*
- E. A bushy petals 9-18. 3. *stellata*
- EE. A tree: petals 6. 4. *Kobus*
- BB. Blooming after the leaves appear, in May or later.
- C. Color of fls. pure white. 5. *glauca*
- DD. Size of fls. 2-3 in. 6. *tripetalata*
- CC. Color of fls. greenish. 7. *acuminata*
- CCC. Color white, inner petals purple-spotted at base. 8. *macrophylla*
- AA. The tender species, not reliable north of Washington.
- B. Blooming before the leaves appear.
- C. Color purple outside; fls. scentless. 9. *obovata*
- CC. Color pink shaded purple outside, fls. fragrant. 10. *Campbelli*
- BB. Blooming after the lvs.
- C. Color pure white. 11. *pumila*
- DD. Size of fls. small, 1½ inches; evergreen shrub. 12. *Fraseri*
- DD. Size of fls. large, 5-9 inches. 13. *Thompsoniana*
- E. Fls. 6-9 inches across: lvs. deciduous, eared. 14. *parviflora*
- EE. Fls. 5-6 inches across: lvs. evergreen. 15. *Watsoni*
- C. Color white, except pink sepals and filaments: fls. 3-4 in. across. 16. *hypoleuca*
- CC. Color white, except red filaments. 17. *grandiflora*
- D. Foliage deciduous.
- E. Lvs. 4-7 in. long, scattered along branches. 18. *cordata*
- EE. Lvs. 8-20 in. long, mostly clustered at the ends of the branches. 19. *hypoleuca*
- DD. Foliage evergreen. 20. *grandiflora*
- CCC. Color pale or brownish yellow.
- D. Size of fls. about 4 in. across: color canary yellow. 21. *cordata*
- DD. Size of fls. 1-2 in. across. 22. *Michelia Champaca*
- E. Color pale yellow. 23. *Michelia fuscata*



M. macrophylla, leaves a yard long, and flowers a foot across. The largest flowered garden tree

Beauty in Garden Grasses—By Parker T. Barnes ^{New York}

CLEAR-CUT PEN PORTRAITS OF THE TWENTY-EIGHT BEST BAMBOOS AND OTHER GRASSES.—THEIR PECULIAR MERITS AND ADAPTATIONS TO DIFFERENT SITUATIONS—GROWING PLUMES FOR WINTER EFFECT

JUST because they are in the catalogues as "grasses," the average amateur is apt to pass by a host of very valuable garden plants: grasses generally mean to him lawns and pastures. But there are taller growing kinds that lend a grace to the border, and many are worth growing for their handsome flowers or "plumes." Not particular as to soil, they will grow where many showy flowers fail, and in late fall give a character and tone to a garden that distinguish it from the average. If you want something easy and singular, grow grasses.

For convenience, they may be considered under four main sections.

I. GRASSES FOR BEDS AND MASSES

The tallest and most stately of all the ornamental grasses is the great reed (*Arundo Donax*). Its tall, reedy stalks, rising afresh each year, attain a height of eight to fifteen feet, according to situation. The plumes are rather insignificant, especially when compared with those of the pampas grass, and are not produced until just before the frosts.

It is an excellent plant for the centre of large, formal beds, and, as a specimen plant in emphatic points in the border, it is one of the best grasses in cultivation. It must have a rich, moist soil, and, although it is a perennial, and perfectly hardy, it is wisdom to give it a mulch on the approach of cold weather, at which time the long stalks should be cut down.

The great reed has two varieties: the

variegated reed (*Arundo Donax*, var. *variegata*), not as tall nor as hardy as the type, usually grows from four to seven feet, but sometimes reaches twelve feet, and is well worth the extra care which is necessary for its existence. The other variety, sometimes called the giant reed (*Arundo Donax*, var. *macrophylla*, usually spoken of by the florists as *A. macrophylla*, var. *glauca*), has large leaves of a decidedly bluish tinge, and is one of the most effective of border plants.

THE MOST BEAUTIFUL OF ALL GRASSES

The pampas grass (*Cortaderia argentea*, known among florists as *Gynerium argenteum*) is the most beautiful of all the taller grasses. It forms large tufts from which, during the latter part of the season, are produced the long stalks bearing beautiful silvery-white plumes. There are also varieties with plumes ranging from rose to carmine, violet, and purple. The plume itself, when grown in California, often reaches three feet in length. If left to mature on the plants, the plumes become frayed, and assume a dirty-white appearance, but this does not diminish their value in the landscape, and they will last in fairly good condition until the cold weather approaches.

The foliage is long, narrow and drooping, and its fountain-like habit would alone make it a desirable plant for the garden. Exclusive of its plume-bearing stalk, which sometimes rises to a height of eight or ten feet, it makes a beautifully symmetrical plant, six to eight feet high. The best

plumes are produced on the seed-bearing plants.

The popular name of "pampas" grass is misleading, for it does not come from the pampas of South America, but from the mountains, and usually is found growing alongside water-courses, or in depressions, where there is a constant supply of moisture from some underground source.

The plant is a perennial, but, unfortunately, is not hardy in the Northern states; so, in order to carry it over, it must be dug up in the fall, the leaves trimmed off to within a foot of the ground, and the ball stored in a damp, but not wet, cellar where frost will not reach it. In May, the plants are brought out of storage, all the loose leaves removed, but not the old stalks, and the clump is planted at the same depth as before.

As far north as Rochester, N. Y., plants have been wintered out-of-doors, in sheltered places, by first giving a heavy mulch, and then covering with an inverted box filled with dry leaves, hay or straw.

For perfect specimens, plant in light, rich soil, with a moderate amount of moisture, at least during the early period of growth.

The plant is easily increased by dividing the roots in the spring, or by seeds, which will produce flowering plants in two years.

There are many varieties in the trade, and all have Latin names. These differ from the type in height, variegation of foliage, or color of the plume.

TWO RARER COLORED PAMPAS GRASSES

Another species of pampas grass, which competent critics say is better than the common one, is the lavender-plumed (*Cortaderia jubata*, known in the trade as *Gynerium arcuato-nodosum* and *Gynerium jubatum*). It differs from the true pampas grass in having a laxer, more graceful and nodding plumes which are lavender colored instead of white. Though it is sometimes killed by zero weather, it merits cultivation and is not nearly as well known as it should be.

The uva grass (*Gynerium saccharoides*) has beautiful purple spikes, but is so tender that it cannot be grown even in California. It is only for the Southern states, and grows in damp places, often reaching a height of thirty feet.

A SUBSTITUTE FOR THE PAMPAS GRASS

The best hardy substitute for the pampas grass is the Ravenna grass (*Erianthus Ravenna*), a hardy perennial, growing four to seven feet high. In the Northern states, it stands next to the arundo for beauty and as a bedding plant. It is equally effective when planted as single specimens or in masses. It forms graceful clumps of foliage, from which rise long, handsome plumes, resembling those of the pampas grass, but smaller. They also may be cut and dried for winter decorations.



In the north the eulalia (*Miscanthus Sinesis*) is an excellent substitute for the tender pampas grass. The silvery plumes adorn the garden after the foliage has fallen from the trees. Dwarf bamboo (*Arundinaria Faxonica*, known in the trade as *Bambusa Metake*) in the foreground



As a lawn specimen the most effective and tallest grass is the blue giant reed (*Arundo Donax*, var. *macrophylla*). Sometimes reaches thirty feet high. Hardy perennial

It is not at all particular as to where it is placed, but prefers a sunny situation, and lends itself admirably for use in aquatic groups.

It is easy to increase by division of the clumps in early spring; and flowering specimens can be grown in a single season from seed sown indoors in February or March.

TWO GOOD GRASSES FOR AQUATIC EFFECTS

A grass which is, somehow, but seldom grown, yet is admirably adapted for effects around ponds and along streams is the reed canary grass (*Phalaris arundinacea*). It is a hardy perennial, growing five or six feet high, with beautiful whitish, drooping, spike-like flower panicles and narrow leaves.

One word of caution about this plant: It is very apt to spread too freely by means of its underground shoots, and must be rigorously kept within bounds. It is most easily increased by means of these same underground shoots. It may also be grown from seed. This grass is found growing wild in a wet ground through North America.

A much better-known plant is its variegated form, the common ribbon grass (*Phalaris arundinacea*, var. *variegata*, sometimes known in the trade as var. *picta*). The leaves are longitudinally striped with white. This must be looked after as sharply as the type, as it has the same propensity for spreading rapidly. A small piece planted in the garden soon makes a large clump. It can be controlled by planting in a sunken drain tile.

II. GRASSES FOR SPECIMENS ON THE LAWN

The pampas and Ravenna grasses are excellent subjects for planting as single lawn specimens. So are the eulalias, which rank among the first six popular grasses cultivated for ornamental purposes. They endure our rigorous northern winters with little or no protection.

The common eulalia (*Miscanthus Sinensis*, known in the trade as *Eulalia Japonica*) makes a beautiful, compact plant, four to nine feet high; with long, narrow and drooping leaves which arch over most gracefully. Old, well-established plants will form clumps eighteen feet in circumference.

There are several varieties: The striped eulalia (*M. Sinensis*, var. *variegatus*) has leaves which are longitudinally striped with yellow; the zebra grass (*M. Sinensis*, var. *zebrinus*, known in the trade as *Eulalia zebra*) has leaves which are banded with yellow, a very curious and puzzling characteristic. It is not quite as hardy as the plain green form. The Japanese rush (*M. Sinensis*, var. *gracillimus*, known in the trade as *Eulalia univittata*) has leaves about one half as wide as the type, or about one-half inch, and is a delightful plant for small gardens, exceedingly effective as a background to the herbaceous border.

There is a native grass which is little



Mass planting. The variegated eulalia (*Miscanthus Sinensis*, var. *variegatus*) has striped foliage—sometimes reaches eight feet high

grown in our gardens, but really a beautiful plant, particularly after the flowering time (July). This is the spike grass (*Uniola latifolia*), a hardy perennial growing two to four feet high. The spikelets are large and thin, and, when ripe, droop on their slender stems, which makes it very graceful in effect.

III. GRASSES FOR EDGINGS AND BORDERS

I think the best dwarf grass is the pennisetum (*Pennisetum villosum*, known in the trade as *P. longistylum*). It is not hardy, but may be grown each year from seed started in February or early March. Old plants, dug in the fall and stored away from frost over winter, can be propagated from the following spring. The plants attain a height of one or two feet, and bear very feathery brownish spikes two to four inches long. It is particularly valuable for edging beds and borders. The leaves are long, narrow, and drooping.

More graceful, but slightly taller, is Ruppell's grass (*Pennisetum Ruppellii*, known in the trade as *P. Rupelianum*). It has longer spikes, and was a conspicuous grass

in the grounds of the Pan-American Exposition in 1902.

A GRASS FOR SHADY CORNERS

The blue fescue grass (*Festuca glauca*) is valuable because it will flourish in moderately shady places. It is a very handsome hardy perennial, which grows in little tufts, and has leaves of a deep silvery blue. For color value alone it is worth growing, and answers as an edging plant along a border on the sunless side of the garden—a place which is always difficult to plant.

AN IDEAL EDGING GRASS

The hare's-tail grass (*Lagurus ovatus*) is such a delightfully pretty little plant that I am sure, if you grow it, you will always want it in the future. The tuft of leaves grows only about eight inches high, and the leaves are densely covered with soft, whitish down. They bend downward, and the plant is ideal for use as an edging to the flower bed, or along the walks. Its flower head can be likened to a pampas-grass plume in miniature. It is borne on an upright stem, several inches above the foliage, is of a glistening white color and silky texture. The plumes can be cut and used for indoor decoration, and will take dyes as well as the pampas plumes. The plant is a hardy annual, and seems to flourish equally well on heavy or light soil; provided it receives a fair supply of water.

A GRASS FOR GREENHOUSE BENCHES

The isolepis grass (*Scirpus cernuus*, known in the trade as *Isolepis gracilis*) is the only grass that makes a good greenhouse plant. It is indeed invaluable for edging benches, relieving the stiffness of the painted wood and hiding the pots of other plants.

The leaves are three to twelve inches long, slender and cylindrical, and those on the outside of the tuft droop, while those of the



Border planting. Giant reed edged by eulalia. Both are permanent grasses, and may be edged by a different flower or annual grass each year



The bamboos are the most dignified looking of all the grasses. Though hardy, they must be carefully nursed for the first few years after transplanting. Many people fail with hardy bamboos because they neglect this detail. (*Arundinaria Japonica*, known in the trade as *Bambusa Metake*)

centre stand upright; a combination which produces a very pretty effect.

A DELIGHT FOR THE YOUNG FOLK

If you want to grow something for the children, sow a hill of Job's tears (*Coix Lacryma-Jobi*), and let them gather the large pearly seeds in due season. It is quite hardy, and will make a good growth, even in a city back yard. Better results will follow from starting them early in the house, in pots. The plant looks uncommonly like corn until it begins to flower, and derives its name from the curiously pear-shaped seeds, which are made into necklaces.

IV. GRASSES FOR SUBTROPICAL EFFECT

What a pity we do not grow the bamboos

more commonly. They are grasses on a big scale, but without any appearance of coarseness. Happily, they are being used more and more in landscape gardening, particularly around buildings. Some of the lower-growing kinds are very useful in breaking the lines between buildings and the lawn. A good example of this may be found in Washington, where they have been used around some of the public buildings.

SECRETS OF BAMBOO HARDINESS

The most effective way of growing these bamboos is in pots, or tubs, for porch or conservatory decoration. Even the hardy ones are used this way.

The bamboos grow well after they become established, but need great care during the first few years after they are planted out.



A native grass worth growing in our gardens. Spike grass (*Urtica latifolia*) useful for winter bouquets

Even the perfectly hardy species are delicate during this early period, and they do not show the vigor and beauty that they attain in after years. The most critical period will be during the first winter.

Plant in a deep, rich, well-drained situation which has an abundance of moisture, and which is protected from the prevailing winds of winter, and slightly shaded. A mulch will also be found a great help, particularly while the plants are being established.

Increase is by division of the roots in the spring, before growth commences. All that is necessary is to dig the plants and carefully separate the underground stems. Some of the species spread very rapidly by means of these rhizomes.

THE SEVEN BEST KINDS

While there are about two dozen bamboos with which the Northern connoisseur might experiment for hardness, there are seven species which are sure to please. The commonest and best of all is the broad-leaved bamboo (*Arundinaria Japonica*, known in the trade as *Bambusa Metake*). It has the largest and broadest leaves of all the tall bamboos. It also has leaf sheaths, which start from the joints, and are so large and broad as to almost cover the stem. It grows six to ten feet high. Specially recommended for planting in city gardens.

The black bamboo (*Phyllostachys nigra*, known in the trade as *Bambusa nigra*), has the peculiarity of black stems. At first they are green, becoming black in the second year. The canes grow ten to twenty feet high. This bamboo is the one from which the Japanese make their best fancy furniture.

A variety which is the spotted bamboo (*P. nigra*, var. *punctata*), which has the yellow stems covered with black spots.

The golden-stemmed bamboo (*Phyllostachys aurea*, known in the trade as *Bambusa aurea*) grows ten to fifteen feet high. Although this is called the golden-stemmed bamboo, there are several other kinds whose stems become yellow as they ripen.

Another kind, which has a very zigzag habit of growth, is Riviere's bamboo (*Phyllostachys viridi-glaucescens*). This species is very hardy and quite common. It grows from ten to eighteen feet in height.

The tallest of all the hardy bamboos is Simon's bamboo, (*Arundinaria Simoni*), growing canes of ten to twenty feet in height in the North. Unfortunately, it starts its growth very late in the season, and more stems are produced than the plant can properly mature; therefore, remove the weaker ones. Its leaves are an inch wide, eight to twelve long, and taper gradually to a long, fine point.

The smallest of all is the pygmy bamboo (*Bambusa pygmaea*); it is often a nuisance in the border because it spreads so rapidly, but for covering ground in rocky places it is invaluable.

The only variegated kind which is perfectly hardy in the North is Fortune's bamboo (*Arundinaria Fortunei*), an old favorite, and quite common. It has white-striped foliage, and grows three or four feet high.

A Flower that Blooms in Three Days—By R. T. F., ^{Austin Texas}

THE "FAIRY LILY," AND "EVENING STAR," TWO SOUTHERN WILDFLOWERS THAT BLOOM THREE DAYS AFTER A RAIN AND CAN BE NATURALIZED IN SOUTHERN LAWNS OR GROWN IN NORTHERN GARDENS IF THE BULBS ARE STORED OVER WINTER—THE SAME BULBS SOMETIMES FLOWER TWO OR THREE TIMES IN ONE SEASON IN THE SOUTH

The southern rain lily, or fairy lily (*Cooperia pedunculata*), has waxy white, fragrant, night-blooming flowers about two inches across, with a tube about an inch and a half long. The flowers are tinged red

on to life with great tenacity. Lay the bulb on a shelf for a whole year, and if given a smell of dampness it will throw up a flower shoot six inches high and greet you with a six-pointed star.

GARDEN CULTURE IN THE SOUTH

These flowers are also suitable for general cultivation in the South and when planted at the edge of the grass they present a pretty appearance. The best time to plant them is from March to July, but they can be planted any time, when the ground is not frozen. Set the bulbs four inches deep and three or four inches apart. In Texas their main blooming season is from April 1st to September 1st with scattering blooms as late as

growth begins, then freely, but discontinuing watering after September and keep the soil dry during the winter. They should be kept at a temperature of 40° to 45° and from 50° to 55° from February to May. Propagate by offsets in February.

THE EVENING STAR

The evening star (*Cooperia Drummondii*), is found in the valley of the Colorado River chiefly. The tube of the flower is much longer (3-5 inches) and the flat portion less wide (an inch or less). It blooms later in the season than the rain lily and the flower does not last as long. The bulb has a shorter neck than that of *C. pedunculata*. Both species are cultivated in the same way.

SOME NEAR RELATIVES

Close relatives of the rain lily and evening star are the zephyr lilies (*Zephyranthes*), which may be grown in the same way. There are four which are really good ones to grow. Two of the zephyr lilies (*Z. candida* and *Z. rosea*) bloom in the autumn; one, the Atamasco lily (*Z. Alamasco*), flowers in spring and *Z. carinata* is a summer flowering species. *Zephyranthes rosea* is a red one and is the most common one in cultivation, at least, it is the one which is most frequently catalogued, but *Z. candida* is the most beautiful of all. Its leaves do not appear until the fall, when the white flowers also appear, and the leaves have been known to last all winter, in sheltered places.

GARDEN CULTURE IN THE NORTH

Thousands of rain lily bulbs are shipped to the Eastern states every year, and even some of them to Europe. In the North the bulbs should be taken up in autumn and stored during the winter in dry soil. Of course, they will not respond as quickly to the rain in the North as in the South. A drouth and then a rain or good soaking brings a "shower of stars." Plant them in May in the North in a compost of peat, loam and leaf mold in equal parts. They flower in August.

If kept in pots in a cool greenhouse or coldframe they should be reotted in January or February. Water moderately until

outside and are more or less greenish within. The blossoms remain wide open for three successive nights and days; on the fourth they are nearly closed.

The accompanying pictures show the rain lily in detail and in mass. Normally the flower has six perianth lobes, but if you hunt steadily for half a day you may find one or two flowers with seven or eight.

SUGGESTIONS FOR NATURALIZING THEM

The lower picture which shows rain lilies growing wild by the thousand on the campus of the Texas State University, suggests how easily these bulbs might be naturalized on southern lawns. Fancy a thousand of them sodding three days after a rain! Cows will clip them close to the ground but they will bloom just as well. Every few years our temperature reaches zero, yet the bulbs are never injured. They do especially well in the black soil around Austin, where, after a heavy rain we can see hills for a hundred miles lighted by myriads of these white little stars. The Cooperias are free from all diseases and insect pests. The greatest number bloom after the first good April rain, but there are plenty to delight one after every good rain during the spring and first part of the summer. The same bulbs will flower two or three times in a season.

The bulbs go down in hard soil four to six inches and the man who digs them for the florist at \$10 a thousand earns his money. They bear seed freely but we have lots to learn yet about raising them from seed successfully, and the best way to propagate them is by offsets. When the young lily bulbs are about a year old they are the size of a pencil and about an inch long, and not until the bulbs sink to the proper depth does it assume its amaryllis form.

The rain lily bulb is the size of a small amaryllis—about an inch thick. It holds



The rain lily (*Cooperia pedunculata*), a fragrant, white, night-blooming Southern bulb which is cultivated in Northern gardens and deserves to be planted by the thousands in Southern lawns.



Rain lilies which spring up by the thousand in three days after a rain on the campus of the Texas State University. They can be grazed by cows without damage.

Large-Flowered Chrysanthemums Outdoors—By H. G. Taylor, New Jersey

AN AMATEUR'S ACCOUNT OF HIS SUCCESS WITH THE FLORISTS' SHOW VARIETIES AS HARDY BORDER PLANTS—EXACT INSTRUCTIONS FOR GROWING FOUR-INCH BLOOMS, AND A COMPLETE EXPOSITION OF THE DELICATE ART OF DISBUDDING

GREAT was my satisfaction in demonstrating that the early varieties of the large-flowered chrysanthemums could be successfully grown out of doors. I prefer to have my plants in the open border, where they lend their beauty to the general scheme of the garden. I have no greenhouse, and I do not want one!

Planting out is done the latter half of April, either from division of the old roots that have

been outdoors all winter, or from new plants that I buy from the florists, as I try a few novelties each year.

Division of the old plants and roots and replanting each spring is a necessary detail if you want flowers of size and quality. Plants that have wintered in the open ground are dug up as soon as they have made new growths of two or three inches. They are carefully broken into separate pieces, taking

some roots with each sprout, if possible, as I find that this gives the plant an earlier start, which makes it much stronger.

As chrysanthemums are what the gardeners call "gross feeders," the ground is made very rich by spading in an abundance of old manure. The bed in which they are planted is raised slightly above the general surface of the garden, so as to secure good drainage, and all through the season I am careful to keep plenty of free space around the chrysanthemum plants, so that they are open to both light and air, which results in a healthy sturdy growth, that counts for much when flowering time comes.

If I want to grow the plants to a single bloom, one foot apart is ample space to allow when planting. If they are to be allowed to make four or five stems they will need at least eighteen inches, and not less than two feet in each direction if the plants are to be pinched back several times, so as to make large bushes.

After the plants have been set out, there is very little attention required other than training. I do not know of any plant that grows so easily as the chrysanthemum, if given anything like a fair chance.

THE ART OF DISBUDDING

To grow large flowers in my backyard I have to follow the methods of the professional florist so far as disbudding and staking the plants is concerned. It means a lot of work and close attention all the season, and in midsummer I may feel like giving up, but when the October blooms come I feel that after all I am well repaid!

The largest flowers are grown on plants which are allowed to develop but one stem, and only one bud on that stem. All side shoots are removed as soon as they appear, in order to throw the entire strength into the one flower. The art of chrysanthemum growing centres in a knowledge of the different flower buds and their qualities. A reference to the photographs will make this plainer. The plant produces two kinds of bud—"crown" and "terminal." The "crown" is a solitary bud, and the first to appear, forming on the top of the stalk before the branches start (Figs. 4 and 6). Terminal buds come in clusters at the ends of the final branches which the plant sends out, and which terminate the season's growth, (Figs. 1, 2, 10).

CROWN BUDS FOR LARGEST FLOWERS

When growing for an individual flower of the largest size, a crown bud is generally selected, and all side shoots nipped off as soon as they start (Fig. 6). The first crown bud (Fig. 6), although capable of producing an immense flower, is often deficient in coloring matter, and otherwise lacking in the essentials of a perfect flower. Therefore



The best quality chrysanthemum blooms are generally produced by terminal buds, but crown buds give the larger flowers. Figs. 4 and 6, crown buds; Figs. 1, 2 and 10 terminal buds; Figs. 5, 6, 7, show methods of pinching, and when to do it. Fig. 3 a terminal cluster after disbudding. Figs. 9 and 10 show how disbudding makes the solitary bloom larger than when several buds are left on the stem. Fig. 8, development of Fig. 7

what is called the second crown is generally chosen as being more certain to give satisfaction. It requires expert knowledge to decide on the propriety of using the first crown, but for the amateur it is much better to rely on the second.

This is obtained by pinching out the tip of the stalk (Fig. 5-A) in June, or when the stalk is eight or ten inches high, before the first crown has appeared, and then allowing a shoot (Fig. 5-B) to grow from the base, or axil of one of the leaves, just below the top. This in turn is kept free from branches in the manner shown in Fig. 6, and develops a single bud, which produces the desired quality, and flowers four inches across.

By thus removing the tip, without first waiting for the first crown to form, one saves time, and what is very important, is likely to secure a stouter growth. Should the branch (Fig. 5-B) end in a cluster of buds, nip out all but one, leaving the strongest, which is generally at the top.

MORE FLOWERS FROM TERMINAL BUDS

I prefer to grow the terminals, and three to a stem. Although the flowers are not so large, they are more graceful, both in the garden and when cut. When the young plant is about five inches high nip off the top (Fig. 7). Shoots then start from the base of the leaves, forming a plant with three to five branches (Fig. 8). Each of these stems will probably terminate in a cluster of buds (Fig. 2) which are thinned (disbudded) as necessary at the stage shown in Fig. 1. I leave three good buds, well separated, which will develop as shown in Fig. 3.

These clusters could be reduced to one bud to a stem for larger flowers, or allowed to develop naturally into a number of flowers (Fig. 10). The latter, however, are too crowded to give perfect flowers.

MAKING A BUSH PLANT

For a bush plant, start with one of the size of Fig. 7, pinch out the tip, and when each branch is five inches long, and looks about like Fig. 7, pinch out the top of each shoot, and in turn treat their branches, similarly. When the clusters of terminal buds appear, remove all but the centre bud, if you want the finest flowers. The more buds you leave, the smaller the individual flowers.

TRAINING FOR STANDARDS

If I like to grow a few plants in tree or standard form, just for variety. I start as for single stem plants and, when the stem is about three feet high, nip out the top. This induces branching, but only the upper five or six branches are retained, all the others being rubbed off. The subsequent treatment is as for bush plants. They need careful staking.

STAKING A NECESSARY EVIL

Unfortunately, the plants which are destined to grow large flowers will not stand alone. One stake to a plant is generally enough when growing but a few stems to a plant, but when more are required they become quite unsightly. Galvanized steel



The final glory of the garden. Early flowering varieties of the large flowering chrysanthemum flourishing in the garden after frost has cut down all else. (Flashlight photograph)

wire can be used, and is less obtrusive. If several plants are growing together, drive a five-foot stake at each end of the row, and connect them by wires placed a foot apart, so that the stems are tied as they grow.

An invisible support of my own devising is perhaps the best of all—when growing a clump or bush. As the plant increases in size, drive a heavy stake (a broom-stick painted green), so the top will be in the centre of the clump, the bottom sometimes slanting out slightly, to avoid the roots as much as pos-

sible. From this suspend by four strings a heavy wire ring about eighteen inches in diameter, and with hooked ends, to allow its being joined around the plant and brought up from below. The strings are tied to the ring in slip knots, to permit of the latter being raised or lowered as the plant may require. The plants completely hide the stake, which can be driven quite low, and the method of support is not noticed.

Aside from the staking and disbudding details, the routine of work is simple. See



To protect the tender flowers, a wire frame is erected in September, which is covered over with burlap when frost threatens. The petals will be injured by frost though the plant itself is perfectly hardy

that the plants do not want for water, and early in July spread a mulch of about two inches of old manure around the roots to prevent the ground from baking. From July until the buds begin to show color I water once a week with liquid sheep manure, which is made by soaking five pounds of sheep manure in forty-five gallons of water. Often and weak, rather than seldom and strong, being my guiding principle in the feeding of the plants.

The black and green aphides are always very troublesome, but they can be held in check by the frequent use of tobacco dust.

PROTECTION FROM EARLY FROST

Though the plants themselves are perfectly hardy, the flowers of the large-flowered chrysanthemums are more or less tender and must be shielded from early frosts. About the middle of September six-foot stakes six feet apart are driven into the bed parallel with and two feet in from the edge. The stakes are connected by a wire fastened well above the tops of the plants. Over the

frame thus formed strips of burlap, long enough to rest on the grass in front and extend well down on the other side of the wire fence in back of the bed, are thrown whenever frost threatens. The strips are weighted at each end with a stick. Other material, such as muslin or canvas, would answer as a cover, but the burlap is both tougher and cheaper, the cover used last fall being good after several seasons' wear.

WINTER PROTECTION

After the flowers have matured, or have been cut, and frost settles down for winter, the old stems are cut off close to the ground and the stools covered with about eight inches of loose, strawy material. Leaves alone proved too compact.

I understand that some people prefer to dig up the roots and store the balls of earth close together in a corner of the cellar, where it is cool but not freezing, but I never have done so. Indeed, the old roots are not disturbed until the spring division, and with me they have done very well out of doors.

Tilling the Home Orchard—By S. W. Fletcher

Michigan Agricultural College

THE MOST PRACTICAL WAYS OF SUPPLYING MOISTURE TO THE ROOTS OF FRUIT TREES WITHOUT GIVING WATER—WHAT CROPS MAY BE SAFELY GROWN BETWEEN THE ROWS—THE DANGER OF LATE CULTIVATION

YOUNG fruit trees set in tilled soil generally do better than if set in sod land, even though that is to be plowed later. If possible, it is still better to put the proposed orchard site into a cultivated crop, as corn or potatoes, for one or two years before

If the fruit garden site is somewhat hard or shallow, and especially if it has a hardpan that comes close to the surface in some places, begin the tillage of your trees before they are planted, by subsoiling or by tile drainage. Under-drainage and tillage are co-ordinate factors in supplying fruit trees with plenty of water; under-drainage not only carries off the surplus water in a wet time, but also, what is still more important, deepens the soil so that it can hold more water in a dry time. This latter point is often overlooked. Another way to increase the water-holding capacity of some soils is by subsoiling. Only in orchards of considerable size would it pay to use the subsoil plow which follows behind the ordinary plow, stirring the soil at the bottom of the furrow to a depth of several inches.

The benefits of this deep loosening of the soil may be observed on some soils for several seasons, or until the loosened soil has settled back, which it usually does in two to four years. Sometimes subsoiling is positively injurious to rather heavy land that is to be used for annual crops, principally because it breaks up the earthworm burrows that lighten and aerate it.

This disadvantage should not hold for tree fruits. If the fruit garden soil needs deepening, but the orchard area is so small that subsoil plowing is impracticable, at least deepen the soil with a spade for several feet around the place where each tree is to be planted.

THE SPRING PLOWING

The fruit garden, especially the orchard, should be plowed as early in spring as the

Any of the following early-flowering varieties may be expected to do well. I would always include the Glory of the Pacific, and its sports, Cremo and Polly Rose.

Dwarf: Cremo, light yellow; Glory of the Pacific, pink; Ivory, white, globular; Lady Harriet, deep pink, incurved; Pink Ivory, pink sport from Ivory; Polly Rose, white.

Medium: George W. Childs, crimson; Lady Fitzwygram, white; Marion Henderson, yellow; Merry Monarch, white; Mon-rovia, bright yellow; Yellow Fitzwygram.

Tall: Soleil d'Octobre, yellow. The tall varieties are not well adapted to outdoor cultivation.

The plants can be bought from florists for \$1.00 to \$1.50 a dozen, and if they are to be grown for just one flower it should be so stated when buying, as otherwise you may receive plants with the tops nipped out, causing the plant to branch and form a bush. If you want to try any not named above, be sure to ask for *early*, large-flowering varieties.

ground can be worked; that is, whenever it has dried out enough so that the ground will work up loose and mellow, not lumpy and wet. This time varies with the season; there may be several weeks' difference between succeeding years.

The chief reason why it is commonly advised to plow very early is that this results in a great saving of soil water. The sooner a much of loose soil is spread over the garden or orchard, the quicker will the loss of water from it by evaporation be checked. In regions having a rather scanty rainfall, this is a very important point. An incidental



Corn grown between peaches the first season. Plant no crop within five feet of the trees

planting the trees. This not only shows up the poorly drained places, but also warms up the soil, puts it in better texture, and furnishes a large supply of quickly available plant food to give the young trees an early and vigorous start.

When setting out an orchard, it does not pay to be in a great hurry, if you wish it to live to be a comfort in your declining years. A year or two of tillage preceding the setting of an orchard is a very decided benefit to the trees. This is especially true when the orchard site is virgin soil or land that has been in sod for many years, or on soil that is inclined to be wet or sour.



The root system of an apple tree. The depth of the roots depends more on the soil and the variety than upon tillage or lack of tillage, contrary to the common idea.



Washing away of soil and fertility. The cultivator furrows become water courses. To prevent this, sow a cover crop in the autumn

advantage of early plowing is that weeds are buried before they get well started. In the case of apples, the decaying leaves of last season harbor over winter the spores of the scab disease, becoming a source of infection in the spring. Early plowing helps to control this and some of the other diseases. Spring is a busy season for everybody who has a garden, especially a vegetable garden, and the plowing of the orchard is often neglected until late in the spring. By this time weeds have taken possession of the land, so that they make trouble all summer; or the cover-crop has grown so tall and rank that it can be plowed under only with difficulty and is so woody that it decays slowly; and the surface soil is hard and dry. First-class tillage later in the season cannot compensate for tardiness in beginning it. On land that has been deeply prepared by trenching all through the season. The spring plowing should be deep. Deep plowing increases the capacity of the soil to hold water; it also has a tendency to deflect the roots of the young trees downward so that they become anchored deeply in the soil and the trees can withstand drought better. The latter effect of deep tillage on young trees, while commonly accepted, has been much questioned of late. It is probable that the rooting habit of a tree is affected much more by the natural root tendencies of the variety and also by the character of the lower strata of soil than it is by any surface tillage.

When the space between rows of young trees is not to be used for any crop that requires cultivation, it is a common practice

to plow only three or four furrows on each side of the row the first year, widening the plowed area by one or more furrows a year as the trees grow. In some cases, especially on very light soils, it is best not to plow the orchard every year. The soil may be thoroughly worked up in spring with a spring-tooth, disk, or spading harrow, but it is not usually wise to plow with plowing more often than alternate years.

After being plowed and when the furrows have dried out so that the soil crumbles, the land should be fitted, until it is uniformly mellow, using any of the deep-working harrows. Here is the place for extreme thoroughness. One extra turn with the harrow at this time may be equal to two or three cultivations later on; for the more thorough this preparatory tillage, the more efficient will be the soil mulch that is established later on. I once saw a field of buckwheat one half of which outyielded the other half by nearly 20 per cent, for no reason except that it was harrowed six times before seeding and the other half harrowed twice.

SUMMER TILLAGE

This should be rather shallow, and as level as possible. After the soil is fitted, the objects of subsequent tillage are mainly to keep down weeds and to prevent the escape of water. Both are gained most economically by using shallow working tools, such as the spike-tooth harrow or cultivator, or the acme harrow. Two inches of loose soil on the surface is about as effective in preventing the escape of water as four inches. It is expensive to move soil, so we shall do no more of it than is necessary.

THE QUESTION OF TOOLS

The kind of a tool that it will be best to use for preserving this mulch depends very



Dwarf apple trees under clean tillage. Excellent results are to be had by this system

mulch. On fairly mellow soils, free from rocks, the spike-tooth harrow is preferred. Some soils need the action of the broad, rounded teeth on the ordinary garden cultivator.

It is as impracticable to advise what kind of tool to use, without knowing the soil, as to advise what varieties to plant, without knowing the tastes of the family. A good gardener will find the tool that fits his soil and his type of gardening, and will not copy the methods of anybody else.

When it is necessary to use, for the summer tillage, a broad-toothed harrow or cultivator, the soil will be left in rather high ridges. It will pay to level these, especially if the orchard is in a region where every drop of water counts or if the summer is exceptionally dry. The more surface the soil has exposed to evaporation, the greater will be its loss of moisture. Level off the ridges with a section of a spike-toothed harrow or with a joist, say, four by six inches, or a heavy iron pipe, any of which may drag behind the deep working harrow.

In the very small fruit garden, an iron rake scratched over the soil two or three times a week, makes a most effective tool for preserving the soil mulch that has so much to do with the success of the crop.

That depends upon the locality, the kind of soil, the age of the trees, the season, and the crop. It ranges from two to, perhaps, twenty times, as the judgment and the energy of the gardener dictate. The kernel



Tilling the orchard with the spring-tooth harrow. This is one of the best tools for making and preserving a soil mulch. These high-headed trees permit close tillage

largely upon the character of the soil. On some stiff, lumpy, or rocky soils the vigorous scratching of a spring-tooth harrow is necessary in order to make a satisfactory

of the whole matter is to till as often as is needed to give the trees enough moisture for growth of wood and fruit. The dryer the region, the more urgent is the necessity for

tillage. For example, fruit gardens in those parts of Eastern Washington that have a rainfall of twelve to fifteen inches and are without irrigation, must obviously be tilled much more often than fruit gardens just across the Cascade Mountains on the Puget Sound, where there is a rainfall of forty to sixty inches.

THE DIFFERENCES OF SOILS

Soils vary greatly in their moisture-holding power; even in the same locality, and perhaps on the same farm, there may be soils that differ very markedly in this respect. Light and loose soils deficient in humus, stiff clay soils, and shallow soils dry out quicker, and hence need to be cultivated more frequently than deep, mellow, humus-laden soils. Especially in those parts of the Northern states that were glaciated, there is likely to be little uniformity in soils, and hence no uniformity of tillage is possible.

YOUNG TREES NEED MOST TILLAGE

The younger the trees, the more often should they be tilled; they have special need of a vigorous growth when young and are more affected by lack of water than older trees. Obviously, trees loaded with fruit should be tilled more often and later in the season than barren trees; the fruit is mostly water. The dryer the season, the greater the necessity for tillage. I have seen a thrifty and profitable unirrigated home orchard in a region which had but eight inches of rainfall—it was tilled until the surface soil was like road dust.

No good gardener tills his fruit trees the same number of times each season. The infallible guides are the dryness of the soil and the growth of the trees. The only general statement worth making is that most home orchards in the humid sections of the country should be tilled from five to ten times during the season. Wherever a crust is formed on the surface, especially after a beating rain, it is a sign that water is escaping and tillage is necessary to break it up and restore the mulch.

RIPENING THE WOOD

Some fruit trees are ruined by being tilled too late in the season. A tree under natural conditions, in sod, makes most of its growth during spring and early summer, when the soil is moist, and grows more slowly as the dryness of summer increases. It goes into the winter with well-matured wood.

Late tillage prolongs growth and may carry the tree into the winter with green wood and undeveloped buds, which are likely to winter kill. After a particularly trying winter it is a common observation that the late-growing orchards are usually the most injured. Not as many fruit trees are injured by being tilled too late as by being tilled too little, but unquestionably many are ruined by injudicious tillage. Therein is the great advantage of using a cover-crop. The cover-crop system is the most important development in orchard practice, next to spraying, during the past twenty-five years.

When to stop tillage depends upon all the

factors already mentioned, especially upon whether the trees are laden with fruit, which must have water in order to swell to a large size. In the Northern states the date of the last tillage, as usually recommended, is from the middle of July to the middle of August; in the Southern states proportionately earlier. In most regions, over 90 per cent. of the growth of fruit trees is made by the first of July, and the chief reason for any subsequent tillage would be to "carry out" a crop. In some seasons it would be much better if orchards on deep, moisture-holding soils were not tilled at all after the spring plowing. Let the season, the soil, the crop, and the growth of the trees decide this. We have got so thoroughly into the habit of advising the tilling of fruit trees—which is certainly the safest advice to give in a majority of cases—that quite often orchards are tilled too much. Like many other excellent orchard methods, tillage can become detrimental in the hands of an injudicious man.

The advantages of using a cover-crop to fill the gap between the last tillage and the spring plowing, were pointed out in *THE GARDEN MAGAZINE* for March, page 68.

WHAT MAY BE GROWN BETWEEN THE TREES

The home orchardist, especially the man whose garden area is limited, is tempted to grow other crops between the trees. Within certain limits, this practice is justifiable; but some kinds of double cropping are ruinous to orchards. The farmer who sows wheat in his orchard usually garners each fall a little grain and a very disappointing crop of fruit. When the trees are small and until the time when their branches and roots appropriate most of the sunlight above and soil below, the interspaces may be used, if necessary, for some other crop. But never a grain crop. Nothing is more detrimental to the trees, not so much because the grains exhaust the soil or plant food, as that they rob the trees of moisture. Every stalk of wheat is a pump, sucking out of the soil not only the water needed to perfect its own growth, but also evaporating a large amount through its leaves.

The chief objection to grains in the orchard, or any other sown crop, is that they do not permit of tillage, which is usually essential to the welfare of young trees. The only exception to this is when over-vigorous trees are seeded to grain for the express purpose of checking their growth and throwing them into bearing. If strips of tilled land are left on either side of newly set trees, however, the remaining space may be sown.

The common advice, born of many disappointing experiences, is to plant a hoed crop, not a sown crop, in the orchard. Any annual vegetable can be grown to advantage. Potatoes and corn, although most commonly used, are not as desirable as some other vegetable, because they both draw so heavily on the soil moisture, and if the corn is allowed to grow rank close to the young trees, it may shade and injure them. Put rows of corn at some distance from the trees, not closer than five feet the first season. Never plant any closer to the trees than the roots extend,

which means that nothing is planted within four feet of the area covered by the spread of the branches, and that the cropped area is diminished each year.

Strawberries can be grown between trees, if necessary, but, since these have only a small tillable area the second year, unless grown in the hedgerow system, they are not usually as desirable for this purpose as annual vegetables. Vegetables that need cultivation after the time when tillage of the trees should cease, should not be chosen.

Two things must be adhered to faithfully if this double cropping is practised: the tillage of the garden crop must be such as is needed by the trees; and the land must be fertilized, if fertilizing is necessary, sufficiently to support both crops.

PRACTICAL POINTS IN ORCHARD TILLAGE

The man who tills young trees should have far more solicitude for them than the average plowman. Countless fruit trees are ruined by tillage tools. One scrape of the iron end of a whiffle-tree will make an incurable wound on a tender young tree. Some careful men wrap the ends of the whiffle-tree with burlap, if they have to plow close to trees, and use one not over eighteen inches long. A plow with a set-over beam is useful for this purpose. Remove the projecting ends of the hames, which scrape the bark from the under side of the limbs under which the horse passes, and substitute a strap.

Put a muzzle on the horse when tilling young trees; one nip in an unguarded moment may permanently destroy the symmetry of a choice young tree. If the trees are headed low—as they should be for the most economical management—there will be trouble in trying to till beneath them. Two sections of a spike-tooth harrow or other tillage tool may be separated, so that one section works beneath the trees and the other between the rows. There is less need for tillage beneath the trees than between them, for the moisture-hungry roots are mostly out between the rows. In many cases no tillage beneath the trees is necessary, only an occasional hoeing. Some people even prefer to let their trees stand in a strip of sod and till only the space between the rows, which is about as wide as the sod strip. In such cases straw mulch should be spread beneath the trees. This plan has especial merit when the orchard site is sloping and washing is bad, in which case the sod strips and rows should run across the slope. If it has been decided to adopt the tillage system, it is best to till the entire area.

Avoid the mistake, the effects of which are common in older orchards, of plowing the same way every year. After a while the trees are on ridges, with depressions sometimes of two or three feet in depth, between the rows. A good plan, when the trees are young, is to plow around the orchard just as though no trees were there. If the soil is thrown toward a row of trees one year, reverse the operation the next year. As a tree gets older it is bound to work out of the ground but the hill and valley contour of many old orchards could have been avoided.



CLEAN CULTIVATION IN THE PLUM ORCHARD

The sturdy vigor and abundant flowering of these trees are the result of early and frequent tillage. The orchard should be ploughed and harrowed from five to ten times during the season. Begin as early as the ground can be worked. Give last cultivation never later than the middle of August in the northern states

The Gayest Flowers for Late Fall—By Allen French

Massachusetts

THE ONE PLANT OF REMARKABLE VIGOR OF GROWTH AND PROFUSION OF BLOOM BURSTING INTO COLOR WHEN OTHER PLANTS SUCCUMB TO THE FROST

[EDITOR'S NOTE—The author of that deservedly successful novel "The Colonials" is not too proud to garden with his own hands. He told the story of his conversion from golf to gardening in "Country Life in America" for May, 1905, page 96. Photographs by the author.]

THE pompon chrysanthemum rewards the grower better than most flowers, as it is that rare thing, a hardy autumn plant, keeping in bloom for a month after almost everything else has gone, and able with its masses of blossoms to maintain a gay looking garden.

Whenever I see the strange shapes of the odd chrysanthemums on which the professionals so pride themselves, and whenever

I note how quickly those queer flowers fade, I think with satisfaction of my own unpretentious but prolific plantation. Not one flower to a stem, but often more than fifty; not tender to frost, but hardy, not soon fading in the house, but usually keeping more than a fortnight; regular in shape, beautiful in color, requiring no skill to grow, no investment and no great care.

I am ready to admit that there is beauty

in many of the large-flowering chrysanthemums, but when I think of the care needed in growing them, as well as in keeping them after they are cut, and consider how little time the average home-gardener and house-keeper can give to both these, I make my decision in favor of the less showy but more cheaply and more easily grown kinds.

THE INCREASE OF SEVEN YEARS

I started seven years ago with perhaps a dozen small plants of two varieties, red and yellow. The yellow kind has done better than the red, and it now makes a row of about twenty-two feet long, while the red ones fill only sixteen feet. Yet that is doing very well, considering three complete transplantings, the many roots given away, and the fact that not until recently have the plants had really good earth. Having been told that they would "live anywhere," and being an ignorant rather than a careless cultivator, I did not realize, until I tried it, the difference between living upon scant rations and flourishing upon plenty. There are now so many new plants springing from the roots that in another year I shall be able to nearly double each row.

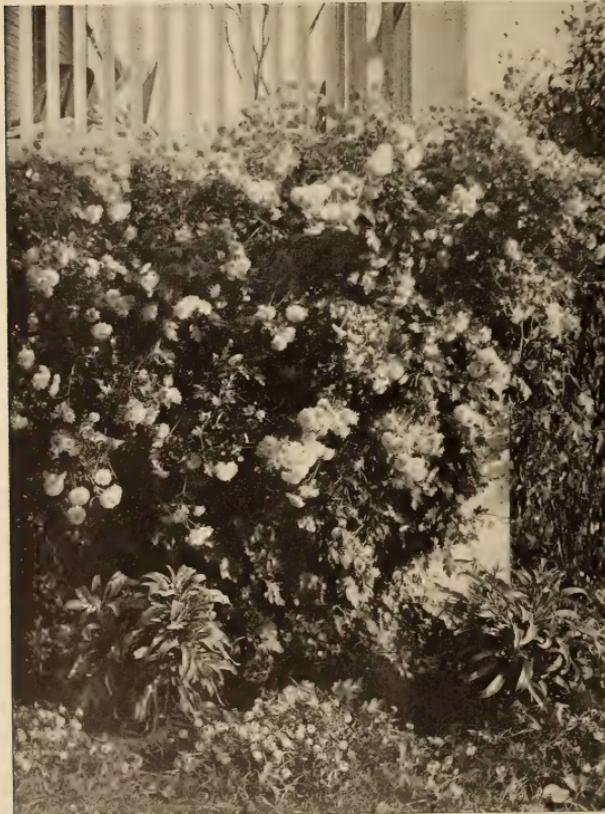
Though they are an old-fashioned plant, and somewhat neglected just now, they are offered by seedsmen and nurserymen, who carry (according to their catalogues) some as few as four, one as many as forty-seven named varieties, and one offers the seed.

They have the same characteristic shaped leaves as the show flowers, but are smaller, and bear their own small, symmetrical, more or less double flowers, in great profusion. The blossoms vary in size with the varieties, my small reds being seldom more than an inch across, while the yellows are two inches; and I have seen other varieties whose flowers were as much as two and a half inches in diameter. It is possible to produce larger flowers by disbudding and growing only a few to a stem, but this required more time and trouble than I have been able to give to them.

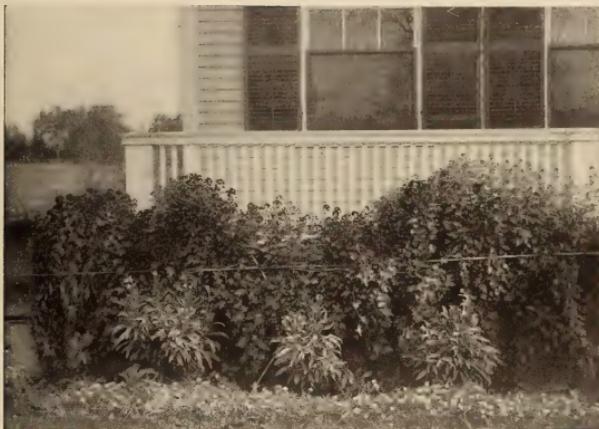
POMPONS AS A SCREEN

I use these hardy chrysanthemums to screen my piazza lattice, which is never truly handsome, and which, as the summer advances, they cover to perfection, even to the height of four and a half feet. As they grow they require support, for although the red ones are very stiff, they bend in wind or rain; the yellows droop naturally. We support them with light bamboos tied across the rows; the uncompromising reds reveal their support, but the yellows completely cover theirs.

As a low screen they are therefore perfect, and give besides a good background for the flowers which stand in front of them. I



The hardy chrysanthemum is the most profuse late-flowering hardy plant. Although an armful of flowers has just been picked from these plants, there is still an abundance of bloom. Frost has killed the sneezeweed; stocks and sweet alyssum are almost over, but the chrysanthemums stand erect



As a screen to the porch lattice the hardy chrysanthemum serves a dual purpose. In summer its leaves make a green background to the earlier flowers; in the late fall it bursts into a sheet of glowing color when all else is dead or dying.

know of no plant which I would exchange for them for this purpose.

FLOWERS IN A FROST-DESOLATED LANDSCAPE

The pompon chrysanthemums become really valuable about the time when other plants give up the fight. I have the ill-fortune to live where my flowers get frost earlier and harder than my near neighbors'. It is a particular satisfaction, therefore, to have my chrysanthemums come into bloom about the time that everything else is killed. My sneezeweed and sweet alyssum were the only flowers left to me, except some very feeble stocks, when the chrysanthemums were large enough to pick last year, and even those were soon gone. Last fall the first killing frost came September 27th; the frosts came almost nightly after the first week in October; the flowers were in bloom, large enough to pick, on October 12th, and they gave a constant supply from that time on. The last picking was on November 12th, the plants having twice gone through frosts of eighteen degrees; but for some time longer the flowers were effective when seen from a distance, although too much injured to look well at close quarters in the house.

As cut flowers some of the bunches lasted three weeks; but after they had suffered from many frosts they lasted less than a week.

HOW TO GET MORE FLOWERS

The pompon chrysanthemums are easily increased by division of the roots. Each spring the old plant sends out numerous new shoots, called suckers, which, if taken from the old plant with a few roots if possible, will make blooming plants the following fall. Should the suckers not have roots they should be put in a pot or box of sand, and given the

same treatment which is given to the ordinary "slip," or cutting. These suckers will produce new roots very quickly. When the plants become large they can be divided in the spring by cutting them with a spade into two or more pieces.

If young plants are not wanted the suckers should be removed, or else the plants will stand too closely. Grown as ours are for a screen, we let them stand at two to three inches apart, and feed them heavily. Their roots are shallow, therefore they must be

cultivated carefully. It is a good plan to mulch with lawn clippings. So far, with us, they have had no pests or diseases, a small black plant-louse which comes in the middle of summer always disappearing without doing any harm. They should be watered while in flower, if the ground is at all dry.

Protection of the plants is a very simple matter, grown as ours are. Twice their buds, while very young, have been killed by unexpected early, heavy frosts, against which we did not guard; but once in bloom, both flowers and buds seem to be able to stand almost anything. However, I cover ours at night with cotton cloths which are attached to the bottom of the piazza railing, and folded back by day. In winter the only protection is their own tops, cut off and laid over the roots. Thinning, fertilizing, mulching, supporting, covering against frosts, and breaking down the tops in fall, is all the care needed for plants that yield us more flowers than any others.

There are two classes of hardy chrysanthemums which may be had—the Japanese and the pompons. The latter are usually far more satisfactory as they are much hardier, yet it is possible to grow out of doors excellent flowers of the Japanese sorts four, five, and even six inches in diameter. There is nothing else in the garden just like these pompon chrysanthemums. Their colors are very vivid, and harmonise with nothing else, and because of their striking appearance it is better to grow them in masses by themselves.

The range of color among the pompons is as great as in their larger relatives, the greenhouse chrysanthemums; and for one who has not the advantage of a glass structure in which to grow the larger kinds, all the pleasure which they bring can be had in these smaller and hardier varieties.



The garden in October and November is redeemed by the profuse flowering of the bright hardy chrysanthemums. Plants may be divided each year, in spring; merely cut the old clump into pieces with a spade.



Radishes flourish and mature in thirty days. White Icing, Long Scarlet White Tip and Scarlet Globe



Perfect onions are easily grown in a deep, rich, loose soil. Southport White Globe



Mild flavored Ruby King peppers are excellent stuffed or in pickles

A Vegetable Garden in the Semi-Arid Region—By Viola McCollm, ^{Bucklin,} Kansas

HOW GARDENING ON THE PRAIRIES DIFFERS FROM THAT IN THE EAST—LAND A PLENTY BUT A SCARCITY OF WATER—THE PECULIAR CONSEQUENCE OF THE DRY WINTERS

[NOTE.—This is the first of a series of articles on home gardening in every part of the United States and Canada, to which our readers are cordially invited to contribute. We need articles from Southern Florida, Texas, New Mexico, Oregon, Alaska, Manitoba, and every other region that has peculiar conditions. Won't you tell us what these conditions are, describe your successful garden, give a calendar for all important operations, make your article intensely practical for people in your region and interesting to everybody else? Instead of writing us "Why don't you have articles about our region," won't you tell us who are the successful amateurs in your region?]

OUT in the Western prairies, the garden has a new set of conditions, but the commoner vegetables are easily grown in this semi-arid region if the garden be irrigated. The soil is deep, rich, and comparatively new, so there is no need to add

spring and summer months there is a liberal supply of moisture, the ground may be so dry in the early spring that the garden plot must actually be watered before it can be put in good condition for planting. Fancy that, you Easterners!

Luckily there are good wells, and one well will, besides affording water for house use and for many head of stock, supply plenty of water to irrigate a large garden; and the wind will lift the water.

When once the crops are well established, the rain comes in abundance, and sometimes, for several weeks together, there will be no need to water the garden.

The garden is just south of the barn lots, so the buildings afford protection when the wind happens to be in the north. That however, is an incident. The main reason for selecting this place is that the ground in this direction slopes from the well. Near by is a fifty-barrel stock tank where the stock drinks, and which also serves as a storage reservoir for water to be used in the garden.

In our first summer we irrigated until after mid-summer by means of pipe and hose. But cheaper, and really more satisfactory, is the method of small ditches or trenches which was installed the second year. Lead-



Squash, pumpkins and melons are successfully grown without irrigation

fertilizer. The one thing needed here at 2,428 feet elevation is water in the earliest spring. And for economy's sake our vegetable gardens are placed sufficiently near to the house so that the one well can serve the two. Cultivation is by hand tools or by horse power, generally the latter, because it is so much the cheaper, and then, too, the necessity of getting much in a little space, which is one of the controlling factors of Eastern gardening, does not bother us at all. When horse power is used, more ground is occupied, but land is cheap here.

WATERING BEFORE PLANTING

During the four months, November, December, January and February, the average monthly rainfall is only about half an inch, yet the average annual precipitation is 20.35 inches. This means that, while in the



A typical prairie garden—open to all the winds that blow. Irrigation is its salvation

ing from the tank to the garden and down one end of it is the main trench, and in every other space between the rows we make a trench with a hoe, when ready to water the garden. When the water is flowing in the main trench, it can be directed into the desired trenches between the rows, by damming up with a hoe the ends of those trenches where water is not needed.

If we are busy with other affairs, and cannot well afford time to look after the spreading of water in the various channels, the windmill can be left pumping, and the overflow from the full tank will flood along and over the one or more trenches left open. Watering is then done slowly.

A quicker way, taking about thirty minutes, is to draw the plug from a two-inch auger hole in the bottom of the tank, and by opening and closing the ends of trenches at the main trench with a hoe, distribute fifty barrels of water on the garden. If the soil is well pulverized, so that the water quickly soaks into it, this rapid rush of water is the better method. What we use is practically a system of sub-irrigation. The trenches are never filled to overflowing. The water soaking through from the trenches directly to the roots of the plants, and the surface soil is retained unaltered. It is ideal watering.

After each irrigation, when the surface of the ground is sufficiently dry, it is cultivated.

WHAT THE GARDEN GREW

Our vegetable plot is exactly 5 x 6 rods (or 82 $\frac{1}{2}$ x 99 feet), and it yielded all one family wanted, and compares well, I think, with what you of the East can do.

The first outdoor planting was on April 13th when seeds of lettuce, radishes, beets, parsnips, onions and peas were planted. Later sowings were of string beans, lima beans, sweet corn, Irish potatoes, squash, cucumbers and peppers. The squashes were raised among the sweet corn.

Cabbage and tomato plants were raised in a hotbed and celery in a box, and transplanted to the garden when ready.

After the dead pea vines were removed, late plants of All-head Early cabbage were set in their places. The cucumber vines were ready to cover the space left vacant by the Irish potatoes. Later, two rows of celery were set where the potatoes had been.

A SUCCESSION OF CROPS

There is no reason for the majority of people out here to bother about close succession, but we do it just as much for fun as for anything else. Three crops on the same bed is like doing something after all. Besides raising a second crop where peas and Irish potatoes were raised, two crops were produced on one small bed, and three on another, each five feet by ten feet in size. On April 13th, seeds of three varieties of radishes were planted in one, and three varieties of lettuce in another. In the latter were also planted seeds of Quickest Forcing radish. The soil was in good condition, except that it was not sufficiently moist, so as soon as the seeds were covered, the beds were watered.



Two crops of radishes. The first in flower; the second just in condition to gather. Succession of crops is not a matter of necessity when land is plenty. Photographed June 18th



Cabbage set in the radish rows, and tomatoes among the lettuce. Some of the lettuce was left for seed, and formed a unique support for the lower branches of the tomatoes. Photographed July 23rd



The garden in fall; beets and parsnips. These and other root crops furnished an abundant supply for the winter. Photographed October 18th.

Repeated irrigations kept the soil continually moist, but we saw to it that the water did not wash the soil away from the seeds or tender plants. When the radishes were well started, they were watered once a day. They were ready for use just one month after planting.

Although most of the days were warm the nights were very cool. A few of the Quickest Forcing radishes were ready in less than thirty days, but this variety is too tender to withstand our climate. Cool weather, and a continual abundance of water unite to produce radishes of exceeding tenderness and sweetness. Those who have never eaten radishes grown under such conditions have no conception of the excellence of this vegetable.

On the day that we pulled the first radishes, seeds were planted between the rows, to raise a second crop. The bed had been purposely allowed to become dry enough to be in good condition for the space between the rows to be hoed and planted. After this, however, the bed was kept very wet—sometimes being watered at about sunset, and again early the next morning.

The second crop came up nicely in five days, and three weeks after planting we commenced to use them. There were about five hundred radishes in the first crop, and three hundred in the second.

A TOMATO MYSTERY

The tomato is the one great crop that we cannot have equally as good as in the East. We cannot grow them at all for an early crop, but after the middle of August we get plenty of nice smooth fruits, though never large.

The difficulty is peculiar: Until the season is well advanced, the tomatoes will shed their fruits as quickly as they are set. I do not think the wind is wholly responsible. From the earliest flowers a large percentage of the fruit breaks off where it joins the tiny stem. Perhaps the failure is due to the presence of too much moisture in the air.

LETTUCE A BELATED CROP

It seems that early lettuce cannot be raised here. I believe the cool nights, owing to the rather high altitude, retard the growth while the lettuce is small. After it attains some size, it develops rapidly, and after the 1st of June we had lettuce in abundance.

A QUEER TOMATO SUPPORT

Some lettuce was left to produce seed, and their sturdy stems furnished some support to the tomato plants, which were set in the bed June 10th. Five days earlier, cabbage plants were set between the second crop of radishes. Irrigation was continued, and the crop of both tomatoes and cabbages was as good as if they had been planted in ground that had not previously produced that season, one or two crops.

The beans were ready to use by the middle of June. From that date until the middle of July we had peas too. From July 1st until October 1st we had beans. The

cucumbers were ready for slicing on the 1st of July. We commenced to use cabbage on July 15th, celery on September 20th, and had plenty of both until spring. Other crops for winter and spring use were onions, beets, squashes, and parsnips.

There were also cucumber pickles, canned beans and tomatoes, Celestial peppers for seasoning, and mangoes, made by filling the Ruby King peppers. There were six bushels of onions.

BEETS WEIGHING 11½ POUNDS

The first killing frost was on October 25th—after that we dug twelve bushels of immense tender beets from the two rows, each five rods in length. Two early Bassano beets weighed 11½ pounds each.

VEGETABLES THAT SUCCEED WITHOUT IRRIGATION

The following vegetables will usually succeed here without irrigation, and it is well to raise the main supply elsewhere than in the irrigated garden, for not only is it cheaper to raise these things without irrigation, but by planting out in the field, one saves the expense of fencing such a large plot with poultry net.

POTATOES

The ground should be put in good condition with plow and harrow as early as possible in the spring, and the potatoes should be planted as early as the weather is fit—some seasons it is possible to plant them the first of March. The potato patch must be thoroughly cultivated, not alone that the soil may be kept mellow about the roots, but that the loose mulch of soil on the surface may conserve the soil moisture. When planted early, and given this care there is usually a good yield of potatoes of fair size and excellent quality. The potatoes may be planted where chickens have a free range.

SWEET POTATOES A SURE CROP

These need to be given just the same good care that one should give them anywhere else, and they are almost certain to produce tubers of fair table size and of superior quality without irrigation. Chickens should not have access to the sweet potatoes, for they tear the ridges down.

THE MELON, SQUASH, AND PUMPKIN

Seeds should be planted on the first breaking of sod. A good place to select is a rather low spot in a field, where sorghum, or some other tall growing crop will afford shelter on one or more sides from the wind. A similar place should be chosen for the squashes and pumpkins. No one relishes melons that are mixed with pumpkins or squashes, so the melons must have a separate patch. The mere planting of seeds is all the work that is necessary, for melons, squashes, and pumpkins do well on first breaking of sod, without either hoeing or cultivation. These vegetables may be raised out in the field or land not so new, but first sod is preferred.



An Old Palm Re-discovered

FOR many years (a score, perhaps) students of the palms have marvelled at the great diversity of growth in our weeping palms (*Washingtonias*), without more than a mere suspicion that we were growing two distinct species as different types of one (*Washingtonia filifera*).

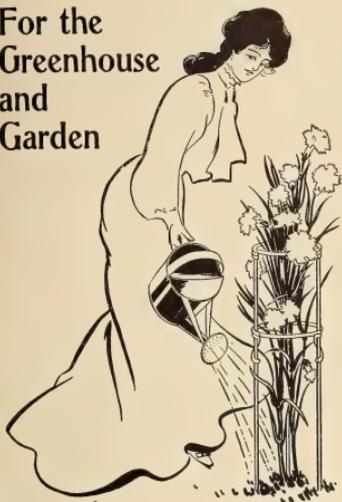
That the identity of the other species, (*W. robusta*) was not sooner discovered, is remarkably strange in view of the fact that careful measurements of our oldest palms prove that *robusta* grows just four times faster than *filifera*. Grown under identically the same conditions, *W. robusta*, at twenty years of age, had made forty feet of solid (matured) trunk, while the more common species had made but ten. The deeper and more constant green of the *robusta* palm is a strong point in its favor as a decorative plant. Other points wherein



The weeping palm (*Washingtonia filifera*). A false impression is current that it is not as hardy as *W. robusta*. The reverse is true.

it differs from the more common species, (*W. filifera*), are: its shorter petiole or leaf stem, its more compact habit and the darker color of all its parts. The base and edges of the petiole are light brown in *W. filifera*, but violet-black in *W. robusta*. The same difference of color is noticeable even in the trunk, *W. robusta* being much the darker of the two. The seeds of *robusta* are only about one half as large as those of *filifera* and differ in shape. What difference there

For the
Greenhouse
and
Garden



GARDEN NECESSITIES

INEXPENSIVE LITTLE THINGS THAT PAY FOR THEMSELVES IMMEDIATELY
IN INCREASED CROPS AND LABOR-SAVING

MODEL TOMATO AND PLANT SUPPORT

The best support for tomatoes and heavily flowered plants, such as Dahlias, Peonies, Chrysanthemums, etc. Tomatoes grown with supports produce a much larger crop and of better quality. Constructed of galvanized wire, they are light, strong and easily applied, with screw or diamond anchor.

PER DOZ., \$1.75; 50, \$7.50; 1/2 GROSS, \$10.00; GROSS, \$18.00

MODEL ROSE AND LILY STAKES

Strong, light, more sightly than wooden stakes. Made with or without loop with screw or prong anchor. Do not harbor insects. Made of galvanized wire, proof against rust. All sizes.

AMERICAN BEAUTY SUPPORT

This support is made especially for heavily flowered plants, and can be adjusted to any height from two to eight feet.

MODEL EXTENSION CARNATION WIRE SUPPORT

Light, strong, easily applied with screw or diamond anchor. Every grower of Carnations should use these.

MODEL POT HANGER

Adjustable to pots of all sizes up to ten inches. Can be put on quickly and taken off easily. The only practical device for converting ordinary flower pots into hanging baskets.

Write for Illustrated Pamphlet, "FOR THE GREENHOUSE AND GARDEN"

PARKER-BRUEN MFG. CO.

ST. JAMES BUILDING, NEW YORK
FACTORY: HARRISON, N. J.

We have everything to make your grounds beautiful and garden useful!

BAY TREES, BOXWOOD AND ENGLISH IVIES



We have a grand collection of these popular decorative trees in both Standard and Pyramidal forms.

Magnolias,
Blue Spruce,
Evergreens
and Conifers
in Tubs and Baskets
Phoenix Palms

Pot-grown Roses, both Standard and Bush form, English Ivy in all sizes, Clematis and other Vines, Japanese Maples from 1 to 6 feet, in pots and tubs.

It will be a pleasure for our landscape department to assist you, without charge, in suggesting effective landscape arrangements, and help you solve any difficult problems you may have. With a nursery complete in every particular, we can supply every variety of Shrubs, choice Blue Spruce, Evergreens and Conifers, Plants, Native Rhododendrons and English Hybrids, Roses, Hardy Vines, Hardy Ferns and Grasses, Old-Fashioned Hardy Flowers, Fruit Trees, Small Fruits, etc.

These are all described in our New Illustrated Catalogue, which we shall be glad to send to serious inquirers. Our Landscape department will be pleased to correspond with parties intending to lay out or improve their grounds. The general supervision of private estates and old-fashioned gardens a specialty. Visitors to our Nurseries are always welcome.

BOBBINK & ATKINS

Nurserymen, Florists and Landscape Gardeners

RUTHERFORD, N. J.



"Saved Twenty Times Its Cost"

"I am writing this," says E. C. Parnelle, Highlands, N. J., "by the light of one of your Angle Lamps. In fact, I would not think of using any other light. They are the lamps. Everyone who has seen mine is impressed with them. Why, I have saved at least twenty times their cost in oil, kerosene, chimneys and 'cans' words."

The Angle Lamp is not an improvement on the old style lamp but an entire new principle of oil lighting which has made common kerosene (or coal oil) the most satisfactory of all lighting methods. Safer and more reliable than gasoline, or acetylene, yet as convenient to operate as gas or electricity.

The ANGLE LAMP

is lighted and extinguished like gas. May be turned high or low without odor. No smoke, no danger. Filled while lighted and without moving. Requires filling but once or twice a week. It floods a room with its beautiful, soft, mellow light that has no equal. Write for our Catalog "41" and our proposition for a

30 DAYS' FREE TRIAL

Write for our catalog at. Having thirty-two varieties of The Angle Lamp, from \$1.50 up, now before you inspect it—before you turn this leaf—for it gives you the benefit of our two years of experience with oil lighting methods.

THE ANGLE MFG. CO., 78-80 Murray St., New York



Why a Garden for Six Months Only

PERHAPS you have tasted the health-giving joys of your flower or kitchen garden, felt lonesome and out of sorts when the all too short season ended. You had slept better, held a bigger feeling for all humanity those days you were digging, coddling your garden favorites. Now with the return of beautiful spring comes all the anticipation of renewed friendship with Mother Earth, but don't forget the short span of summer's lease and how soon again come the dull months of winter wastes.

Why not have a glass enclosed garden the whole year round? A garden giving you choice flowers, adding their fragrance and beauty to your home, and out of season vegetables to increase the pleasures of your table. Then with it all comes that unmistakable soothing of the nerves, that "straightening out of the kinks" which an hour or so a day in a greenhouse surely brings. Right now is the time to talk this building matter over with us, so your house will be all ready not later than the last of July to get your plants and other things prepared. Then November, with its dreary days, will find your house filled with bloom; your Christmas table graced with its regal bunch of American Beauty roses, and the guests smacking their lips over crispy cucumbers or luscious melons—"all from my own greenhouse."

LORD & BURNHAM CO.

Greenhouse Designers
and Manufacturers

1133 Broadway, Cor. 26th St., New York
Boston Branch, 819 Tremont Building

SEND for our cold frame brochure, which also tells a good bit about greenhouse things you want to know. Prices range from \$50 up.

FAIRFAX ROSES
CANNOT BE EQUALLED *Catalogue free*
W. R. GRAY, Box 6, OAKTON, FAIRFAX CO., VA

MAULE'S SEEDS LEAD ALL
Illustrated Catalogue free
WM. HENRY MAULE
1701 Filbert Street, Philadelphia, Pa.

The Celebrated Furman Boilers



As an Investment, Furman Boilers return large Dividends in improved Health, increased Comfort and Fuel Saved.
SELLING AGENTS:
E. S. DEAN, Bloomington, Ill. E. A. BARR, La Crosse, Wis.

Valuable Catalogue and Booklet "Warmth" mailed free. Address
The Herendean Manufacturing Company,
6 Plant Street, Geneva, N. Y.
NEW YORK Office and Show Room 245 Pearl Street.

may be in the floral structure, it is hoped to determine during the coming summer.

Washingtonia robusta has grown rapidly in public favor during the past few years, due to the fact that it is superior, for many purposes, to the commoner *W. filifera*. When we had watched it for several years and noted its rapid growth, it became evident that for street alignment it surpassed all palms heretofore used for the purpose.

The claim so often made by dealers that *W. robusta* is the hardier of the two species, is utterly without foundation, *W. filifera* being the hardier. The claim is based, no doubt, on the fact that *W. robusta* does not get "rusty" on the leaf tips as does the common species. This rustiness does not come from the leaf being nipped by the frost, for often the greatest part of such discoloration comes in late summer.

It may be as well to correct a popular misunderstanding regarding the needs of these plants. They do not "grow in the desert sands without water." Neither do they



Washingtonia robusta. Same age as tree of *W. filifera* shown in illustration on page 284. Grows four times as fast, and is better as a street tree

grow on the desert at all, nor in the sand, nor without a constant supply of water. They grow in the canyons and depressions of the foothills bordering the desert, usually in black "adobe" or "gumbo" soil and where they get a considerable water supply. This water generally holds in solution so much alkali that it can not be used for drink by man or beast.

Wendland, in his original description of *W. robusta*, says it is native to the Sacramento River region. This was certainly a mistake on his part unless there be a Sacramento River in Northern Mexico. Doubtless he meant the Colorado River, for the northern range of this palm is not far from the mouth of that stream.

California. ERNEST BRAUNTON.

The New Century Lawn Sprinkler

Revolves freely with any pressure. Equal spray over circle from three to fifty feet in diameter.



Head and Arms of Polished Brass

Body Black Enameled

Wheels Mounted

on Wide Base Red Enameled

SIMPLE AND DURABLE

Your money back if not entirely satisfactory. Sent express prepaid anywhere in United States east of Rocky Mountains for only \$2.50. Descriptive circular free.

THE YOST ELECTRIC MFG. CO.,
Toledo, Ohio., U. S. A.

ORCHIDS

Largest importers and growers of ORCHIDS in the United States

LAGER & HURRELL
Orchid Growers and Importers SUMMIT, N. J.

Hardy Plants FOR Old Fashioned Flower Gardens

Including Philoxera, Bell Flowers, Larkspurs, Poppies, Pansies, Iris, Garden Flasks, Day Lilies, etc. Also fine collection of novelties. Catalogue on Application.

FREDERICK J. REA Norwood, Mass.



E. G. W. Dietrich, Archt., New York

Plenty of Evidence

can be furnished to prove the artistic, durable and economical character of

Cabot's Shingle Stains

"Five years ago this month I had my house stained with your moss-green and mahogany-red shingle (creosote) stains, and it looks almost as well to-day as then. . . . House was stained in April, 1900—never touched since."

Englewood, N. J., April 23, 1905. WILLARD SMITH.

"April 23, 1903, I bought No. 100 green shingle stain from you, which we used on a new residence. . . . Same has proved very satisfactory, and I now want to place an order for three barrels of this same No. 100 Creosote shingle stain for a new property which I am now building."

Billing, Mont., June 1, 1903. AUGUST NORTH.

East of West, North or South, the only reliable, guaranteed, wood-preserving stains.

Stained wood samples, catalogue and color-chart, free.

SAMUEL CABOT, 1 Oliver St., Boston, Mass.

Agents at all Central Points.

MELLIN'S FOOD

For the Baby



MARY RYMERS
A Mellin's Food Girl.

"Man's work is from sun to sun,
But woman's work is never done."

MELLIN'S FOOD is really an assurance of healthy, happy childhood, and robust manhood and womanhood, for proper feeding in infancy lays a foundation of good health upon which, later on, strong men and women are developed; not only strong physically, but strong mentally, for the mind is dependent on the body. Therefore see to it that the infant's food is right, *i. e.*, use MELLIN'S FOOD. *Send for a free sample for your baby.*

Mellin's Food Company, Boston, Mass.

"It Gathers as it Sweeps"

THE
"Apollo" Sweeper

is an ideal time and labor-saving machine for the care of Lawns, Golf-greens, Porches, Walks, Barn-floors, etc. It takes the place of broom and shovel, sweeping and gathering all in one operation. The sweepings are carried into the box attached, (see cut) doing away with the need of basket or cart for collecting the sweepings.

Beautiful Lawns

are produced by the use of the "APOLLO" sweeper, because instead of injuring the grass or tearing it up as a rake does, the action of the fibre bristles promotes the growth of the turf, makes the grass thick and produces a rich, green, "velvety" appearance, instead of a dull gray or brown color. It removes every particle of cut and dead grass, leaves, twigs, manure, dirt, etc. If your dealer cannot supply you, write us and we will send a sweeper on 10 Days Approval. Booklet Free.

THE GREENE MFG. CO., 34 Sycamore St., SPRINGFIELD, OHIO. (Good Canvassers Wanted.)

To Make Cheap Gas-light for Country Homes

TAKE a common Clay Pipe.
Put a simple "Acetylene" Gasburner on its stem.
Bind the two in position with a tight-fitting piece
of Rubber Hose.

Then fill the bowl of the pipe with fine-ground Calcium Carbide.

Next tie a moistened rag over head of the bowl to keep in the Carbide.

Now put the pipe into a Glass of Water, as in picture.

There you have a complete Gas plant for 25 cents.

Touch a match to the Burner—

and you'll get a beautiful White Gas-light.

Of course, this is only an experiment, but it shows the wonderful simplicity of Acetylene Lighting.

That very simplicity gave Acetylene Light a setback at first.

It seemed so simple to turn Calcium Carbide into Gas-light that over 600 different kinds of "tanks" and "Acetylene Machines" were invented, patented, and marketed for the purpose by about as many different people.



Well, the thing to be expected certainly happened!

About 530 of these "Acetylene Machines" had been invented and sold by people who knew more about *Fire* than they did about *Gas-making*.

The "Calcium Carbide" was all right all the time, but 530 of the machines, for turning it into Gas were all wrong all the time.

So Acetylene Gas "got a bad name," though it is clear enough now that it never deserved it at any time.

It was like selling Wood Slower to burn Hard Coal in and then blaming the Coal for not burning.

Lots of things happened to grieve the Owners of these 530 makes of alleged "Acetylene Machines."

But very few accidents occurred from them even in the days of rank experiment and dense ignorance among "Generator" Makers.

Of course, a gun will go off unexpectedly, now and then, if the trigger be pulled by a person who "didn't know it was loaded."

But, that's no fault of the Ammunition—is it?

Well, finally the Insurance Companies got after these 530 makes of "Acetylene Machines," that wouldn't Acetylate, and the Insurance Board made an investigation of all Generators that were submitted to them.

Then, out of the 600 odd "Machines" patented, only about 70 were "permitted" by the Insurance Board to be used.

Oh, what a howl was there!

By "permitted" I mean that the Insurance Board was willing that any building should be insured, without extra charge, which used any one of these 70 Acetylene Generators it had found safe, and effective, just as it permitted houses to be piped for City Gas or wired for Electricity, under proper conditions.

Now, the Insurance Companies ought to know whether or not these 70 different makes of Acetylene Generators were absolutely safe to use.

Because, they have to pay the bills, if Fire or Explosion occurs, from any one of the Acetylene Generators they authorize.

And, here's a proof of their good judgment.

Though there are now Two Million people using Acetylene Light in America, there were only *four* Fires from it in one year, against 8865 Fires from Kerosene and Gasoline.

There have also been 4601 Fires from Electricity, 1707 Fires from City Gas and 540 Fires from Candles.

Besides these there have been 16 Fires from the Sun's rays, But—only four Fires from Acetylene.

That shows how careful the Insurance Board was in its examination of Acetylene Generators, and in "permitting" only the 70 makes that were above suspicion out of the 600 experiments that were once on the market.

Well—the boom in Acetylene Lighting made *lower* prices possible on the material it is derived from, viz. Calcium Carbide, a material that looks like Granite but acts like Magic.

Today, Acetylene Light is a full *third cheaper* than Kerosene Light, or Gasoline Light, per Candle Power.

It is not more than *half* the price of Electric Light, nor *three-fourths* that of City Gas.

If I can't prove these statements to your full satisfaction my name is not "Acetylene Jones."

But Acetylene is *more* than the *safest* and *cheapest* Light of the year 1906.

It is also the *Whiter* Light—the nearest to natural Sunlight in health-giving Blue and Violet rays, and because of this, with its freedom from flicker, it is the easiest of all Artificial Light on the Eyes.

It is so much like *real* Sunlight that it has made plants grow 24 hours per day in dark cellars where no ray of Sunlight could reach them. It made them grow *twice* as fast as similar plants that had only the Sunlight of day-time, viz., half the time.

That was proven by Cornell University in a three months' experiment made this very year.

Now, I've saved up for the last a point more important to you than all the others about Acetylene Light.

It consumes only *one-fourth* as much of the vital Oxygen from the Air of Living rooms or bedrooms, as either Kerosene or City Gas-Light consumes.

That's a tremendous difference in a lifetime, mark you—three-fourths of a difference.

Because—Oxygen is Life.

And every bit of Oxygen stolen from the lungs of Women (Children are meant through Lighting, is a loss that can never be made good again.

A 24 Candle-Power Acetylene Light costs you only *two-fifths* of a cent per hour.

That's about \$5.85 per year, if burned every night in the year for four steady hours.

A Kerosene Lamp of equal capacity would cost you a *third more*, but *three-fifths* of a cent per hour for Kerosene alone, or \$8.75 per year.

That's exclusive of broken lamp chimneys, new wicks, and the everlasting drudgery and danger of cleaning, filling and trimming daily.

I want to show these figures to you, Reader, if you are a house-owner or store-keeper.

Tell me how many rooms you've got and I'll tell you what it will cost to light them with brilliant, beautiful, Sanitary, eye-saving Acetylene.

Write me today for my Free Book about "Sunlight on Tap."

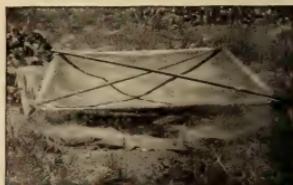
Just address me here as—
"Acetylene B Jones,"
160 Michigan Ave.,
Chicago, Ills.



Some Insects that Bother the Melon Patch

AS the little melon seedlings push their way up through the soil in June they are immediately attacked by a little yellow-and-black-striped beetle, who seems to have been actively waiting for the seedling's appearance. Often these striped beetles occur in such numbers that, where only a few seedlings are growing, there is no chance whatever of any surviving the assault. Many growers, therefore, plant the seed very thickly in rows, so that the beetles may have plenty of food. As soon as their appetites have been partially satisfied, the rows are thinned out into hills the desired distance apart.

A few hills may be protected very easily by a cover the frame of which is made from



Make a light frame six feet square and cover it with canvas which has been soaked in lime-sulphur. Have the ends long enough to be covered with soil to prevent the smoke from escaping.

two barrel hoops. Cut one into two pieces and cross the two halves, tacking them together at the centre and their ends to the hoop. Thus a dome-shaped frame is formed which may be covered with mosquito netting or cheese-cloth. They are cheap, easily made, and may be kept year to year.

If the young plants are kept thoroughly coated with Bordeaux mixture, they are protected from the beetles.

Early squashes, planted around the melons, will attract the beetles first; and by keeping the squashes well poisoned with Paris green, many of the beetles are destroyed, and the melons remain untouched. Further north, where the beetles attack young squashes, the best method is to drive them off with frequent applications of tobacco dust, or any of the cheaper, non-poisonous powder insecticides.

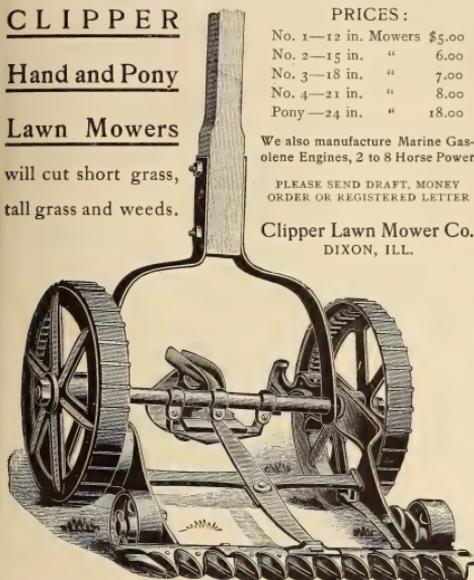
A second brood of the beetles appears later in the season, and is often troublesome on late squashes. Much may be done to reduce the numbers of this annoying pest by

CLIPPER

Hand and Pony

Lawn Mowers

will cut short grass,
tall grass and weeds.



PRICES:

- No. 1—12 in. Mowers \$5.00
- No. 2—15 in. " 6.00
- No. 3—18 in. " 7.00
- No. 4—21 in. " 8.00
- Pony—24 in. " 18.00

We also manufacture Marine Gasoline Engines, 2 to 8 Horse Power

PLEASE SEND DRAFT, MONEY ORDER OR REGISTERED LETTER

Clipper Lawn Mower Co.
DIXON, ILL.



DREER'S WATER LILIES

HARDY AND TENDER.

NELUMBIUMS, NYMPHEAS, VICTORIAS, ETC.

The most complete list to select from and the finest quality plants supplied. Our "Water Lily Leaflet" tells how to care for these plants, and makes the work a pleasure. *A copy will be mailed free.*

DREER'S GARDEN BOOK

contains a large list of aquatics, besides much other information about **Seeds, Plants, and Bulbs** of all kinds. *Write for a copy free and mention this magazine.*

HENRY A. DREER

714 Chestnut Street

Philadelphia, Pa.

A Complete Manual of House Building in the Country

THE COUNTRY HOUSE

BY CHARLES EDW. HOOPER

This volume gives competently and in detail, yet without technicalities, all the information necessary in the building of a country house.

Its practical value is unlimited. 380 illustrations. Net. \$3.00. (Postage, 30 cents.)



DOUBLEDAY PAGE & CO.

133-135-137 EAST 107 STREET, NEW YORK

HOME STUDY COURSES



JOHN CRAIG

Professor of Horticulture in Cornell University

EVERYONE interested in farming or gardening, everyone who owns or who expects to own a suburban or a country home, should know about the Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture, which we offer under Prof. Wm. P. Brooks of the Massachusetts Agricultural College and Prof. John Craig of Cornell University.

¶ There is money and pleasure, too, in farming and gardening, in the growing of fruit and of flowers, for those who understand the **ways** how and the **reasons why** of modern agriculture. A knowledge of landscape gardening and floriculture is indispensable to those

who would ever have the pleasantest homes. ¶ Every reader of THE GARDEN MAGAZINE who is interested in these matters is invited to send for a free copy of our eighty-page catalogue and full information in regard to our home study courses.

THE HOME CORRESPONDENCE SCHOOL

Dept. 8, SPRINGFIELD, MASS.



KELLER'S BRILLIANT GAILLARDIAS

Hardy Garden Flowers No. 5

Nothing imparts such gaiety and joyous exuberance to a garden as an abundance of Gaillardias. Their honest open faces greet you every day from August to October. How they revel in the sunshine! What tumbling billowy masses of red and yellow! They are the largest flowered hardy perennial members of the "composite" family during the month of August, and even when the big sunflowers appear in September the Gaillardias are most welcome because of their dwarfier and more compact habit, their warm red colors and their distinctive shape. A garden without gaillardias would be like a home without the merry voices of happy children. Plant some now.

\$1.50 Per Doz. \$10.00 Per 100.

It is not too late even now to plant a hardy garden for this summer's enjoyment. It will mean for you a profusion of flowers all summer long, and until late in the autumn—flowers of every size and shade succeeding one another in endless variety.

Let us help you. Our stock of hardy perennials is unsurpassed because we grow them exclusively and devote all our attention to their culture.

Send for our 1906 Catalogue.

J. B. KELLER SON
ROCHESTER, NEW YORK

All the plates used in

THE GARDEN MAGAZINE

are made by

GILL Engraving
Company

110 Fifth Avenue New York

keeping the plants of the late crop well poisoned.

As the vines get larger, a leaf or a tip is now and then found wilted, due to the work of the common Squash Bug, which in New England is called the "Mohawk." This well-known, large brown bug is one of the most common enemies of the cucurbits, and, when numerous, often one of the most difficult to handle. Its eggs are laid in small bunches, each egg separate from the others, and of a glistening golden brown color. They are easily found on the under sides of the leaves, which should be examined for them. Hand-picking seems the most satisfactory means of handling this pest, and where abundant the vines must be gone over frequently.

Shingles or small boards, laid lightly on the surface of the soil, furnish a warm cover under which the bugs pass the night, and from which they can readily be gathered early in the morning. Early planted squashes are also of use as a trap crop, planted alternately or here and there among the rows of melons and cucumbers.

When the vines are a foot or so long, a hill here and there is found covered with little green aphides. They must be attacked at once, for, if left alone, they will soon be so numerous as to be beyond control.

THE EVER PRESENT APHID

When you see curled leaves, examine the hill for aphides. Spray with weak kerosene emulsion—one made according to the formula in the March number of THE GARDEN MAGAZINE, page 65, and diluted twelve times, will answer—whale-oil soap at the rate of one pound to six or seven gallons of water or tobacco water.

Do not use too strong a spray, for the vines are easily injured. Turn the vines over, so that all the under surface of the leaf is thoroughly sprayed, as only those aphides are killed which are hit by the spray, and a few escaping will soon restock the patch. When the aphides become abundant on larger vines, with fruit nearly ripe, it is a difficult matter to control them, and often the crop is sacrificed to them as a result of early neglect.

Fumigation with tobacco smoke is the most successful method. First bunch up the vine as much as possible without breaking, then place over it a cover under which the smoke is generated. This cover should be a light frame covered with canvas soaked in linseed oil. The edges form a flap, extending out for six or eight inches on all sides, over which the earth may be hoed up, to prevent the escape of the fumes. The commercial prepared fumigating paper (which has been soaked in a tobacco extract) is the easiest fumigant to use. The amount and length of time of fumigation will vary according to the size of the cover, but can readily be determined by a few trials.

In a small garden one of these covers and a supply of the prepared tobacco paper will enable one to handle the melon aphides and many similar pests of other plants.

E. DWIGHT SANDERSON.

Entomologist, New Hampshire Experiment Station.

Wash Fabrics

DELICATE
SUMMER WEAR
COLORED OR
WHITE LINEN
LACE SILKS will
last twice as long
when washed with
PEARLINE only—
talk better too.

Pearline's

a gentle treatment
WITHOUT RUB-
BING or help of any
sort. Soaps all dirt,
and EASY RINSING
free it, leaving no trace
of Soap or Sulfonamide
Odor.

BAR SOAP cannot be
made which rinses so
thoroughly, quickly, and thor-
oughly as PEARLINE.
A chemical analysis or
practical home test will
prove this statement.



Millions Use
Pearline

Used by U. S. Signal Corps

Geneva Superior Binocular \$15

Our handsome book, *The Near
Distance*, sent free on request.

Its magnifying power, field view
and clearness of definition is
seldom equalled.

Price \$4. delivered. If not sat-
isfactory, return at our expense.
We refund your money.

GENEVA OPTICAL COMPANY
51 Linden Street, Geneva, N. Y.

Exclusive Sales Agents:

H. C. WILSON, Syracuse, N. Y.
E. G. WILSON, Ithaca, N. Y.
Buffalo Optical Co., 232 Main Street, Buffalo, N. Y.
E. F. BAUSCH & SON, E. Main Street, Rochester, N. Y.
C. H. WOOD, 1122 Washington Street, Oakland, Cal.



SPRAY THE WATSON

Four Row Potato Sprayer

Covers 30 to 40 acres per day. Straddles
2 rows, sprays 4 at a time. Wheels ad-
just for different widths. Sprays to
any distance and opening of pump to wheel
of cart gives any pressure desired. Automatic agitator and suction
straw cleaner. Never spoils foliage, nor clogs. Free instruction
and formula book shows the famous Garfield, Empire King, Orchard
Monarch and other Superiors. Write for it.

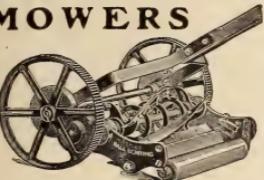
FIELD FORCE PUMP CO., 48 Eleventh St., Elmira, N. Y.



MUSHROOMS 3 "buttons", wt. 25 ounces.
Are you getting such re-
sults from the spawn you are using? If you would
like to grow better mushrooms and get larger yields,
let us send you our booklet on "Mushroom Spawn and
Guide to Mushroom Culture".

PURE CULTURE SPAWN CO., Box 95, Pacific, Mo.

TOWNSEND MOWERS



TOWNSEND GAVE TO THE WORLD

The Ball-Bearing Lawn Mower

His mowers are more imitated than any others.

We make more high-grade mowers than any other firm and they are all ball-bearing.

We make the best Lawn Mower in the world.

We make the best Horse Lawn Mower in the world.

We make the best Roller Mower in the world.

We repair and sharpen all kinds of Mowers.

S. P. TOWNSEND & CO., - Orange, N. J.

Coldwell Lawn Mowers

HAND, HORSE AND MOTOR POWER

Over 600 in use on the parks of GREATER NEW YORK where they have been used exclusively FOR OVER TWELVE YEARS



COLDWELL'S MOTOR LAWN MOWER

We make all styles, sizes and grades. If your dealer does not sell them we will quote you special prices and terms.

SEND FOR CATALOGUE

COLDWELL LAWN MOWER CO.

30 Coldwell Street . . . Newburgh, N. Y.

KILL THE WEEDS and GRASS that deface your WALKS and DRIVES with FAIRMOUNT WEED-KILLER

(Imitations are not cheap.)

and do it effectively and thoroughly at small cost.

No Failures

In Eleven Years of Severe Tests.

LIST OF PRICES—(Net. F. O. B., Philadelphia)— $\frac{1}{2}$ gal. in tin (makes 27 gals. treating liquid), 75c; 1 gal. tin (makes 50 gals. treating liquid), \$1.25; 5-gal. keg (makes 250 gals. treating liquid), \$6; 10-gal. keg (makes 500 gals. treating liquid), \$11; 50-gal. barrel (makes 2500 gals. treating liquid), \$45.

Can you beat our weeds for the same money?

Send orders to dealers, or direct to

FAIRMOUNT CHEMICAL LABORATORIES, Only Makers, Office N.W. Cor. Broad and Fairmount, Philadelphia, Pa.

MENNEN'S BORATED TALCUM TOILET POWDER



The Freshness of Roses

and balmy June days are not more delightful and refreshing than the soothing touch of Mennen's. Gives immediate and positive relief from Prickly Heat, Chafing, Sunburn and all skin troubles. Everywhere used and recommended by physicians and nurses for its perfect purity and absolute uniformity. Mennen's face on every box. See that you get the genuine. For sale everywhere, or by mail, 25c. Sample free.

Gerhard Mennen Co., Newark, N. J.

Try Mennen's Talcum (Borated) Toilet



THORBURN'S SEEDS

THE BEST AND MOST RELIABLE. If you are interested in gardening send for our beautiful GARDEN ANNUAL. Mailed free J. M. THORBURN & CO., 36 Cortlandt St., New York

KILL YOUR PLANT AND DOG parasites with Lemon Oil

Insecticide. No poison—no powder—no odor. Used for years by florists and kennels. Cheapest and best. If not sold by your seedman write us. Weatherly Bros., Baltimore, Md.



For Liquor and Drug Using

A scientific remedy which has been skillfully and successfully administered by medical specialists for the past 25 years

AT THE FOLLOWING KEELEY INSTITUTES:

- | | | | | |
|---------------------|--------------------|---------------------|----------------------|----------------------|
| Birmingham, Ala. | Washington, D. C. | Des Moines, Ia. | Buffalo, N. Y. | Harrisburg, Pa. |
| Hot Springs, Ark. | 311 N. Capitol St. | Levington, Mass. | White Plains, N. Y. | Pittsburg, Pa. |
| San Francisco, Cal. | Bright, Ill. | Portland, Me. | Columbus, O. | 4846 Fifth Ave. |
| 1190 Market St. | Marion, Ind. | St. Louis, Mo. | 1087 N. Denison Ave. | Providence, R.I. |
| West Haven, Conn. | Painfield, Ind. | 2902 Locust St. | Philadelphia, Pa. | Salt Lake City, Utah |
| | | North Conway, N. J. | 812 N. Broad St. | |

A Quarter-Ton of Grapes



grew in this grapeery in one year from 16 vines, each vine yielding 30 pounds. This is not a record breaking instance either, but simply what anyone can do with one of our houses.

Have you ever tasted grapes from a grapeery along in May and June—big luscious fruit in all its unequalled flavor—a start on Dame Nature of full four months? Of course they can be grown just as easily for Thanksgiving or Christmas.

U-Bar Grapeeries are the Best

and give the nearest possible to an outdoors-ripened fruit because of their extreme lightness of construction and least possible shading, the sun getting to the vines in all its strength and flavor-giving power.

The U-Bar is a patented construction and we are the only ones building U-Bar Grapeeries and Greenhouses. Send for cuts.

PIERSON U-BAR COMPANY

Designers and Builders
U-BAR GREENHOUSES

Metropolitan Bldg., 4th Ave. and 23d St.
NEW YORK



Texas Rain Lilies Naturalized

Valuable new varieties of fruits. Dewberries and blackberries and crosses between them, and new fruits. Write for catalogue.

RAMSEY'S AUSTIN NURSERY,

AUSTIN, TEXAS

TEXAS RAIN LILIES

(*Cooperia pedunculata* and *Cooperia Drummondii*)

THE LILY THE FAIRIES LOVE

In the South they bloom in three days after a rain. Excellent for naturalizing in lawns, and are remarkably cheap. They are fine for summer use in Northern gardens or for pot plants for window decoration. You can mow the lawn on Saturday and have it covered with white stars by the middle of the next week. Easily planted by dropping the bulbs in holes punched with a crowbar.

Cooperia pedunculata (Rain Lily, Fairy Lily), by mail or express prepaid, 50 for \$4; 100 for \$8; By express, not prepaid, 100, \$2; 1,000, \$12.

Clematis coccinea (red), *C. crispata* (blue), hardy everywhere; by mail, 25 cents; by express, 15 cents.

Pavonia lasiopetalata, hardy shrub, rosy pink, flowers all summer; by mail, 25 cents; large blooming root, by express, 20 cents.

Malvaviscus Drummondii, hardy, 2 ft.; brilliant red flowers all summer; by mail, 25 cents; by express, 20 cents.

Salvia Texana, Blue Salvia, perennial; by mail, 2 for 25 cents; by express, 10 cents each.



The Culture of Magnolias

THE weak point about the magnolia is its soft, spongy, brittle, punklike roots. Therefore be careful to preserve all the fine roots, always planting them with a ball of earth and never in the autumn. It does not pay to buy a cheap year-old magnolia or an older one that has never been properly prepared for transplanting. It is better to pay three to five dollars for a tree that has been several times transplanted and has a good ball of earth.

It makes all the difference in the world whether your magnolia has a dark background or not, if it blooms before the leaves. The flowers show off best when seen against evergreens or against a dark-colored house.



Magnolia Norbertiana, one of the later flowering of the numerous hybrids between *M. Yulan* and *M. obcordata*

Don't get your magnolia in the middle of the lawn or in front of deciduous trees. The front yard is the time-honored place for it.

Nothing is too good for your magnolias. Dig a big hole, fill it with rich earth, mulch the surface heavily and water freely until the tree is established.

It is a slow business to raise magnolias from seed, but if you want to try it, ask to have the seeds packed in damp clay before they are sent to you. Magnolia seeds have so much oil in them that they travel badly. But in clay they will preserve their germinating power for several months.

Magnolias can be safely planted until the second week in June, if you buy trees with a large ball of earth that is covered with cloth to protect them from sun and air.

New York.

W. M.

YOUR GOOD TASTE BESPEAKS A COPY OF

The International Cook Book

By ALEXANDER FILIPPINI

Formerly of *Delmonico's*

Author of "The Table"



HIS is the world's cook book. It is replete with rare and deliciously original dishes, drawn from the author's wide experience and years of travel here and abroad. There are nearly 3,500 recipes in all—a veritable encyclopedia representing countries all over the globe.

Two washable bindings, white seal grain and red Morocco grain. Net, \$4.80 (postage 48 cents).

DOUBLEDAY, PAGE & CO., 133 East 16th Street, New York City

Increase the Yield of Your Garden

by using the **IGOE TOMATO AND PLANT SUPPORTS**. They will mean a more abundant crop of Tomatoes of superior quality, and more beauty and success of your heavily flowered plants, such as Peonies, Dahlias, Golden Glow, Chrysanthemums, etc. *The best and strongest support made.*



REPAYS THE COST MANY TIMES OVER IN A SINGLE SEASON

MADE STRONG AND LIGHT OF HEAVY GALVANIZED WIRE

PRICES

Per dozen \$1.75
Per 50, \$7.00; per 100, \$12.50

Send for Price List and Catalogue.

THE IGOE CARNATION SUPPORTS are equally important for the success of your Carnations. 2-ring, \$3.50 per 100; 3-ring, \$4.00 per 100

FOR YOUR ROSES: The Igoe Rose Stakes, made of galvanized wire, take the place of the old-fashioned insect-harboring, decaying, wooden supports. They are neat, strong, and will not rust. Made in all sizes (and prices), looped and straight, 65c. to \$1.65 per 100.

You also need some **Tying Wire** which does not rot nor untie. No 18, galvanized, 12 lbs. for 85c.; No. 19, \$1.00.

IGOE BROTHERS

228 North 9th Street Brooklyn, N. Y.



LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special prices to cemeteries and churches. Address **IGOE BROTHERS, 228 NORTH 9TH STREET, BROOKLYN, N. Y.**

Knapsack Spramotor

destroys all insects or fungi on potatoes, berry bushes, trees, plants or vegetables.

Copper tank \$15, galvanized \$12. Agents Wanted. Ask for 86-page treatise K. SPRAMOTOR CO. Buffalo, N. Y. London, Ont.

A Piedmont Red Cedar Chest

in the home saves the trouble and expense of putting your furs in cold storage.

The cost is about the same as that of a season's cold storage, but the chest lasts a lifetime. It is always in your home and easy of access.

It does all that cold storage does—and more; imparts that delicate odor of the genuine Southern Red Cedar to your furs, and absolutely protects them from moths and insects, which at this season are laying their eggs and preparing for their work of destruction to furs and woolsens. Furs, blankets, valuable clothing, etc. packed in a Piedmont Red Cedar Chest are perfectly secure from moths, dust and dampness, and are kept clean, sweet and fresh.

They are always ready to wear. No need of days of sitting to destroy the odor of moth-balls, etc., which only partially protects.

Made in several sizes and fitted with handsome trimmings.

An Ideal Wedding or Birthday Gift

You run no risk—if not perfectly satisfied with the chest, return it in five days at our expense and get your money back.

They are shipped direct from factory to your home, freight prepaid.

Write for booklet with full information and factory prices.

PIEDMONT FURNITURE CO.
Dept. W. Statesville, N. C.



Plant for Immediate Effect

Not for Future Generations

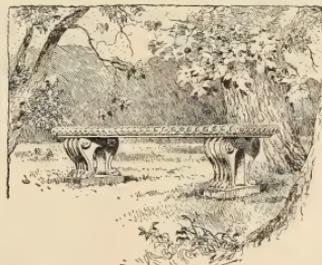
Start with the largest stock that can be secured! It takes over twenty years to grow such Trees and Shrubs as we offer.

We do the long waiting—thus enabling you to secure trees and shrubs that give an immediate effect. **Spring Price List Now Ready.**

ANDORRA NURSERIES

CHESTNUT HILL, PHILADELPHIA, PA.

WM. WARNER HARPER, PROPRIETOR



LELAND & HALL CO.

WORKERS IN STONE

557 FIFTH AVENUE

NEW YORK

STUDIOS { PIETRASANTA, ITALY
LONG ISLAND CITY

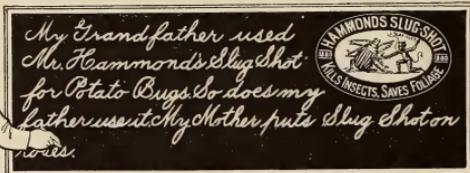
WORKS: BARRE, VT.



Invite special attention to their unequalled facilities for designing and executing the highest grade of garden adornments, mantels, tables, statuary, altars, fountains, monuments and mausoleums, in marble, granite and stone.

Also invite inspection of the pieces in stock
Designs and prices sent upon request

SOLD BY SEED DEALERS FROM MAINE TO CALIFORNIA



"SLUG SHOT" Used from Ocean to Ocean

A light, composite, fine powder, easily distributed either by duster, bellows, or in water by spraying. Thoroughly reliable in killing Currant Worms, Potato Bugs, Cabbage Worms, Lice, Slugs, Sow Bugs, etc., and it is also strongly impregnated with fungicides. Put up in Popular Packages at Popular Prices.

For Blights, Rots or Mildews

Hammond's Solution of Copper—Dilute with 100 parts of water. **French Bordeaux Mixture**, genuine. **True Blue and Butterline**—dilute 25 or 50 gallons with water. **Green Dust** for mildew on roses, violets, carnations, gooseberries or grapes.

For Scale

Horicum kills San José Scale. **Thrip Juice No. 1**, used for the past 20 years on orange trees, kills all sorts of scale. Dilute 500 to 1,000 times with water.

For Gypsy Moth

Kerosene Emulsion No. 2 arsenated. (This would knock Satan out if you could catch him.) **Kerosene Emulsion** greatly recommended for very many things.

For Hotbeds, Greenhouses, &c., good as gold

Twemlow's Old English Liquid Glazing Putty. **Hammond's Greenhouse White Paint**—original and genuine. **Twemlow's Green Stain**.

Send for pamphlets worth having to

Hammond's Paint and Slug Shot Works, Fishkill-on-Hudson, N. Y.

Ask the man who sells your seeds for these goods.



I am in everybody's mouth three times a day—or ought to be.

Sold Only in a Yellow Box—for your protection. Curved handle and face to fit the mouth. Bristles in irregular tails—cleans between the teeth. Holds in handle and hook to hold it. This means much to clean if you use it. Buy—the only one who like our brush.



Adults' use. Youth's use. Children's use. By mail or at dealers. Send for our free booklet, "Tooth Truths." FLORENCE MFG. CO., 181 Pine St., Florence, Mass.

WASHINGTON AS A COUNTRY GENTLEMAN

Letters and Recollections of George Washington

BEING HIS CORRESPONDENCE WITH TOBIAS LEAR AND OTHERS, TOGETHER WITH A DIARY OF WASHINGTON'S LAST DAYS, KEPT BY MR. LEAR



THIS volume is no less than a revelation of the home life at Mt. Vernon, so much does it contain of information as to property, farm, methods of handling servants and the like. Illustrated with rare portraits, etc.

Ready in June (\$2.75 postpaid.)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.



Carnations for Cut Flowers Next Winter

NOW is the time to start in order to secure good plants of carnations for your window garden next winter. If your plants are put out in the garden before all danger of frost is over, it will do no harm, for if the plants have been properly hardened off, a little frost will do them no harm.

Procure from your neighboring florist some of this spring's cuttings which have become established in two or three inch pots, and which have not become pot bound. If they are healthy it will make no difference if they look rather lank or leggy, because about the first thing to do will be to pinch them back—pinch out the tops.

WHERE TO GROW

During the summer grow the plants out of doors. Select a well drained portion of the garden, spade it as deeply as possible with a spading fork, turning under at the same time a dressing of well decomposed manure which has been spread on the ground about three inches thick. After spading thoroughly rake the soil until it is fine and smooth, and all the stones have been removed. Set the plants eighteen inches apart, in rows which are eighteen to twenty-four inches apart. Cultivate the ground thoroughly all summer long. I have found it an excellent scheme to go over the garden about once in two weeks, loosening up the soil with a spading fork, to a depth of about three inches.

Water freely all summer, do not give them a little sprinkling every day, which will do more harm than good—give them a thorough soaking once or twice a week, after which the surface soil must be stirred with a wheel hoe, or other tool, to form a soil mulch, to prevent the evaporation of moisture. I had a plot about 700 feet square, of sandy soil, with a gravelly subsoil, so there was no danger of overwatering. This little garden plot held a miscellaneous collection of plants which were grown for potting up in the late summer, for winter flowers, and on this plot a hose ran every day. Some part of the garden had a thorough soaking each day, and each part had a watering about twice a week, so you can see that if your ground is well drained, you need not fear of overwatering your plants or garden.

SECURE STOCKY PLANTS

As soon as the plants start to grow, pinch out the top. This is easily done with the thumb and forefinger. This pinching should continue all summer, at intervals of

TEA

DRINK TEA- AND YOUR SYSTEM WILL GRADUALLY BE POISONED BY TANNIC ACID-

COFFEE

DRINK COFFEE- AND YOU WILL BECOME A NERVOUS WRECK-



COCOA

DRINK COCOA FOR BREAKFAST, LUNCH AND SUPPER

AND YOU WILL ENJOY PERFECT HEALTH- COCOA IS A BUILDER OF STRENGTH & VITALITY

OF COURSE IT'S *Stuyler's* YOU WANT,

IT IS THE PUREST & BEST. ALL GROCERS.

Bausch & Lomb-Zeiss TESSAR





When Buying a Camera

you must remember that photographs like those shown in this advertisement are almost impossible with the lenses usually furnished and that the most difficult views you would like to photograph are often the most difficult to get. The *lens* is the all important part of a camera. The new TESSAR Lens, now furnished with all Kodaks, Premos, Century and Hawkeye Cameras, will make pictures such as those shown here as easily as any other kind. It will make any kind of a picture from a racing automobile to a portrait. TESSAR is only one of many fine photographic lenses made by the Bausch & Lomb Optical Company and described in a beautifully illustrated booklet, "Aids to Artistic Aims," just issued, sent free on request. Ask your dealer to show you cameras with the new TESSAR Lenses.

Bausch & Lomb Optical Co., Rochester, N. Y.

NEW YORK BOSTON WASHINGTON CHICAGO SAN FRANCISCO

Bridgeman's

HIGH GRADE




Vegetable, Farm and Flower Seeds

GARDEN TOOLS and HORTICULTURAL BOOKS

Descriptive illustrated catalogue mailed free on application

BRIDGEMAN'S SEED WAREHOUSE
37 East 19th Street, New York City

If the Skies Rained Oil, Paint Would Never "Chalk"

Chalking paint is absorbent paint, and as the skies rain water and not oil, absorbent paint does not protect the surface under it. Chalking is prevented by the addition of OXIDE OF ZINC—combination paints based on OXIDE OF ZINC do not become "chalky" or absorbent, neither do they discolor, and, furthermore, they are very durable and economical.

FREE—our practical pamphlets:
"The Paint Question"
"Paints in Architecture"
"Paint: Why, How and When"
"French Government Decrees"
"Specifications for Architects"

The New Jersey Zinc Co. 71 BROADWAY NEW YORK

WE DO NOT GRIND ZINC IN OIL. A LIST OF MANUFACTURERS OF ZINC WHITE PAINTS WILL BE FURNISHED ON APPLICATION

¶ You can learn all that is known about the raising, breeding, care and sale of every kind of feathered product in

The Poultry Book

¶ It is the most complete and authoritative book on the subject ever printed in America.

Superbly illustrated in color and black-and-white, by Harrison Weir

\$13.60, sold by subscription.





DOUBLEDAY PAGE & Co. NEW YORK.



CRYSTAL Domino SUGAR

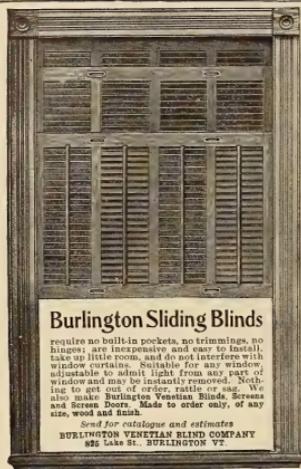
A Triumph in Sugar Making!

Sold only in 5lb. sealed boxes!

IMAGINATION COULD NOT CONCEIVE OF A HANDIER AND PRETTIER FORM THAN IS PRESENTED IN "CRYSTAL DOMINO SUGAR". NEITHER COULD THE MOST PARTICULAR PEOPLE ASK FOR MORE PERFECT PURITY OR ECONOMICAL PEOPLE FOR LESS WASTE.

HIGHEST GRADE IN THE WORLD. BEST SUGAR FOR TEA AND COFFEE.

By grocers everywhere.



Burlington Sliding Blinds

require no built-in pockets, no trimmings, no hinges, are inexpensive and easy to install, take up little room, and do not interfere with window curtains. Suitable for any window adjustable to admit light from any part of window and may be instantly removed. Nothing to get out of order, rattle or sag. We also make Burlington Venetian Blind Screens and Screen Doors. Made to order only of any size, wood and finish.

Send for catalogue and estimates
BURLINGTON VENETIAN BLIND COMPANY
 632 Lake St., BURLINGTON VT.



Rife Automatic Hydraulic Ram

(Water Pumped by Water Power)

No Attention No Expense
 Runs Continuously

Country Homes Formal Gardens
 Farms Town Plants Irrigation
 Railroad Tanks Dairies, Etc.

5000 in Operation 80% efficiency developed
 Catalog and Estimate Free

RIFE ENGINE CO., 2109 Trinity Bldg., New York

Take a Good Man's Word

A PROMINENT GARDENER AND FLORIST
 OF IRONDEQUOIT, N. Y., WRITES AS FOLLOWS:

"When I placed an order with your agent for some of the Dormant Sod Brand Pulverized Sheep Manure I made an arrangement with him whereby I should try a small sample before taking the entire shipment, as I had never used any of this fertilizer before. I wish to inform you that I have used this sample on small planted lettuce in my greenhouse and I can say that it is the best fertilizer I have ever gotten hold of. I commenced to see the benefit of a little sprinkling of it soon after planting, and shall make use of my full order in the near future."

Price \$4.00 per large barrel full Pulverized Sheep Manure; equal in fertilizing strength to two wagon loads of barnyard manure. Delivered to any point in the United States (east of Denver) freight prepaid. Special prices on larger quantities. Write for booklet.

DORMANT SOD COMPANY
 19 EXCHANGE AVENUE
 Union Stock Yards Chicago, Ill.

ten days or two weeks, or when the new shoots which start as a result of the pinching have made about an inch or an inch and a half of growth. Be careful to note the difference between the leaves and stems. The new leaves frequently stick out straight and round, like a stem.

This constant pinching will secure round, stocky plants, six or eight inches in diameter. If the plants are allowed to run up to a single stem, and flower, they will be of little use for next winter.

LIFTING AND POTTING

About the middle of August is a good time to transplant the plants into pots and boxes—their permanent quarters for next winter. If you have a small greenhouse, and want to plant them out on a bench, this is the time to do it.

As a general rule people soak the ground just before lifting the plants, or do this work after a rain. I have found the contrary to be true. I got much better results from allowing ground to dry out a little. This however, cannot always be done on heavy soil, nor will it work as well either unless the soil is full of humus, but on my sandy soil it gave me great long feeding roots which I otherwise would have lost.

Plants grown as I have described will need pots six or seven inches in diameter—they may be put in boxes, or on benches, and planted a foot apart.

Do not "over-pot" them. When you are putting them in the sized pots mentioned you will feel that you are crowding them, but you forget that the new soil which you are putting around them is full of plant food, so that they will not need to have a large amount of soil in which to fatten.

I found that a soil consisting of equal parts of rotten sod, leaf-mold, well decomposed horse manure, and sand, made a good medium in which to grow the plants. If you can mix your soil up a week in advance, put in a five-inch potful of bone meal to a wheelbarrowful of soil. This must be done beforehand, as it ferments, which would hurt the roots if it were added just before potting the plants in it.

Be sure that the roots are spread out as much as possible, and that the soil is worked well in among the roots. This can be done by filling up the pot, and then holding the plant by the stem, gently lift it up and down. You will be surprised to find how much soil will work in around the roots which you could not get in there by any other method.

Firm—do not pack—the soil, first with the hands, and then with a potting stick. This stick should be a piece of white pine, because it is soft; about a foot long, an inch to an inch and a half wide, and about three-quarters of an inch thick, rounded at the ends and the corners smoothed off, so as not to hurt the hands.

CARE AFTER POTTING

When potted, water the plants, giving them enough so that all the soil in the pots is thoroughly moistened, and set them in a shady place for a few days, where they are sheltered from the wind. The watering will help



BULL-FOOT BRAND

THE TOLEDO RUBBER CO. MADE IN TOLEDO, OHIO

LAWN HOSE

"THE KIND THAT LASTS"

This is the kind that you get when you buy hose having the most famous brand.

You can make a positive saving of 50 per cent or more on your lawn hose by buying the genuine

"BULL-FOOT" BRAND

SEAMLESS TUBE

Because "BULL-FOOT" BRAND hose costs more and lasts over twice as long as the old style lapped tub kind. Nine-tenths of all hose from this is because of faulty seams. (See Cut.)

SPECIAL OFFER—To widely distribute "BULL-FOOT" BRAND, we will, if your dealer does not handle it, ship you, upon receipt of twice on 30 Days' Free Trial, 50 ft. 1/2 in. Self-will hose, complete for use. Money back if not satisfied. **FREE!** Upon request valuable book on "Lawn Watering and Care." *They're showing you.*

How they can increase their Lawn Hose business—**471** Queen St., Toledo, Ohio.

Established 1901. **The Toledo Rubber Co.** Toledo, Ohio. Reference 407 back in Guide.

This is the kind you get when you buy hose having the most famous brand.



Protect your Flowers

WITH THOMPSON'S OSE NICOTINE

(Pure Nicotine from Tobacco)

Save them in every form of Plant Insects on Flowers, Vegetables, Trees, Shrubs or Climbers, ferns in the household, dog-tentacles, haw-buzzards, on dogs, cats, foxes and the human head, or both.

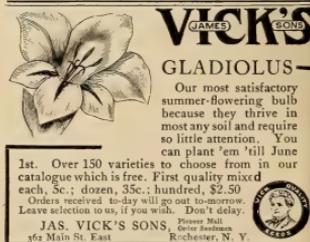
Guaranteed to do its work satisfactorily and without injury to the most delicate flowers, fabric or pet animals.

Colorless, tasteless and odorless. Spray or bath costs less than two cents per quart. Sold by all leading druggists in 5c. and 10c. cans. For insects and plant fungi forms, we recommend the "Rise-Nicotine" Fungicide (Glow) for its thoroughness and easy application. No odor after fumigation.

If you send us the name of your druggist, we will send free one valuable booklet (25 pages) "How to Destroy Plant Insects and Vermin" 5c. can prepaid, 10c. 5c. can or Fungicide 5c. or both 5c. If druggist won't supply you (not suitable).

F. A. THOMPSON & CO., INC., Chicago
 120 Franklin Ave., Detroit, Mich.

G. H. PETERSON
 Rose and Peony Specialist
 (Catalogue on Application)
 FAIR LAWN NEW JERSEY



VICK'S

(GAMES) SODS

GLADIOLUS

Our most satisfactory summer flowering bulb because they thrive in most any soil and require so little attention. You can plant 'em 'til June and choose from in our 1st. Over 150 varieties to select from in our catalogue which is free. First quality mixed each, 5c.; dozen, 35c.; hundred, \$2.50

Orders received to-day will go out to-morrow. Leave selection no as if you wish. Don't forget!

JAS. VICK'S SONS, Pioneer Mail Order Business Rochester, N. Y.
 474 Main St. East



ORNAMENTAL FIXTURES FOR COUNTRY GROUNDS

Lawn and Park Fountains, Aquaria and Aquarium Fountains, Drinking Fountains, Flower Vases in Cast Iron and Bronze, Statuary, Settees and Chairs, Tree Guards, Railings and Entrance Gates Gas and Electric Light Posts and Lamps, Stable and Cattle House Fittings and Weather Vanes.

We issue separate Catalogue of each of the above, which will be sent on request

Address

ORNAMENTAL DEPT.

THE J. L. MOTT IRON WORKS

84 to 90 BEEKMAN ST., NEW YORK



"The Seal of Quality"

Sixty four page catalogue mailed free.

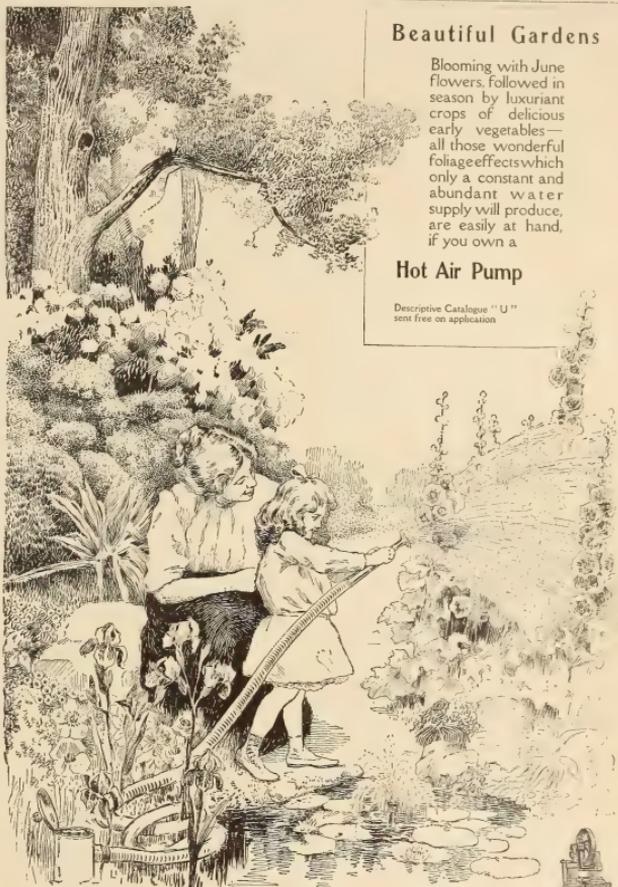


Pompom Chrysanthemums

It is not too late to plant the beautiful Aquilegias, Pyrethrum roseum, Digitalis, Pompom Chrysanthemums. They should be ordered now. *Send for Catalogue.*

SHATEMUC NURSERIES,

Barrytown, Dutchess Co., N. Y.



Beautiful Gardens

Blooming with June flowers, followed in season by luxuriant crops of delicious early vegetables—all those wonderful foliage effects which only a constant and abundant water supply will produce, are easily at hand, if you own a

Hot Air Pump

Descriptive Catalogue "U" sent free on application



The Hot Air Pump

Rider-Ericsson Engine Co.

35 Warren St., N. Y. 254 Craig St. W. Montreal, P. Q.
230 Franklin St., Boston. 40 N. 7th St., Philadelphia.
40 Dearborn St., Chicago. 22 Pitt St., Sydney, N. S. W.
Touleste-Boyer 77, Havana, Cuba.

DUTCH BULBS
Sold by the growers direct to the planter

We are the only dealers in the United States owning and working nurseries in the Saasenheim district of Holland. Orders taken during June will be filled direct from our nurseries, and healthy, first-class, true-to-name bulbs guaranteed.

FRANKEN BROS. - - Lake Forrest, Ill.

\$1.00 GOLDEN GLOW \$1.00
PERFECTLY HARDY

For \$1.00 we will ship sufficient plants Golden Glow to plant bed five feet in diameter.
EDW. J. TAYLOR - - Southport, Conn.

CACTUS
SUCULENTS, ODD and RARE PLANTS
Largest Importer and Grower in United States
F. WEINBERG, Woodside, L. I.
Illustrated Catalogue on Application

D. and C. Roses
are the best, change as often as the seasons will let you, in the United States. We supply a number of new and interesting. Flower and Vegetable Seeds a specialty. A production with every order. Write for
NEW GUIDE TO ROSE CULTURE
for 10¢. We have a lot of other new and interesting. Established 1860. Telephone
THE DINGEE & CONARD CO. - - West Grove, Pa.

To Upbuild the Pacific Coast States



Frederick E. Scotford

THE Quoin Club of New York, an association of the leading periodicals of national circulation (reaching practically every intelligent English-speaking family in the United States and Canada), introduces Mr. Frederick E. Scotford, who will represent it on the Pacific Coast in a movement that is of the greatest importance to everyone interested in the upbuilding of the Pacific Coast States. He will co-operate with the various interests of the Coast in obtaining proper publicity for their communities and their industries among capitalists, settlers and tourists.

At this moment Mr. Scotford has offices in Seattle, but will go in person, or by letter, to any place on the Coast where a Chamber of Commerce or other organized body wishes to know how it can be benefited—as other cities and communities have been—by the aid of the magazines.

A Clearing-house of Information for the Pacific Coast.

In order to assure the greatest degree of helpfulness, through Mr. Scotford's work, the Quoin Club has undertaken to act as a clearing-house, putting everyone interested in close touch with reliable sources of information on all matters pertaining to the Pacific Coast States—their topographical and climatic advantages, business opportunities, etc.

Address all inquiries either to Mr. Scotford, 476 Arcade Building, Seattle, Washington, or to

SECRETARY
THE QUOIN CLUB
NEW YORK CITY

settle soil among the roots. In order to help the plants recover from the shock of transplanting, syringe the foliage three or four times a day, doing it early in the morning and late in the afternoon, with a couple of syringings in the middle of the day. Take care, however, not to give them so much water that the soil in the pots will be kept very wet, because if you do the soil will sour. Great care must be exercised to keep the soil moist but not water-logged. At this time the plants are forming new working roots, so they can take only a small quantity of water from the soil.

In a couple of weeks when the new roots will have commenced to form and to work, the plants should be gradually brought into the positions more exposed to the sun. When the plants are first potted, they will wilt some during the day, but so long as they have a fresh, bright, crisp appearance each morning, you need have no fear of losing them.

When the plants have become established they may be brought into the house, or they may be set in a deep coldframe, or any other place where they can be easily cared for, have plenty of sunlight, and be protected from the cold nights.

I do not know the names of those which I grew, but here are six varieties suitable for window boxes, which will give you good returns, as they are compact growing, free blooming kinds: Enchantress, pale pink; Mrs. Nelson, deep pink; May Naylor, white; Boston Market, white; Portia, scarlet; Eldorado, yellow.

CHRYSANTHEMUMS NEED THE SAME CARE

I have described how I grew my carnations. In this same plot of ground I always grew a lot of chrysanthemums. They were plants which were started in the spring, and were large enough so that some of them were in five-inch pots when I planted them out late in May, sometimes before the last frosts, but these will not injure them. They were given the same treatment as were the carnations, except the pinching out of the ends of the shoots. This was done regularly; every day or two the plants were gone over, the ends of some of the shoots being pinched out. As a rule I usually allowed a new shoot to make about two inches of stem before stopping it, but I varied it, as was necessary in order to secure a symmetrical plant. Pinching out the ends of the shoots must stop not later than the first of August. Some of the professional growers do not stop the shoots after the middle of July.

Plants given the treatment described will need pots from eight to ten inches in diameter, with possibly a few exceptions, when eleven and twelve inch sizes may be needed—never larger than that. Soap boxes will make very good receptacles for them, and they are much cheaper, as several boxes can be gotten from the grocer for the price of one pot. Provide good drainage, by making four or five holes in the bottom of the box and putting in a layer one or two inches deep of stones or clinkers.

New York.

P. T. BARNES.

Hill's Famous Clothes Dryers

IS YOUR BEAUTIFUL LAWN DISFIGURED BY UGLY LEANING CLOTHES POSTS that are a constant eye sore? Get

HILL'S FAMOUS LAWN DRYER

It always looks neat and tidy. Holds 100 to 150 feet of line, quickly removed after the wash. Lasts a lifetime; saves line and clothes. No tramping in wet grass or snow; line comes to you. More than two million people use them. Also **Balcony and Roof Dryers.**

If not found at hardware store, write

HILL DRYER CO., 359 Park Avenue, Worcester, Mass.

Write for Catalog 85



**CHRYSANTHEMUMS
FOR EXHIBITION**

I make a specialty of handling the very finest exhibition varieties and have all the novelties of the year as well as the standard kinds. Five splendid varieties are Morton F. Plant, Mrs. John E. Dunne, Mrs. Geo. Heaume, Mrs. Henry Partridge, Mrs. F. F. Thompson. Send for my complete Catalogue No. 2 of exhibition and hardy varieties.

CHARLES H. TOTTY MADISON NEW JERSEY

A DAY WELL SPENT

JUNE IS THE TIME to see the magnificent

Gold Medal Collection of

80,000 PEONIES and

40,000 HARDY RHODODENDRONS

In FULL BLOOM at the

COTTAGE GARDENS NURSERIES

QUEENS, LONG ISLAND

Queens is reached by all Long Island Electric and Steam trains from Brooklyn, also Garden City and Hempstead trains from Long Island City.

Call Long Distance 'Phone 91 L. Jamaica and conveyance will meet any train.

**BEAUTIFY YOUR LAWN
with
TERRA COTTA VASES**

Vase No. 8 made of vitrified fire clay, height 4 1/2 in., diam. of top 2 1/2 in. Flowers grow to perfection in these vases as the porous clay does not heat and the air circulated freely through these vases. Many designs, from 5 in. to 28 in. in diam. Prices ranging from \$ 50 to \$20.00. Plain and fancy flower pots, extra large, 12 to 20 in. in diam. A specialty in hanging baskets, squab nests. The best that experience of thirty years can make. Tell us what you want. All our goods packed by experienced packers, and shipped all over the U. S.

Address

**TERRA COTTA VASE CO.
TIFFIN, OHIO**



POMPON CHRYSANTHEMUMS

CHRYSANTHEMUMS

We Have the Largest Collection in America. Originators and Disseminators of the Very Best to Date.

- Large Flowered Varieties, 12 Distinct Sorts from Standard List 50c.
- 12 Selections, including many new Australian Giants, \$1.00
- Handy Garden or Pompon Varieties, 40 Distinct Sorts. Collection of 12 for 50c.
- Odd and Artistic Forms, collection of 12 for \$1.00

EVERYTHING FOR THE FLOWER GARDEN: Carnations, Cosmos, Geraniums and other Tender Plants, also an extensive Hardy Perennial List. *Send for Large Illustrated Catalogue.*

**NATHAN SMITH & SON,
62 West Maumee Street, Adrian, Mich.**



EXHIBITION BLOOMS

READERS OF THIS MAGAZINE

are invited to visit our library salesroom to examine our books and magazines.



We shall be especially pleased to show you the new and enlarged edition of

The Cyclopaedia of American Horticulture, in six volumes.

The Nature Library, in ten large octavo volumes.

The Gallery of Masterpieces, fifty beautiful photomezzotints.

The Home Library of Law, six handy little books.

The Little Nature Library, seven dainty illustrated volumes.

Bound Volumes and Files of Our Magazines, "THE WORLD'S WORK," "COUNTRY LIFE IN AMERICA," "THE GARDEN MAGAZINE" and "FARMING."

133-137 EAST 16TH ST., BET. IRVING PLACE AND 3D AVENUE
DOUBLEDAY, PAGE & COMPANY, Publishers

MOTOR BOAT PERFECTION

At popular prices is a 20th-Century possibility, and with our patented one-lever control, is absolutely safe and reliable, free from complications and care. No skill being required to operate them, we can guarantee you satisfaction and the most health-giving pleasure money can buy you. Others may make this claim, we deliver the goods. A complete line of boats for inspection, trial and prompt delivery will be found at our different branches. Let us show you Racine worth.

- 122 W. 34th St., = New York,
- 509 Tremont St., = Boston
- 38 Delaware Ave., = Camden, N. J.,
- 1321 Michigan Ave., = Chicago,
- 182 Jefferson Ave., = Detroit, Mich.,
- 321 1st Ave. S., = Seattle,

and all other principal cities. If interested in Steam or Sail Yachts, Motor Boats, Auto Boats, Row or Hunting Boats, Dingbys or Canoes for pleasure or business, write for illustrated truth to the

Racine Boat Mfg. Company, Box 48, Muskegon, Mich.





Residence of E. L. Atkins
Paducah, Ky.

Equipped with Kewanee Water Supply Outfit

WATER IN YOUR COUNTRY HOME

A Kewanee Pneumatic Tank

in the cellar, or buried in the ground, delivers water to all hydrants and plumbing connections by air pressure. Every comfort and convenience of a city water supply. Fresh, pure water at any moment of the day or night—just turn on the faucet. *Splendid fire protection.* No elevated tank to freeze or blow over. No leaky attic tank. Will last a lifetime without additional expense. 4,000 in operation. Satisfaction guaranteed. Read what a few users say:

E. T. Crawford, August, O. "Equal to any city water works."

Rev. J. Wilbur Chapman, New York. "Perfectly delighted."

H. L. Spafford, N. Bennington, Vt. "Does all you claim and more too."

U. R. Fishel, Hope, Ind., "My Kewanee System is giving splendid results"

Write for names of users in your State and illustrated catalog No. 16, free if you mention The Garden Magazine.

Kewanee Water Supply Co.
Drawer S. Kewanee, Ill.



STARK FRUIT BOOK

shows in NATURAL COLORS and accurately describes 216 varieties of fruit. Send for our liberal terms of distribution to planters.—Stark Bro's, Louisiana, Mo.

Abandoned Farm \$5.60 an acre
Deer, Quail, Trout, Lake Wimepeezaukee fishing. Grand views, 1200 cubic wood, 2 story 20 room house, barn, stable, etc. \$350 down. Details post free. P. O. Box 1344, Boston, Mass.

Lambert's Pure Culture Mushroom Spawn

Produced by new grafting process from selected and prolific specimens thoroughly acclimated, has never failed to run. Sold by Leading Seedsmen. Practical! Instructions on "Mushroom Culture" mailed free on application.
American Spaw Co., St. Paul, Minn.



Setting out the Summer Bedding Plants

AS A RULE, in the vicinity of New York, it is not safe to set out the tender bedding plants—cannas, geraniums and such like—until the first of June unless one is



The best blue-flowered bedding plant for continuous bloom is ageratum Siella Gurney. Others come in shades of blue and even white

prepared to cover the plants on cool nights when frosts threaten.

If the summer bedding plants are to occupy the place where the spring bulbs stand, these



For edging and carpeting in solid masses the florists' verberna (*V. hybrida*) offers a variety of color

latter must be carefully dug up and laid in a shady dry place to finish ripening. Spread over the bed a dressing of well decomposed manure three or four inches thick, and with a spading fork turn it under. Rake off the bed giving it a very slight crown—the centre three to four inches higher than the edges. Now mark out the rows where the plants are to be, putting the first row far enough in so that when the plants have made their growth there will be a clear space of six inches

Planting Plans for Gardens, Flowers and Shrubs

Send us the size of your yard, garden or grounds, together with a rough plan of same showing the location of your buildings, of surrounding buildings together with such trees and plants as you have already growing. Indicate the points of the compass on the sketch and our landscape gardeners will be able to furnish you with a plan for an appropriate, artistic arrangement of your grounds. Our charges for such plans are surprisingly small. Write us to-day.

We solicit large or small commissions in landscape gardening.

Plant Department

We are the largest growers in the West of **Boxwood Trees, Bay Trees, Palms, Ferns, Blooming Plants, Orchids, etc.**

GEO. WITTBACH CO.

1657 Buckingham Place - CHICAGO
Landscape Gardeners and Growers of Plants and Flowers

It's a Snap

FOR THE MAN WITH THE HOSE

BECAUSE IT

Saves Time

Saves His Hair

Saves his Temper

Saves his Wife's Temper

Also his Wife's Fingert and Skirt

IS WARRANTED TO WORK

Applies and lasts between two coats of lime, burning, or low-heat the mortar, or any other place where a quick and easy connection is desired. The price of the working will be no less for the best or low thermal.

Be sure for the convenience and safety.

FOR SALE BY YOUR DEALER

Or Sent Postpaid or 35c Each, 3 for \$1.05, and Worth

Descriptive Circular Free.

Mann & Peoria, Ill. All mail orders filled from Boulder.

Nelson & Morrison, Box 57, Boulder, Colorado



Japanese Bamboo Stakes

Durable year to year. Indispensable for tying Lilies, Roses, Chrysanthemums, Dahlias.

3 to 4 feet stakes, 100 for 75 cents; 1000 for \$4.00
6 feet stakes, 100 for \$1.00; 1000 for \$6.00
(25 at 100 rate; 250 at 1000 rate)

Address H. H. BERGER & CO., 47 Barclay St., New York



A HAMMOCK THAT'S RIGHT

The only hammock made that combines Quality, Durability, and Beauty with Comfort. Can be used indoors or out. For further particulars write

QUEEN HAMMOCK CO.

188 West North St. Kalamazoo, Mich., U. S. A.



**THE WHELOCK
RUST-PROOF**

Is the only guaranteed fencing. GALVANIZED AFTER WEAVING. The Wheelock Trellis, Flower Bed Guard, Lawn Fence, Lawn Guard, Tree Guard, etc. are economical and beautiful.

If your dealer has it not, send order to us.

WRIGHT WIRE CO., 71 Hammond St. Worcester, Mass.
Large Catalogue on request.

300 DESIGNS & PLANS
SEND 2c POSTAGE **SENT FREE**



ART PLAN CO. ST. LOUIS
392 Walnut Building

The Agricultural Experts Association

GEORGE T. POWELL, President
120 Broadway, N. Y.

DEVELOPMENT of Country Places; Examinations made of Land with full reports and Suggestions for Improvement; Advice on General Management; Policies Outlined; Location of Buildings; Landscape Work; Orchard Development; Care of Forest Land and Live Stock. Correspondence invited.

Roses Write to-day for our art booklet "How to Grow Roses" and our New Floral Guide—FREE.

CONARD & JONES CO., Box P, West Grove, Pa.
Growers of "the Best Roses in America."

Amalite

ROOFING

NO EXTRAS. Everything needed to lay Amalite goes in the package, and you or the hired man or boy can lay it. It's so easy.

Amalite is wind, rain and weather proof. To summer heat and winter freezing it is alike impervious. It will give as perfect service on roofs in Panama and Alaska as here. It requires no painting nor coating and is the best ready roofing in EVERY RESPECT for the money.

Pails to catch leaks are never needed under Amalite.

TEST A SAMPLE—Our nearest office will send one to you free upon request, and also mail you a copy of our booklet about it.

Barrett Manufacturing Co.

New York	Chicago	Minneapolis
Boston	Allegheny	Philadelphia
St. Louis	New Orleans	Kansas City

Cleveland Cincinnati




GARDEN POTTERY

Italian Flower Pots

Terra-cotta Garden Vases, Statuary, Fountains, Flower Pots, etc.

Large variety. Beautiful designs. Send for Catalogue.





WILLIAM GALLOWAY, POTTERY WARENT ST. 3224 Walnut Street, Philadelphia

Do You Want a House Like This?

Comfortable, Well Planned and Well Built as can be had for the money? Such Houses I show in my Books of Designs, or make specially *To Your Order and Satisfaction.*

BOOK OF BUNGALOWS, 1906—A unique and artistic book, containing designs for one and one and a half story Bungalows in various styles \$3.00 per copy. Printed in Swiss tones. Price by mail, \$3.00.

NEW PICTURESQUE COTTAGES—Containing Original and Beautiful Designs for Suburban Homes from \$2,500 to \$6,000. Price by mail, \$1.00.

PICTURESQUE SUMMER COTTAGES, Vol. II—16 designs for Stone, Shingle and Rustic Summer Cottages. Price by mail, \$1.00.

For complete, clear drawings and Detailed Specifications, Original and Artistic Interiors and Exterior Effects, See My Plans.

E. E. HOLMAN, Architect, LUDLOW BUILDING, PHILADELPHIA, PA.



THIS IS FROM MY BOOK OF BUNGALOWS

IF ANY DEALER OFFERS YOU A SUBSTITUTE, INSIST ON HAVING THE GENUINE

Never Slips nor Tears **HOSE CUSHION BUTTON SUPPORTER**

THE **Secret Grip**

Sample pair, Mer. 50c. Silk, 60c. Mailed on receipt of order.

LOOK FOR THE NAME ON EVERY LOOP



GEORGE FROST COMPANY, Makers, Boston, Mass., U. S. A.



What's in a Name? More, perhaps, than you think IF YOU PAINT

Turpentine adulterated with petroleum is named "pure" turpentine by many dealers, and sold at attractive prices—much below the price of genuine turpentine.

This is why a painter writes us that he cannot afford to use Allpine Painters' Turpentine, because he is buying "pure" turpentine at 45 cents per gallon.

The market on turpentine during the past year has been between 61 and 72½ cents per gallon. Petroleum, the favorite adulterant of turpentine, sells for 15 cents a gallon. Can't you see what you get when you buy the ordinary "pure" turpentine of commerce?

When turpentine represents such a trivial part of your painting expense can you really afford to use the adulterated article because it is a few cents a gallon cheaper? Just try the really pure turpentine once and notice the difference.

Allpine Painters' Turpentine
is pure. It is put in sealed cans like the above, and is guaranteed to be free from any adulterant.

Ten Gallons (2 cans in case) \$8.50
If your dealer won't supply you with Allpine Turpentine, we will, and we will pay the freight.

THE CHAS. E. SHOLES COMPANY
164 Front Street New York City
44 South Water Street, Philadelphia, Pa.
Sole Selling Agents of the
Georgetown Chemical Works, Georgetown, S. C.

Sheep Manure Lawn Fertilizer

is unequalled for not dressing the lawn. It is a complete fertilizer and is especially rich in nitrogen. There is no danger of carrying in weed seeds if sheep manure is used. It is also an excellent fertilizer for the Vegetable and Flower Garden and Orchard, promoting a steady, rapid growth. It is non-odoriferous, is cleaner and richer than stable manure. 10 lbs. ... \$0.25 50 lbs. ... \$1.50
50 lbs. ... 1.00 Per ton ... 25.00

CAIRNSMUIR FARM NEW CITY, ROCKLAND CO, NEW YORK

between them and the edge of the bed. Give the plants a thorough soaking with water when you are ready to plant them, and you will be surprised to find how easily they slip out of the pots. Take your plants to the bed, placing each plant on it, just where you are going to plant it. Now you are ready to



Castor oil plants, dwarf cannas and scarlet sage make a very effective border against buildings

plant. Dig the hole a little larger than the plant and stick your trowel in the ground near by where it is handy, then take up the plant, place the stem between the first and second fingers of the right hand, turn the



Water the plants; then distribute, placing each one just where they want to grow. To remove the plant from the pot invert it and tap the rim of the pot on something solid.

plant up side down and gently knock the rim of the pot on the trowel handle. If you have never done this before you will be surprised to see how easily the plant slips from the pot, the ball of earth not even cracking. The plant is placed in the hole and soil drawn around it and firmed. When finished the plant should be just a little deeper in the ground—not over half an inch—than it was in the pot. When all the plants are set give the bed a thorough soaking to settle the soil.

The distance apart at which the plants

HAVE YOU A DAIRY?

Do you want your milk and cream bottles, churns, pails, pans and separators free from every atom of grease, dirt and soured fats? If so, you will be interested in

DAIRY TRIOLET

the new dairy cleanser. It will keep your dairy apparatus sweet and clean, free from all grease and dirt. It removes the soured fats and greases where soap will not. It contains no acids, potash nor poisons, and is absolutely harmless.

A Perfect Antiseptic and Purifier

Triolel will also prevent rust from forming on apparatus and tinware, being absolutely non-corrosive, non-caustic and non-poisonous. It softens water, leaving the hands of the operatives soft and clean.

Test Triolel carefully, critically. If you are not satisfied with it we will refund the purchase price.
25 pound ctns. . . \$ 2.50
50 " ctns. . . 4.00
450 " barrels . . 37.00
C. O. B. New York

THE TRIOLET COMPANY

164 Front Street New York City
Ask your grocer for HOUSEHOLD TRIOLET and test it on glassware and in the laundry. It is so effective that it cleanses so if by magic, so harmless that it will not injure the most delicate fabric.

If your grocer does not have it order direct from us.

A VISIT TO THE Rosedale Nurseries

Offers a rare opportunity to select just what one needs to plant a place, large or small.

We number among our customers many of the keenest buyers in the country.

Our catalogue will post you on sizes and prices.

S. G. HARRIS, Tarrytown, N. Y.

JUST A FEW COPIES OF MEEHAN'S HELPFUL TREE CATALOGUE FOR 1906 REMAIN.

What we send you one? You will find it the most interesting and useful catalogue you have ever read.

THOMAS MEEHAN & SONS, Inc., Box 8, Germantown, Phila., Pa.

Bedding Plants

10,000 Geraniums, 4 in. pots, large, six colors, 10c. each; by the hundred, 8c. Pansies, immense blooms, \$2.00 per hundred. Prompt shipment.

STEPHEN CHASE, -*- Nashua, N. H.

PANSIES

My Celebrated Pansies are the best Pansies in the country, both for sizes of blossoms, colors and markings. Send for a trial order. Fine, large Fall transplanted plants all ready to set out. Price per doz., by mail, 60c., per 100 by express, \$2.50, per 1,000, \$20.00. Leonard Cousins, Jr., Concord June., Mass.

CHEAP! CHEAP! CHEAP!

We have the finest stock of Bedding plants: Carnations, 10 leading kinds, 10c.; 100, \$1.00. Chrysanthemums, 10 exhibition kinds, 10c.; 100, \$1.00. Dahlias, 10 named kinds, 10c.; 100, \$1.00. Carnations, 10 kinds, 10c.; 100, \$1.00. Geraniums, double, 10 fancy kinds, Verbenas, Phlox Drum, Scarlet Sage, Asters, Sweet Alyssum, Little Gem, etc., 10c.; 100, \$1.00. Hardy Garden Flowers, one-year-old clumps: Aquilegia, Gaillardia grandiflora, Myosotis silvestris, Præcox ornata, Hardy Phlox, 20 kinds, Delphinium chin., blue or white, etc., 10c.; 100, \$1.00.
Price list and our large booklet of "Gardening for Less" free. IMPERIAL SEED & PLANT CO., GRANDE F. O., BALTIMORE, MD.



NEW YORK

Pedigree Strawberry Plants

Pat Grown

OUR PLANTS are grown with the greatest care, and the healthy, strong condition they are in when shipped by us will give a full crop by next year. Order now for July delivery. Early orders get best selection of stock.

VERY EARLY VARIETIES: Fairfield, Success, Lady Thompson, Climax.

MID-SEASON VARIETIES: Wm. Belt, McKinley, New York, Oom Paul, Nick Ohmer, Glen Mary, Sample, Marshall, Bismark, Senator Danlop, Warfield, Clyde, Bulach.

LATE VARIETIES: Gandy, Lester Lovett, Arline, Aroma, Joe, Late Champion.

Price per dozen, 75 cents per 100, \$3.50; per 1,000, \$25.00.

Catalogue and Colored directions mailed free.

STUMPP & WALTER CO.,
50 Barclay St., New York



WROUGHT IRON
FENCE AND ENTRANCE
• GATES •
ORNAMENTAL IRON WORK
TREE GUARDS, LAWN •
• FURNITURE ETC.

TENNIS COURT ENCLOSURES A SPECIALTY
• F. E. CARPENTER CO. •
7 & 9 WARREN ST.
NEW YORK

Bays STANDARD PYRAMID
Box STANDARD, PYRAMID AND EDGING
No finer lot in the country to select from.

GARDEN GRASSES
Large clumps for immediate effect.

Spindling Specimen **EVERGREENS** with balls of earth

THE ELM CITY NURSERY CO.
New Haven, Conn.
Write for descriptive Catalog.

It's What's Inside the Can or Tin that Counts.



The Little Red Devil Brand is made of the **Finest Sugar Cured Hams** of our own curing and **Pure Spices and Nothing Else!**

IT IS "BRANDED WITH THE DEVIL, BUT FIT FOR THE GODS."

Whenever you see the name of **Wm. Underwood Co.** on the **OUTSIDE** of a can you may count on the **QUALITY** of what's **INSIDE.**

UNDERWOOD'S
ORIGINAL
DEVILED HAM
is **ABSOLUTELY PURE!**

There is not one particle of coloring matter nor preservative in Underwood's goods.

Wm. Underwood Co., Boston, Mass.

ATTRACTIVE BUNGALOWS NEAR N. Y. CITY

A gentleman having a farm in Westchester County, with acreage greater than he needs and wishing to secure good neighbors, is selling a portion of his land—at moderate prices—to desirable parties for the erection of country houses. The farm is situated on high, well drained land in the vicinity of four golf clubs, within easy commuting distance of N. Y. City with choice two railroads.

Address: **HOLMLEA FARMS, Care of THE GARDEN MAGAZINE**



Competent Gardeners

The comfort, and products of a country home are increased by employing a competent gardener; if you want to engage one, write to us. Please give particulars regarding place and say whether married or single man is wanted. We have been supplying them for years to the best people everywhere. No fee asked. **PETER HENDERSON & CO.,** Seedsmen and Florists, 35 and 37 Cortlandt Street, New York City.

FILMS DEVELOPED

10c. per **ROLL** All Sizes
COLE & CO., ASBURY PARK, N. J.

We are film specialists and believe our methods give you better results than you have ever had.
Velox Prints, Brownies, 3c. 3x3, 3x4, 4x4, 5x6, 6x6, 8x10, 10x12, 11x14, 12x14, 12x17, 14x17, 16x20, 18x24, 20x24, 22x28, 24x28, 24x36, 30x40, 36x48, 42x54, 48x60, 54x72, 60x84, 72x96, 84x108, 96x120, 108x144, 120x168, 144x192, 168x224, 192x252, 224x294, 252x336, 294x392, 336x448, 392x504, 448x594, 504x672, 594x792, 672x894, 792x1044, 894x1158, 1044x1344, 1158x1494, 1344x1728, 1494x1944, 1728x2214, 1944x2448, 2214x2832, 2448x3114, 2832x3552, 3114x3966, 3552x4512, 3966x5016, 4512x5766, 5016x6372, 5766x7344, 6372x8064, 7344x9216, 8064x10224, 9216x11592, 10224x12960, 11592x14544, 12960x16224, 14544x18276, 16224x20292, 18276x22668, 20292x25464, 22668x28392, 25464x31632, 28392x35280, 31632x39696, 35280x44688, 39696x55296, 44688x56640, 55296x69696, 69696x87648, 87648x109632, 109632x137664, 137664x172800, 172800x217632, 217632x273600, 273600x341664, 341664x422400, 422400x528000, 528000x658560, 658560x825600, 825600x1029120, 1029120x1279680, 1279680x1577280, 1577280x1971840, 1971840x2472480, 2472480x3079200, 3079200x3842880, 3842880x4773600, 4773600x5884800, 5884800x7356000, 7356000x9196800, 9196800x11414400, 11414400x14102400, 14102400x17270400, 17270400x21000000, 21000000x26250000, 26250000x32928000, 32928000x40944000, 40944000x50400000, 50400000x62544000, 62544000x77472000, 77472000x95424000, 95424000x117504000, 117504000x144720000, 144720000x177168000, 177168000x215040000, 215040000x266400000, 266400000x331200000, 331200000x409440000, 409440000x501600000, 501600000x617920000, 617920000x760320000, 760320000x939840000, 939840000x1157760000, 1157760000x1416000000, 1416000000x1716000000, 1716000000x2059200000, 2059200000x2544000000, 2544000000x3163200000, 3163200000x3916800000, 3916800000x4814400000, 4814400000x5966400000, 5966400000x7382400000, 7382400000x9076800000, 9076800000x11169600000, 11169600000x13660800000, 13660800000x16560000000, 16560000000x20472000000, 20472000000x25392000000, 25392000000x31328000000, 31328000000x38280000000, 38280000000x46368000000, 46368000000x56592000000, 56592000000x68976000000, 68976000000x84576000000, 84576000000x103488000000, 103488000000x125808000000, 125808000000x151632000000, 151632000000x180864000000, 180864000000x213792000000, 213792000000x250920000000, 250920000000x302240000000, 302240000000x367840000000, 367840000000x447840000000, 447840000000x542400000000, 542400000000x652640000000, 652640000000x788640000000, 788640000000x951360000000, 951360000000x1141440000000, 1141440000000x1360320000000, 1360320000000x1608000000000, 1608000000000x1885440000000, 1885440000000x2202720000000, 2202720000000x2660800000000, 2660800000000x3160800000000, 3160800000000x3702720000000, 3702720000000x4387680000000, 4387680000000x5117760000000, 5117760000000x5902800000000, 5902800000000x6842880000000, 6842880000000x7937920000000, 7937920000000x9188160000000, 9188160000000x10593600000000, 10593600000000x12164640000000, 12164640000000x13911040000000, 13911040000000x15842880000000, 15842880000000x17960000000000, 17960000000000x20292000000000, 20292000000000x22905600000000, 22905600000000x26006400000000, 26006400000000x29603200000000, 29603200000000x33796800000000, 33796800000000x38587200000000, 38587200000000x44083200000000, 44083200000000x50284800000000, 50284800000000x56292000000000, 56292000000000x62116800000000, 62116800000000x68768000000000, 68768000000000x75254400000000, 75254400000000x82676800000000, 82676800000000x89934400000000, 89934400000000x97036800000000, 97036800000000x105083200000000, 105083200000000x113174400000000, 113174400000000x121308800000000, 121308800000000x129486400000000, 129486400000000x137716800000000, 137716800000000x146090400000000, 146090400000000x154608000000000, 154608000000000x163169600000000, 163169600000000x171881600000000, 171881600000000x180736000000000, 180736000000000x189736000000000, 189736000000000x198880000000000, 198880000000000x208171200000000, 208171200000000x217708800000000, 217708800000000x227388800000000, 227388800000000x237211200000000, 237211200000000x247176000000000, 247176000000000x257272000000000, 257272000000000x267409600000000, 267409600000000x277680000000000, 277680000000000x288083200000000, 288083200000000x298707200000000, 298707200000000x309452800000000, 309452800000000x319329600000000, 319329600000000x329338400000000, 329338400000000x339480000000000, 339480000000000x349756800000000, 349756800000000x359168000000000, 359168000000000x369713600000000, 369713600000000x379395200000000, 379395200000000x389212800000000, 389212800000000x399169600000000, 399169600000000x409164800000000, 409164800000000x419297600000000, 419297600000000x429467200000000, 429467200000000x439774400000000, 439774400000000x449217600000000, 449217600000000x459796800000000, 459796800000000x469512000000000, 469512000000000x479363200000000, 479363200000000x489360000000000, 489360000000000x499494400000000, 499494400000000x509763200000000, 509763200000000x519267200000000, 519267200000000x529905600000000, 529905600000000x539688000000000, 539688000000000x549513600000000, 549513600000000x559481600000000, 559481600000000x569492800000000, 569492800000000x579547200000000, 579547200000000x589644800000000, 589644800000000x599785600000000, 599785600000000x609970400000000, 609970400000000x619308800000000, 619308800000000x629290400000000, 629290400000000x639329600000000, 639329600000000x649419200000000, 649419200000000x659457600000000, 659457600000000x669544800000000, 669544800000000x679680000000000, 679680000000000x689864000000000, 689864000000000x699105600000000, 699105600000000x709404800000000, 709404800000000x719761600000000, 719761600000000x729276800000000, 729276800000000x739851200000000, 739851200000000x749497600000000, 749497600000000x759305600000000, 759305600000000x769275200000000, 769275200000000x779305600000000, 779305600000000x789396800000000, 789396800000000x799448800000000, 799448800000000x809561600000000, 809561600000000x819635200000000, 819635200000000x829769600000000, 829769600000000x839913600000000, 839913600000000x849968000000000, 849968000000000x859932800000000, 859932800000000x869907200000000, 869907200000000x879891200000000, 879891200000000x889884800000000, 889884800000000x899888000000000, 899888000000000x909891200000000, 909891200000000x919894400000000, 919894400000000x929897600000000, 929897600000000x939900800000000, 939900800000000x949904000000000, 949904000000000x959907200000000, 959907200000000x969910400000000, 969910400000000x979913600000000, 979913600000000x989916800000000, 989916800000000x999920000000000, 999920000000000x1000000000000000

2 Bee-Outfits For Honey and Money

Now's a good time to start keeping Bees. Hours of genuine, healthful pleasure and great possibilities in profit are in store for every owner of our hard workers—the gentle, Red Clover strain of bees. They gather a remarkable quantity of honey. Order your outfit now and let them get to work on the flowers and blossoms near you. At the end of the season you'll be surprised at how little trouble they have been and how much honey you'll have to sell.

Cleanings in Bee-Culture, the leading bee-paper—semi-monthly, over 1,200 pages annually—answers your questions. \$1 a year.

6 months trial..... **25¢**

OUR BEGINNERS' OUTFITS ARE REASONABLE

Everything guaranteed. Every cent returned to you if goods do not prove as we claim.

Outfit No. 5 for Dove-tailed Hive

1 ABC of Bee Culture.....	\$1.00
1 year's subscription to "Cleanings in Bee Culture".....	1.00
1 Junior Cornell smoker.....	.45
1 No. 2 bee-veil.....	.50
1 Bee-hat.....	.25
1 pair bee-gloves (small, medium, or large).....	.25
1 Colony of Italian bees in 5-frame Dove-tailed hive with bottom-board and cover and super.....	7.50
1 Tested red-clover queen for same.....	2.00
2 Hives for new swarms mailed and equipped, with comb-honey paper.....	5.70
Total.....	\$19.95

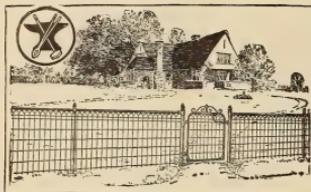
This outfit is particularly intended for those just beginning bee-culture who have neither bees, hives, nor any equipment. More bees can be added to this outfit.

Outfit No. 6 for Danzenbaker Hive

1 ABC of Bee Culture.....	\$1.00
1 year's subscription to "Cleanings in Bee Culture".....	1.00
1 Junior Cornell smoker.....	.45
1 No. 2 bee-veil.....	.50
1 Bee-hat.....	.25
1 pair bee-gloves (small, medium, or large).....	.25
1 full colony of Italian bees in Danzenbaker hive, with a bottom cover and super.....	9.00
1 Tested red-clover queen.....	2.00
2 Danzenbaker hives complete for comb-honey, ready for the bees, mailed and painted, at \$10.....	6.30
Total.....	\$19.95

This outfit is intended for beginners who wish to adopt the Danzenbaker hive.

The A. I. Root Co. Medina N. Y. City Chicago, Ill. Philadelphia, Pa. Washington, D. C. St. Paul, Minn. Syracuse, N. Y. Ohio 1037 144 E. Erie 10 Viro St. 1100 Md. Ave. 1024 Miss St. 1631 W. Gen. St.



Fences?

THIS is one of the many beautiful Lawn Fences we make—strong, beautiful, durable and very inexpensive considering the quality. Made of heavy woven netting, with the patented Anchor Post Construction—a patented and galvanized Post that keeps the fence in perfect alignment forever, and fully protects it against rust.

We also make and erect—on one contract—all kinds of Iron and Wire Railings, Fences and Gates, for Lawns, Gardens and Farms, Original Designs and Estimates free. If you really want the highest possible quality, write for Catalog No. 30A. ANCHOR POST IRON WORKS
40 Park Row, N. Y.

WILSON'S OUTSIDE VENETIAN

Blind and Awning Combined

The most unique, practical and satisfactory solution of the window problem yet devised. Easily operated. Very durable and artistic. Fully up out of sight when desired. Illustrated leaflet and testimonials mailed free. Models on view at salesroom.

JAS. G. WILSON MFG. CO.
5 W. 29th St., New York
The manufacturers of Rolling Steel Shutters and Wood and Steel Rolling Doors and Partitions.



The Apple Tree

NOW IS THE TIME

when nature is in full bloom to arrange for further planting. A great deal depends upon harmony of color; select now, and arrange your Trees, Plants and Flowers so as to have continual color. Our Landscape Architect can assist you. Visit the nursery and see the stock. We have everything necessary to beautify your homes, from the Apple Tree which blooms in May, to Herbaceous Plants and Perennials for the summer gardens, and all kinds of Forest Trees, that lend cooling shade in the summer and brilliant foliage in the fall. Do not wait until time to plant, but arrange now. Send for Catalogue. Address

THE STEPHEN HOYT'S SONS CO.
Tel. 148-2 So. Norwalk, Ct. NEW CANAAN, CONN.

should be set varies with the kind as follows (distance in inches): Ageratum, 6 to 9; annual phlox, 4 to 6; Begonia Vernon, 6 to 8; cannas, 12, except the orchid-flowered ones (like Italia) which should have 18; coleus, 9 to 10; geraniums, except the dwarf ones, 12; dwarf geraniums (Madame Salleroi) 6 to 9; heliotrope, 12 to 18; lantanas, 8 to 12; salvias, 12 to 18; verbenas, 6 to 12.

Cannas make a very effective bed or border plant either alone or with other kinds. A bed of them surrounded by low growing plants like geraniums or ageratums is good to look at. There are many varieties, some of the good kinds are: Alphonse Bouvier, crimson, 6 feet; President McKinley, crimson with scarlet shadings, 3 feet; Buttercup, almost a clear yellow, 3 feet; Egandale, red with bronze foliage, 4 feet; Florence Vaughan golden yellow with red spots, 4 feet, Madame Crozy, scarlet with golden edges, 4 feet.

Some good geraniums are: Gen. Grant, scarlet; Madame Bruant, carmine; Alphonse Riccard, scarlet; Beauté Poitevine, salmon pink; S. A. Nutt, dark crimson. The dwarf variegated-leaved ones, like Madame Salleroi make very good edging plants and must not be grown for flowers.

There are many kinds of coleus, but the best are: Golden Bedder, yellow; Rainbow, maroon; Verschafelti, dark crimson. The best ageratum, Stella Gurney, has bright blue flowers. The best bedding begonia is Vernon, it has bronze-like foliage and red flowers. The best heliotrope is Queen of the Violets, a rich violet blue.

New York.

W. CLARK

Things Worth Trying

AFTER the "June drop" thin the crop of tree fruits and grapes. Leave about half, work for quality, not quantity.

Pot strawberry runners now, if you want to save a year on the fruit. Pinch off the ends, after the first joint, and let them root on an inverted sod, or in 2½ inch pots set level with the ground.

Do your canning outdoors. (r:230, 2:69) Can surplus strawberries, cherries, and Swiss chard. (r:254) These references refer to the volume and page of THE GARDEN MAGAZINE.

Try some tuberous-rooted begonias or tarweed (*Madia elegans*) in a shady bed where other plants fail.

Set out sprouted dahlia roots the first week in June. (r:235)

June 20th plant some gladioli in your shrubbery border for late September flowers, and make a planting July 1st.

Plant Virginia creeper against the cellar window, to keep the cellar cool. (r:133)

Peg down petunias and verbenas, and they will hide the ground.

Make a lath-house for your palms, and they will be much easier to care for this summer, and much healthier next winter. (r: 227)

One of the best and easiest ways to keep a greenhouse attractive all summer, with little care, is to grow a collection of fancy leaved caladiums.

Buy Mrs. Comstock's delightful "How to Keep Bees," and get an observation hive.



Gillet's Ferns and Flowers

For Dark, Shady Places

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Penstems, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the HARDY WILD FERN AND FLOWERS of New England. These we have been studying and growing for 25 years, and can help you in your selections. They are adapted for a great many places, and selections can be made for beautifying the dark corner by the porch, the shaded wall or hedge, shady hillside, wet places in both open sun, deep shade, dry woods and rocky places. Brilliant lobelias for planting in small brooks; dainty gentians for planting by brookside. Also Rhododendrons and other American shrubs.

Send for my illustrated "Descriptive Catalogue of over 50 pages, which tells about this class of plants."

EDW. GILLET, Southwick, Mass.



Jasco Coffee

Delicious beyond expression.

A blend that will please you even if you are the most critical connoisseur.

Jasco Coffee is blended from a selection of choicest coffees into a harmony that will delight you. Sold at the price of ordinary coffee.

Put up in air-tight screw-top tins that preserve the aroma and keep the coffee perfectly fresh until used.

5 lb. CAN, \$1.60 Express prepaid.

Ground, pulverized or bean.

Our broad guarantee—Your money back if not satisfactory. Send for a sample, mailed free if you mention THE GARDEN MAGAZINE.

A. J. SHELDON CO., Importers, 100 Frost St., New York

THE THOUSAND ISLANDS

will be more attractive than ever this season. The New York Central Lines Four-Track Series No. 10, "The St. Lawrence River from the Thousand Islands to the Saguenay" contains the finest map ever made of this region. Copy will be sent free, postpaid, on receipt of a two-cent stamp by George H. Daniels, Manager, General Advertising Department, Grand Central Station, New York.



REACH THE THOUSAND ISLANDS FROM EVERY DIRECTION

C. F. DALY W. J. LYNCH
Passenger Traffic Mgr. Passenger Traffic Mgr.
NEW YORK CHICAGO

THE POSTED MAN

IS A
KREMENTZ
MAN

The posted man never takes the just as good Button. He insists on the GENUINE ONE-PIECE

"Krementz"

He knows the quality is stamped on back of button. Made in gold and rolled plate. Easy to button and unbutton. Stays buttoned. If damaged in any way, exchange it for a new one at any dealer. All jewelers and Haberdashers. Booklet "Story of Collar Button" will post you. Shows all styles and sizes. Send for it.

KREMENTZ & CO.

95 Chestnut

Street

NEWARK, N. J.



GLADIOLI

\$5.00

For the "Diamond" Collection
"All the tints of the Rainbow"



Send 50 Cents and receive 12 bulbs of the "SILVER SELECTION" postpaid to any place in the United States or Canada.

Catalogue Free.

LADIES GOLD WATCH FREE

To Lady sending, before June 1st, the greatest number of words made from word "GLADIOLI," and ten cents for 1,000 Golden Popsy Seeds.

Willow Bank Nurseries, Specialist in Gladioli, Dept. M., Newark, Wayne County, New York.

"COUNTRY AND SUBURBAN HOUSES"

\$6,500 to \$30,000. (1906 edition), price \$2.00
\$2,000 to \$15,000. (1904 edition), price \$2.00

Both of these books are beautifully printed, the catenae being illustrated by half-tone engravings made from photographs and water color drawings; the floor plans are illustrated from carefully figured drawings. Also up-to-date estimates of cost, general specifications, chapters on decoration (interior), and general information on planning and building. COGNAC, ARTS, ENGLISH, BELGIUM, and other styles of ARCHITECTURE. Plans and specifications drawn for all classes of buildings. Special attention. House plans and building. The book is one of valuable assistance to one intending building.

WILLIAM D. DEWSNAP, Architect

American Tract Society Building, New York City



Country Homes of Famous Americans

If you send \$2.00 to two subscriptions to THE GARDEN MAGAZINE (your own and that of a friend who is not already a subscriber), also the names of the people interested in gardening (not merely subscribers) we will send you the portfolio "Homes of Famous Americans," eight and a half-page engravings, size 12 x 15 inches, express prepaid, as a premium. The pictures are suitable for framing and make for their historical interest. See superb engravings of old-fashioned gardens and beautiful homes. The portfolio was formerly sold by subscription for \$2.00. It is sent prepaid without any expense to you.

The Eight Pictures are as follows:

Lowell's House in Winter

Washington's Flower Garden

Side View of Emerson's House

William Cullen Bryant at Cedarhurst

A Winter View of Longfellow's Home

Arlington, the Home of Robert E. Lee

The Whittier Kitchen at Haverhill

The Old-Fashioned Garden at Cedarhurst

DOUBLEDAY, PAGE & CO., 133-137 East 16th St., New York

House & Garden

A Monthly Magazine

embodies the best efforts of the world's leading architects, landscape designers and writers on house and garden topics. Every number is finely illustrated with a wide range of photographs and plans—beautiful country places, garden scenes and other interesting subjects.

\$3.00 Yearly 25 cents a Copy

Cut out this advertisement and send it to us with your name and address and \$1.00 and it will pay for a five months' trial subscription. Very special, so write to-day.

THE JOHN C. WINSTON CO.
1003 Arch Street, Philadelphia, Pa.

DAHLIAS

If you are looking for something new and wish to keep up-to-date, send for free catalogue to winner of silver medal. Highest award to any American Firm for growing exhibit at World's Fair, St. Louis, 1904. May is the month to plant Dahlias.

EAST BRIDGEWATER DAHLIA GARDEN
J. K. Alexander, Prop. EAST BRIDGEWATER, MASS.



No. 45. This seat all boxed ready for shipment \$40.00. 9 feet length of front.

Old English Garden Seats
and Rustic Furniture.....

Send for Catalogue.

North Shore Ferries, Beverly, Mass.



[NOTE.—The editorial department has for some time past been giving the subscribers of The Garden Magazine individual answers to specific questions; a service that it is most pleased to render. Many subscribers have written expressing the opinion that a great deal of the special information thus given would be of immense interest to others, and have suggested an enlargement of this department of Questions and Answers. It is in response to this expression that the present form of arrangement is adopted.]

PROPAGATING PENNISTEMUS

G. R., NEW YORK.—Pennistemus are often treated as annuals, the seeds being sown in February in a warm place. Where large amounts are used, the pennistemus are treated as a perennial; but, because it is tender, it must be wintered in a frost-proof place. Dig up the roots before severe frosts arrive. In February or March, the latter month being early enough in the Northern States, divide the clumps into pieces small enough to go into three- or four-inch pots. Cut back the old leaves to within five or six inches of the crown and trim the roots. At first it will be better to place the clumps close together in flats, surrounding each piece with rich sandy soil, and placing them in a warm place—a greenhouse, heated or unheated, or in the window garden. When the new roots are well started (in about a month) shift the plants to the pots already mentioned and transfer to coldframes, where they can be grown until planting-out time.

SUMMERING FORCED AZALEAS

C. A. K., OHIO—Keep your azaleas in a light place, like a window, until all danger of frost is past, when they may be put out of doors. Azaleas, like all members of the heath family, are easily injured by too much or too little water; therefore see that the soil is always moist, never let it get dry, nor water-logged. Put the plants out of doors, when danger of frost is past. Better plunge them to the rim of the pot in well drained soil or coal ashes. This will keep the pots cool, preventing evaporation of water from them. Some people put their azaleas in the full sunlight during the summer; but it is better generally to put them where they can have the early morning and late afternoon sun, but are shaded during the midday. Sprinkle the foliage late each afternoon with the hose or force pump, and see that the under sides of the leaves are hit by the water, in order to dislodge the red spiders and thrips, which will do a great deal of harm, if not checked. In the fall store the plants in a cool, light place, where the temperature is from 35° to 45°. Keep them here until you are ready to force them.

KILL THE CUTWORM!

J. V., IOWA—The Oklahoma Experiment Station recommends this: Thoroughly mix while dry, one pound of Paris green and fifty pounds of wheat bran, make moist, but not sloppy, by adding water in which a quart of cheap molasses has been dissolved. Place this mixture in spoonful piles where the worms are working. It also has been found to be a good grasshopper poison.

VINES FOR SCREENS

R. L. S., OREGON—The Logan berry would probably be insufficient for a screen. Things which would cover your trellis, and give you a good show, are *Clematis Jackmani* and *C. paniculata*. Plant these together; the bittersweet (*Celastrus*), which has bright red fruits; the Dutchman's pipe, (*Aristolochia macrophylla*) with its curiously shaped flowers, and foliage of a deep, rich green color. A better foliage can be had in *Aethia quinata*, which bears clusters of small wine-colored flowers, which will make a dense screen, is the Actinidia, it has white, fragrant, inconspicuous flowers. The trumpet vine (*Tecoma radicans*), is a strong growing vine, with dark green foliage and showy orange and scarlet flowers four inches long which are borne in profusion from July to September. It climbs by means of aerial roots.

Superb Magnolias



Magnolia tripetala. Especially good for Tropical climates. Pure white flowers 8 inches across. Showiest red fruit.

The first time that all the hardy species known to science have been offered. The exquisitely beautiful flowers and luxuriant healthy foliage of the Magnolias make this a rare opportunity, for buying them in quantity at low rates, one of the richest offerings of the season. Plant them by the dozen—by the hundred, on the lawn, along the border of woodland and swamp. Hedge the garden with M. glauca, the Sweet Bay, the thick glossy foliage and creamy cups make an effective background for the flower border that is new and artistically good.

Sweet Bay. The thick glossy foliage and creamy cups make an effective background for the flower border that is new and artistically good.

	SIZE	PER 100	PER 500
Magnolia tripetala,	1-2 ft.	.35	2.00 15.00
M. "	2-3 ft.	.40	3.00 25.00
M. "	4-5 ft.	.60	5.00 50.00
M. "	5-6 ft.	1.00	10.00 80.00
M. glauca, Sweet Bay, 3 in.		.05	.40 3.00
M. "	1 ft.	.25	2.00 15.00
M. "	2 ft.	.40	3.00 25.00
M. macrophylla,	1 1/2 ft.	1.25	11.00 100.00
M. stellata,	3 in.	.15	1.20 10.00
M. "	1 1/2 ft.	1.50	12.00 100.00

M. Kobus, M. hypoleuca, 2 ft., \$1.00. M. Watsoni, M. parviflora, M. Yulan, 1 ft., at \$2.00. M. Soulangiana, 3 ft. \$1.50. Some can be shipped immediately and some reserved for the next season. Picking at cost.

General Nursery Stock

Shade and evergreen trees up to 30 ft. high shipped by the carload.

Send for our beautifully illustrated new catalogue. Visit the Nurseries in June. 22 Tree-movers for various types of trees and soil. Carry big trees up to 10 ft. diam. 60 ft. high, by 15 ft. wide, with the full natural root system spreading 30-40 ft. The permanency successful method

ISAAC HICKS & SON, Nurserymen and Scientific Tree-movers,
WESTBURY STATION, LONG ISLAND, N. Y.
Telephone 75 W

YOUR IRONING MADE EASY

You can save your strength, worry and three-quarters of your ironing time by using the Simplex Ironing Machine. It is the simplest, most practical and durable device of its kind on the market. It is endorsed wherever used.

Costs
Only
1 Cent
per hour
to
Operate



Booklet
FREE

Get Our
Approval
Offer

THE SIMPLEX IRONING MACHINE

"The World's Standard"

Does the best work and costs only one cent per hour to heat by gas or gasoline. Anyone can easily operate it. It makes ironing day pleasant for the entire household, besides saving labor and time for the women folks.

Let us explain our new approval offer. It will surely interest you. Write for FREE illustrated booklet, "The Passing of the Household Drudge."

AMERICAN IRONING MACHINE CO.

179 E. Washington Street

Chicago, Ill.

World's Champion Cow

The Guernsey cow here illustrated has proved herself the biggest butter producer in the world. This letter tells the story.



Milwaukee, Wis., Feb. 12, 1906.
My Guernsey cow, Yeksa Sunbeam, No. 15439, holds the World's record for a yearly butter-fat production, having made in a year 857.13 pounds of butter-fat. She also made 14920.8 pounds of milk testing 5.75% fat, this is the largest amount of milk produced in a year by any Guernsey cow.

The butter exhibited from my farm was awarded **FIRST PRIZE** over all at the State Dairymen's Convention at Waukesha, Wis., scoring 97 1/2 points. I use the United States Cream Separator, of which I have three on as many farms.

Don't miss the point of this story: **GOOD COWS** and the

FRED RIETBROCK.

U. S. CREAM SEPARATOR

is a combination that means biggest profit to dairymen. You feed your cows to produce rich milk, and to get the most butter-fat from that milk you need a U. S. Cream Separator because it **Bolds the WORLD'S RECORD for CLEAN SKIMMING.**

Our new, handsome 1906 catalogue tells all about the U. S. Read it before you put any money into a cream separator. Just write us, Send catalogue number SEVEN. You'll get one by return mail. Better buy 10c p-per don't and write as now while you think of it.

VERMONT FARM MACHINE CO.

Bellows Falls, Vermont

Eighteen centrally located distributing warehouses throughout the United States and Canada. Prompt delivery. 436



Keep Your Drives Clean.



Don't Dig Weeds

Kill them with **THISTLEINE**. Spray the walks, driveways and gutters with **THISTLEINE**. **ONE SPRAYING WILL KEEP THEM FREE FROM WEEDS AND GRASS THE ENTIRE SEASON.** Kills Dandelions, Burdock and Canada Thistles. **5-POUND CAN OF THISTLEINE** will make sufficient solution to **SPRAY 40,000 SQUARE FEET.** Price, \$2.00. If your dealer doesn't keep it, send money direct to **LINDGREN CHEMICAL CO., 26 Scribner St., Grand Rapids, Mich.**

Used for four years by city of Grand Rapids and officially endorsed.



*It's daylight all the way by the
KODAK System. Loading, un-
loading, developing, printing—all
without a dark-room.*

"A Kodak Morning."

The Kodak,

The Kodak Tank Developer, and Velox Paper, have made the process of finishing the pictures as simple as pressing the button.

Kodaks, \$5 to \$108. Kodak Tank Developers, \$2.50 to \$7.50.

EASTMAN KODAK CO.

ROCHESTER, N. Y., *The Kodak City.*

Catalogue free at the dealers or by mail.

JULY

1906

Vol. III. No. 6

A Garden Planted After July 4th—Hot Weather Salads, Fruits
and Flowers—Vegetables for July Planting—Midsummer Suggestions

10c.

\$1.00 a Year

THE GARDEN MAGAZINE



The World's Work



Country Life in America



Farming

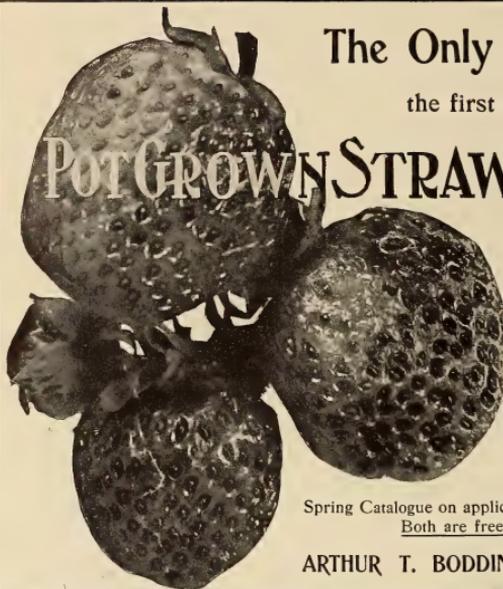
CHICAGO

1515 Heyworth Building

DOUBLEDAY, PAGE & COMPANY

NEW YORK

133-137 East Sixteenth St.



The Only Way to secure a good crop of Strawberries
the first season after planting is to plant

POT GROWN STRAWBERRY PLANTS

Offer

the following select varieties for all purposes for delivery in July and August at 75c. per 12; \$3.50 per 100; \$25.00 per 1000.

- August Luther.** Extra-early; perfect.
- Bederwood.** Early; perfect flowering.
- Brandywine.** Midseason to late; perfect flowering.
- Bubach.** Midseason; pistillate.
- Clyde.** Early; perfect flowering.
- Excelsior.** Extra-early; perfect.
- Wm. Belt.** Midseason; perfect.
- Gandy.** Late; perfect flowering.
- Glen Mary.** Midseason; perfect.
- Marshall.** Midseason; perfect.
- McKinley.** Midseason; perfect.
- New York.** Midseason; perfect.
- President.** Midseason; pistillate.
- Sharpless.** Midseason; perfect.
- Uncle Jim.** Midseason to late; perfect.

For other varieties, also large quantities, write.

Spring Catalogue on application. Fall Bulb Catalogue now in course of preparation. Both are free; send in your name and have it registered.

ARTHUR T. BODDINGTON, 342 West 14th Street, New York City



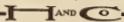
A Man's Hobby



EVERY MAN should have a hobby; most men have, and its amusing to note the enthusiasms with which each man talks about *his* hobby. Take the man who makes a hobby of his greenhouse: he may start in with a fondness for flowers, plants and all sorts of growing things, but with this sort of hobby there is a fascination in the work which grows from day to day, and in return for the small amount of time he gives it; he gets actual tangible returns not alone in fresh blooms, and vegetables of rare delicacy and flavor, but in this working with Mother Earth he unconsciously breathes in a healthfulness that invigorates his tired and jaded physical and mental body.

Of course, this speaking of the greenhouse as a hobby is simply the story of what many men get out of it, but there's a deal of truth running between the lines well worth thinking about. Talk it over with us *now*.

HITCHINGS AND COMPANY
Greenhouse Designers and Builders
Manufacturers of Heating and Ventilating Apparatus
1170 BROADWAY, NEW YORK



Keep Your Drives Clean.



Don't Dig Weeds

Kill them with THISTLEINE. Spray the walks, driveways and gutters with THISTLEINE. ONE SPRAYING WILL KEEP THEM FREE FROM WEEDS AND GRASS THE ENTIRE SEASON. Kills Dandelions, Burdock and Canada Thistles.

5-POUND CAN OF THISTLEINE will make sufficient solution TO SPRAY 40,000 SQUARE FEET. Price, \$2.00. If your dealer doesn't keep it, send money direct to **LINDGREN CHEMICAL CO., 26 Scribner St., Grand Rapids, Mich.**

Used for four years by city of Grand Rapids; and officially endorsed.

TIFFANY & Co.

Fifth Avenue and 37th Street, New York

Silverware at Attractive Prices

Tiffany & Co. are strictly retailers, and as they manufacture solely for their own trade, their designs do not lose individuality through over production or extensive sale by other dealers

Articles quoted are of English Sterling quality, 925-1,000 fine

Bonbon and Hors d'Œuvre dishes, each, - - -	
- - -	\$4.50, \$7.00, \$8.00, \$9.00, \$10.00, \$12.00 upward
Candlesticks, each, -	\$5.00, \$10.00, \$12.50, \$16.00 upward
Tall Baskets for bonbons or flowers, each, - -	
- - -	\$10.00, \$11.00, \$15.00 upward
Tall Compotiers, each, -	\$13.50, \$16.00, \$21.00, \$25.00 upward
Flower Vases, each, - - - - -	
- - -	\$15.00, \$20.00, \$23.00, \$25.00, \$32.00 upward
Bowls for berries or fruits, each, - - -	
- - -	\$20.00, \$25.00, \$28.00, \$30.00, \$35.00 upward
Tete-a-Tete Sets, -	\$48.00, \$55.00, \$64.00, \$70.00 upward
Coffee Sets, -	\$50.00, \$55.00, \$65.00, \$80.00 upward

Cuts or Photographs Upon Request

Silverware on Approval

Upon receipt of satisfactory references from any National Bank or responsible business house, Tiffany & Co. will send on approval selections from their stock to any part of the United States

Fifth Avenue New York

Sterling Silver
Forks & Spoons
\$1.00
per Ounce

This method of marking prices furnishes purchasers with exact information as to weights and enables them to compare values more readily with articles for similar uses sold elsewhere

Prices per Dozen

Tea Spoons,
\$11 to \$19

Dessert Spoons,
\$18 to \$30

Soup or Table
Spoons, \$25 to \$46

Breakfast, Entrée
or Dessert Forks,
\$17 to \$28

Dinner or Table
Forks, \$23 to \$39

Wedding
Stationery

Marriage announcements, invitations for house or church weddings, admission cards, etc. Samples and prices upon request

Tiffany & Co.
1906 Blue Book
Second Edition

A compact 530-page catalogue, without pictures or cuts, but replete with descriptions, prices and helpful suggestions of artistic merchandise suitable for wedding presents, sent free upon request

The easiest and the pleasantest way to know the trees is through

The Tree Book

By JULIA E. ROGERS

"This is the most valuable, accurate and elaborate book ever published in America on our native trees."—*New York Herald.*

The 350 beautiful photographic illustrations show bud, blossom, full leaf, fruit and wood of all the important species. 16 plates in color. Net, \$4.00 (Postage, 34c.)

Here is one of the most fascinating nature books it has ever been our good fortune to publish:

The Frog Book

By MARY C. DICKERSON

Frogs and toads have been comparatively neglected in nature study, but this book contains a wealth of original observation and pioneer work that is a real contribution to science. It is an ideal volume in the nature series we have long been issuing—a work of reference which is authoritative and complete, yet full of vital interest and as readable as "nature fiction."

16 plates in color and nearly 300 black and white photographs from life by the author. Net, \$4.00 (Postage, 40c.)



DOUBLEDAY, PAGE & COMPANY

133 East
16th Street

New York City

*How to
Buy
Life
Insurance*
By "Q. P."

CONSIDER: This is the only book on *Life Insurance* which treats a policy as merchandise, and tells the man who is thinking of insuring how to buy intelligently. A book that it is a duty to read—and written in words simpler than your policy.

(*\$1.30 postpaid.*)

DOUBLEDAY, PAGE & CO., 133 E. 16TH ST., NEW YORK CITY

SERVICE FOR READERS OF THE GARDEN MAGAZINE

The publishers of THE GARDEN MAGAZINE will be glad to give its readers information on points relating to gardening, the country home and grounds, and advise where equipment and supplies not found in the advertising pages can be obtained. Address

READERS' SERVICE DEPT., THE GARDEN MAGAZINE
133-137 EAST 16th STREET, NEW YORK

YOUR GOOD TASTE BESPEAKS A COPY OF

The International Cook Book

By ALEXANDER FILIPPINI

Formerly of Delmonico's

Author of "The Table"



HIS is the world's cook book. It is replete with rare and deliciously original dishes, drawn from the author's wide experience and years of travel here and abroad. There are nearly 3,500 recipes in all—a veritable encyclopedia representing countries all over the globe.

Two washable bindings, white seal grain and red Morocco grain. Net, \$4.80 (postage 48 cents).

DOUBLEDAY, PAGE & CO., 133 East 16th Street, New York City

The Garden Magazine

THE NEW TEMPORARY BINDER



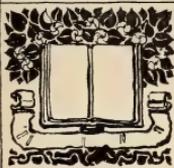
Is very convenient and will hold copies until volume is complete and ready for permanent binding. It is worth its cost several times over each year. You will have the copies together when you need them, and it will last for years for succeeding

volumes. Black cloth, neatly stamped in gold. Made on an improved pattern.

Price \$1.00 prepaid

DOUBLEDAY, PAGE & COMPANY
133-137 East 16th Street, New York

THE TALK OF THE OFFICE



"To business that we love we rise betime
And go to 't with delight."—*Antony and Cleopatra*

BOUND VOLUMES

Volume III of THE GARDEN MAGAZINE ends with the July Number.

THE GARDEN MAGAZINE is a permanent cyclopaedia of useful information to everyone interested in the growing of flowers, or vegetables for the table. The price of these bound volumes is \$1.35, while they last, or we can furnish a cover for local binders for 50 cents. Should our readers desire it, we will



bind their copies for them for 75 cents, they to pay the expressage both ways. The great demand for these bound volumes is evidenced by the fact that Volumes I and II are now selling at a premium—\$2.00 per volume.

THE GARDEN MAGAZINE FOR AUGUST

August is the month for planting evergreens, and Mr. John W. Duncan, of Boston, tells of the Best Ten Conifers. He gives information as to the kinds best adapted for various purposes, whether they are to be used as windbreaks, or as specimen trees. Miss I. G. Taber contributes a plan for planting an evergreen border. This plan is entirely new, and has many unique features; it is laid out in "bays" to increase the perspective of the yard. A planting list of the best varieties to use is given, and how to plant them.

Now is the time to get the greenhouse built, if it is to be ready for the winter. "The

Real Thing in Greenhouses" is an article by Mr. Leonard Barron, and tells all one needs to know about the best types. To have flowers from Christmas to May without much trouble is an attractive proposition, and how to do this, with a small greenhouse, is told by Mr. P. T. Barnes in "The Wonders of a Cool House." Other articles are:

Currants and Gooseberries, by Prof. S. W. Fletcher.
Our Native Orchids,
Balls for August Planting,
Growing Herbaceous Plants from Seed,

and many others.

THE JULY FARMING

The keynote of the July Number of *Farming* is the work that should be done that month. "Getting the Full Value of the Hay Crop": it is believed that the value in the United States is next to wheat, yet it is perhaps the most neglected crop that farmers raise. The Angora goat has been much talked about, and the possibilities they possess for farmers in the various parts of the country are discussed in "The Truth about Angora Goats." The alfalfa expert, Mr. J. M. Westgate, in a well illustrated article, describes the possibilities of alfalfa for farmers. Any crop that can be cut five times in one year is worth knowing about. In the United States there are about 1,000,000,000 acres which, until recently, have been unavailable for agriculture on account of insufficient rainfall. "The Possibilities of Dry Farming" tells of subsurface packing to obtain moisture, and dry mulching to prevent its evaporation, which will make a large portion of the vast tract available for agricultural purposes. Polled Herefords are a new and very promising breed that has been originated in response to a general demand, and they are discussed at length for, perhaps, the first time in an agricultural magazine.

This is the time above all others to read and study Nature Books. For some years we have been at work building up a list of books on this subject in all its various branches. Here is a bare list.

The Nature Library:

Bird Neighbors,	Moths,
Game Birds,	Butterflies,
Bird Homes,	Insects,
Animals,	Wild Flowers,
Fishes,	Mushrooms.

Send for prices in various bindings—Buckram, Half Leather, and Full morocco.

The Little Nature Library:

How to Attract the Birds.....	\$1.35 net
Nature Biographies.....	1.35 net
Nature and the Camera.....	1.35 net
The Nature Study Idea.....	1.00 net
Among the Water Fowl.....	1.35 net
The Brook Book.....	1.35 net
Our Native Orchids.....	1.35 net
Flashlights on Nature.....	1.35 net

Other Nature Books:

The Tree Book.....	\$4.00 net
The Frog Book.....	4.00 net
Color Key to North American Birds.....	2.50 net
The First Book on Farming.....	1.00 net
North American Birds' Eggs.....	2.50 net

Add 10% for postage if ordered by mail.

If you are in New York, call in and examine our books, magazines, and pictures. Our Library Salesroom is for your convenience.

THE WORLD'S WORK UPLIFT NUMBER

The World's Work has always been a cheerful and optimistic magazine, but this year it devotes nearly the whole of the July issue to the good things which are being done in the work of the world.

Readers of THE GARDEN MAGAZINE will take pleasure we are sure, in receiving *The World's Work*, and we ask them to send \$1.00 for a "rest of the year" subscription. Use this blank:

DOUBLEDAY, PAGE & COMPANY
133 East 16th Street, New York City

Enclosed find \$1.00 to pay for a "rest of the year" subscription to *The World's Work* July to December, 1906, inclusive

Address.....

C. M. P.

The Best Way to Study Nature

John Burroughs tells us that most of our song birds have three notes, expressive of love, alarm and fellowship. In the bluebird, for instance, he says; "I recognize a simple plaintive call uttered in the air by the migrating birds, both fall and spring, and which is like the word 'pure,' 'pure'; then the animated warbling calls and twitterings, during the mating season, which are uttered in a fond, reassuring tone, usually accompanied by that pretty wing gesture; then the call of alarm when some enemy approaches the nest, or a hawk appears. This last note is soft like the other, but the tone is different: it is sorrowful and apprehensive."

Any one who has had even a little dip into the delights of nature, knows with what a thrill each bird friend is welcomed back in the spring, and is watched during the summer, and how much a friendship with some of the flowers, and trees and insects, has added to the joy of living.

Country Life in America has founded for the benefit of its readers THE NATURE CLUB OF AMERICA. The objects of the Nature Club is to furnish persons interested in nature the utmost assistance possible in their studies. The work of the Club will be conducted by some of the most eminent naturalists in this country, and thus it will be possible for every member to get personally any particular nature information he wants, and to be sure that it is authoritative. Membership to THE NATURE CLUB OF AMERICA is absolutely free to subscribers of the magazine.

You may now study nature, either by yourself



JOHN BURROUGHS AT SLABSIDE

or with a Local Club Chapter, and get all the advice and suggestions you want free of cost. The Nature Club is really a correspondence course in Nature Study, but without any red tape. You simply use it when you need it.

The Officers of the Nature Club of America

Secretary, ANNA BOTSFORD COMSTOCK
a distinguished teacher of Nature Study at Cornell University

ADVISORY BOARD

JOHN BURROUGHS
DR. B. W. EVERMANN
U. S. Bureau of Fisheries
C. WM. BEEBE
New York Zoological Park
ERNEST THOMPSON SETON
A. RADCLIFFE DIGMORE
DR. L. O. HOWARD
Chief of Bureau of Entomology,
U. S. Department of Agriculture
JULIA E. ROGERS

Practical Books for the Garden

Ferns and How to Grow them

By G. A. WOOLSON.

An authoritative little hand-book, dealing with the growing of hardy ferns both in the garden and indoors. Profusely illustrated. Net, \$1.10. (Postage 10c.)

Roses and How to Grow them

A very practical volume, uniform with the above. Profusely illustrated. Net, \$1.10. (Postage 10c.)

How to Make a Vegetable Garden

By EDITH L. FULLERTON.

A real necessity for a suburban or a country home. 250 beautiful photographic illustrations. Net \$2.00. (Postage 20c.)

How to Make a Flower Garden

A charming and practical book by experts on every branch of the subject. 219 beautiful photographic illustrations. Net, \$1.60. (Postage 16c.)

How to Make School Gardens

By H. D. HEMENWAY.

Illustrated, (\$1.10 postpaid.)

How to Plan the Home Gardens

By SAMUEL PARSONS, JR.

Illustrated. (\$1.10 postpaid.)

A Plea for Hardy Plants

By J. W. ELLIOTT.

Beautifully illustrated. (\$1.76 postpaid.)

What Nature Club Members Will Get:

I. Personal Advice and Aid in Nature Work

Members will receive from the National Secretary advice on any nature matter, help in the identification of field specimens, suggestions as to books, courses of study, and so on. You have only to write to the Secretary.

II. Plans for Field Excursions

Furnished by the Secretary; where to go, what to study, what to take.

III. Oversight of Local Clubs

Direction of meetings, courses of study, field work.

IN THE NATURE CLUB OF AMERICA *Country Life in America* gives its subscribers benefits that no other organization could give. But it can only be made a great organization by the enthusiasm and co-operation of its members. We want your support.

Send your name to the Secretary and a membership certificate will be forwarded at once free of charge. N. B.—A pamphlet fully describing THE NATURE CLUB OF AMERICA and outlining special advantages to local clubs, will be forwarded upon request.

APPLICATION FOR MEMBERSHIP

THE SECRETARY—THE NATURE CLUB OF AMERICA

133 East 16th Street, New York

I hereby apply for membership in The Nature Club of America.

Name _____

Address _____

I enclose \$4.00 for a year's subscription to *Country Life in America*.

(If you are now a subscriber, cross out the above line and send no money.)

COUNTRY LIFE IN AMERICA  THE WORLD'S WORK FARMING  THE GARDEN MAGAZINE 

DOUBLEDAY, PAGE & CO. NEW YORK.

CONTENTS

JULY, 1906

	PAGE		PAGE
THE GARDENER'S REMINDER - - - - -	317	IMPORTANT VEGETABLES FOR JULY PLANTING	<i>James T. Scott</i>
QUALITY LETTUICES FOR THE HOME GARDEN - - - - -	318		Photograph by John Craig 332
			<i>L. and E. M. Barron</i>
		THE BEST HARDY PLANTS OF THE HEATH FAMILY - - -	334
THE TENDER DAY-BLOOMING WATER LILIES - - - - -	321		Photograph by H. Troth and N. R. Graves <i>John Dunbar</i>
		BETTER STAKES OR NONE - - - - -	340
A ROUND-UP OF THE GARDEN PEPPERS	325	PREPARE FOR FALL AND WINTER VEGETABLES - - -	342
			<i>E. D. Darlington</i>
RASPBERRIES, BLACKBERRIES AND DEWBERRIES - - - - -	327	SPRAY GRAPES THREE TIMES IN JULY - - - - -	346
			Photographs by the author
A GARDEN PLANTED AFTER JULY FOURTH - - - - -	330	AN IRIS EXCURSION - - - - -	350
		ANSWERS TO QUERIES - - - - -	352
		THE EASIEST WAY TO CAN - - - - -	<i>E. M. Barron</i> 354

WILHELM MILLER, EDITOR.—COPYRIGHT, 1906, BY DOUBLEDAY, PAGE & COMPANY

Entered as second-class matter January 12, 1905, at the post-office at New York, N. Y., under the Act of Congress, March 3, 1879.



Luxury unites with economy, and radiant beauty with healthfulness in "Standard" Porcelain Enameled Baths and One - Piece Lavatories.

Each piece of "Standard" Ware is the most beautiful—the most economical and satisfactory for whatever purpose it is designed.

"Standard" Ware adds a distinctive note of good taste to the home—brings the self-gratification of owning the best and the keen satisfaction of lasting service. Its hard, smooth, china-like surface is sanitary perfection, yet underneath is the durability of iron. "Standard" Ware is a modern home necessity—indispensable to the health, comfort and convenience of every family. Its always moderate cost is only true economy when measured by the service test.

CAUTION: Every piece of "Standard" Ware bears our "Standard" Green and Gold guarantee label, and has our trade-mark "Standard" cast on the outside. Unless the label and trade-mark are on the fixture it is not "Standard" Ware. Refuse substitutes—they are all inferior and will cost you more in the end. The word "Standard" is stamped on all of our nickel-plated fittings; specify them and see that you get the genuine with your bath and lavatory, etc.



Our book "MODERN BATHROOMS" tells you how to plan, buy and arrange your bathroom and illustrates many beautiful and inexpensive rooms, showing the cost of each fixture in detail, together with many hints on decoration, tiling, etc. It is the most complete and beautiful booklet on the subject and contains two pages.

Standard Sanitary Mfg. Co. Dept. 37, Pittsburgh, U. S. A.
Offices and Showrooms in New York: "Standard" Building, 35-37 West 31st Street.
London, England, 22 Holborn Viaduct, E. C.

The Garden Magazine

VOL. III.—No. 6
PUBLISHED MONTHLY

JULY, 1906

ONE DOLLAR A YEAR
TEN CENTS A COPY



How to Make your Garden Cost you Nothing

THERE is a Canadian amateur who has spent about \$300 for seeds, plants, and bulbs during the last ten years, and every cent of it has come out of the garden, although he has never sold a thing.

The prizes that he wins have covered all the cost of his garden—tools, fertilizers and all—for nearly fifteen years. It doesn't pay for his time, but no amateur has a right to count that. The point is that this prize money enables him to try all sorts of new things which he could not otherwise afford.

Is it too late for you to compete for any of the prizes offered by your local improvement society, or by the seedsmen? Better make sure. Don't guess.

If it is too late, here is a chance for you to make a little something without compromising your dignity or amateur standing.

Read "Record-Breaking Experiences in Gardening," in the Christmas number. The amateurs who wrote those articles received anywhere from \$5 to \$15. You can do something like that, and it may pay you better than any prize your county fair offers to gardeners.

We will pay \$5 for every acceptable photograph, accompanied by dates, figures, and methods of cultivation, showing that you have improved upon anything pictured or described in any number of the GARDEN MAGAZINE, provided you remind us of this offer.

But, of course, we shall take more pleasure in awarding these prizes for new and original experiences. What are you cultivating that is new, earlier, bigger, longer in season, or of better quality?

You still have time to concentrate upon some record-making achievement. If you are at a loss for ideas, consider whether you can do any of the things suggested on this page. If you can beat any of the dates here mentioned, it should constitute an achievement worth photographing and recording.

For example, we want to publish in our Spring Planting Number for April, 1907, the

best article that has ever appeared on "How to Have Vegetables in the Cellar All Winter." We never expect to find any one person who has had a sufficiently wide and satisfactory experience to write this article. So we want suggestions from every part of the country.

Won't you help us get a planting table for winter vegetables, and photographs of all sorts of devices for storing them?

THREE CROPS ON THE SAME GROUND

These are not theoretical propositions. Every one of them has been carried out by Mr. William Scott, of Tarrytown, New York. Follow these plans, and you will exhaust your soil less than if you grow peas after peas, etc. Also, you will avoid some troublesome insects and diseases which you might get by planting some two members of the same botanical family in succession. If you know any better combinations for the same period, won't you tell us? We might be grateful to the extent of \$5.

1. Plant Purple-top turnips June 17th, after early cabbage, (set out April 14th). The turnips should be harvested by August 18th, and the plot can be sown to winter beets.

2. Sow early Valentine beans June 15th, or whenever your first crop of spinach is gone. The beans should be ready August 16th, afterwards sow Yellow Stone turnips for winter.

3. Transplant young lettuce June 18th, or whenever early beets have been harvested. This crop of lettuce should be harvested by August first, and string beans can follow.

4. Sow corn June 20th, on land from which you harvested early peas, sown April 6th.

5. Sow lettuce June 20th, on land where early turnips sown April 6th have been harvested. This lettuce should be harvested by August 20th, when you can sow spinach, for October use.

6. Set out cabbage plants June 27th on land from which early carrots sown April 8th have been harvested.

7. Sow winter carrots June 28th, on land from which string beans sown April 18th have been harvested.

8. Plant winter celery July 25th on land from which early corn planted April 15th should be harvested.

INSURE AGAINST FALL SHORTAGE

The chief reason why most gardens have so little variety in September, and almost nothing in October, is that somebody neglected to plant succession crops in July. Try some of these schemes, and keep a full accurate account of what you get.

It is not necessary for you to beat these particular dates, or their equivalents for your locality. Quantity, length of yield, and quality are more important.

First, and most important, sow Cory sweet corn July 1st and 15th, for September use. (It has been known to mature in less than 60 days.)

Next to corn, the most important vegetable for succession is the snap bean. You should sow Early Valentine every fortnight from June 15th to August 1st, if you don't want a big gap in September and October (Beans should mature in 45 days).

Sow Daniel O'Rourke or other early peas June 15th, July 1st and 15th, in a cool, partially shaded spot, for September use. Peas don't like hot weather, but these three plantings should give you one good crop when your neighbors have none. (Record 36 days.)

You can't have fresh cucumbers in September unless you sow them about June 15th. Use the Early White Spine. The normal time to sow cucumbers for pickles is June 15th to July 7th. Thus you avoid fighting the beetle.

Sow Eclipse beet July 1st and 15th for fall use—*not* for storage. Should mature in 50 days.

Get acquainted with summer and autumn radishes. Sow White Stuttgart about July 1st. In 6 or 8 weeks it becomes 3 or 4 inches in diameter, and does not get pithy in hot weather for a long time.

Nature's hot weather substitutes for lettuce and spinach are endive and New Zealand spinach. Sow each once in June and once in July, "for August delivery."

A SEED ORDER IN JULY!

Who ever heard of such a thing? No one! But that's no matter. Try these new things, and you will not regret it. Clinch the matter by ordering the seeds to-day. We venture to say you do not know half of these varieties.

Any time in July buy celery plants of some winter variety (e. g. Pascal, Fin de Sicile) not the early sorts, like White Plume.

Sow Hubbard squash before June 20th, for winter use. Plant among corn, 1 inch deep and allow them 4 x 6 feet. Should mature in 125 days.

Ask your seedsmen for an improved variety of Purple-top turnip. Sow once any time from June to August.

Sow Long Orange or Danvers carrot before July 20th. To be stored in boxes of damp sand in the cellar.

Do you know the pleasure of having winter radishes? Sow the Half-long Black Spanish winter radish once between June 15th and July 15th. The roots become 7 to 10 inches long, and after being stored in a dry cellar require two or three months to mature. Flesh white, mild, crisp.

Quality Lettuces for the Home Garden—By L. and E. M. Barron New York

THE SECOND OF A SERIES OF ARTICLES BY TWO CONNOISSEURS IN WHICH THE ATTENTION IS CONSTANTLY FOCUSED UPON QUALITY FROM THREE POINTS OF VIEW HITHERTO ABSURDLY DIVORCED, VIZ., VARIETIES, CULTIVATION, COOKING

With illustrations kindly furnished by the U. S. Department of Agriculture

WITH more than a hundred really distinct varieties (which are known in the trade under fully three times as many names) the amateur gardener may well stand agast in the confusion when he wants to select one or two best lettuces for home use.

Assuming that a wise selection of the variety has been made in the first place, quality in lettuce depends upon the plants being grown ahead without a check, and in their being served at the table when fresh and full of water. A flagged lettuce is a bad lettuce. Take that as an axiom; and if you want to preserve the best that is in any variety, keep the cut heads cool, and in a place where the air is not drying. The

proper time to cut the heads is in the early morning, before the exhausting heat of the sun has had time to lower the water content; failing this, gather in the evening, after sundown, rather than in the middle of the day. But gather at any time, rather than go without lettuce for salad.

The lettuce is a cool weather plant, and does not thrive in the South, except for early crops along the coast. It demands a moist, loose open soil, in which its roots can travel freely. Water it must have in abundance, but a constantly water-logged soil is bad.

The grand fact about lettuce is that it will grow on almost any soil. For exact results, you should sow the seed in a bed of fine soil, or in a frame for early crop, transplanting as needed. We have a habit of dropping a few lettuce seeds into odd spaces anywhere in the garden, and so always have plenty of young plants available. If they are not needed, the loss is nothing. When transplanted, set at twelve inches apart.

Another way is to sow thickly, and thin out as the plants develop, using the thinnings as salad, even from the very first. These very young plants are a toothsome delicacy.

The quickest growing lettuces, such as Tennis Ball White Seeded, a butter heading kind, mature in about 55 days; the latest require 85 to 90 days. But the majority of the popular kinds are intermediate, and mature in about 70 to 75 days. For quickest results the bunching kinds answer best, because they can be cut at any stage, whereas a heading lettuce must be allowed to develop a solid heart.

Lettuce may be divided culturally into two great groups: (1) suitable for growing in the open, and (2) suitable to indoor culture. A few fit into both divisions, but generally the distinctions are well marked. For the present only the garden kinds are considered.

THE MAIN TYPES OF PLANTS

There are three big groups of lettuce

which are easily recognized: 1, Butter; 2, Crisp; 3, Cos.

Varieties of the "butter" class are most generally regarded as the best quality, and are especially valuable for home growing. Some of the best of these, such as Half



Butter heading. The ideal for the home gardener. Tender, delicate in flavor, and making a solid head. California Cream Butter succeeds well in all sections. Good for summer and stands over winter.



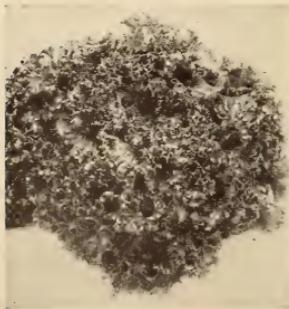
Crisp heading. Valuable because it self-blanches and is so hard that it withstands rough handling. Hanson, one of the most largely grown varieties, and possibly the very best for summer use.



Cos bunching. The best type for serving as cooked greens. Leaves hard, but very sweet. The cos varieties are good for summer use. This variety, Express, is the earliest of its class.



Butter bunching. Leaves tender, generally pale or yellowish green. The highest quality in lettuces is found in the butter varieties. (Lancaster, medium quality, but grows well under shade, in the South)



Crisp bunching. Leaves hard and generally strong flavored. Good for shipping. Grand Rapids, one of the ten most largely grown varieties, chiefly for forcing. Poor quality outdoors



Cos loose. Large, late, good for summer use. Does not bolt to seed. Popular in Europe, but little grown in America. Bath cos not so coarse as the other cos varieties

THE SIX TYPES OF LETTUCE. THERE ARE TWO MAIN DIVISIONS, (1) HEAD OR CABBAGE, AND (2) BUNCHING, OR LOOSE



Ballimore Oak-leaved butter bunching. A peculiar variety, with lobed leaves, grown in the South, but very poor quality. Slow to shoot to seed



Asparagus. A peculiar cos sort but little grown. Good for cooking; or the large hard midrib may be served like celery. The leaf is of very poor quality



Prize Head is the most largely grown of all the crisp bunching varieties. Slow to shoot to seed, and excellent for summer use. Quality good

Century and Hartford Bronzed Head are so delicate and so tender that only real connoisseurs care to grow them. The leaves of this class are soft, almost oily in texture, the veins small, and the edge of the leaf smooth, or nearly so.

The "crisp" varieties are harder of texture, the leaf is more or less fringed, and the midrib and veins are large. Grand Rapids is a well-known variety of this type, which is a favorite with market gardeners, because the harder, crisper leaves stand shipping so much better than do the soft ones of the butter class.

In the "cos" or "romaine" lettuce we get a totally distinct type of long, very hard leaf, with coarse midrib and veins. They stand shipping well, and are much stronger in flavor than either of the others. For table use the leaves generally have to be cut, as they do not break easily, and so they make a less attractive appearance than either butter or crisp kinds. English gardeners and English cooks rate the cos lettuces very highly, but its quality in America is not up to the British standard. These varieties are good for hot weather, however, and have a pungency and sweetness quite different from what is found elsewhere. The amateur should try a few plants of Paris White Cos.

THE "CABBAGE" AND "BUNCHING" HEAD

Not all lettuces make solid heads. People who like the young, tender, blanched inner

leaves of cabbage-head lettuce must be careful to select a variety that is not a "buncher." Each of the three classes already described contains varieties that are normally either heading, or bunching, though in describing the cos class the terms "self closing" and "loose" are used to express the same ideas.

All these points are worth knowing when studying the catalogues to decide upon one's purchase. We would never grow a bunching variety for our own use, in spite of the big fact that Prize Head, a distinctly bunching crisp, is the most largely grown of all the hundred varieties offered in the trade to-day.

Broadly speaking, the season of a head lettuce is shorter than that of a bunching, because when it begins to "bolt" or "shoot" to seed, its head is spilt, and it is rejected, whereas in a bunching variety the beginning of a "bolt" is not so evident. The remedy is to make many successive sowings. Moreover, it is easier to grow the bunching varieties.

COLOR AND QUALITY

Generally the best quality (delicacy of flavor and tenderness of texture), is associated with pale, thin foliage. The thick, coarse, and green leaves of the Big Boston are decidedly poorer in all the "quality" attributes. Some varieties have more or less brown on the leaves, which is sometimes thought to indicate intensity of flavor, but it is an utterly unreliable guide to quality, as Hartford Bronzed Head is probably one of

the very highest in quality—tender and delicate to a superlative degree.

LETTUCES FOR SPECIAL PURPOSES

The most popular varieties—that is, those whose names have come to be a household word among us; Big Boston, Grand Rapids, and Prize Head, for example,—naturally do not represent the highest degree of quality. The most popularly known are those that are notoriously good shippers, whereas the actual standard of value for the home garden could be measured inversely by that standard.

We want the tenderest, most delicately flavored, not necessarily large; and even the quality of cropping uniformly may be a disadvantage, giving a plethora of heads for a few days, and then nothing. Here are some selections by Mr. W. W. Tracy, Jr., of the U. S. Department of Agriculture, who has grown all the lettuces offered by the seedsmen.*

FOR HOME USE

Deacon, butter heading, thick, soft leaves, grows everywhere: Good for summer, intermediate season.

Hartford Bronzed Head (Crisp-as-Ice) butter heading, dark brown foliage, intermediate season, good for summer.

*American Varieties of Lettuce, Bulletin No. 69, Bureau of Plant Industry. This is the best monograph of any vegetable yet published and it is to be hoped that others of the same stamp will be forthcoming.



Big Boston, a popular butter heading lettuce for late summer and autumn use. Grows well everywhere, but there are better quality varieties



Asparagus Lobed-leaved, larger and slower to shoot to seed than Asparagus, but no better in quality. Rough, hard, and rank flavor, except the midrib



Black Seeded Simpson, crisp heading, is recommended for use in the dog days. Its quality is not of the best, but it is reliable and easily grown



Extreme type of crisp leaf, Denver Market. This is the most blistered and crumpled of all the lettuces

New York, crisp heading, late. Sweet, but not butter flavor; a standard summer variety, useless for wintering.

Prise Head, crisp bunching, early, leaf thin brown, grows well everywhere, and is especially favored in the west. Soon wilts when cut.

Mignonette, crisp heading, small, second early, and does not quickly bolt to seed. Excellent quality, the tenderest and most delicate of the crisp varieties. Very hard head. Good for spring and fall sowing.

Black Seeded Simpson, crisp bunching, intermediate to medium late. Grows anywhere. This is the most easily grown, and most reliable of all lettuces. Does well in summer, when other kinds fail. Fair quality, hard in texture.

Paris White Cos, the best of its type, very large, late, and worth growing during the summer. The leaves are very crisp, firm, and sweet. Has all the quality of the butter types added to a crisp, hard leaf. Used for romaine salads.

California Cream Butter, butter heading,



Lettuce should be transplanted twice. First as soon as the plants can be easily handled; second, when they have made a pair of true leaves.

fairly late. Very hardy to cold; stands the winter well, and does well in summer. Succeeds everywhere. One of the most buttery.

Iceberg, crisp heading, valuable as a late variety, large, and does not bolt. Good quality, sweet. Good as a summer head lettuce.

Tennis Ball Black Seeded, butter heading, intermediate season. Valuable because it is perhaps the most reliable at all seasons, and in all sections. Good for spring, summer, or autumn sowing.

STANDARDS FOR QUALITY

If all other considerations can be sacrificed, and a selection be made for quality alone, perhaps *Half Century* would head the list of desirable lettuces. It is better than *Hartford Bronzed Head* even. Mr. Tracy says of it, "Decidedly the most tender and delicate flavored of all varieties tested", and he draws his conclusions from several years tests with every kind that could be found in the trade up to two years ago. But you can't get all the good points in one thing; the ideal is always a mental fancy. Against its high quality *Half Century* has an unattractive dark color, uneven shape, the tender leaves break with the least handling; it is an uneven header, and needs good, careful cultivation. If you can't supply that, don't attempt to grow this variety.

Next in order of merit come *Hartford Bronzed Head*, *Deacon*, *Paris White Cos*, *Mignonette*, *New York*, *Tennis Ball Black Seeded*, *California Cream/Butter*, *Hubbard's Market*, and *Golden Green*. Excepting the two last, all these varieties have been described above.

Hubbard's Market is a butter heading, succeeding well in all parts of the country. A first class, all around variety for all seasons, for forcing, and for wintering outdoors. Darker green than *Tennis Ball Black Seeded*, which it otherwise resembles.

Golden Queen, butter heading, small, very light green, firm texture, and approaching the crisp quality. For the earliest crops in frames this variety is well adapted, or for first early outdoors, but not for summer use.

FOR AUTUMN CROPS

No variety is better than *Big Boston* for late autumn use. It is a butter heading variety, and endures heat well. Though not equal in quality to the others named, it is a deservedly popular variety. As a rule, those lettuces that are best in the heat of summer and autumn are not of the highest quality. *Black Seeded Simpson* is another example of this—a coarse lettuce, but sure of results, and often the most satisfactory for home use.

PREPARATION FOR THE TABLE

More than any other vegetable, lettuce pays for being picked and eaten within the hour. It is essentially a home garden vegetable, and cannot be had of the highest quality unless grown under the kitchen window. To be presentable at all, the heads must be fresh looking. If the leaves are wilted and flabby, put them into cold water with a little salt in, for about an hour before serving.



Leaf of typical butter type, Deacon, one of the best for home use. Slightly blistered

Remove the outer withered leaves, and carefully clean the inner ones removing all grit and insects; wash in cold water, with a little salt added, and then dry thoroughly. Do this by shaking the separated leaves in a clean cloth, and do it gently, so that the leaves will not be bruised. Rough handling will bruise, and cause discoloration of the leaves, entirely spoiling both appearance and flavor.

Lettuce is generally served uncooked, as salad, either plain, with a simple dressing, as a summer salad; or as the foundation for almost any conceivable form of mixed salad, of fish, flesh, fowl or fruit. For serving plain, the crisp, or butter varieties are preferred; the butter kinds we like best for a dressed salad; and those who do not know the *cos* in the mixed salad have yet to live!

In preparing for salad, be careful to drain the leaves thoroughly, for if the water



Typical leaves of the *Cos* type, on the right. *Asparagus Lobed-leaved* (an unusual form) on the left

is allowed to remain, the sauce used will be watery and unappetizing. If the leaves are to be cut, use a silver knife, but it is far better to break them gently with the fingers. A steel knife should never be used, as it spoils the delicate flavor of the leaf.

For salad, any vegetable in season, and to suit the taste of the consumer, can be used—radishes, beets, cucumbers, tomatoes, etc., and the addition of hard-boiled eggs is a great improvement. The yolks are to be beaten to a powder—a fork can be used for this purpose—or they can be rubbed through a wire sieve and mixed with the dressing, and the whites sliced and arranged alternately with slices of the deep red beet, make a most attractive dish. There are immense possibilities for original and attractive display in the making and decoration of salads.



Typical head lettuce. The solid mass of blanched inner leaves is of the highest quality and delicate flavor. Just the thing for the amateur



Always break off the leaves, don't cut them

In making any salad dressing, the ingredients cannot be added too gradually, nor stirred too much. This is of great importance, as a good dressing may be completely spoiled by the curdling of the oil and vinegar, unless correctly mixed. There is quite a knack in mixing a dressing. The only way to prevent curdling is to add drop by drop alternately, oil and vinegar, and to stir constantly, always in the same direction.

The dressing may be made hours before use; in fact, if salads are constantly served, it saves much time and trouble to make at one time a sufficient quantity to last for a few days. It will remain good if tightly bottled. But do not add the dressing to the salad until ready to serve.

Very often in a small family there will be lettuce left over which does not look fit to make an attractive appearance on the table

the next day. These old pieces of lettuce can be put into spring soup, and indeed into any sort of vegetable soup. Shredded finely, and added to cabbage or greens its delicacy of flavor does not interfere with that of the other vegetables, yet its influence is marked.

Lettuce can also be served boiled, as an accompaniment to the meat course, and if carefully cooked, makes an excellent dish. The large white, or brown cos lettuces are best for this purpose. If very large, cut it in half—put into quite boiling salted water, boil for ten or fifteen minutes, and immediately drain very thoroughly, and serve on slices of buttered toast. This can be served with drawn butter sauce, or a rich brown gravy, very slightly flavored with onion.



Typical bunching lettuce. Note the loose arrangement of the leaves in the centre. Can be used earlier than the head varieties

The Tender Day-Blooming Water-Lilies—By Henry S. Conard Johns Hopkins University

THEY ARE LARGER THAN THE HARDY KINDS, HAVE MORE COLORS, EXHIBIT WONDERFUL HABITS OF OPENING AND CLOSING, AND ARE UNRIVALED IN THE VEGETABLE KINGDOM FOR BRILLIANCY AND INTENSITY OF COLOR

[EDITOR'S NOTE.—This is the eighth article in the unique "Lilic Monographs" series which turns its back on the dull, pedantic, botanical style of writing and strives to "size up" plants in a human, interesting, practical way. Are you growing a large collection of any one annual or perennial flower? If not, don't you want to shore the world ahead a peg by doing so? We can furnish the pictures and the botany, if you will grow the plants.]

THESE are two great groups of tender water-lilies. In one group the flowers expand in the evening, remain open all night, and close during the following morning. In the other group the flowers open at various hours during the morning, and close, as variously, in the afternoon.

These day bloomers have sweet-scented flowers, six to twelve inches across, carried on strong stalks several inches above the water. The leaves are often very large (up to two feet) and float upon the water like those of the hardy kinds. The leaf margins are often wavy, while the hardy kinds always have smooth-edged leaves. In this group we have—or soon shall have—flowers in all colors: red, blue, yellow, and white! Splendid creatures they are. It is no wonder the Egyptians carved pictures of them on their temple walls, painted them on their coffins, covered the dead with wreaths of them, and bore them in their processions, as offerings to gods.

GLISTENING WITH BLUE AND GOLD

The king of all the water-lily tribe is the Zanzibar water-lily (*Nymphaea Zanzibariensis*). Its flowers are of the richest royal blue, often ten inches across, and borne

on strong stalks thicker than one's thumb, eight or ten inches above the water. The broad, blunt petals make a solid cup-shaped ring, surrounding a large number of stamens. These last are truly "gleaming with purple and gold"—golden anthers, with carmine purple backs. In the centre of the flower, seen only on its first day of opening, is the cup-shaped golden yellow pistil, an inch in diameter. This lily opens on three, four, or rarely five successive days, from 11 a. m. until 5 p. m.

A well grown plant has dark green leaves, mottled with brown, eighteen to twenty-four inches across, with deeply wavy margins, and the under side a dull purplish blue.

FOR LARGE OR SMALL SPACE

It will accommodate itself to a great variety of circumstances. It will flower even in a six-inch pot, sunk in a tub of water, but the blooms will be only three inches across, and the leaves small in proportion. The more room, the more and the larger the flowers and leaves will be. With a three foot tub for the roots and ten feet square of water surface, you can get the maximum results. A new flower comes up every two or three days, so you always have one, often

two or three blooms from a single root. It blossoms from the middle of July until killing frosts arrive.

PALE BLUE AND RED ZANZIBARS

There are two forms and several hybrids of the Zanzibar water-lily, all of which deserve a close acquaintance: the azure Zanzibar (*N. Zanzibariensis*, var. *azurea*), with flowers of light blue, and leaves pale blue beneath; the pink Zanzibar (*N. Zanzibariensis*, var. *rosea*) which has flowers of bright rose pink, and leaves reddish beneath. There is a tinge of purple about the pink petals of the latter variety, which betrays its origin. Just how it sprang from its deep blue parent is not quite clear. It makes a massive, beautiful flower.

THE GORGEOUS HYBRIDS

Next to the two just mentioned must be placed the hybrids of similar color, *N. William Stone* and *N. Mrs. C. W. Ward*. From a broad spreading circle of large green leaves the slender flower stalks rise, topped with graceful, starry blooms. William Stone is bright blue, Mrs. C. W. Ward is pink, with a tinge of purple. In both, the inside of the sepal shares somewhat of the



N. Zanibarientis, var. *rosea*, the best bright rose water-lily for common use. Open from 11 a.m. to 5 p.m.



N. Pennsylvania, the most prolific bloomer. Bright blue with a golden centre. Open from 8 a.m. to 5 p.m.



N. Wm. Stone, one of the easiest to grow and keeps over winter. Bright blue flowers

The most striking differences in water-lily flowers are only seen in their gorgeous coloring. In black and white they look very much alike

color of the petals. They are from seed of the white flowered *N. flavo-virens* (known in American gardens as *N. gracilis*) but that is different from the plant of that name in Europe). The petals are narrow, and taper to an acute point. The flower is "star-shaped," the parts spreading out in all directions, like rays of a star. They are borne on very tall stalks, a foot or more above the water. The effect is very striking.

A RED DERIVED FROM A BLUE

Deserving of special notice is *Nymphaea flavo-virens*, var. *rubra* (The "red gracilis" of our gardens). It is much like Mrs. C. W. Ward, but the purple tone of the latter is eliminated, and we get a pure deep pink, approaching red. This is at once a pleasure to the cultivator and a notable triumph for the plant breeder, for it came from a blue parent *N. Zanibarientis*.

A GOOD PINK FOR ANYBODY

Another pink water-lily among the tender day bloomers is in this country, though not offered in catalogues. This is *Nymphaea stellata*, var. *versicolor*. The flower is from four to five inches in diameter, pure pink

with few and rather narrow petals, rising but a few inches above the water. The leaves have wavy margins, are pink beneath, and about eight inches in diameter. While its size is not equal to that of many of its relatives, this variety is very pretty, and gives promise of value, as one easy to propagate.

In the fall, the base of each leaf, where it separates from the short stem, develops a little, hard tuber. This tuber may be kept along with ordinary tender bulbs during the winter, and will produce one or more plants the following summer. The plant is native to India, Indo-China, and the Philippines.

THE LONGEST ENDURING—GIGANTEA

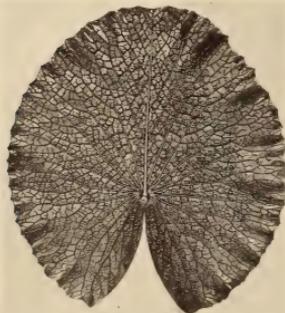
If for massive, dazzling splendor the Zanibar water-lily deserves kingly praise, certainly the giant lily (*Nymphaea gigantea*) is the queen of water-lilies. Its flower is a huge, airy head of soft azure blue, with a centre of purest gold. The original specimen in the Kew herbarium is twelve inches across. The blossoms are borne a foot and a half above the water, on slender green stalks, slightly bending with the weight they carry. It is open on five to seven successive days from 8 to 9 a. m. until twilight; it is therefore of much longer duration than any other species. The petals are twenty to fifty in number, broad and rounded, and of a slightly crinkled texture, like crepe. The color shades from a deep blue at the point of the petal to a very pale blue at the base. The tints are exquisitely chaste and pure; the flower is an embodiment of grace and dignity. The leaves are large, a little more oval than round, dark green above, but deep Syrian purple beneath. The margins are very evenly scalloped, each wave ending in a sharp tooth. The plant is separated from all others of its kind, by several botanical differences, the most notable of which is that there are no gradations from petals to stamens.

Nymphaea gigantea is the most difficult of the day bloomers to cultivate. It can hardly be grown at Philadelphia without artificial heat. The one plant I had there was of good size when I procured it, and the summer happened to be unusually hot. It flowered fairly well in a small tub in a still, warm pond. If you try it, get a large plant,

and have it shipped to you in the pot or basket in which it was grown. Set it out two weeks later than the other kinds, and hope for warm weather at the time of its arrival. Place it in your tank with the utmost care. Any check in its growth is likely to cause it to stop growing, and drop its leaves. It can only be coaxed into growth in warm water after a rest, and it will be too late for the current season's use. The perfect plant is so stately, so noble, that it is worth much effort and risk.

THE ONE POPULAR WHITE

Of blues and whites we may have a considerable assortment, inside the present group. *N. flavo-virens* (commonly catalogued in America as *N. gracilis*), already mentioned, is the only well-known white. Its flowers are borne on tall, slender stalks. They open quite widely, and are arranged in a graceful star form. The very sweet-scented flower opens on three successive days from early morning until 5 or 6 p. m. The petals are narrow and pointed, and of a dull rather than a snowy whiteness. The leaves reach a diameter of eighteen to twenty inches,



The leaves of tender water-lilies usually have wavy margins like this (*N. gigantea*). The hardy kinds are always smooth. (A direct sun print)



The framework of the floating leaves is an interesting study in mechanics. The under sides are often colored similarly to the flowers. *N. Zanibarientis* is a purplish blue

and are bright green on both sides. While this is not a showy species, it is graceful and pleasing.

It is very easily increased, either by seeds or tubers. In the fall the main stem, as big as one's fist, or bigger, hardens and ripens into a rough tuber. It should be taken indoors about the first of November, or earlier, if ripe, and kept in dry sand. Pringle says he has seen them lying on the ground in dried up pools in Mexico, like old pine cones. In spring each tuber gives rise to several lusty plants for summer blooming. This hardy character is shared by its offspring, William Stone and Mrs. C. W. Ward, making these the best ones for most of us.

THE BEST WHITE NOT OFFERED

A nearly allied species is *Nymphaea ampla*, from tropical America. While it resembles *N. flavo-virens* in color, the flower is larger (four to seven inches across) and the petals broader, and rounder. The leaf is often very large, twenty to twenty-four inches across, and reddish purple beneath. The sepals are marked with numerous black specks and lines, whereas those of *N. flavo-virens* are pure green, or very rarely with black markings. Unfortunately, this fine species has yet to be introduced to the American trade; the plant commonly known in the American trade as *N. ampla* is *N. Amazonum*, a night bloomer.

A BLUE GEM FOR THREE DAYS

We have a native blue water-lily which is the daintiest of all its group, *Nymphaea elegans*. The smooth-edged oval leaves lie separately on the water, without crowding one another. They are about eight inches long, by six inches wide, of very graceful outline. The dark green upper surface is handsomely blotched with brown, the under surface a rich red-purple, with blue-black specks. Each flower lasts three days, and is open from 8 a. m. until 1 p. m. Think of the most delicate shade of violet in the rainbow, and you have an idea of the color that plays on the petals and shades in and out between the golden stamens and the pale sepals of this charming little water-lily. It rarely exceeds six inches in diameter. Like all the others, it needs no special care in summer, and it is as easy as any blue kind to flower under glass in winter.

THE REAL EGYPTIAN LOTUS

The true Egyptian lotus, or blue lotus (*Nymphaea carulea*), is a water-lily of this class, and one of the easiest blues to raise. The flowers rise well above the water, and are open for three days, from 7:30 a. m. until noon. They never open very widely, but remain in a broad, cup-shape, so that the four green sepals, with their characteristic copious black spots, are always evident. The petals are of a pale blue color, shading to dull white at base, not very numerous, and rather narrow. I have had flowers six and a half inches across, with petals three and a half inches long. The leaves reach a diameter of twenty inches under very favorable circumstances. They

are entire, dark green above, copiously spotted with black beneath.

This species produces many seeds, which are easily grown. Its seeds have been known to lie out in the mud of a pond near Philadelphia over two winters, and to come up vigorously during the second summer. The same thing occurred once with the Zanzibar lily, the seedlings actually coming into bloom in September.

OPEN AS LATE AS FOUR O'CLOCK

The last real species of blue water-lily is *Nymphaea Capensis*. It is a strong plant, with pale blue flowers like the azure Zanzibar. It differs from that chiefly in keeping its flowers open from 7 a. m. to 4 p. m., and in having the leaves pure green on both sides. The sepals and petals are narrower. The flowers are very large, and of perfect shape, making this a desirable kind.

THE BEST BLUE STAR

From the blue lotus (*Nymphaea carulea*),

have sprung two hybrids of prominence, *N. pulcherrima* and *N. Pennsylvania*. *N. pulcherrima* has long been known as the best "stellate" light blue. By stellate is meant that the petals are few and narrow enough to give the flower a star-like shape. It is a fairly free bloomer, and produces very large flowers and leaves. Its big sharp, cone-shaped buds, heavily mottled with black dots, are very striking and characteristic. The leaves have wavy margins.

A DANGEROUS RIVAL—PENNSYLVANIA

It is said, however, that *Nymphaea Pennsylvania* is to outshine *Nymphaea pulcherrima*. Pennsylvania is a most prolific bloomer, always having two or three flowers up at once. They remain open from 8 a. m. until 5 p. m. Each one is a great, bright blue cup, with a golden centre. The buds are big, blunt, and egg-shaped. The four heavy sepals are thickly marked with black dots and lines. The original plant bore petals four and a half inches long.



The tender water-lilies, excepting *N. gigantea*, will flourish as far north as Massachusetts. Plant outdoors about the middle of June, when the water has begun to temper. *N. Capensis* and *N. Zanabarbottis* in the garden of Mr. Oakes Ames at North Easton



In the North it is necessary to have the tender water-lilies grown under glass, if a long season of bloom is desired. This picture shows the red and blue Zanzibar lilies in full flower in Mr. S. Untermyer's greenhouse at Yonkers, on April 26th, long before plants could be put outdoors.

None of its kin surpasses it in size and freedom of flowering. The leaves, too, are as large as those of any of its allies, spotted with brown above, and more or less bluish beneath.

THE YELLOW GLORIES TO COME

There are two treasures awaiting introduction, and which promise great things. Africa hides in its vast interior two yellow tender species, allied to the present blues and reds and whites. One has excellent double flowers six or seven inches across, (*Nymphaea Stuhlmannii*). The other, (*Nymphaea sulphurea*), is a pigmy, with flowers and leaves two to three inches in diameter. Aside from their individual attractions, think what a future they offer for hybridization! It is earnestly hoped that they will not long be absent from our gardens.

THE WATER REQUIREMENTS

As to the care of water-lilies of this class during summer, little need be said. They like tubs of earth, from two to four feet in diameter. A very good plan is to use a still larger tub, and set in it two or three roots. This insures constant and copious blooming. The water need not be more than ten inches

deep, above the crown of the plant. A foot is better, and two feet will do no harm, if you can get heat enough. The shallower the pond, the more readily it is warmed by the sun. As all of these are tropical plants, they need as much heat as they can get. An especially hot summer at Philadelphia makes them luxuriant. Plants may be set out as soon as warm weather is fully and permanently established, and the water has begun to temper—say June 1st to 15th.

HOW TO GET THE PLANTS

All the true species seed freely, and may be easily raised from seed. These are *N. gigantea*, *elegans*, *gracilis*, *ampla*, *Capensis*, *Zanzibariensis*, *versicolor*, and *caerulea*. Sow the seeds in February, in small pots or pans, cover them lightly with sand, and keep in warm water, about 80° F. When the plants have produced three or four leaves each, prick off into separate three-inch pots, with rich earth, and keep them in warm tanks with plenty of sunshine. Let them grow as fast as possible, and repot when necessary. Harden off a little in cooler water before setting out. When set out they should have about three leaves, from three to six inches across. Persons who have no accommoda-

tions for all this will do best to purchase plants. They are not very costly.

WINTERING—A PROBLEM

Wintering is really a difficult matter, requiring some skill and a good deal of space. Full-grown plants may be taken up bodily before frost, either in their tubs, or with a big ball of earth, and wintered in a large, warm tank. They will keep on blooming, with plenty of heat and light, or will merely keep alive in lower temperatures. Plants which have grown large, and flowered, will not live over in any other way, excepting *Nymphaea flavo-virens*, and its kin. Usually, therefore, the old plants are left outside to die.

MAKING TUBERS TO PROPAGATE

All hybrids, however, are practically sterile, and must be propagated from the "roots." The same method may also be used for the true species. Indeed, one can never depend on the purity of seed where several kinds have been grown in the same tank. Natural hybrids are common. Hence, for pure stock we must commonly have recourse to the following method. Begin a year in advance. A young plant of

the desired kind is kept all summer in a six-inch pot, in very shallow water. It will make good growth for some time, and then all the leaves will die off. If this does not occur naturally, it must be induced in August or early September, by raising the plant to the surface of the water, or partly out. When the leaves are gone, a tuber the size of a robin's egg should be found in the pot. Now remove the pot from the water, and let it become nearly dry. Take out the tuber, place it in clean sand, and keep it in a moist, temperate, or warm greenhouse until next March. Never let the tuber get hard and desiccated, nor should it get really wet. It wants only a gentle air-drying.

Now, to propagate, set pot and sand and tuber in a warm tank in March. The tuber should be planted about an inch deep. Soon a shoot comes out, sends up leaves to the surface of the water, and makes roots. When one good floating leaf is established, wash away the sand from roots and tuber, carefully break off the shoot with its roots from the apex of the tuber, and replant both plantlet and tuber. Of course the plantlet

now goes into rich earth. The tuber should give off at least one more shoot. The first plant is pushed forward for flowering, the next is kept to form a tuber for the following year.

The easiest to grow, to keep over winter, and to increase from the tuber, are *N. flavo-virens*, *N. Wm. Stone*, and *N. Mrs. C. W. Ward*. The easiest to grow from seeds are, the blue lotus, Zanzibar water-lily, and *Nymphaea flavo-virens*.

KEY TO THE TENDER DAY-BLOOMING WATER-LILIES.

- A. Color of flowers white
- B. Lvs. green beneath; petals acute..... 1. *flavo-virens*
- BB. Lvs. red-purple beneath; petals obtuse..... 2. *ampla*
- AA. Color of flowers pink or red
- B. Lvs. with little wart-like pustules beneath..... 3. *stellata*, var. *versicolor*
- BB. Lvs. not pustulate
- C. Petals broad and rounded 4. *Zanzibariensis*, var. *rosa*
- CC. Petals narrow; flower stellate
- D. Color of flowers pinkish 5. *Mrs. C. W. Ward*
- DD. Flowers red..... 6. *flavo-virens*, var. *rubra*
- AAA. Color of flowers blue
- B. Sepals densely marked with black spots
- C. Fl. small; stamens go to 7; fertile..... 7. *carulea*
- CC. Fl. large; bud sharply conical; sterile..... 8. *pulcherrima*
- CCC. Fl. large; bud rounded ovoid..... 9. *Pennsylvania*
- BB. Sepals pure green or with very few spots
- C. The stamens all round 10. *gigantea*
- CC. The outer stamens with broad flat stalks (filaments)
- D. Lvs. entire; petals delicate violet..... 11. *elegans*
- DD. Lvs. sinuate, large
- E. Color of flower deep royal blue, cup-shaped..... 12. *Zanzibariensis*
- EE. Fl. azure blue
- F. Shape stellate; flower stalk tall..... 13. *Wm. Stone*
- FF. Shape cup-like; fl. stalk shorter
- G. Lvs. bluish beneath 14. *Zanzibariensis*, var. *azurea*
- GG. Lvs. pure green beneath..... 15. *Capensis*

A Round-Up of the Garden Peppers—By E. D. Darlington Pennsylvania

ILLUSTRATING THE WONDERFUL TRANSFORMATION FROM THE FIERY, HOT, SMALL, THIN-SKINNED, SEEDY, OLD-TIME PEPPER TO THE LARGE, MILD, SWEET, THICK-SKINNED, FEW-SEEDED PEPPER PREFERRED BY CONNOISSEURS

THOUGH the large sweet pepper is a most delicious vegetable it is but little known or appreciated. Contrary to one's imagination, it is not hot, at least, the seeds are the only warm portion of the fruit, and these are removed before cooking. Until recently peppers have been a late summer or fall crop, the fruits being used as an ingredient for fancy pickles, pepper-hush and sauces. But now there is a demand for earlier large-fruited, meaty varieties to be served as a separate dish, or the fruits are stuffed with force meat, and baked.

TYPES AND VARIETIES

The Bull Nose, or Sweet Bell pepper (Fig. 1) has long been the standard variety for general use, its bright red fruits are from two to three inches in length, and about two inches broad at the shoulder or stem end, with a broad blunt, or slightly sunken point at the blossom end. The plants grow about two feet high, and are well branched.

The Ruby King (Fig. 2) is a little larger than the Bull-Nose, but produces a much larger and handsomer fruit, with thicker flesh, and a very mild, sweet flavor. The



Fig. 2. Ruby King, larger and later than Bull Nose. Thick flesh, mild and sweet

fruits measure four inches in length, and two and a half inches across at the shoulder. The plants grow three feet high and have a stiff, erect habit.

An exceptionally mild, sweet, and very thick meated sort is the Chinese Giant (Fig. 3) with the same habit as Ruby King, but with larger fruits—five to seven inches long and from five to six inches across. It is especially esteemed for exhibition purposes. The flesh of both the Ruby King and the Chinese Giant is so sweet and mild that they may be eaten raw, and when sliced, they add a crisp piquancy to raw salads.

In season the Chinese Giant is a little larger than the Ruby King, but its very large size is not as acceptable for general use.

THE EARLIEST VARIETY

A very early and productive variety is the Neapolitan, which is a very desirable kind for the home garden, as it has a very mild flavor, and sets fruits very freely. It is so early that fruits from well grown plants in the

open field have been picked in June, several weeks in advance of the earliest fruits of the Bull Nose, or Ruby King varieties grown under the same conditions. The fruits of this variety, when of full size, turn to a creamy yellow, then to a brilliant scarlet. The shape somewhat resembles that of Ruby King (Fig. 2), but they are rather longer and more slender, and sometimes are sharply pointed averaging three and a half to four inches in length, and from one and a half to two inches in diameter.

The Neapolitan will probably become the leading variety, although the shape is not as desirable for stuffed peppers as the broader and blunter pointed varieties. The plant is of rather open branching habit, two and a half feet high.

There are two excellent large-fruited peppers, in which the ripe fruits are of a deep, golden yellow the earlier being the Golden Dawn (Fig. 7) the other a larger, later variety the Golden Queen, which is the counterpart of the Ruby King, in all but coloring. These



Fig. 3. Chinese Giant—a large, late variety, thick meated, and so sweet and mild that it may be eaten from the hand. Five to seven inches long and five to six inches across



Fig. 1. The Bull Nose, or Sweet Bell pepper, the old standard variety for general use. Two to three inches long



Fig. 4. Mikado, the central specimen, an odd-shaped variety from Japan; and the Cherry type which comes in red, orange and yellow



Fig. 5. Red Chili, fruits borne singly; and Red Cluster, with bright red, curiously twisted fruits. Two best of this type. Very strong



Fig. 6. Cayenne, the best pepper for seasoning. Other varieties of this type are purple, yellow and brown; the red is the best known

yellow peppers are as good as the bright red ones, but for some reason are not as popular.

SMALL FRUITED AND ORNAMENTAL PEPPERS

As a general rule, the smaller a pepper is in size, the hotter and more pungent is the flesh. With us in the Northern states the small fruited varieties are chiefly grown for flavoring, or for using in mixed pickles, and a few varieties have been grown by florists for sale during the early winter, as decorative pot plants. The further south we travel the more general the use of these small, hot peppers becomes, and in Mexico, and other Spanish-American countries they form an ingredient of almost every dish prepared for the table. These very hot peppers have a longer season of growth before ripening their fruits than do our larger varieties and even with very early started plants only a few of the numerous fruits ripen before frost.

The Birdseye, or Creole pepper (Fig. 8) makes a spreading bush about eighteen inches in height and breadth, with slender branches, and small foliage, bearing hundreds of small round, or slightly elongated fruits.

The famous tobacco sauce is made from a variety bearing that name (Fig. 8). This variety grows about three feet high, and is immensely productive, but will not ripen in this vicinity. We have however a small dwarf bush variety, called the Coral Gem, which grows only twelve inches high, and sets small slender fruits in great profusion, and ripens early. The Coral Gem makes a beautiful pot plant, and the small, intensely hot fruits are very useful for seasoning.

Another type of the small, hot peppers is shown in Fig. 5, the best of which are the Red Cluster and Red Chili, the first having clusters of slender bright scarlet fruits, two inches long, and curiously twisted, while on the Red Chili the long slender fruits come singly, and are slightly larger.

These small, slender peppers and the Coral Gem, are the best types to grow for

seasoning in this section, as they bear profusely, and ripen before frost. The fruits are so hot or pungent that two or three of the small peppers are sufficient to season and flavor a large pot of soup. To keep them for winter use, the bushes, with the fruit attached, may be cut off in the fall, and hung in a cool room to dry, or the ripe fruits may be gathered, and strung on stout threads, to dry.

The largest of the peppers for seasoning is the Cayenne shown in Fig. 6 and while the best known variety has bright red fruits, there are others which have fruits of the same size and form, but deep purple, yellow or brown in color. Two varieties from Japan the Celestial and Kaleidoscope (Fig. 9) are of compact bushy growth, and bear a profusion of fruits an inch to an inch and a half in length, which pass through various shades of cream and yellow before turning to a bright scarlet. These are the varieties which have lately been quite largely grown as pot-plants for early winter sale, the bright green leaves and variously colored fruits being very showy. They are distinct in that the Celestial is quite stiffly erect or bushy in growth, while the Kaleidoscope is more open and spreading, with fruits slightly smaller in size.

In Fig. 4 the centre specimen shows the odd, flattened shaped variety called the Mikado which originally came from Japan, while the other specimens are the so-called "Cherry peppers," measuring from one half to one inch in diameter, and which may be had in different shades of red, orange and yellow, in different varieties.

HOW TO GROW QUALITY PEPPERS

Plant in a rich, light, well drained but moist soil in order that they may make a rapid growth. The slightest check is bad.

To have plants of suitable size for planting out at the proper time, sow the seed in a warm greenhouse or hotbed early in February using a very rich, light compost. Old rotted manure from the bottom of a hotbed, or from the bottom of a manure heap, thoroughly dried, and sifted through the ordinary ash sieve, either alone, or mixed with one-half its bulk of good fibrous loam, makes the best medium in which to plant the seed, and forward the growth of the young plants. I have found that where rotten manure can be gathered and stored in boxes or barrels under shelter for several months, it makes the best compost for starting young plants.



Fig. 7. Golden Dawn, a yellow variety. This and Golden Queen (larger and later) are as good as the large fruited, red varieties, but not as popular



Fig. 8. Tabasco, the centre specimen, does not ripen well in the North. It is the hottest variety. Outer fruits Birdseye or Creole, a very prolific sort



Fig. 9. Celestial and Kaleidoscope. The fruits turn from cream to yellow and then red—grown by florists as decorative plants



Fig. 10. Small red, seedy peppers of this type require a longer season of growth than do the larger meatier sorts and are very pungent

The spent manure from a mushroom bed is also excellent for this purpose.

As soon as the young plants are well established in the seed bed, and show two or three true leaves, they should be transplanted into small flower pots, or hotbeds, freshly filled with rich compost, the plants to stand three to four inches apart each way. If grown in pots, or boxes, they should be again transplanted as they grow or the pots moved farther apart, as crowding the young plants delays fruiting and diminishes the amount produced.

WAIT FOR WARM WEATHER

When the weather is warm enough to set the peppers in the open ground (which will not be until the thermometer stands at 60° through the night and all danger of frost is past), the first blossoms should be showing.

When setting the plants in the open ground, place a shovelful of well rotted manure in the hill where the pepper plant is to stand, to help make a strong, rapid growth in the plant and fruit. A few well fed and well grown plants, ripening smooth large fruits early in the season, will be more profitable than a larger number grown slowly in poor soil, which would give only a small quantity of fruit before being killed by frost in the fall.

On light sandy soil, it is customary to plant the peppers in low ground, where the soil is mofe or less peaty in character, and retains moisture; but in heavier, clay loams, plant the peppers on elevated, well drained land, or on raised hills or ridges, or the plants will make too large a growth of foliage, and will be correspondingly later in fruiting.

Picking the large fruited sorts begins as soon as the fruits reach good size, whether they are green, or well colored. For the home garden a dozen or fifteen well-grown plants of one of the large fruited sorts will give an ample supply for the average family.

Raspberries, Blackberries and Dewberries—By S. W. Fletcher

Michigan
Agri. College

WHY PEOPLE DO NOT KNOW THE HIGHEST QUALITY IN THESE BERRIES; THEY PICK FRUIT TOO EARLY—“STORE” BERRIES ARE SMALL, SOUR AND SWEET—EXTRA CARE THAT IS NECESSARY FOR SUPERIOR QUALITY

Photographs by the author

THE brambles are especial favorites because they give quick returns, are easily grown, and yield so much fruit per square foot of space occupied. In small city or suburban gardens they should occupy a large proportion of the area. If there is any opportunity for choice, the brambles should be given that spot in the garden which has the most humus, coolness and moisture, but is well drained. A northern exposure is preferred. The chief essential in bramble growing is plenty of humus. The soil need not be very rich, and preferably not very heavy; but it should be full of decaying vegetable matter. That is why there is nothing better for brambles, in most cases, than stable manure; both as a preparation for planting and as an annual mulch. The black raspberries prefer a heavier soil than the red raspberries. Brambles will often do well on many of the lighter soils, so one should not forego the pleasure of having them merely because an ideal soil cannot be had; but it will pay to immediately set about improving a light soil, in which brambles are planted, by working into it heavy dressings of manure. If it is necessary to set berries in proximity to trees, plant the red raspberries or blackberries, as these are more successful in partial shade than black raspberries.

One of the most satisfactory things about brambles is that the plants cost so little in proportion to the pleasure and profit they bring. Get suckers from young rather than from old plantations; they are more likely to be thrifty and not diseased.

WHEN AND HOW TO PLANT

Spring planting is preferable to fall planting in a majority of cases because it is safer, and practically nothing is gained by fall planting as regards an earlier start. If planting late, small suckers of the present season's growth may be lifted and transplanted safely. If you buy plants of a nurseryman, order them early, at least two months before the time for planting; late orders often result in a poor selection of plants, and they may not be delivered in season. On receiving the plants from the nursery, loosen the bundle, heel them in on the north side of a building or some other cool, moist spot. If the roots are dry, dose them in water or in thin mud before heeling them in.

Plant early, just as soon as the ground is dry enough to work up mellow. Brambles love the cool, moist conditions of early spring; many a berry garden has been a disappointment because planting was delayed. Raspberries, blackberries, and dewberries may be planted in rows six or eight feet apart, with plants set two or three feet apart in the rows. In two or three years each row will be four

feet wide if the growth of suckers is unrestricted. Each plant may be kept in a hill by planting six feet apart in the row, so that they may be cultivated both ways, but the row system is usually better than hills.

Dig a hole more than large enough to accommodate all the roots without twisting them—the harder the soil, the bigger should be the hole. It is an excellent plan to carry the plants in water when setting. Plant deeply; most amateurs err in the direction of shallow planting. The plant should be set several inches deeper than it stood in the ground before moving, as the soil settles. Put rich, surface soil around the roots. Plant black raspberry tips in the same relative position as when they were attached to the parent plant; that is, do not set the piece of old cane upright, but so that the large bud

to do is to provide moisture and to promote a vigorous growth. Tillage does this; mulching may do it. Berries planted around the borders of a garden, or used as a hedge, may be mulched with straw or strawy manure often with excellent results, but tillage is generally advisable whenever practicable. Mulching makes the roots run close to the surface; for this reason, if once started, it should be continued. Begin tilling early; shiftless gardeners let weeds get a start and choke out the berry plants. Cultivate shallow, for all brambles are shallow rooted. Deep cultivation increases suckering. Vegetables may be grown between the rows the first year, but this practice is of doubtful value unless necessary because of limited space. If the cultivator has teeth that will cut the suckers, it will save much hand hoeing. It is best to stop tillage about the first of August to ripen up the canes. A cover crop may then be sown if the soil is deficient in humus.

When the black raspberry and blackberry shoots are about eighteen inches high, pinch off the ends so as to get branched canes. These bear more fruit than long, unbranched canes; are easier to handle, and winter-kill less. If shoots are not pinched, they make unmanageable canes. Red raspberries, however, do not seem to be benefited by this practice in most places and sometimes black raspberries and blackberries are not. There is much difference in opinion and in results of summer pinching, which shows that in some localities and on some soils it is best and under other conditions it is not.

FERTILIZING FOR THE NEXT CROP

In the fall of the first season each plant should have one or several strong canes ready to bear fruit the next season. This is a good time to put several generous forkfuls of manure around the base of each plant. Brambles are hearty eaters, and their special weakness in the way of vitamins is rotted manure. The manure should be spaded, plowed or cultivated into the ground the following spring, unless it is to be used as a permanent mulch. If the fruit is very soft, watery, and poorly flavored, and the canes grow rank and are unproductive, the soil has too much nitrogen and will be benefited by applications of potash and phosphoric acid.

PRUNING AND TRAINING

Some pruning will be needed early in the spring following planting, after severe weather is past, and before the buds start. Small, weak canes are cut out completely and the lateral branches of those that remain are shortened. These canes bear fruit that season, and new canes spring up from the roots. After the old canes have borne fruit they should be cut out at once and burned;



Quack grass in raspberries. Keep it out or it will get ahead of you and ruin the canes

in the centre of the mat of roots will be upright. It is the bud, not the cane, which should grow strongest. This bud, however, should not be covered with more than two inches of soil. Tramp firmly around each plant; but throw a little loose soil over this tramped soil before leaving, to prevent evaporation. Either before or after planting, head back the tops of canes one-third to one-half, unless this has been done by the nurseryman, to balance the loss of roots by transplanting.

CARE THE FIRST SEASON

During the first season the essential thing



Black raspberry plant before pruning. The old canes should have been cut out after fruiting

this should be done every summer. Some people prefer to leave the old canes standing until the spring pruning, claiming that they protect the young canes somewhat; but the liability of their being diseased is a weighty argument against this practice.

The second spring after planting, and every year thereafter, brambles need pruning. Two things need to be done—thin out weak or crowding canes and cut back laterals. First remove all very small canes, leaving only a limited number—eight to twelve per plant of red raspberries or blackberries planted in hills; or about eight inches apart if planted in rows. Fewer canes of black raspberries should be left, since these naturally make more branches.

The second operation is to cut back the canes. The chief purpose of this is to thin the fruit. The laterals of black raspberries and blackberries are shortened to one to four feet, depending upon the variety and the development of the buds. Each bud should give rise to a shoot bearing a cluster of berries. The buds on the ends of the branches were developed last and may not be mature enough to give fruit. Cut back to strong buds, thus reducing the amount of fruit that will be borne and getting only large clusters. Varieties differ somewhat in fruit bearing; a few sorts bear their best clusters on the ends of the laterals but most varieties bear better lower down. If there has been winter injury cut to green wood.



The same plant as above after pruning. The old and weak canes are cut out and the strong ones headed back. Red raspberries and blackberries are pruned in essentially the same way

Unbranched red raspberry canes may be shortened to about four or five feet high. The spring pruning may be done with hand shears, but a hooked knife or "hack," inserted into a wooden handle about two and one-half feet long makes the task less onerous. In windy sections the canes may need some support. A wooden stake five feet high answers very well if the plants are grown in hills. If grown in rows the canes may be tied to a trellis such as is used for grapes, or they may be supported by two parallel wires or rails, one on each side of the row and about three to four feet from the ground. If the canes are headed low there is much less necessity for this.

FRUIT WORTH THE TROUBLE

There should be a small crop of fruit the second year, and a full crop the third and subsequent years. When a man has once tasted fresh, dead-ripe berries of his own raising, he will never be satisfied to go back to the half-ripe, sun-baked and fly-specked berries of the grocer. It is impossible to get really first-class blackberries and raspberries in the open market. The reason is that the berries have to be picked before they are fully ripe in order that they may endure the shipping. A blackberry is not ripe when it is black, any more than a winter apple is ripe when it is well colored. The apple must get soft, and so must the berry, before it is really ready to eat.

CHOICE VARIETIES FOR THE AMATEUR

The blackberries and the hybrid raspberries, like Shaffer and Columbian, usually yield more than the black raspberries and red raspberries, but the fruit garden should have a short row of each. The varieties are much more numerous than is commonly supposed. Since the introduction of the Dorchester blackberry in 1841 and the Ohio Everbearing in 1839, both pioneer varieties, the improvement that has been wrought in these native fruits is remarkable. Our native flora of the genus *Rubus* is very numerous and very variable; we may expect even greater progress in the future. At the present time our bramble growing is practically independent of Europe, for varieties. A few European sorts, especially the Red Antwerp, are grown in the Hudson River valley, in the Pacific Northwest and in a few other places; but for the most part the European sorts are not hardy enough nor vigorous enough for American conditions. All of our varieties of blackberries, black raspberries, and dewberries, come from native species; practically all of our varieties of red raspberries are likewise of American lineage. The purple cane raspberries, which are hybrids between the native red and the native black raspberries, are common in the wild. They are valuable in the home garden for canning, because of their great vigor and productiveness. Their fruits are soft, and of rather poor color when fresh, but they assume an attractive color when canned. The most popular and cosmopolitan varieties of the brambles seem to be Gregg, Kansas and Ohio of the black raspberries; Cuthbert

and Marlboro of the red raspberries; Shaffer and Columbian of the purple cane raspberries; and Snyder, Wilson, Kittaniny and Taylor of the blackberries. The white varieties of blackberries have little to commend them. The subject of varieties for different sections of the country is considered in *Country Life in America* for March, April and May.

DEWBERRIES EARLIER THAN BLACKBERRIES

The chief claim of dewberries for a place in the home garden is that they ripen two weeks earlier than blackberries and so lengthen the blackberry season. Another advantage in some localities is that the vines can be protected in winter much easier than blackberries. But here the advantages end, for dewberries are much harder to manage, more variable in quality and less productive than blackberries. However, the man who is fond of blackberries will be likely to have a row of dewberries also. Their culture is the same as that of blackberries, except as regards training. The vines may be trained to a wire trellis, but are preferably planted and kept in hills and the vines of each hill trained to a stake about five feet high. The fruiting canes are tied to the stake in the spring and the new canes sprawl over the ground at will until the following spring, when they, in turn, are tied to the stake. The Lucretia is grown more than other sorts.

THE WORST DISEASES

As a rule, brambles are more free from insects and diseases than other fruits. Perhaps the most serious trouble is the anthracnose, which attacks the young canes of all brambles but is most serious on black raspberries. It appears in midsummer making pits in the canes. These are grayish with a purple edge. They may run together, and, in very serious cases, kill the canes completely. The berries do not ripen on canes that are even slightly diseased.

Treatment: Set no diseased plants, and do not take plants from a diseased plantation. Cut out diseased canes as soon as seen. Do not allow the canes to stand thickly. Spray the young shoots as soon as they appear with Bordeaux and repeat this once or twice at intervals of about two weeks. In some cases the disease refuses to yield to treatment and a new planting of young plants from healthy stock is necessary.

The orange rust or red rust attacks blackberries, raspberries and dewberries. It makes orange colored spots, which are masses of spores, on the under sides of the leaves. There is no help for a plant once attacked; dig it up at once and burn it.

The root gall or crown gall. Rough, knotty galls, often several inches in diameter, appear on the stem close to the ground or just beneath the surface. There are also smaller galls on the roots. The plants look sickly. The disease is partial to the red raspberry but also attacks other brambles. The cause of the trouble is still in dispute, but it is thought to be a slime mould. The only treatment suggested is to dig up and destroy diseased plants. Do not plant rasp-



Tipping raspberries. The ends of the branches are covered with soil in midsummer. By fall the tips will have rooted. They may be separated then or the following spring.

berries for several years where diseased plants have stood. Set no plants having suspicious swellings on the roots.

INJURIOUS INSECTS

The rose chafer or rose bug often attacks the brambles, eating both flowers and foliage. They are particularly destructive on light soils, in which they breed. Poisons, kerosene emulsion and pyrethrum are sometimes fairly effective, but all remedies for this insect often fail. Hand picking or some device for knocking them off and catching them is sometimes practicable.

The raspberry saw-fly. The larvae of this black fly, which may be seen around raspberries in May and June, feed upon the leaves and often defoliate the plants. They are green, and about one-half inch long. The

remedy is to spray or dust the plants with hellebore or with an arsenite.

The raspberry cane-borer works in the young shoots of raspberry and blackberry, causing them to wither and the ends to droop. One or two rows of punctures may be found encircling the shoot. The remedy is to cut off the shoot several inches below the punctures as soon as it begins to droop, and to destroy together with the borer inside. When an entire cane begins to die, in late summer, it should be cut off close to the ground and burned.

With good care, the brambles may be kept in bearing for many years but it is seldom wise to do this. It pays to reset every four to six years. This gives the plants the benefits of a rotation and prevents disease and weeds from getting a foothold.



Raspberries and blackberries bent over for winter protection. This simple precaution will often save a crop. Lift up the canes very early in the spring.

A Garden Planted after July Fourth—By I. M. Angell New York

GOOD NEWS FOR THE BELATED MOVER—THREE MONTHS' CROPS OF GOOD, FRESH VEGETABLES RAISED AFTER INDEPENDENCE DAY—ONE ESSENTIAL CULTURAL FACTOR

MANY would-be gardeners who change their place of residence about the end of June miss the delights of the garden because they fear it is too late in the season to make the effort.

But I have had great success in the vegetable patch when not a thing was planted



Young Early Scarlet Short-horn carrots, sowed July 6th and pulled October 9th

before the Fourth of July. The photographs show actual results last year.

These kinds of vegetables have more than paid for the risk of late planting: cucumbers, squash, carrots, corn, lettuce, bush limas, pole string beans, parsley, radishes, and wax beans.

Others that give fairly good results are,



Bovee potatoes planted July 21st were dug October 30th. Always select an early variety for late planting

pole limas, tomatoes, potatoes, beets and kohlrabi.

KINDS TO PLANT FOR CROPS

The ever useful Henderson bush lima bean yielded a very good crop. The sowing of July 6th gave full sized beans the third week in September, and picking continued until the end of October, at which time the plants were destroyed by frost. These beans are not as choice as the pole limas, but I reserve a space for them in the garden each year, because they are so much earlier and harder and less trouble to care for, beside being very prolific.

After the pole limas are in bearing, the bush limas are used for either succotash, or to dry for winter.

Cucumbers take kindly to midsummer planting, and make a good growth during the cool weather of early fall. The sowing of Japanese Climbing cucumber made July 5th began bearing the last week in August, and gave us a continuous supply until the second week in October, when the frosty nights killed them. They would have borne still longer if frost had held off, as they were in good growing condition at that date.

Plantings made July 5th, of crookneck squash, bore during late summer and early fall, and more than justified so tardy a start.

A safe crop to sow at any time during July is carrots. The roots do not need time to mature before cold weather as they are excellent for the table when young and tender—the younger the better, indeed—before they reach full growth. Ours were sowed July 6th, and we began to pull them the latter part of September. The second week in November found them apparently unharmed by several sharp frosts that had killed the tender vegetables.

One of the best vegetables for July planting is wax beans. The sowing of July 6th was in bearing by the third week in August, and the beans were better and larger than those from earlier sowings from the same lot of seed. Pickings were made at intervals, until the first week in October. Two weeks later they began with a second crop of blossoms and beans, but were cut off by frost.

Radishes, of course, can be planted in July and later, even in September. Our July 6th planting was ready to eat in less than a month.

We had no more sweet or tender corn from any of our eight sowings than that from an extra early sort sowed July 5th. It is to be highly recommended for July planting. A twenty-five foot row gave us forty-five ears, the bearing season lasting from the last week in September to the first week in October.

Pole string beans, Lazy Wife, planted

July 7th had time to become even too large before the end of the season.

Good sized plants of parsley were had in October from seeds sown July 6th. The plants were in excellent shape to pot for growing in the house during the winter.

A most convenient plant for late sowing is



Crookneck squash, sowed July 5th, picked October 9th

lettuce, as it will bear twenty degrees of frost, and not be killed. Last year I was still using full sized heads from the open ground, for more than two weeks after all the tender vegetables had been killed by frost.

At a venture I tried a July planting of potatoes, an extra early variety being planted the third week in July. The vine made a



Parsley from sowing made July 6th. Photographed on November 8th. Good for wintering in the window

growth of three feet, and late in October the crop was dug, two potatoes that measured two and one-half inches in length. This was not a very profitable yield, but it was interesting as an experiment.

Near a stout, tall castor bean that served as a bean pole, some pole lima beans were planted on July 5th. The vines attained a length of eight feet, and bore full sized beans before frost caught them, but as a regular crop I should not advise planting them later than the middle of June, as they are very sensitive to frost, and do not have a chance to give a bearing season of any length, if sowed too late.



Late corn, from sowing Early Champion on July 1st. These ears were picked October 27th

For a family that enjoys pickles even tomatoes are worth while sowing after Fourth of July. My seed was planted July 5th, and, of course the earliest variety obtainable was used. In spite of the handicap of transplanting, I had green tomatoes in October that measured over eight inches in circumference, surely large enough for pickles.

For winter use, beets are sowed in June, so the July 7th planting did not yield full sized roots, still young tender beets are the best of all and even very small ones make a good dish cooked with the leaves as greens.

Kohlrabi is supposed to be one of the best vegetables for late sowing, but mine were not started soon enough. July 20th did not give the bulbs time to form before the growing season was over. Next time I shall sow them the first of July.

A CULTURAL NECESSITY

An important element of success in July sowings is pressing of the soil into close contact with the planted seeds. This is essential for it causes the young plants to come up promptly, regularly, vigorously and straight, instead of feebly, unevenly and slowly, or else not at all, as often happens in mid-summer when the soil is left loose and dry above the plantings. The later growth and even the maturity of the crop also share in the good effects. The seedlings get a good start before the weed seeds, in the unrolled soil between the rows, have sprouted, so that the germinating vegetables can be cultivated before the weeds gain a foothold. In moist or heavy soils, or in early spring or late fall, when rains are probable, and the atmosphere is cool, this pressing of the soil is not so necessary, but in the loose, dry, crumbly soil, in which most of our summer planting must be done, it is important to firm every inch of soil above the seeds. It is not necessary to firm more than a narrow strip, except in the case of broadcast sowing. After firming lightly scratch the surface with a rake to form a mulch which helps to retain moisture and to prevent the formation of a crust through which it would be difficult for the seedlings to push their way. This principle applies to all kinds of seeds, and to transplanted plants, which can thus be protected from the wilting and burning that so often follow careless transplanting, in hot dry weather, when the soil is not properly firm. The soil may be pressed in various ways: by the foot, throwing the whole weight at every step; by pounding with the flat side of a spade or hoe; with a board which may be walked upon till the soil is firm; or with a roller.

Experiments were made to prove the wisdom of firming the soil. Patches of celery and cabbage were sowed, and part of each planting rolled. Where this was done the crops were good, but in the loose soil not one celery seed in a thousand germinated, and not one in a hundred of the cabbage seed. Corn and beets, sowed the first week in July, and rolled, came up in four days and perfected their crop before the season ended, while the unrolled ones took twelve days



These tomatoes were photographed on October 9th. The seed was sown July 5th

to germinate and did not mature before frost checked their growth. In August spinach and turnips were sown and a portion rolled. The rolled portion came up at once and yielded a good crop while those which were not rolled burned up because the loose soil allowed the dry air to penetrate to the roots.

As will be seen by the table, a harvest of nearly three months will come from vegetables sowed at Fourth of July, beginning with squash and wax beans about the middle of August and ending with carrots that do not mind the first frosts and can be left in the ground until November when the season is suitable. Where I have

added the word "frost" the vegetables had not run their course and would have continued bearing if the frost had been delayed.

TABLE OF FOURTH OF JULY GARDEN.

Vegetable	Date planted	First Picking	Last
Bush Lima	July 6th	Sept. 22nd	Oct. 30-Frost
Cucumbers	July 5th	Aug. 29th	Oct. 9-Frost
Crookneck Squash	July 5th	Aug. 26th	Oct. 11-Frost
Carrots	July 6th	Sept. 26th	Nov. 11
Wax Beans	July 6th	Aug. 21st	Oct. 21-Frost
Corn	July 5th	Sept. 26th	Oct. 7
Potato	July 21st	Oct. 30th	—
Pole Limas	July 5th	Oct. 21st	— Frost

Beside these were six other vegetables for which I do not have the exact dates.



Full grown pods of Extra Early Jersey lima beans, from sowing of July 5th. Photographed October 9th

Important Vegetables for July Planting—By James T. Scott ^{New York}

PROMPT ACTION NOW WILL INSURE A CELLAR FULL OF VEGETABLES THIS WINTER—THE LAST OPPORTUNITY, AND ONE THAT SHOULD NOT BE MISSED—EVERY HOME GARDENER SHOULD GROW TWO CROPS ON THE SAME GROUND

JULY ought to be more a month of activity than even April or May. In spring everyone prepares for summer, and during the summer months the wealth of vegetables seems to have no limit. In winter there never seems to be quite enough to go round. Let us do a little thinking now, and get our gardens to work overtime a bit during the fall months, and the usual order of things will stand reversed.

By July 1st many of the early crops have already matured and served their purpose. Clear the ground at once; don't allow it to lie idle for a single day. It is erroneous to think that your garden is resting—or that it needs to rest in summer. The long rest of winter is more than enough. Cropping and cultivating improve a garden. Exposure to the elements takes more out of a bare piece of ground than a crop does, and the elements don't help to pay the taxes!

CELERY MOST IMPORTANT

The most important winter vegetable, (apart from the potato) is celery. If reference be made to the plan for a vegetable garden in the January GARDEN MAGAZINE, page 266, it will be found that this crop is intended to succeed early potatoes, beets, spinach, etc. Celery needs an abundance of fertilizer and even though the ground was enriched in the early spring, give some manure now. Well-rotted animal manure is best as it retains the moisture—a very essential thing in celery culture.

There are various ways of setting out celery. The man who grows acres for the market plants it so close in the row that the plants blanch one another. Some plant it on the surface, as they do other crops, and blanch by means of paper collars. Others use boards, and pack leaves between the plants. But I am old-fashioned enough to think that celery is always crisper and nicer when blanched with earth, in the old-fashioned way. It is the plan universally adopted by those who grow it for their own use, and there is no celery on the market that seems to taste just like your own, so this method must have virtue.

BLANCHING FOR QUALITY

Proceed as follows: Lay down your garden line, leaving two feet of space between it and whatever may be next to it. Pull your line tight, so that it will not be readily displaced. Measure two feet again, and lay down another line. Between these lines is the space for the celery. This should be dug out one foot deep, and the soil laid equally on either side. If more than one trench is needed, measure off again, leaving a space of two and one-half or three feet, and so on, as before. When your trenches are dug, level off the soil, and firm down with the back of the spade, to prevent it from washing into the trench again.

This is the soil that you will use later for blanching. As, however, it will not be needed for that purpose for two months you can easily harvest a crop of lettuce, spinach, or radishes from it. Plant or sow these now. You can walk in the bottom of the trench, and work from both sides, and this will prevent any breaking down of the soil.

Next, add the manure in the trench. Three inches of well rotted material will be none too much. Dig this in with a fork, thoroughly mixing it with the soil.

The trench will hold two rows of celery plants. Lay your garden line again, six inches from either side. This will leave a space of one foot between the lines of plants, and setting them one foot apart will give ample space. The plants should be about six inches high when set out. If you don't have good ones buy them—they do not cost much. In setting just cover the roots. Many people cover the growing crowns, and then wonder why their plants don't grow. Water the plants freely as soon as they have been planted, and at other times, if necessary. The best varieties (my choice) are White Plume for early and Golden Dwarf for late. The minimum quantity worth growing for a family of six would be 400 plants; which would require two trenches each 100 feet long.

CARROTS IN THE STRAWBERRY PATCH

Another very important crop is winter carrots which should be sown about July 1st. Unlike celery it does not want a rich soil, but one that has been deeply worked is essential. In a well ordered garden a patch of strawberries has to be planted and an old one turned under every year; an old strawberry patch is an ideal place for carrots. The berries are all picked by this time, and the plants may as well be turned under now as later on.

Sow the carrots in rows about 18 inches apart, and thin out the plants when big enough, leaving two inches between each. The best varieties are Long Orange Improved, and Danvers Half-Long. The minimum quantity for a family of six would be about 250 running feet. Two small later sowings can also be made in any vacant place, one in about two weeks, and one a month after that date. These young carrots are preferred by many to the larger ones for immediate use, and they are very palatable.

WHERE THE PEAS AND CORN GROW

Rutabagas (turnips) may be sown as early as July 15th, and up to August 1st. About 100 running feet of row should be sufficient, but this is a matter of taste. I sow twice that quantity. Sow in rows two feet apart—the ground having been previously manured—and later thin the plants to nine inches apart. The rutabagas may succeed the early peas and early corn.

Cabbage, Flat Dutch and Savoy; and cauliflower, Autumn Giant and Snowball, should be planted by the first of July. Both of these like a rich soil. They want plenty of room, and should have at least $2\frac{1}{2} \times 1\frac{1}{2}$ feet of space. One hundred heads of cabbage, and the same of cauliflower, are sufficient. The cabbage will be required for storage for winter use, and the quantity may be increased, if necessary. The Snowball cauliflower will all be used before cold weather, but the Autumn Giant can be lifted and heeled-in in soil in the cellar, where it will keep in good condition until Christmas. The cabbage and cauliflower can be grown where the early beans, lettuce, spinach, or radishes have been.

THREE SOWINGS OF CORN

Three more sowings of corn can still be made. On July 1st and 8th plant Country Gentleman, 100 feet of row at each planting, and on July 16th plant Minnesota. It may just happen that this last planting will be cut down by early frosts, but if we have a late mild fall this extra late crop of sweet corn will be a treat, anyway it's worth risking the seed on a chance. This last sowing can succeed early crops of cabbage, cauliflower, turnips, or peas.

PEAS ON A CHANCE

Peas are not usually very successful when sown at this time, but they are worth trying.



Celery is the most important crop for July planting. The home gardener should grow it in double rows in trenches and blanch by earthing it up

They are at least good for the ground. About August 1st more corn will have passed its usefulness, and the ground may as well be used for this crop. Sow some of the early dwarf varieties, such as Nott's Excelsior, or American Wonder.

A SURE CROP—BEANS

Three more sowings can yet be made of string beans, from July 1st to August 1st. It may not be possible to get them all into one plot, but wherever an empty space is found, fill it up. By August 1st you will find lots of room.

By August 20th the onions yet to be harvested, else they will start into growth again, which will spoil their keeping qualities. This ground can be used for Yellow Stone turnips, or for winter beets. Eclipse is a good keeping variety.

BEETS AND TURNIPS

The early muskmelons will also be past, and part of the ground on which they grew can be used for beets and turnips. One hundred running feet of turnips and two hundred of beets would be about the minimum quantity.

The rest of the ground on which the muskmelons grew can be used for winter spinach. Make successive sowings of lettuce and

radishes throughout August, and lettuce even later, for transplanting to hotbeds.

Make also another sowing of endive about July 1st. Fifty feet of row will be sufficient.

SUCCESSION OF SPINACH

Successive sowings of spinach should be made every two weeks up to the end of August. This is one of the healthiest of all vegetables, and a garden should never be without it. Small sowings, twenty-five to fifty feet at a time will do. You can always find this much space by watching carefully and a second crop of this can follow on the ground where one has just been cleared, and each will do well.

CROPPING AIDS FERTILITY

Your chief aim should be to keep your garden busy the whole year. You will always find in these planting tables some useful crop that will fill in where one has been harvested. If toward the end of the season—say the middle of August—you have more empty space than you need for successive sowing, it will pay to fork over the ground, and sow white mustard, or any green crop that grows quickly, to be turned under for manure. Remember this: An empty garden is always a weedy one. It is less trouble to sow such a crop than it is to hoe

the weeds, and there are no bad after effects. Aim to plant in each plot as nearly as possible such things as can be harvested about the same time. It facilitates the work greatly, and looks better. Imagine manuring and forking over three feet, then skipping ten or fifteen feet, and forking three feet more. More time is wasted than would be necessary to cultivate a whole plot.

WORK ON A SYSTEM

These small things are often overlooked, when greater things demand attention. It is well therefore to be methodical regarding them. Assign the job, to yourself or someone else, to be done the last thing Saturday night, or first thing Monday morning. Make it a point to sow a few seeds once a week, and you will always have plants of suitable size to transplant. Very small sowings of the seed should be made, and transplant about two dozen plants at a time. This is better than planting a lot at one time and allowing them to go to waste.

Carefully watch the successions, and as far as possible avoid having any kind succeed itself, or even an allied species (except in the case of spinach). They not only require the same soil ingredients, but they are subject to the same diseases, and by planting one after the other, you are borrowing trouble

Time of Planting and Sowing for Winter Crops

KIND	VARIETY	DATE TO SOW OR TO SET OUT PLANTS	DATE TO SOW FOR SUCCESSION	DISTANCE BETWEEN ROWS (inches)	DISTANCE BETWEEN PLANTS when thinned (inches)	MINIMUM QUANTITY RUSING FEET OR NO. OF PLANTS	TO SUCCEED
Celery	White Plume, Golden Dwarf	July 15 (from May 1 sowing)		36	12	400 pfts.	Early peas, beets, beans, carrots
Carrots	Long Orange Improved, Danvers Half Long	July 1	July 10-25 Aug. 15	12 to 18	2 to 3	250 ft.	Strawberries Give no manure
Turnips	Purple top Rutabaga	July 15		24	9	100 ft.	Early peas, early corn
Cabbage	Flat Dutch, Savoy	July 1 (from May 10 sowing)		30	18	100 pfts.	Beans, lettuce, spinach, radishes
Cauliflower	Snowball, Autumn Giant	July 1 (from May 10 sowing)		30	15 to 18	100 pfts.	Beans, lettuce, spinach, radishes
Corn	Country Gentleman, Minnesota		July 1, 8, 16	48	24	100 ft.	Early cabbage, turnips, cauliflower, peas
Peas	Nott's Excelsior, American Wonder		August 1	48	3	50 ft.	Early corn
Beans	Golden Wax, Mohawk Bush		July 1, 10, 25	36	3	25 ft.	Onions, melons, corn
Turnips	Yellow Stone	Aug. 20		30	8	100 ft.	Onions, melons, corn
Beets	Eclipse	Aug. 20	Sept. 1-15	24	2 to 3	200 ft.	Onions, melons, corn
Endive	Green Curled, Batavian		July 1	18	9	50 ft.	Anything
Lettuce	Boston Market, Deacon		Once a week	15	9	20 ft.	Between lines of celery
Radishes	French Breakfast, White-tipped Scarlet		Once a week	12	2	10 ft.	Between lines of celery
Spinach	Long Standing, New Zealand	Aug. 20 (New Zealand); other kinds: July 1, 10, 25, Aug. 5, 15, 25		18	6	25 ft.	Anything



Pieris floribunda, excellent for edging; evergreen. Flower buds are carried all winter, opening in May



Aralea Sinenis, flowers from orange to pink, late in May. One of the best early flowering shrubs



Leucothoe catesbaei, southern evergreen and much used as undergrowth in rhododendron beds

The Best Hardy Plants of the Heath Family—By John Dunbar Rochester, New York

THE GORGEOUS RHODODENDRONS, AZALEAS, MOUNTAIN LAURELS AND OTHER CHARMING PLANTS OF THE SAME BOTANICAL AND CULTURAL GROUP—SEVEN YEARS' SUCCESS WITH THESE LIME-HATERS IN A LIMESTONE REGION

[NOTE.—This article makes an important contribution to horticultural knowledge by demonstrating that the secret of rhododendron culture is the plant's hatred of lime. It shows how the difficulty can be overcome in limestone regions by the simplest means. It also explains why peat, though necessary, is only an incident. The author is Assistant Superintendent of Parks at Rochester, N. Y. He has special charge of the planting and collections at Highland Park which is gaining an international reputation for its combination of artistic planting and complete botanical collections of hardy trees and shrubs.]

THERE is a large group of plants belonging to one great class, the heath family, the cultivation of which sometimes seems to be as elusive a problem as the plants themselves are worthy. The rhododendrons, the most striking and gorgeous members of this galaxy, are planted by the carload, and unfortunately frequently die in equal quantities. They have subtle requirements, but these once supplied, the rhododendrons, the heaths, and the azaleas offer charming possibilities for our gardens. What more desirable for fringing the tall masses of the rhododendrons and azaleas than some of the dwarfer, more or less trailing, heaths, or the intermediate andromedas?

Over in England they are pleased to make "American Gardens," which means plantations of the rhododendron alliance, which will flourish in well-drained peaty soils. We

can have real "American Gardens" here, carrying out the idea entirely with native shrubs of the heath family, but the conditions once provided, it is also possible to grow some of the most delightful genera of the whole world, and why not add the Scotch heather, the Irish and the Cornish heaths, and a few of the showy exotic azaleas?

THE SECRET OF GROWING RHODODENDRONS

Twelve years ago I planted a small selection of hardy Catawbiense hybrid rhododendrons in a well protected ravine, in light loamy limestone soil (The soil in this region contains lime). The surface of the bed was annually mulched with leaf soil and leaves, and they were well watered, but they always looked unhappy. They struggled along, produced but few flowers, made little growth, and were scorched every winter.

Five years later another attempt was made on an entirely different plan. In this same ravine, which is thoroughly protected from the sweep of north, northwest, and west winds, an irregular area of about two thousand square feet was dug out, to a depth of from two to two and one-half feet. There being good natural drainage, the space was simply filled in with soil taken from a swamp, or a kind of sink hole amongst some small hills, containing a deposit of partially decayed organic matter—leaves, moss, fern roots, etc., forming a material intermediate between muck and peat. It did not show any evidence of sourness. Rotted cow manure, equal to about one-tenth the bulk of the new soil, was spread on the surface, and forked over with the top soil until quite fine.

This bed was also planted with a selection of hardy Catawbiense hybrids, and during every year since, they have grown strongly and flowered freely; they are very happy and vigorous, and have had no special protection, other than that afforded by the lay of the land. I have been told that we could not overcome the lime in the soil beneath, and that it would work up, by capillarity. But the bed has flourished for seven years, and there are no evidences as yet of the lime working up. As a matter of fact, the water with which the bed is frequently soaked in the summer time contains lime, but even that does not seem to affect the plants.

Even if there is no lime in the soil, the beds for rhododendrons should be prepared two, or two-and-a-half, feet deep; the top soil, or any that contains humus, being retained and mixed with leaf mold, or peaty soil and cow manure.

When rhododendrons are growing in a congenial soil, they will stand more sunshine than is commonly believed, but they cannot, under any conditions, endure the sweep of



The sheep laurel (*Kalmia angustifolia*), has narrower, smaller leaves and darker flowers than the common mountain laurel. It begins to flower a little later, but finishes at the same time



The hardy cross-leaved heath (*Erica Tetralix*). The bright green foliage makes it ideal for edging

cold winds. They have always wintered well in Rochester, excepting during the severe period of 1903-4. I always give a mulching of leaves five or six inches deep in the fall. The mulch is not removed in the spring, and the leaves soon rot.

During the past few years, various quarters have reported that the rhododendrons had been attacked by a species of lace bug, which sucks the cells on the under sides of the leaves, causing a brown discoloration, and if not checked the whole plant will soon turn yellow. Last year the insect appeared on our plants, but it was easily destroyed by applications of a solution of Ivory soap, half pound in three gallons of water.



The rhododendrons are the most dignified and most popular members of the heath family. They must have perfect drainage, and deep humic soil

The laurels, (*Kalmia*), with their exquisite pink blossoms and handsome ever-green foliage, are the best companions for the rhododendrons and they are more easily grown because they need less humus.

The commonest and best species is the mountain laurel (*Kalmia latifolia*), from four to ten feet in height in different sections, but never over four feet with us. It has smooth, oval, deep green leaves, with saucer shaped, pinkish red to white blossoms, in flattish clusters, from the first to the end of June. It is a common wild plant in many parts of the northeastern states.

The sheep laurel, (*K. angustifolia*) is easily distinguished from the foregoing, by its narrower and smaller leaves and the reddish flower clusters from the middle to the end of June. It seldom exceeds two and a half to three feet in height, and so is well adapted for massing in the front of the rhododendron beds.

A third species, not over one and a half feet tall, and sprawling, with very pretty rose purplish blossoms at the ends of the branches about the middle of May, is the pale laurel (*K. polifolia*, sometimes called *K. glauca* in the nurseries). It is valuable because it flowers early, and when planted with other laurels along the edges, so that the flowers appear out, the straggling habit is not noticed.

THREE MONTHS OF AZALEA BLOOM

For gorgeous masses of brilliantly colored flowers before the rhododendrons bloom, what could surpass the azaleas? In a bed of mixed varieties all the beautiful tints and glows of sunset skies are reproduced. There are three color groups, red or pink, yellow, and white, and they flower in that order, from May to July.

With the exception of *A. nudiflora*, which does well in any light moist soil even where there is lime, all the azaleas grow best in a soil rich in humus, peat, or leaf mold, and so may be planted in the rhododendron beds. The flowers vary through pink, rose and red. It grows from two to seven feet tall and comes into bloom about the middle of May with the expanding leaves.

The earliest of all, and perfectly easy to grow, is the native rhodora (*Azalea Canadensis*), a dwarf shrub, one to three feet high, with delicate lavender or pale purple flowers, opening the first of May.

About the second week in May, the delicately tinted blossoms of the Carolina azalea (*A. Vaseyi*), about one and one-half inches across, pale pink to pale rose, with faint orange spots on the upper petal, unfold.

About the same time the new hardy Indian azalea (*A. Indica*, var. *Kempferi*),—introduced from Japan by Prof. C. S. Sargent—opens its charming pinkish red blossoms in great profusion. This is a perfectly hardy form of the florists' azalea, and merits extended planting in our gardens. The foliage is evergreen.

The Chinese azalea, (*A. Sinensis*) has very showy flowers ranging from orange to pink. A large number of named hybrids and varieties of this are in cultivation in a wide range of exceedingly bright colors;



The true Scotch heather (*Calluna vulgaris*) does not have the bell shaped flowers of a true heath (*Erica*). These popular names are often confused

they bloom about May 20th, and are fairly hardy.

At the end of May and during early June, the showy orange yellow to intense red blossoms of the flame colored azalea (*A. calendulacea*) always attract attention, and completely change the color scheme of the plantation. It grows from four to eight feet tall. There are two other species that fit



A successful rhododendron bed in a limestone region. Peaty soil, well fertilized, was filled in to a depth of two and a half feet.



The Irish heath (*Daboecia polifolia*) is worth the effort to grow it. Grows about a foot high and flowers continuously from July to fall. Requires slight winter protection at Rochester. There are many color varieties

into the same group: The California azalea (*A. occidentalis*) shading from cream yellow to deep yellow, at the end of May. The leaves are distinctly yellowish green, and the plant grows about two feet tall. As this passes out of flower, it is succeeded by the creamy yellow and fragrant blossoms of the Pontic azalea (*A. Pontica*). It is easily distinguished from the California azalea by its rough and hairy leaves. The plant grows two to three feet high.

The smooth azalea (*A. arborescens*) is said to grow, in its southern home, twenty feet tall, but I have never seen it over eight feet, in cultivation. The white flowers (sometimes slightly tinged with pink) appear at the end of June and first of July. With blossoms of this, the latest flowering

species, the brighter colors give place to white, which seems an appropriate adaptation to the increasing heat of the approaching summer.

Flowering about the same time, and also having white blossoms, which are quite gummy on the outside, is the clammy azalea (*A. viscosa*). It can readily be distinguished from the other white flowered azaleas by the hairy leaves.

The American azaleas have been hybridized amongst themselves, and with others, to produce a race of beautiful hardy hybrids, known as Ghent azaleas (*A. Gandavensis*). These have long been in cultivation.

THE HEATHS AND THE HEATHERS

None of the true heaths (*Erica*) are natives

of the American Continent, but are quite common on the moors of the British Islands and Central and Northern Europe.

They are well adapted for use as adjuncts or edgings to the azalea beds, because they are low growing, and destroy any ragged appearance that might arise from the lower leafless portion of the taller kinds.

In early spring the flesh colored heath (*Erica carnea*) brings cheer to the gardens. Its numerous pinkish red blossoms, eagerly sought by bees, appear with the first breath of spring, and keep in good bloom for about four weeks. It is one of the hardiest of the heaths. The white-flowering form, which blooms at the same time, is sometimes known as *Erica herbacea*. These are the only spring-flowering hardy heaths.

Contrary to popular belief the Scotch heather (*Calluna vulgaris*) is the most easily grown of the hardy heaths, thriving on a peaty soil. Field mice greatly enjoy making their winter homes in the heather clumps; they gnaw the branches, and a constant war has to be waged against them. It has small, purplish pink blossoms, carried in dense masses, in August. There are a number of named varieties in cultivation, including a pure white form.

Blooming at the same time, and much more attractive, with its light purplish red blossoms, is the Cornish heath (*Erica vagans*). It forms dense cushions of bright green foliage, which when thickly covered with the bell shaped flowers, is very showy. The white flowering variety is not often seen, but is worthy of cultivation.

In August and September the rosy-white flowers of the cross-leaved heath (*Erica Tetralix*) appear. The foliage is grayish green and the branches are somewhat prostrate. It is a charming plant for edging, and is quite hardy with us.

The Irish heath (*Daboecia polifolia*), is one of the daintiest of the true heaths. It grows about one foot tall, and the slender branches are terminated by long spikes of purple red blossoms in the typical bell form. There are varieties with variously colored blossoms but the pure white form, *Daboecia polifolia* var. *alba*, is one of the best. The flowers are produced continuously from July until fall. It is not quite hardy here, but with a light winter protection of dry oak leaves, and a few evergreen branches to hold the leaves in place, it can be successfully carried through. The *Daboecias* are not easily grown, but they are such pretty things that they are well worth a special effort.

A GROUP OF WHITE-FLOWERED SHRUBS

I do not know of anything that makes a better foil to the bright colored plants than the beautiful andromedas which grow about eighteen inches high, and in May are covered with lily-of-the-valley-like flowers. Perhaps the best for general planting is the common andromeda (*Pieris floribunda*) making a compact, neat, evergreen bush. The flowers expand at the end of April. It does remarkably well in light, sandy, moist soil, with a little surface mulching of leaf mold.

(Continued on page 338)



Scotch heather (*Calluna vulgaris*) is the most easily grown of all the heaths, but field mice eat off the branches in winter. Small, purplish flowers in August. There are several varieties, including a white one

GARDEN NECESSITIES

Inexpensive little things that pay for themselves immediately in increased crops and labor-saving.

MODEL EXTENSION CARNATION WIRE SUPPORT

Without the aid of supports, carnations soon fall and break from the weight of the bloom. Every grower of carnations should have our support; they are strong, light, and easily applied with screw or diamond anchor.

MODEL TOMATO & PLANT SUPPORT

Diamond Anchor

The best support for tomatoes and heavily flowered plants, such as Dahlias, Peonies, Chrysanthemums, etc. Tomatoes grown with supports produce a much larger crop and better quality. Constructed of galvanized wire. They are light, strong, and easily applied with screw or diamond anchor.

Per Dozen, \$1.75 Half Gross, \$10.00
50 " " 7.50 Gross, " 18.00

We make plant supports of all kinds. Write for illustrated pamphlet, "For the Greenhouse and Garden."



Screw Anchor

Parker-Bruen Mfg. Company, Inc.

Factory: Harrison, N. J.

St. James Building, New York

A Full Crop of Large Luscious Berries Next Season Will Be the Result of Planting

DREER'S



POT GROWN STRAWBERRY PLANTS

THIS SUMMER

Dreer's Mid-Summer Catalogue

is now ready. It tells all about the best varieties of Strawberries, also offers Celery, Cabbage and other Vegetable Plants, Palms, Ferns and Decorative Plants. Vegetable Seeds for planting during the Summer and Fall. Seeds of Old-fashioned Hardy Perennials and other Flowers for present sowing. Lawn Mowers and Garden Requisites of all kinds. A copy will be mailed free to all applicants who mention this magazine. Write for it to-day.

HENRY A. DREER

714 Chestnut Street

PHILADELPHIA, PA.

A Complete Manual of House Building in the Country



THE COUNTRY HOUSE

BY CHARLES EDW. HOOPER

THIS volume gives competently and in detail, yet without technicalities, all the information necessary in the building of a country house.

Its practical value is unlimited. 380 illustrations. Net, \$3.00. (Postage, 30 cents.)



DOUBLEDAY PAGE & CO.

125-127 EAST 16TH STREET, NEW YORK

THE SEA TRIP

of the

OLD DOMINION LINE

makes the most attractive route to

NORFOLK
OLD POINT COMFORT
RICHMOND, VA., and
WASHINGTON, D. C.

Steamers sail daily, except Sunday, at 3 P. M. from Pier 26, North River, foot of Beach Street, New York.

For full information apply to

OLD DOMINION STEAMSHIP CO.
PIER 26, N. R., NEW YORK, N. Y.

H. B. WALKER
V. P. & T. M.

J. J. BROWN
G. P. A.



OVER SEVEN BUSHEL OF TOMATOES

grown on *one* bench in this greenhouse. Seven bushels (5 quarts to a plant) of splendid large Aristocrat tomatoes that were a joy to the owner all through the winter and right up to the middle of June. This was not an exceptional case either, but proof of the wonderful growing qualities of the U-Bar Greenhouses.

U-BAR GREENHOUSES ARE THE BEST GREENHOUSES BUILT

because with their wide spacing of glass, curved eave line and great reduction in heavy frame work, they are the lightest house possible, the nearest to an outdoor condition that has ever been reached.

We are the sole U-Bar builders. Send for *Cuts*.

PIERSON U-BAR COMPANY

DESIGNERS AND BUILDERS

U-BAR GREENHOUSES

Metropolitan Building 4th Avenue and 23rd Street New York

D. and C. Roses

are the best. Always on their own roots. Plants mailed to any point in the United States. Safe arrival guaranteed. Over 40 years' experience. Flower and Vegetable Seeds a specialty. A premium with every order. Write for

NEW GUIDE TO ROSE CULTURE
for 1906, the leading rose authority of America. 110 pages. Mailed FREE. Inquiries over 1,000 returned. Tells how to grow them and all other desirable Roses. Established 1857. 20 greenhouses.

THE DINGEE & CONRAD CO. West Grove, Pa.

50,000 Rhododendrons and Azaleas
all the hardy varieties

80,000 Peonies in over 450 varieties
The choicest collections of these plants in existence.

Send for prices.

COTTAGE GARDENS COMPANY
QUEENS, LONG ISLAND, N. Y.

READERS OF THIS MAGAZINE

are invited to visit our library salesroom
to examine our books and magazines.



We shall be especially pleased to show you the new
and enlarged edition of

The Cyclopedia of American Horticulture, in six
volumes.

The Nature Library, in ten large octavo volumes.

The Gallery of Masterpieces, fifty beautiful photo-
mezzotints.

The Home Library of Law, six handy little books.

The Little Nature Library, seven dainty illustrated
volumes.

Bound Volumes and Files of Our Magazines, "THE
WORLD'S WORK," "COUNTRY LIFE IN AMERICA,"
"THE GARDEN MAGAZINE" and "FARMING."

133-137 EAST 16TH ST., BET. IRVING PLACE AND 3D AVENUE

DOUBLEDAY, PAGE & COMPANY, Publishers

The Best Hardy Plants of the Heath Family

(Continued from page 336)

The Japanese andromeda (*Pieris japonica*) is also evergreen, but a little larger growing. The long, drooping, white flower clusters which are crowded towards the ends of the branches open about the first of May. It is not quite as hardy as *forficunda*.

A low-growing deciduous species that has very pretty drooping pure white blossoms in long clusters, at the end of May and first of June, is the stagger bush (*Pieris Mariana*). It grows abundantly on the Long Island plains in sandy soil but for some reason, perhaps on account of lime in the soil, it does not do well with us, unless planted in peaty soil!

THREE ROSE PLANTS FOR DRY SOILS

The wild rosemary (*Andromeda polifolia*), common in some sphagnum bogs, is easily recognized by its grayish green leaves, and flesh-pink nodding flowers produced at the ends of the branches, in the end of April. Curiously enough, this plant, which always has "wet feet" in native conditions, does splendidly with me in a light, sandy soil forming a much neater shrub than I ever saw in the wild.

Another plant, that, like the stagger bush, inhabits wet sphagnum bogs, but which can be grown quite well in light, loamy, moist soil, is the leather cap (*Chamaedaphne calyculata*). The one-sided spikes of nodding white flowers appear with the first warm spell of spring. A much branched shrub growing one to three feet high.

Flowering a little later, and of smaller size, about two feet high, the Labrador tea (*Ledum latifolium*) usually grows in shade in sphagnum bogs. The terminal clusters of showy white blossoms appear at the end of May and first of June. It never looks happy unless grown entirely in peat or humus and given abundance of water, but it does not require a boggy condition to be comfortable.

PLANTS WITH STRIKING FOLIAGE

Of late years much attention has been given to the merits of the southern Leucothoë (*L. Catesbaei*) as an undergrowth plant for rhododendrons. It has very beautiful evergreen leathery foliage, and retains its dark green color well throughout the winter months. White flowers are produced along the curving branches about the middle of May. In peaty soil, and with an abundance of moisture, it makes a rampant grower.

The showy andromeda or lily-of-the-valley-bush (*Zenobia speciosa*) is a shrub about two and one-half feet tall, with whitish leaves, which are very beautiful. The large drooping clusters (often five inches long) of pure white, bell-shaped blossoms (one-third of an inch across) are very handsome at the end of May. With us the plant is a little tender, and we have some difficulty in growing it, even in a good, peaty soil.

A PLANT FOR EVERY GARDEN

Certainly the easiest to grow of all this family is the pepper bush (*Clethra alnifolia*). You may plant it in any ordinary light soil



**KELLER'S
GORGEOUS POPPIES**

Hardy Garden Flowers

No. 6

Oriental poppies! What a gorgeous image rises at the sound of those magic words! The largest poppies in the world—six to eight inches across—their blood red color fires the imagination with visions of the mystic Orient. The first glimpse of them transports one as on a magic carpet to the land of the Arabian nights. Their several weeks of bloom seems all too short, but you can have poppy flowers for a longer period by having in your garden other chapters of the fascinating poppy story.

Do you know the Iceland poppy, that lovely Arctic treasure, which gives us the best yellows, whites and orange in the family? You can still enjoy these superb flowers this year! For, in addition to a splendid stock of field grown plants for Fall planting, we have a quantity of strong pot grown plants that can be planted during June, and will bloom profusely later in the Summer.

Oriental Poppy (*Papaver orientale*)
\$2.00 per doz., \$15.00 per 100
Iceland Poppy (*Papaver nudicaule*)
\$1.50 per doz., \$10.00 per 100

Do you know the hardy garden, of which the gorgeous poppy is its beauty is a representative flower? With a hardy garden you would now be reveling in lilies, Phlox, Campanulas, Achillea, Spirea and the other flowers of character that make the garden glorious.

We grow hardy perennials exclusively. Our energies are altogether devoted to their culture, and we have a stock such as only a specialist could grow.

Write for our illustrated catalogue.

J. B. KELLER, SONS

Rochester, N. Y.

An Every Day Garden Every Day in the Year

YOU have waited long weeks for your summer garden, with all its joys of caring for it—all its rewards in bloom or vegetables, however all too soon it will be gone again—But why not have an every day in the year garden? The kind that right at your very door-step in the bleakest, most discouraging winter day you can have the summer time again—the summer with its wealth of flower fragrance—its vegetables with their fresh crispness, and all that comfort and joy of poking in the dirt around them—the delightful assisting of Nature in her wonder work—have it all in a greenhouse—the kind of a greenhouse that is conveniently arranged, attractive, a regular cheer place.

LORD & BURNHAM CO.
Greenhouse Designers
and Manufacturers
1133 Broadway, Cor. 26th St., New York
Boston Branch, 819 Tremont Building

We build that kind of a house—build them a little bit better than anyone else because we have been building them longer than anyone else. Send for our greenhouse brochure.

Bridgeman's

HIGH GRADE
Vegetable, Farm
and Flower Seeds
GARDEN TOOLS
and HORTICUL-
TURAL BOOKS

Descriptive illustrated catalogue
mailed free on application

BRIDGEMAN'S SEED WAREHOUSE
37 East 19th Street, New York City

MAULE'S SEEDS LEAD ALL

Illustrated Catalogue free
W. M. HENRY MAULE
1701 Filbert Street, Philadelphia, Pa.

FAIRFAX ROSES

CANNOT BE EQUALLED *Catalogue free*
W. R. GRAY, Box 6, OAKTON, FAIRFAX CO., VA.

The Celebrated Furman Boilers

As an Investment, Furman Boilers return large Dividends in improved Health, increased Comfort and Fuel Saved.

Valuable Catalogue and Booklet "Warmth" mailed free. Address The Herenden Manufacturing Company, Plant Street, Geneva, N. Y.

SELLING AGENTS:
E. S. DEAN, Bloomington, Ill. E. K. BARR, La Crosse, Wis. NEW YORK Office and Show Room 226 Pearl Street.



Pedigree Strawberry Plants

Pot Grown

OUR PLANTS are grown with the greatest care, and the healthy, strong condition they are in when shipped by us will give a full crop next year if plants are set out before September. Order now, early orders get the best selection of stock.

VERY EARLY VARIETIES: Fairfield, Success, Lady Thompson, Climax.

MID-SEASON VARIETIES: Wm. Belt, McKinley, New York, Oom Paul, Nick Omer, Glen Mary, Sample, Marshall, Biomark, Senator Dunlop, Warfield, Clyde, Babach.

LATE VARIETIES: Gandy, Lester Lovett, Arline, Aroma, Jov, Late Champion.

Price per dozen, 75 cents per 100, \$3.50 per 1,000, \$25.00.

Catalogue and Cultural directions mailed free.

STUMPP & WALTER CO.,

50 Barclay St., New York

Hardy Plants FOR Old Fashioned Flower Gardens

including Phloxes, Bell Flowers, Larkspurs, Poppies, Paeonies, Iris, Garden Pinks, Day Lilies, etc. Also fine collection of novelties. Catalogue on application.

FREDERIC J. REA Norwood, Mass.



LAWN HOSE "THE KIND THAT LASTS"

This is the kind that gets extra use every time you haul out your hose and brand.

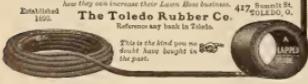
You can make a positive saving of 50 per cent or more in cost of Lawn Hose by buying the "BULL-FROG" BRAND.

Because "BULL-FROG" BRAND costs no more and lasts over twice as long as the ordinary lapped hose kind. Ninety-nine out of one hundred are because of faulty seams. (See Chart.)

SPECIAL OFFER:—To widely distribute "BULL-FROG" BRAND. We will, if your dealer does not handle it, ship you, upon receipt of order on 30 Days Free Trial. Sixty-five cents per foot of hose, complete for \$1.50, express prepaid East of the Mississippi River and North of the Tennessee River; equalized by post. Money back if not satisfied.

FREE! Open, repairable, reliable hose on "Lawn Hose" making and care. "Dealer should write and learn how they can increase their Lawn Hose business." Request S. Bull-Frog Seal, Toledo, Ohio.

The Toledo Rubber Co. Reference any bank in Toledo.



that splits, wrenches, and slaughters the dahlias, unless they have been planted in a spot sheltered from the wind.

Gladioli have no business in a flower border. They have no decent foliage or habit and besides, tender plants don't fit in a hardy border. Grow them in your vegetable garden, in rows, where you can cultivate them with a wheel hoe, and where stakes don't matter so much. Posts and wires are practical for fanciers of gladioli.

A rose garden is usually the worst looking kind of garden there is, because the stakes and labels loom up like the stones in a graveyard. Use iron stakes, or prune your plants so they won't need stakes. Keep a book, showing the position of each rose, and thus avoid labels.

Cosmos always wants to grow too high and bloom too late. It may be twenty years yet before we shall have dwarf, July-blooming varieties. Therefore, jam a spade down into the ground all round the cosmos, not too close, but near enough to check its growth and throw it into flower. Leave some other plants for comparison. If you have success, please send us photographs, dates, measurements, and other facts.



Prepare for Fall and Winter Vegetables

THE suggestions made in the *Gardener's Reminder* this month are excellent, but I wish to note one important difference between New York and Philadelphia practice and to add some other timely advice.

July 17th would be too soon to plant early flat turnips in the latitude of Philadelphia for fall and winter use, as the bulbs would become hard and woody and would not be fit to put away for winter. August 15th to 18th is the proper time with us to sow these turnips for a winter supply. On the other hand August 18th is too late for us to sow Yellow Stone turnips for winter use. The Stone turnip as we know it is the Swede or Rutabaga and with us these have to be sown early in July to reach a suitable size for winter use. Also we must plant winter beets in July in order to get them of sufficient size.

TRY THIS KIND OF STORAGE

The ordinary cellar is a very poor place for the storing of roots and vegetables for winter use by reason of the dryness and warmth caused by the heater which is usually present. By far the most satisfactory plan for keeping roots, cabbage and several other articles for winter, is to have barrels sunk for about two-thirds of their height or depth in the soil in

GLADIOLI

\$5.00 FOR THE "DIAMOND" COLLECTION

"All the tips of the Rainbow" including "Virgins," the Empress of all.



Send 50 Cents

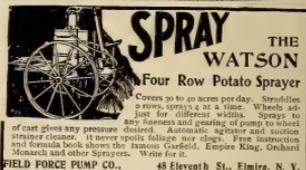
and receive 25 bulbs of the "SILVER SELECTION" shipped to any place in the United States or Canada.

CATALOGUE FREE.

LADIES' GOLD WATCH FLEE

To Lady sending, before July 1st the greatest number of words made from words "GLADIOLUS VIRGINIA" and ten cents for 1,000 Golden Poppies Seeds.

WILLOW BANK NURSERIES, Specialist in Gladioli, Dept. B. Newark, Wayne County, New York.



FIELD FORCE PUMP CO., 48 Eleventh St., Elmira, N. Y.

Mexican Palm Leaf Hat 50c

Made worn by Mexicans in Mexico from palm fiber. Double weight, durable and light weight with colored design in firm. Available at \$2.00 per pair post paid for 40 to introduce our Mexican hats and straw work, same hat plain, 40c; both for 50c. Large, medium and small sizes. Fine for fishing, camping, seashore and gardening. Hats bought free.

The Francis E. Lester Co., Dept. J7, Mesilla Park, N. M.

THORBURN'S SEEDS

THE BEST AND MOST RELIABLE. If you are interested in gardening send for our beautiful GARDEN ANNUAL. Mailed free to J. M. THORBURN & CO., 36 Cortlandt St., New York



LAWN FENCE Many designs. Catalogue at wood 23 page Catalogue free. Special prices to cemeteries and churches. COLE SPRING FENCE CO., Box 366 Winchester, Ind.

All the plates used in

THE GARDEN MAGAZINE

are made by

The GILL Engraving Company

110 Fifth Avenue New York

*The first adequate treatment
of the 'Dog' in America*

The Dog Book

By JAMES WATSON

What Others Say:

New York Times

"Author, artist, publishers, have evidently combined their talents, their enterprise, and their patience to make 'The Dog Book' the most magnificent literary and artistic monument ever created in honor and in explanation of 'man's most faithful friend.' A really unequalled publication."

New York Sun

"If any man knows about dogs it is Mr. Watson."

New York Telegram

"There has been nothing written or published pertaining to dogs which has quite equalled this work."

Boston Transcript

"'The Dog Book' proves itself of the greatest value to every dog lover."

To be in ten parts, eight now ready

Price, each, \$1.10

(Subscription)

Write for special terms and monthly-payment plan, mentioning THE GARDEN MAGAZINE:

COUNTRY LIFE IN AMERICA THE WORLD'S WORK FARMING THE GARDEN MAGAZINE

DOUBLEDAY, PAGE & CO. NEW YORK.

A Piedmont Red Cedar Chest

in the home saves the trouble and expense of putting your furs in cold storage. The cost is about the same as that of a season's cold storage, but the chest lasts a lifetime. It is always in your home and easy of access.

It does all that cold storage does—and more; imparts that delicate odor of the genuine Southern Red Cedar to your furs, and absolutely protects them from moths and insects, which at this season are laying their eggs and preparing for their work of destruction to furs and woolsens. Furs, blankets, valuable clothing, etc. packed in a Piedmont Red Cedar Chest are perfectly secure from moths, dust and dampness, and are kept clean, sweet and fresh. They are always ready to use. No need of airing to destroy the objectionable odor of moth-balls, etc., which only partially protect.

Made in several sizes and fitted with handsome trimmings.

An Ideal Wedding or Birthday Gift

You run no risk—if not perfectly satisfied with the chest, return it in five days at our expense and get your money back.

They are shipped direct from factory to your home, freight prepaid.

Write for booklet with full information and factory prices.

PIEDMONT FURNITURE CO.
Dept. W. Statesville, N. C.



Plant for Immediate Effect

Not for Future Generations

Start with the largest stock that can be secured! It takes over twenty years to grow such Trees and Shrubs as we offer.

We do the long waiting—thus enabling you to secure trees and shrubs that give an immediate effect. Spring Price List Now Ready.

ANDORRA NURSERIES CHESTNUT HILL, PHILADELPHIA, PA.

WM. WARNER HARPER, PROPRIETOR

Bausch & Lomb-Zeiss TESSAR



Pictures



Like



These

The Lens of the Camera

is the most important feature. This year Kodaks, Premos, Hawk-eyes, Centuries and other cameras can be had fitted with the Tessar Lens, a lens that will make all kinds of pictures under all kinds of conditions. This lens requires only about half the light required by lenses usually furnished on cameras. It is therefore possible to use it for home portraiture, photographing the babies, as well as the most rapid outdoor pictures, with equally good results. No other lens has so wide a range of usefulness and is at the same time so compact and perfect optically.

Specify TESSAR when ordering your camera.

Send for Booklet "Aids to Artistic Aims."

Bausch & Lomb Optical Co.,
Rochester, N. Y.

NEW YORK

BOSTON

WASHINGTON

CHICAGO

SAN FRANCISCO

Amatite THE NEVER LEAK ROOF

AMATITE is the never-leak kind of roofing—you can depend upon it in any kind of weather and in any climate. It has a mineral surface and can't rust, rot, crack, buckle nor creep. No better or more suitable ready roofing is made. It needs no painting nor coating and is easy to lay. Large-headed nails and cement free.

Write to-day to our nearest office for



test sample and booklet giving full particulars.

BARRETT MANUFACTURING CO.
New York, Chicago, Philadelphia, Cleveland, Minneapolis, Boston, Cincinnati, St. Louis, Kansas City, Allegheny, New Orleans.



ORCHIDS

Largest importers and growers of ORCHIDS in the United States
LAGER & HURRELL
Orchid Growers and Importers SUMMIT, N. J.



HARTMAN'S PATENTED FENCE FASTENER

FOR CORNER POSTS
Can't pull out. Fence easily fastened to post, or taken down. Farm rights and machine for making staples only \$100.00. We sell staples at \$50.00 per 100 lbs. *Free circular tells all about it.*
Hartman Cement Fastener Co., Conklin, Mich.



THERE'S MONEY IN FARMING

If you understand Modern Methods and FARM INTELLIGENTLY.

Every reader of THE GARDEN MAGAZINE who is interested in farming or gardening, in the growing of fruit or of flowers, is invited to send for a free copy of our 30-page catalogue and full information in regard to the Home Study Courses in Agriculture, Horticulture, Landscape Gardening and Floriculture which we offer under Prof. Brooks of the Massachusetts Agricultural College as Prof. Craig of the Cornell University.

The Home Correspondence School
Dept. 6
BRIDGEFIELD, MASS.

a well-drained location, having the barrels stand at least a clear foot apart. The earth taken out in sinking the barrel is banked up around the upper portion so as to be level with the top of the barrel. The roots, cabbage, etc. are gathered just before there is danger of freezing in the fall and carefully placed in these barrels, covered with boards and when hard frosts come the barrels should be covered with six inches or more of straw, hay or other material. Stored in this way the freshness of the vegetable is retained to the greatest degree and the mulch or covering at the top of the barrels can easily be removed at any time to give access to the contents. One of our neighbors has a storage house of this character under the shelter of a growth of evergreens in which he has been very successful in keeping apples in the finest condition until quite late in the spring as the sun seldom penetrates to the location where this storage house is arranged. This plan of barrel storage in the open ground also is strongly advocated by Mr. Charles Allen, Floral Park, New York.

We advise plantings of snap beans, such as the Early Valentine, at least once every two weeks from early spring until the last of July, planting only a short row at a time, say twenty to thirty feet, which will give pickings for two weeks for a family of eight. Thus you are sure of tender young pods at all times, while if a large planting is made at one time the pods soon become too old. There is little use for the ripened dry seed of the dark colored varieties.

It pays to plant sweet corn every two weeks from the time that the weather becomes warm in the spring (about May 5 near Philadelphia) until the last of July in this section, using two varieties of slightly different season at each planting and a dwarf extra early variety for the last two plantings in July.

HOT WEATHER AND AUTUMN LETTUCE

If you sow lettuce June 20th the heads are due in August, but this is the most difficult month in the whole year to head lettuce satisfactorily. In fact, it can only be accomplished by using some of the crisp head varieties such as the Iceberg, New York and Brittle Ice, and to do so will require an exceptionally rich, light soil which can be kept easily worked during the growth of the plants.

It is better to concentrate on lettuce for fall use. First class head lettuce can be had in the garden more readily during October and early November than at any other month in the year. For this purpose the seed should be planted about August 1st, August 15 and September 1st and if three or four kinds which will come on in succession are planted at the same time, a supply can be had from the first of October until the middle of November without difficulty.

It is all right to sow spinach in July using a summer variety like the Victoria but an earlier as well as a later planting are desirable and our main plantings for spring use are made the latter part of October and the early part of November as fast as the land can be cleared and prepared for seeding.

E. D. DARLINGTON.

Doylestown, Pa.

Pearline

—especially adapted to washing
Ducks
Linen
Figures
Lawn
Madras
Batistes
Percales
Cheviots
Gingham
Organdies
and all other
Wash Fabrics.



ACTIVE SUMMER EXERCISE
requires frequent washing of misty gowns—Don't wear them out by destructive rubbing with soap and wash-board.

PEARLINE
doesn't stain that soap can't—WITHOUT RUBBING.
That's why the most delicate wash fabrics last twice as long when

Pearline Does the Washing

Kill those Bugs

WITH
THOMPSON'S ROSE NICOTINE

(Pure Nicotine from Tobacco.)
A colorless, stainless and odorless product that instantly kills every form of insect life, whether on plants or flowers, in the household, dog kennels, hen-houses, on the human body, on cats, dogs, fowls, etc. Can be used safely on the most delicate flowers, fabrics and pet animals, with positive and satisfactory results guaranteed.
Sold by all druggists in 5c and 10c tins.
For indoor and plant fumigation use Thompson's Rose-Nicotine Fumigator, Box, for its thoroughness and easy application. No odor afterward.
We will send you free our reliable booklet (20 pages) "How to destroy insect pests and vermin." If you will send the name of your druggist, the tin you prefer, 5c or 10c, and a few cents for postage, we will promptly mail you a copy. (Not available where druggists won't supply you.)
F. A. THOMPSON & CO., Mfg. Chemists
1200 Trembley Ave., Bronx, N.Y.



CACTUS SUCCEULENTS, ODD and RARE PLANTS

Largest Importer and Grower in United States
F. WEINBERG, Woodside, L. I.
Illustrated Catalogue on Application

KILL THE WEEDS and GRASS that deface your WALKS and DRIVES with FAIRMOUNT WEED-KILLER

(Imitations are not cheap.)
and do it effectively and thoroughly at small cost.

No Failures
In Eleven Years of Severe Tests.
LIST OF PRICES—(Net, F.O.B. Philadelphia)— $\frac{1}{2}$ gal. in tin (makes 25 gals. treating liquid), 75c.; 1 gal. tin (makes 50 gals. treating liquid), \$1.25; 5 gal. keg (makes 250 gals. treating liquid), \$6.10; 10-gal. keg (makes 500 gals. treating liquid), \$11.50; gal. barrel (makes 200 gals. treating liquid), \$45.

Can you lose out weeds for the same money?
Send orders to dealers, or direct to
FAIRMOUNT CHEMICAL LABORATORIES,
Only Makers, Office N.W. Cor. Broad and Fairmount, Philadelphia, Pa.



Mark Twain in HARPER'S WEEKLY:

"A year and a quarter ago Mr. Foley began to do school-boy poems in a fire-new and blood-curdling and criminal fashion of spelling which no self-respecting eye could endure."
 Yet the "public kept on reading the poems in order to curse the spelling, and of course the natural thing happened; familiarity with the spelling modified the reader's hostility to it, then reconciled him to it, and at last made him fall in love with it; and now—we'll, now Mr. Foley's school-boy is a pet."

Songs of Schooldays

By J. W. FOLEY



These inimitable poems chronicle various romantic and tragic episodes in the life of "henny beamus." For instance:

"Of the Upper Class Girl"

"she gradjewits tooday ann says goodbit to skooldaze fore she nose it all ann i must sea her go far owt upon the way uv life alon wile i kan onley stay fore yeers ann yeers until i reach the spott weare she stands now, ann then ile be fourgot [bi hur hoo i have wurshipt awl these yeers in silence. . . . etc.

Illustrated with silhouettes by Katharine G. Buffum.

(\$1.38 postpaid)

Another Book of Laughter

A Few Neighbors

By HENRY A. SHUTE

A book of irresistible humor by the author of "The Real Diary of a Real Boy." Uniform with "A Few Remarks." (\$1.10 postpaid)

Send for
Free
Book
on
Household
Health

SY-CLO

TRADE MARK

The Closet of Health



The first step toward a proper understanding of the sanitation of the home is to get the book on "Household Health." It is sent free on application. It explains the perfect principle of the wonderful SY-CLO Closet and shows why it is the safe closet. It tells how to detect the unsanitary closet—how to protect the health of the home.

The SY-CLO Closet has a double cleansing action. A copious flush of water from above starts an irresistible syphonic action from below. The downward rush of the water through the pipes creates a vacuum—a powerful pump-like pull which instantly empties the bowl of all its contents instead of merely diluting as does the ordinary closet.

Being formed of a single piece of solid white china, the SY-CLO Closet is without crack, joint or seam for the lodgment of impurity. Nothing can adhere or be absorbed.

By an unusually deep water seal between the closet bowl and the sewer connection making the escape of sewer gas into the home impossible, the SY-CLO Closet gives adequate health protection against the dangers from without.

SY-CLO Closets are heavily constructed and have unusual strength. With ordinary care, they will outlast the building—a perpetual safeguard of health.

SY-CLO stamped on a closet, no matter what other mark is on it, signifies that it is constructed of the best material, with the aid of the best engineering skill, under the direction of the Potteries Selling Co., and that eighteen of the leading potteries of the United States have agreed to maintain its standard of excellence.

If your home contains a closet of imperfect construction, improper material, or one subject to rust, corrosion, or under-surface discoloration such as porcelain enameled iron, you may be unknowingly exposed to a dangerous source of disease. If you have such a closet, self defense demands that you replace it with the closet bearing the trade mark name of SY-CLO, the real of safety, the safeguard of health.

A book on "Household Health" mailed free if you mention the name of your plumber.

Lavatories of every size and design made of the same material as SY-CLO Closets.

POTTERIES SELLING CO., Trenton, N. J.

PAINT--GOOD PAINT--Serves a dual purpose:

It preserves and beautifies. It preserves simply by excluding "the weather"; it beautifies by tint and color. The longer it excludes "the weather," the longer it retains its original tint and color, the better is the paint.

Paints based on OXIDE OF ZINC remain longer impervious than other paints and they retain their pure tones long after other paints have faded or darkened.

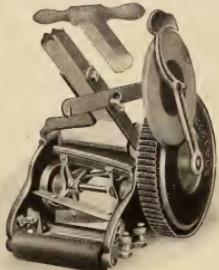
FREE—Our practical pamphlets:
 "The Paint Question"
 "Paint Why, How and When"
 "Paint in Architecture"
 "Specifications for Architects"
 "French Government Decrees"

The New Jersey Zinc Co. 71 BROADWAY
 NEW YORK
 WE DO NOT GRIND ZINC IN OIL. LISTS OF MANUFACTURERS
 OF OXIDE OF ZINC PAINTS WILL BE FURNISHED ON REQUEST

COUNTRY LIFE IN AMERICA THE WORLD'S WORK PUBLISHING THE GARDEN MAGAZINE
 DOUBLEDAY, PAGE & CO. NEW YORK.

SAVE YOURSELF

time and labor by using the



Capitol Lawn Trimmer and Edger

It does the work of shears, clippers, etc.—does it better, in about one-tenth the time. You stand erect—not down on your knees. The first practical machine for this work.

Ask your hardware dealer to show you one or write to-day for Catalog 'D' and prices.

The Secret Mfg. Company, Cleveland, Ohio
Western Sales Agency, Denver, Colo.



MUSICAL HANDBOOK FREE
to any one thinking of purchasing a musical instrument. Contains illustrations, descriptions and the lowest prices on 25,000 instruments and supplies of artistic musical quality. Also much valuable information. Our name for 25 years has been the standard.
PIANOS, VIOLINS, MANDOLINS, Band Instruments, Talking Machines, etc. Everything known in music is sold by us. Write today.
World's Largest Music House
LYON & HEALY, 14 Adams St., Chicago

The Agricultural Experts Association

GEORGE T. POWELL, President
120 Broadway, N. Y.

DEVELOPMENT of Country Places; Examinations made of Land with full reports and Suggestions for Improvement; Advice on General Management; Policies Outlined; Location of Buildings; Landscape Work; Orchard Development; Care of Forest Land and Live Stock. Correspondence invited.



WROUGHT IRON FENCE AND ENTRANCE GATES

ORNAMENTAL IRON WORK
TREE GUARDS, LAWN FURNITURE ETC.

TENNIS COURT ENCLOSURES A SPECIALTY

F. E. CARPENTER & CO.
7 & 9 WARREN ST.
NEW YORK

Spray Grapes Three Times in July

IF YOU want to have grapes of superior quality, better than those which your neighbors get on vines which receive no attention, you must wage a persistent war against the insects.

Grape vines should be sprayed once every ten days or two weeks from April to August. If Paris green, or arsenate of lead is combined with the Bordeaux mixture all the more important insect enemies of the grape will be killed at the same time.

The extra poison for the insects must be used at the rate of one half pound of Paris green, or two to three pounds of arsenate of lead, to each barrel (50 gallons) of Bordeaux mixture.

Even before the grape buds open in early spring, there are little, steel-blue colored flea



When this sort of thing is seen spray and burn the leaves in the fall to destroy the grape-leaf rollers

beetles, hungry after a long winter's fast, which eagerly gnaw into the buds, and feed upon the unfolding foliage. These flea beetles hide their small white eggs in the crevices of the bark of the vine, and from



The grape-leaf roller caterpillar which develops into a small black moth with white spotted wings

them come small, brownish grubs which feed upon the surfaces of the leaves. They will soon disappear if the vines have been well sprayed.

With the first warm days of summer the grape blossoms appear, upon which swarms of rose bugs or chafers will light, preventing the possibility of a crop, unless they are removed at once. Where the chafers are very abundant, as in New Jersey and Maryland, the only satisfactory method is hand picking, doing it twice a day, morning and evening. Where the chafers are not numerous protection has been secured by several thorough

Sure Seal

Home canning of vegetables, meat and fruit made easy and certain by The Economy Jar

To give you an idea how easy it is to can fruits, soups, vegetables, meats, etc., in the Economy jar

—how easy it is to put your hand in and thoroughly clean the jar. No rough seams inside out to catch lint, chip

into food or scratch you. After pouring the contents in hot and wiping rim of jar, with the cap on the gold-plated cap (acid-proof). No screwing, twisting or prying. Just press the cap on gently. No bruises, burns, cuts or sprains

when you use the Economy. Put clamp really is what you need. Position while contents are cooling. The cooling forms a vacuum and holds cap on firmly. Jar is then absolutely airtight. Next day remove clamp, if the lid lifts off lightly. If the food was cooked enough cap is held

tight by vacuum, and contents cannot spoil, as no air can leak in. If cap loose, contents were not cooked enough to sterilize, and can be heated again and resealed. The Economy jar is chemically infomovous

—no gas or steam can get into per condition to put away. When ready to use, simply unscrew cap with can opener and pry off lightly. No unsprayed writing, no unscrewing, no handling, no shaking by breaks glass. No glass particles in food; no smelly top contents fresh and sweet as they say you put them up.

NO separate rubber caps required. The Economy is the jar you will use with comfort and satisfaction year after year.

There is absolutely no jar that looks like, works like, seals like, keeps like, or opens like the Economy. Using some other jar causes you any notion of what the Economy really is when you do. Try the Economy for yourself. Ask your dealer for it. Send his name and we will send you a free, a booklet of recipes. Write direct to main office.

KERR GLASS MFG. CO.
279 Hoyt Street
PORTLAND, OREGON
Eastern Office, Dept. 21, Philadelphia, Pa.



Jasco Coffee

Is blended with the nicest skill by experts whose judgment and long experience enable them to please the most exacting connoisseur.

Every detail that leads to an exquisite table beverage—selection, roasting, blending—is carefully attended to in the preparation of JASCO COFFEE, and insures uniformity of excellence in every cup.

In a light screw-top tin that prevents the aroma and keeps the coffee perfectly fresh.

5 LB. CAN., \$1.60

Sample Pound, 32 Cents, (Prepaid)

Ground, pulverized or bean.

Our broad guarantee—Your money back if not satisfactory.
A. J. SHELDON CO., Importers, 100 Front St., New York

ARE YOU FOND OF MOTORING?
Read THE MOTOR PIRATE, and THE CRUISE OF THE CONQUEROR; or THE Further Adventures of The Motor Pirate
Prepaid, \$1.50 Each
L. C. Page & Company, Boston

Roses Write to-day for our art booklet "How to Grow Roses" and our "Roses Floral Guide—FREE."
CONARD & JONES CO., Box 7, West Grove, Pa.
Givers of the Best Roses in America.

STARK FRUIT BOOK
Shows in NATURAL COLORS and accurately describes 216 varieties of fruit. Send for our liberal terms of distribution to planters—Stark Bro's, Louisiana, Mo.

Gardeners Supplied

High-class men, with good records, can be obtained at VAUGHAN'S SEED STORE, 14 Barclay Street, New York City. No fee. 84 Randolph Street, Chicago.

Competent Gardeners

The comforts and products of a country home are increased by employing a competent gardener; if you want to engage one, write to us. Please give particulars regarding place and our whether married or single man is wanted. We have been supplying them for years to the best people everywhere. No fee asked. PETER HENDERSON & CO., Seedmen and Florists, 35 & 37 Cortlandt Street, New York City.



Ornamental Fixtures for Country Grounds

Flower Vases in Cast Iron and Bronze, Lawn and Park Fountains, Aquaria and Aquarium Fountains, Drinking Fountains, Statuary, Settees and Chairs, Tree Guards, Railings and Entrance Gates, Gas and Electric Light Posts and Lamps, Stable and Cattle House Fittings and Weather-Vanes.

We issue separate Catalogue of each of the above, which will be sent on request.

THE J. L. MOTT IRON WORKS

ORNAMENTAL DEPT.

84 to 90 BEEKMAN ST., NEW YORK

VICK'S SONS



Not too early to think of beautification of the home in winter, or garden next spring, with BULBS of the VICK VICTORIOUS VARIETY. Our Bulb Catalogue will be ready Sept. 1st, but in the meantime, your early wants will be looked for first selection such as the Pioneer Mail Order Seed House only knows how to take care of and to satisfy. Fifty-five years of experience.

JAMES VICK'S SONS

362 MAIN STREET, ROCHESTER, N. Y.

Sheep Manure Lawn Fertilizer

is unequalled for top dressing the lawn. It is a complete fertilizer and is especially rich in nitrogen. There is no danger of carrying in weed seeds if sheep manure is used. It is also an excellent fertilizer for the Vegetable and Flower Garden and Orchard, promoting a steady rapid growth. It is non-odorless, is cleaner and richer than stable manure. 10 lbs. ... \$0.35 100 lbs. ... \$1.50 50 lbs. ... \$1.00 Per ton ... \$25.00

CAIRNSMUIR FARM, NEW CITY, ROCKLAND CO., NEW YORK

Rex Flintkote ROOFING

Atlanta Terminal Station

200,000 SQ. FEET Rex Flintkote ROOFING

The Atlanta Terminal one of the important buildings of the South, is protected with Rex Flintkote Roofing. This building was put up to stay. No sane man will take chances with his roof, and the builders threw wide the doors of competition in their search for something in which quality should be the supreme consideration.

They Chose Rex Flintkote

If it stood the requirements of this structure, it may be safely chosen by owners of buildings of all kinds, from factory to poultry house. Based on Rex Flintkote's long experience, for men who count long life and protection from more than the immediate saving of a half cent a foot.

Agents everywhere.
J. A. & W. BIRD & CO.

There are two kinds of prepared roofs. One made to sell, one made to buy. The dealer who sells Rex Flintkote won't try to dupe you a year from now. He values your future trade more than an immediate larger profit.

Book and Rex Flintkote Samples Mailed Free

They explain its fire and water resisting qualities and durability. It can be laid by any ordinary workman—everything required to lay it is in every roll. Manufacturers of cheap roofing closely imitate the outside appearance of Rex Flintkote—the value is inside. It shows only in years of honest service. Look for the Boy on our trade mark.

29 India St. Boston, Mass.

“It Gathers as it Sweeps”

“Apollo” Sweeper

is an ideal time and labor-saving machine for the care of Lawns, Golf-greens, Porches, Walks, Barn-floors, etc. It takes the place of broom and shovel, sweeping and gathering all in one operation. The sweeping is carried out in the usual way, using a long handle, doing away with the need of basket or cart for collecting the sweepings.

Beautiful Lawns

are produced by the use of the “APOLLO” sweeper, because instead of injuring the grass or tearing it up as a rake does, the action of the fibre bristles promotes the growth of the turf, makes the grass thick and produces a rich, green, “velvety” appearance, instead of a dull gray or brown discoloration. The sweeping is done early, after the grass has matured, etc., etc. Your dealer cannot supply you, write

color. It removes every particle of cut and dead grass, leaves, twigs, manure, etc., etc. and we will send a sweeper on 10 Days Approval, Booklet Free.

THE GREENE MFG. CO., 34 Seymour St., SPRINGFIELD, OHIO. (Good Canvasers Wanted.)

SUN-DIALS

with or without PESTALS

Send for Illustrated Price List #1

Hartmann Bros. Mfg. Co.

New York Office, 1123 Broadway Mt. Vernon, N. Y.

Japanese Bamboo Stakes

Durable year to year. Indispensable for tying Lilies, Roses, Chrysanthemums, Dahlias.

3 to 4 feet stakes, 100 for 75 cents; 1000 for \$4.00
6 feet stakes, 100 for \$1.00; 1000 for \$6.00
(100 at 100 stake; 200 at 1000 stake)

Address H. H. BERGER & CO., 47 Barclay St., New York

Sold by Active Dealers in Seeds all over America

My Grandfather used Mr. Hammond's Slug Shot for Potato Bugs. So does my father. Use it. My Mother puts Slug Shot on her.

“SLUG SHOT” Used from Ocean to Ocean

A light, composite, fine powder, easily distributed either by duster, bellows, or in water by spraying. Thoroughly reliable in killing Currant Worms, Potato Bugs, Cabbage Worms, Lice, Slugs, Saw Bugs, etc., and it is also strongly impregnated with fungicides. Put up in Popular Packages at Popular Prices. Sold by Seed Dealers and Merchants.

HAMMOND'S SLUG SHOT WORKS, FISH-KILL-ON-HUDSON, N. Y.

“Horicum”
The San José Scale Killer

“Copper Solution”
For Blight

“Bordeaux Mixture”
True Blue and Butter Fine

“Grape Dust”
For Mildew

“Cattle Comfort”
To Keep Off Flies

Send for pamphlets worth having

The New Century Lawn Sprinkler

Revolves freely with any pressure. Equal spray over circle from three to fifty feet in diameter.



SIMPLE AND DURABLE

Your money back if not entirely satisfactory. Sent express prepaid anywhere in United States east of Rocky Mountains for only \$2.50. Descriptive circular free.

THE YOST ELECTRIC MFG. CO.,
Toledo, Ohio., U. S. A.

sprays with Bordeaux mixture in which there was a double portion of arsenate of lead—four to five pounds to the barrel. The rose chafer undergoes its development in the ground, preferably in loose, sandy soil, where its grub feeds upon the roots of weeds and shrubs, so that the grubs are rarely seen in the garden.

There may frequently be seen especially during late summer, upon unsprayed vines, leaves which are rolled or folded together, and held by silken threads. Usually the leaf has been skeletonized, which is the work of the inmate of the fold, the grape leaf-folder.



The hawk-moth caterpillar which strips the foliage in late summer

When the silken strands which fasten his front door are broken, the little greenish caterpillar, scarce an inch long, wriggles out with violent contortions, and suspended by a silken thread, quickly drops to the ground, much as does a spider. Were one kept on a fresh leaf under a tumbler it would transform to a brown chrysalis, from which would come a handsome little black moth, with wings spotted with pure white. There are two broods of the insect in a year, the last one passing the winter in the chrysalis stage within a folded leaf. The leaf-folder will rarely be troublesome where the vines have been sprayed; those which do survive the spraying may be readily crushed with the fingers, or by burning the fallen leaves in the autumn.

Much damage has been done to the vine by the grape root-worm. The adult beetle feeds upon the foliage and may therefore be

THE BURLINGTON VENETIAN BLIND



Burlington Venetian Blinds are made for indoor and veranda use. They keep out the direct rays of the sun without excluding the light, and may be regulated to prevent direct drafts and yet admit the air. For veranda use they are unexcelled—adding a room to your house—giving desired privacy and yet in no way obstructing the air or light.

Inside Sliding Blinds—a great improvement over the old style folding variety.

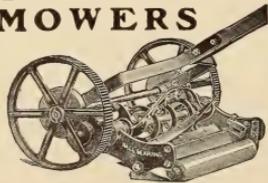
Window Screens and Screen Doors of improved design and highest quality material. MADE TO ORDER ONLY any size, wood and finish.

Send for Free Catalogue.
BURLINGTON VENETIAN BLIND CO.
823 Lake Street, Burlington, Vt.

Rife Automatic Hydraulic Ram
(Water Pumped by Water Power)
No Attention No Expense
Runs Continuously

Country Homes Formal Gardens
Farms Town Plants Irrigation
Railroad Tanks Dairies, Etc.
5000 in Operation 80% efficiency developed
Catalog and Estimate Free
RIFE ENGINE CO., 2109 Trinity Bldg., New York

TOWNSEND MOWERS



TOWNSEND GAVE TO THE WORLD

The Ball-Bearing Lawn Mower

His mowers are more imitated than any others.

We make more high-grade mowers than any other firm and they are all ball-bearing.

We make the best Lawn Mower in the world.

We make the best Horse Lawn Mower in the world.

We make the best Roller Mower in the world.

We repair and sharpen all kinds of Mowers.

S. P. TOWNSEND & CO., - Orange, N. J.



A welcome sight! A caterpillar covered with cocoons of a parasitic fly

destroyed by using arsenate of lead. The grub lives in the ground, feeding upon the roots. Thorough and frequent cultivation and packing the soil, around the base of the vine are the best means of controlling it.

It frequently happens that in late summer the whole tip of a branch may be found stripped of its foliage by the large green, or dark reddish-brown caterpillars of the hawk-moths, sometimes called the "humming-bird" moths. These large caterpillars are easily seen and destroyed, but will seldom occur where spraying has been frequent and thorough. Some of them will usually be found bearing what seem to be little white eggs. These are the cocoons of little, wasp-like flies, which develop within the caterpillar, and kill it. These caterpillars bearing parasitic cocoons should never be destroyed.

The last of the grape pests to be noticed is

Geneva Superior Binocular \$15

Our handsome book, *The Near Distance*, sent free on request.

Its magnifying power, field view and clearness of definition is seldom equalled. Price \$15, delivered. If not satisfactory, return at our expense. We refund your money.

GENEVA OPTICAL COMPANY
51 Linden Street, Geneva, N. Y.
Exclusive Sales Agents:
H. C. WATTS, Syracuse, N. Y.
F. G. WILSON, Ithaca, N. Y.
Buffalo Optical Co., 522 Main Street, Buffalo, N. Y.
E. E. HANSEN & SON, E. Main Street, Rochester, N. Y.
C. H. WOOD, 1125 Washington Street, Oakland, Cal.



¶ You can learn all that is known about the raising, breeding, care and sale of every kind of feathered product in

The Poultry Book

¶ It is the most complete and authoritative book on the subject ever printed in America.

Superbly illustrated in colors and black-and-white, by Harrison Weir
\$13.60, sold by subscription.

COUNTRY LIFE IN AMERICA THE WORLD'S WORK FARMING THE GARDEN MAGAZINE
DOUBLEDAY PAGE & CO. NEW YORK.



IRONING WITHOUT LABOR

Strength, worry and three-quarters of your ironing time can be saved by using the Simplex Ironing Machine. No backache, headache or tired feet. Costs only one cent per hour to heat by gas or gasoline.

THE SIMPLEX IRONING MACHINE

The most modern and practical device of its kind. It relieves ironing day of all annoyances and is economical too. Write for our new approval offer and free illustrated booklet "The Passing of the Household Drudge."

American Ironing Machine Co.
94 FIFTH AVENUE CHICAGO, ILL.



2 Bee-Outfits For Honey and Money

Now's a good time to start keeping Bees. Hours of genuine, healthful pleasure and great possibilities in profit are in store for every owner of our hard workers—the gentle, Red Clover strain of bees. They gather a remarkable quantity of honey. Order your outfit now and let them get to work on the flowers and blossoms near you. At the end of the season you'll be surprised at how little trouble they have been and how much money you'll have to sell.

Gleanings in Bee-Culture, the leading bee-paper—sent monthly, over 1,200 pages annually—answers your questions. \$1 a year. **25¢** 6 months trial

OUR BEGINNERS' OUTFITS ARE REASONABLE

Everything guaranteed. Every cent returned to you if goods do not prove as we claim.

Outfit No. 5 for Dove-filled Hive

1 ABC of Bee Culture.....	\$1.00
1 year's subscription to "Gleanings in Bee Culture".....	1.00
1 Junior Cornell smoker.....	.50
1 No. 2 bee-veil.....	.50
1 Bee-hat.....	.25
1 Colony of Italian bees in frame Dove-filled Hive with bottom-board and cover and super.....	7.50
1 Tested red-clover queen for same.....	2.00
2 Hives for new swarms, nailed and painted, with comb-honey super.....	5.75
Total.....	\$15.25



Outfit No. 6 for Danzenbaker Hive

1 ABC of Bee Culture.....	\$1.00
1 year's subscription to "Gleanings in Bee Culture".....	1.00
1 Junior Cornell smoker.....	.50
1 pair bee-gloves (small, medium, or large).....	.25
1 No. 1 bee-veil.....	.50
1 Bee-hat.....	.25
1 Full colony of Italian bees in Danzenbaker hive with a bottom, cover and super.....	8.00
1 Tested red-clover queen.....	2.00
2 Danzenbaker hives complete for comb-honey ready for the bees, nailed and painted, at \$4.00.....	8.00
Total.....	\$15.00

This outfit is particularly intended for those just beginning bee-culture who have neither bees, hives, nor any equipment. More bees can be added to this outfit.

This outfit is intended for beginners who wish to adopt the Danzenbaker hive.

The A. I. Root Co. Medina N. Y. 516 Chicago, Ill. Philadelphia, Pa. Washington, D. C. St. Paul, Minn. Syracuse, N. Y.
Box 104 1037 144 E. 4th 10 Van St. 1100 Mt. Ave. 1024 Miss St. 1931 W. Gen. St.

It's a Snap

FOR THE MAN WITH THE HOSE BECAUSE IT

- Saves Time
- Saves to Hose
- Saves the Temper
- Saves his Wife's Temper
- Also his Wife's Fingers and Skins

IS WARRANTED TO WORK

It made tight by the water pressure. Will not let hose twist or kink. Cannot lose the washer. Will not wear out. Will not leak.

FOR SALE BY YOUR DEALER

Or Sent Postpaid for 35¢ Each, 3 for \$1.05, and Worth it. Descriptive Catalogue Free.

Mand' at Peoria, Ill. All mail orders filled from Boulder, Nelson & Morrison, Box 57, Boulder, Colorado

GARDEN



POTTERY

Italian Flower Pots

Terra-cotta Garden Vases, Statuary, Fountains, Flower Pots, etc. Large variety. Beautiful designs. Send for Catalogue.



SUN DIAL

WILLIAM GALLOWAY, POTTERY 3224 Walnut Street, Philadelphia



SUN DIAL

August and September Planting Should be Planned Now

We go long distances to assist those who wish to get the best effects. We also make planting plans for those who send us proper data.

We offer a fine line of stock in extra sizes in Fruit, Evergreen and other ornamental trees, Shrubs, Roses, Bulbs, Peonies, Iris, Phlox and other hardy Perennials.

Catalogue will post you on sizes and prices.

ROSDALE NURSERIES
S. G. HARRIS, M. S.

Office, 638 Hamilton Place
TARRYTOWN, N. Y.

Its Simplicity

The fact that any little child can start or stop it when required, that it has no complicated parts, and is extremely simple in its operation is what recommends the

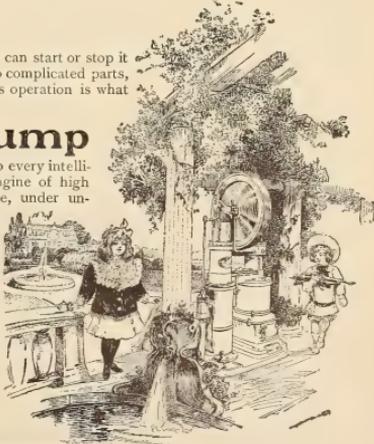
Hot Air Pump

as a domestic water supply to every intelligent user. It is not an engine of high power, which might explode, under unskilled care, but absolutely safe and harmless under all conditions.

Practically automatic, the cost of maintenance is almost nil: Capacity 100 to 100,000 gallons of water per diem. One of these pumps, representing a permanent investment which will outlast a generation, can now be bought at the very low price of \$100. Descriptive catalogue "U" sent free on application.

Rider-Ericsson Engine Co.

35 Warren St., New York. 829 Franklin St., Boston
20 Pearl St., Chicago. 40 N. 5th St., Philadelphia.
20 Pitt St., Sydney. N. S. W. Telephone-Reg 51 Havana, Cuba
151 Craig St., West, Montreal, P. Q.



PULVERIZED SHEEP MANURE

Doubles the Growing Power of Lawn and Garden.

To get best results apply Dormant Sod Brand Pulverized Sheep Manure several times, during growing season, to lawns, gardens and around fruit trees. It stimulates, invigorates and instantly renews old soil.

You Can See Your Garden Grow



One barrel pulverized sheep manure is equal to two wagon loads of barn yard manure—no waste, no refuse, no weeds. Delivered anywhere in the United States east of Denver \$4.00 per large barrel. Send money with order. Booklet free.

DORMANT SOD COMPANY
10 Exchange Ave., Union Stock Yards, Chicago

To Know the Wild Flowers

as every lover of Nature desires to know them. The best, quickest and simplest way is by means of

"A" NATURE STUDIES



These enable you to identify each flower at a glance. You have at hand a picture of the plant; its classification and analysis in simple English; its history and its place in legend and poetry. Blank space for mounting each specimen and for making your own memoranda.

Each series of fifteen studies, identifying twenty-five or more different wild flowers, which blossom at about the same season, is contained in a specially designed and artistic case, that slips easily into the pocket, and is accompanied by a guide card, with illustrated directions. Each series complete in itself, 25 cents, postpaid.

SPECIAL OFFER—We will send four different series containing sixty studies, which identify over one hundred and twenty different flowers together with twenty-five blank mounting cards, all postpaid, if you will enclose a dollar bill in an envelope and send to us.

THE "A" COMPANY, Box 846 H, Philadelphia

DUTCH BULBS

Sold by the growers direct to the planter

We are the only dealers in the United States owning and working nurseries in the Sassenheim district of Holland.

Orders taken now, billed July 15th, will be filled direct from our nurseries, and quality, first-class, true-to-name being guaranteed.

Send for our Catalogue.

FRANKEN BROS., Lake Forest, Ill.



Old English Garden Seats

Rustic Furniture

Special Designs Made to Order.
Send for Catalogue.

NORTH SHORE FERNERIES
Beverly, Massachusetts

the berry-moth, whose caterpillar causes wormy grapes. It often becomes a serious pest. The first brood of the insect appears in spring, and the little caterpillars are forced to feed on the leaves and tender tendrils. If these have been poisoned by spraying, most of the caterpillars will be destroyed. Later in the season, after the little caterpillar has become full grown, it cuts out of a little fold from a leaf, from which it forms a



The only way to keep the grape vine free from insects is to spray every ten days or two weeks from April to August

case, within which it transforms to a chrysalis, and passes the winter. The destruction of the fallen leaves will control it.

Where grapes are grown extensively the control of the numerous insect pests affecting them is no easy matter, but a few vines may be kept almost entirely free from them by thorough and frequent spraying, frequent cultivation, and the burning of all foliage and rubbish in the fall.

E. DWIGHT SANDERSON.

Japanese Iris Excursion

THE GARDEN MAGAZINE suggests the desirability of excursions in all parts of the United States this month, to see large collections of the Japanese iris. This is the largest of all the irises, the flowers often being nine or ten inches across, and sometimes twelve or fourteen. They have a very wide range of color, and the variety of markings beggars description.

The common impression that they will grow only in damp places, such as the borders of water gardens, is a mistaken one. They do splendidly in ordinary gardens, if planted in a heavy soil, and given plenty of water during dry spells.

There are over a hundred named varieties in cultivation. Some are imported under the Japanese names, and comparison shows that some of the Japanese dealers are unscrupulous in substitution. Consequently it pays to see what you buy.

A small group of persons particularly interested in irises will visit the largest private collection near New York, and will probably see some of the largest nursery collections on the way back. It will be an all-day excursion, and everybody who cares to attend is invited to send his address to the editor of THE GARDEN MAGAZINE, so that he may be notified of the proper time and place.

BAY TREES

For the formal garden, bordering the walk, at the entrance to the grounds or house. There is nothing that gives such a distinctive effect as the graceful Bay Tree.

We have some fine specimens in tubs as follows:

- 34 inch—36 inch head, 43 inch stem, 7 feet tall, in 17 inch tubs, \$13.25 each.
- 24 inch—26 inch head, 43 inch—48 inch stem, 6 feet 10 inches tall, in 13 in. tubs, \$7.50 each.

In dozen lots 15 per cent discount. All c refully packed, F. O. B. Rutherford.



Ornamental stock for lawn and exterior decorations

ORCHIDS

JULIUS ROEHR'S CO.

Exotic Nurseries

RUTHERFORD, N. J.



SPRAMOTOR

Kills Bugs, prevents Blight, Rot and Scab, Increases crop on average 115 bushes to acre. Entirely automatic in operation. Send for free 64-page booklet M.

15 SPRAMOTOR CO.
BUFFALO, N. Y. LONDON, CANADA

G. H. PETERSON

Rose and Peony Specialist
FAIR LAWN, N. J.

SOUTHERN ILLINOIS FRUIT FARM

FOR SALE—77 acres in the heart of the fruit belt; well stocked orchards and small fruits; excellent soil; good houses; near station. E. J. AVRES, Villa Ridge, Ill., or F. W. AVRES, Concord, N. H.

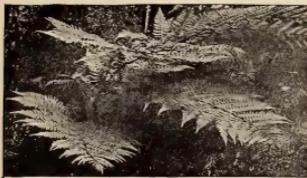
DO NOT DELAY

Spring and summer planting is over and we are now at liberty to assist you to arrange for Fall Planting. We have a full line of all kinds of Fruit, Forest, Ornamental Trees, and Evergreens, Vines, Shrubs, California Privet and Herbaceous Plants. Our Landscape Architect will make a plan for your planting. Visit the Nursery, and select your stock; if impossible to do so, write for Catalogue. Address

STEPHEN HOYT'S SONS, CO.

Tel. 148-2 So Norwalk, Ct.

NEW CANAAN, CONNECTICUT



Gillett's Ferns and Flowers

For Dark, Shady Places

While we grow many thousands of the hardy garden flowers which require open sunlight for their growth, like Phloxes, Campanulas, Peonies, Digitalis, etc., there is a demand for something to grow in dark shady places where the hardy garden plants will not thrive. We find just such a class of plants in the HARDY WILD FERNS AND FLOWERS of New England. These we have been studying and growing for 25 years, and can help you in your selection. They are adapted for a great many places, and selections can be made for beautifying the dark corner by the porch, the shaded wall or hedge, shady hillside, wet places in both open sun, deep shade, dry woods and rocky places. Brilliant lobellias for planting in small brooks; do my gentians for planting by brookside. Also Rhododendrons and other American shrubs.

Send for my *Illustrated Descriptive Catalogue* of over 50 pages, which tells about this class of plants.

EDW. GILLETT, Southwick, Mass.



NATIVE PERENNIALS

for the Wild Garden

CHOICE AZALEA MOLLIS
Herbaceous Plants and Shrubs

SHATEMUC NURSERIES
BARRYTOWN, Dutchess Co., NEW YORK

BRIGHTEN YOUR GARDEN

BY PLANTING NOW

TENDER BEDDING PLANTS

Carnations, Cannas, Geraniums, etc. Hardy Perennials in great variety. Chrysanthemums.

Send for *Illustrated catalogue*.

Nathan Smith & Son, 62 W. Taunton St., Adrian, Mich.



MUSHROOMS 3 "buttons", wt. 25 ounces.

Are you getting such results from the spawn you are using? If you would like to grow better mushrooms and get larger yields, let us send you our booklet on "Mushroom Spawn and Guide to Mushroom Culture".

PURE CULTURE SPAWN CO., Box 95. Pacific, Mo.



LELAND & HALL CO.

WORKERS IN STONE
557 FIFTH AVENUE
NEW YORK

STV'DIOS | PIETRASANTA, ITALY
LONG ISLAND CITY
GRANITE WORKS: BARRE, VT.



Garden Furniture, Sun Dials, Benches, Fountains, Vases, Statuary, Columns, Pergolas, Tables, Wells, etc., in marble, stone, and bronze

Monuments, Mausoleums, Altars, Fonts, etc., granite, marble and stone

Designs sent free upon request

Hill's Famous Clothes Dryers



IS YOUR BEAUTIFUL LAWN DISFIGURED BY UGLY LEANING CLOTHES POSTS that are a constant eye sore? Get

HILL'S FAMOUS LAWN DRYER

It always looks neat and tidy. Holds 100 to 150 feet of line, quickly removed after the wash. Lasts a lifetime; saves a line and clothes. No tramping in wet grass or snowy fire comes to you. More than two million people use them. Also **Balcony and Roof Dryers**.

If not found at hardware store, write

Write for Catalog 25

HILL DRYER CO., 359 Park Avenue, Worcester, Mass.



"COUNTRY AND SUBURBAN HOUSES"

1904 Edition—Designs costing \$2,000 to \$15,000. Price \$2.00

1906 Edition—Designs costing \$6,000 to \$30,000. Price \$2.00

The most beautiful and useful book on this subject published. The designs are illustrated by fine line drawings originating from water color designs and photographs, showing the buildings as they will actually appear when completed. Each design has also a first and second floor plan carefully worked out and finished out in a number of instances. The interiors are shown from photograph plates, also are extensive estimates of cost, general indications and useful information on financing and building. Colonial, Venetian, English Half-Timber and other styles of architecture. Special designs and detailed plans prepared. Houses altered and remodelled.

WILLIAM DEWSNAP, Architect, American Tract Society Bldg., New York



FREE BOOK ABOUT

U.S. CREAM SEPARATOR

- Tells plainly the "WHY" of it. Shows WHY the U.S. Skims cleanest
- WHY the U. S. Holds the World's Record
- WHY the U. S. Wears the Longest
- WHY the U. S. Is Simple in Construction
- WHY the U. S. Is Easy Running
- WHY the U. S. Is Easy to Clean, Easy to Handle, and Perfectly Safe to Operate

48 pages of well-printed, easy reading, finely illustrated FACTS for the farmer who wants to make his cows pay the biggest profit. ONE CENT brings you new Catalogue No. 71. Write this month today.

VERMONT FARM MACHINE CO.,

BELLOWS FALLS, VT.

Eighteen centrally located distributing warehouses throughout the U. S. and Canada.

Prompt delivery.

435

U S U S U S U S U S U S

Poultry, Kennel and Live Stock Directory

Information about the selection or care of dogs, poultry and live stock will be gladly given. Address INFORMATION DEPARTMENT, THE GARDEN MAGAZINE, 133 E. 16th St., New York

GEDNEY FARM POULTRY YARDS

S. C. BUFF ORPINGTONS CORNISH INDIAN GAMES
S. C. BLACK MINORCAS WHITE WYANDOTTES

We breed our prize Winners and can sell you birds that will enable you to do the same. At Madison Square Garden we won first and Club special on S. C. Buff Orpington—14 pens competing. Also third pullet—39 pullets in the class.

At Albany, N. Y., we made a clean sweep. Our Buff Orpingtons won every regular prize offered, except one third—64 Buffs competing. Also eight specials, including silver cup for best display—all varieties competing. On C. I. Game we won a two set, four set and three set at the same show. Our Black Minorcas are bred for egg production and shown for exhibition only. Stock and eggs for sale at high prices. Satisfaction guaranteed.

FRANK W. GAYLOR, Mgr.,

White Plains, N. Y.



COLUMBIAN WYANDOTTE

BUFF WYANDOTTES

All purpose fowl, ideal broiler, winter layer. Eggs \$4.00 per 13, 200 Head Stock for Sale Reasonable.

MARION FARM, - SMYRNA, GA.



Squabs Pay

If you have the best mated HOMER PIGEONS

Send-day for our free book, "How to Make Money with Squabs."

NEWARK SQUAB CO.
No. 1 High St., Newark, N. Y.

Dr. Payne's Sanitary Poultry House Has given universal satisfaction. Plans complete for building House, Self-cleaning Kitchens, Sanitary Nests for \$1.00.

SANITARY POULTRY SUPPLY CO. Brooklyn, N. Y.

Gardeners and Poultrymen

SAVE MONEY Buy your supplies from one place; you'll find it convenient and cheap. I sell everything that you need. I issue four catalogues—Seed, Poultry Supply, Implement and Fall Bulb. Write to-day for the catalogue you want, read it, and you will at once realize the immense saving that is possible. I also sell Farm Implements.

JOSIAH YOUNG, 23 GRAND STREET, TROY, N. Y.

Scottish Terriers

Given as companions. Not offered to fighting or roaming—Best for children's pets.

NEWCASTLE KENNELS
Brookline, Mass.



COLLIE PUPS

HAND-REARED
THE DOG'S
FARM-BASED

Stable and white and tri-color pups, from eight weeks to eight months old. All are eligible for registration, being very highly pedigreed and combining the blood of the present day winning strains with that of practically all of the famous collies of the past. Price from \$10.00 up, according to age and quality. Correspondence invited, but please state names specifically.

HARVALE FARM KENNELS, Midland Park, N. J.



Cairnsmuir Fox Terriers

MAJOR G. M. CARNOCHAN
NEW CITY, ROCKLAND CO., NEW YORK
NEW YORK CITY OFFICE 4 New St. 5 wire
Young puppies either wire or smooth
haired but leashed to one or two weeks
BRED \$125, BIRTH \$10. This is an excellent opportunity to obtain the Cairnsmuir blood at very reasonable prices. Puppies may be sent cheaply with order, sitting, sex and variety. Growth rings used after puppies for sale at all times. Also Welsh terriers.

Monroe Boarding Kennels, Morristown, New Jersey
THOMAS HOLDEN, Proprietor
DOGS BOARDED, CONDITIONED AND EXHIBITED. BREEDER OF HIGH CLASS BULL TERRIERS



Dachshunde

I have always on hand extra fine black and tan, red and brown Dachshunde of the best imported stock.

Dr. CARL O. FOLKES, 639 Superior St., Cleveland, Ohio

"One Dollar a Pound"

OUR NEW BOOK
JUST PUBLISHED

How to Breed, Feed and Raise Frogs
Sent Postpaid for \$1.00

The Meadow Brook Farm
ALLENTON, N. J.



AND AQUARIA SUPPLIES

SEND FOR PRICE LIST

KEENAN'S SEED STORE

6112-6114 Wentworth Avenue, CHICAGO

Do You Drive?

"Driving," by Francis Ware, is the most practical and valuable volume on the subject you can own. 100 illustrations. Richly bound. Net, \$10.00 (Postage 37 cents.)

Copyrighted by
SPRINGER

The McGraw-Hill
Publishing
Company

The McGraw-Hill
Publishing
Company

DOUBLEDAY PAGE & CO. NEW YORK.



PANDANUS FROM SUCKERS

H. W. W., WISCONSIN—It will not injure your plant of *Pandanus Veitchii* to remove the sucker. It can be taken off and treated as a cutting. Cut off half the leaves, put it in damp sand, and it will root in a short time.

KILL THE APHIDES!

G. F., NEW YORK—The green fly which is attacking the window plants is to all practical purposes identical with those described by Prof. Sanderson, in the April GARDEN MAGAZINE, page 150. The only remedy is kerosene emulsion. It is essential to strike the body of the insect with some oil or else to fumigate thoroughly with some tobacco preparation. Although no harm is at present apparent, these insects sucking the juices from the leaves will eventually cause the death of the plants.

OLD PLASTER FOR LAND

E. J., MASS.—The building plaster can do no injury to the land, and can be used in place of quicklime. As it weighs heavier in proportion, you will need, say fifty bushels, or about a ton to the acre. There is no need of exactness in the quantities.

SUMMER FLOWERS FOR THE BULL BED

H. W. M., NEW JERSEY—It is the common practice among gardeners to dig up their spring-flowering bulbs, tulips, hyacinths, and narcissi. When they have finished flowering, they are dug up and left to ripen in a shady place beneath an open cover. This practice is really erroneous where the bulbs are to be followed by some deep-rooted bedding plant, such as geranium or salvia. The bulbs, however, will be better for remaining in the ground to complete their growth and ripen naturally. There are very few plants which can be used to follow the flowering bulbs, when they are left in the ground, as practically all of the bedding plants require so much water that the bulbs cannot properly ripen. The annual phlox (*Phlox Drummondii*), sweet alyssum, and candytuft are good. In addition to these, in beds in sunny situations, the rose moss (*Portulaca grandiflora*) is bound to succeed, no matter how dry the situation, or the summer. It will give a brilliant display all summer in bright weather, but during dull days the flowers close. Sow the seed where it is to flower, putting it in the ground after the soil has become thoroughly warmed.

ANTS IN THE LAWN

C. E. W., MASS.—Poison the ants in your lawn with the fumes of bisulphide of carbon. Four into each hole about a tablespoonful of the liquid and cover with a mat. Upon coming in contact with the air bisulphide of carbon vaporizes immediately. This vapor is heavier than air so sinks and will penetrate into the deepest of the ants' runs, suffocating them. It is highly inflammable but may be handled with perfect safety so long as it is not brought near a flame. It is unnecessary to explode the nests after putting in the liquid which often does harm by loosening the soil and breaking grass roots.

THE TREE MORNING-GLOOM

M. E. P., FLORIDA—The tree morning-gloom (*I. fistulosa*, var. *Goodellii* known in the trade as *I. Goodellii*) is a shrubby morning-gloom. It is not hardy in the Northern states, but in the South it is hardy if the tops are cut back and the ground mulched with straw manure or loose litter. The plants form a bush eight or ten feet high making a good specimen for the lawn. Its appearance can be much improved by pinching it back. The flowers are pale lavender pink with a dark throat. It produces seed sparingly but cuttings are very easily rooted.

ERRATUM—The titles of the two magnolia pictures on page 269 should be transposed.

For Lighting the Country Home

A DIRECTORY OF LIGHTING EQUIPMENT—GENERATORS, FIXTURES, SUPPLIES, ETC.

A Service Department has been established by the publishers of THE GARDEN MAGAZINE to give readers information relating to any phase of the lighting problem of the country home. Address

SERVICE DEPARTMENT, THE GARDEN MAGAZINE, 133 East 16th Street, New York City



The Best "Beto"

IF YOU USE ACETYLENE

We want to send you
A SAMPLE BRAY BURNER

The "Beto" Burner will produce a greater amount of light than is possible with any other Burner ever made for Acetylene.

One "Beto" Burner will furnish sufficient light to illuminate any room in an ordinary house.

One "Beto" Burner will give as much light as three ordinary Burners, and consumes but one-half the amount of gas.

Write us to-day, mention kind of generator used, enclose 10 cents to cover postage and packing, and we will send you **A SAMPLE BURNER**.

W. M. CRANE COMPANY

Room No. 36, 1121-33 Broadway, New York, N. Y.

NASH GASOLINE ENGINES

afford an economical, safe and reliable method of generating

ELECTRIC LIGHTS FOR COUNTRY HOMES

The engine can also be used for furnishing domestic water supply and fire protection.

COMPLETE PLANTS INSTALLED

NATIONAL METER CO.

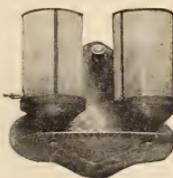
MANUFACTURERS

84-86 CHAMBERS ST., NEW YORK
CHICAGO BOSTON



In an Early English or Mission Room, the lighting scheme should be consistent with the other decorations. Not only the lighting instrument, but the quality of light also, should be in keeping.

A bracket such as illustrated here gives a plenty of light, but of a soft warm quality, appropriate to the character of such a room, and is equally decorative during the hours it is not lighted.



The Enos Company

MAKERS OF
LIGHTING
FIXTURES

Salesrooms, 5 West 39th Street, New York

Baltimore, 519 N. Charles St.; Washington, 518 Connecticut Ave.; San Francisco, 116 Geary St.; Toronto, 94 King St., West.; Montreal, Bank of Toronto Building.

Carbide-Feed Generators

combine safety and wonderful brilliance with great economy.

We Show This in Our Free Book

explaining the Acetylene principle, describing the Colt Generator and giving prices on all sizes from 20 lights up, with scores of testimonials. State your needs and ask questions. Give us your hardware dealer's name when you write.

J. B. COLT COMPANY
Dept. M., No. 21 Barclay Street, New York
Chicago Philadelphia Los Angeles



WE issue a pamphlet, H 26, showing a complete line of

Wood Pedestals

that can be used inside the dwelling or porch to support a lamp or jardiniere of flowers, or on the lawn as a support for a sundial. We furnish these with or without the dials as desired.

Hartmann Bros. Mfg. Co.
Mt. Vernon, N. Y.
N. Y. Office, 1123 Broadway

WASHINGTON AS A COUNTRY GENTLEMAN

Letters and Recollections of George Washington

BEING HIS CORRESPONDENCE WITH TOBIAS LEAR AND OTHERS, TOGETHER WITH A DIARY OF WASHINGTON'S LAST DAYS, KEPT BY MR. LEAR



THIS volume is no less than a revelation of the home life at Mt. Vernon, so much does it contain of information as to property, farm, methods of handling servants and the like. Illustrated with rare portraits, etc. Ready in June. (\$2.75 postpaid.)

COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY PAGE & Co. NEW YORK.

THE JARVIE SHOP MAKES LANTERNS



Sconces, Lamps, Electroliters, Candlesticks—in fact, anything in metal and glass for the lighting and decoration of the home.

If you wish an individual lantern or other fixture for some special place, The Shop will make it.

Send for Portfolio.

THE JARVIE SHOP
Fine Arts Building

This Sconce, copper \$5.00
or brass. . . . Illinois

A Brilliant Lamp for the Country Grounds

At the entrance and roadways a clear, constant light is necessary.

The Dietz No. 3

Is built for this service, and embodies every improvement for country lighting. It is economical, can be lighted and regulated from the outside, has no chimney, and is guaranteed not to blow out.

PRICE, \$6.00

May be had from dealers, or we will deliver it anywhere in the United States or Canada at the above price.

R. E. DIETZ COMPANY

60 LAIGHT STREET
Established 1860. NEW YORK

For Fire Protection in the Country Home

THE GARDEN MAGAZINE through its Service Department will be glad to serve its readers by giving them information relating to the subject of fire protection or put them in touch with reliable sources of information.

READERS' SERVICE, THE GARDEN MAGAZINE 133 EAST 16TH ST., NEW YORK

Protection from Fire



New Model Automatic FIRE ESCAPE

A firm, strong steel ladder, upon which two persons may descend abreast at one time. If necessary, 15 persons may use it at once, as each section is tested up to 2,000 pounds weight. For small houses of two, three or four stories, it is *indispensable*.

Constructed of two or three strands of steel wire in the strongest, simplest manner, it affords a rigidity and sense of safety when in use that has hitherto been unknown to portable fire escapes.

The New Model Automatic Fire Escape is unbreakable, unburnable and will never wear out.

PRICE \$15.00

Send for Catalog, illustrating models A, B, C.



Ladder under window sill when not in use.

THE PARKER-BRUEN MFG. CO., Inc.

New York Office
1133 BROADWAY

A copy of HOME BUILDING AND FURNISHING

will spare you much worry and expense. By it you will not only learn to build with discretion, but you will get at least a hundred ideas for furnishing. *It is practically helpful.* By Price and Johnson.

Illustrated, net, \$1.00 (Postage, 10 cents)



DOUBLEDAY PAGE & CO. NEW YORK.



THE LIFE SAVING FIRE ESCAPE

A Collapsible Steel Ladder tested to sustain 1,000 to 3,000 pounds. Extremely Simple, remarkably Convenient, absolutely Safe. Snugly packed away inside a handsome, low seat, out of sight when not in use. Ready in an instant. No pulleys, no twists, no locks, no levers, no other complications. Can neither break nor burn. The only really practical fire escape ever designed for Residence, Dormitories, Apartment Houses, Hotel's, Factories, Sanitariums, etc. Can be used when other fire ladders are inaccessible, littered with obstructions or coated with ice and sleet. No other so sensible, so convenient or so safe. All in the home can escape in case of fire. Reaches the strong to help the weak. You should have one or more of them in your home. Our free booklet tells how to get and how to use them. Write for it.

ADDRESS

LIFE SAVING FIRE ESCAPE CO.,
Tremont Building, Boston, Mass.

YOUR OWN FIRE APPARATUS

gives the best protection because it is on the spot.

A few Hand Extinguishers and Hand Grenades, a ladder or two and a small

CHEMICAL ENGINE

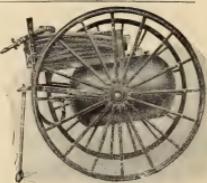
furnish an efficient equipment for fire protection of Country Homes and Estates EVERYWHERE. We will be glad to suggest equipment with cost.

SEND FOR BOOKLET 4

Also Headquarters for "Babcock" and "Patrol" Extinguishers, Haywood's Hand Grenades, portable fire escapes, fire hose reels, etc.

S. F. HAYWARD & CO., Chem. Dept.
124 N. 2d St., Philadelphia
17002, Pa., U.S.A.

Largest Dealers in Fire Supplies in the United States



Always Ventilate, Day and Night, Rain or Shine

THE ROYAL VENTILATOR

will prevent spontaneous combustion in your barns in summer and provides proper ventilation for your stock. It likewise provides perfect ventilation in your home, church, mill, and factory. ☞ Our guarantee of 10 to 20 years is worth something to you. ☞ Send for our booklet on ventilation. At the same time let us give you an estimate. Whole where we have no agents.

ROYAL VENTILATOR & MANUFACTURING CO.,
Main Office and Factory, 410 Locust Street, Philadelphia, Pa.



The Easiest Way to Can

CANNING is more economical than preserving or jam making. It requires less labor, besides retaining the fresh natural flavor of the fruit. Sugar is not really necessary in canning, as it does not help preserve the fruit. It gives a rich syrup, making a richer more palatable dish.

The fruits that are most suitable for canning are apples, pears, quinces, peaches, plums, pineapples and apricots. Of small fruits, cherries, strawberries, blackberries, raspberries, damsons and currants. Rhubarb cut into small pieces is also successfully canned.

Choose perfectly fresh, sound fruit, and remember that even one fruit that has started to decay will cause a whole jar to ferment, and you will lose, not only the fruit and sugar, but most probably the jar also, so it is false economy to use any but the freshest and best fruit.

The most important thing to remember in canning is that your fruit must be put into the jars while it is boiling, and be sealed up at once.

When dealing with large fruits that have to be peeled it is better only to prepare enough for a quart bottle at a time. Put them into cold water as they are prepared to prevent them from discoloring.

Always have ready a number of clean jars, both large and small, with their tops and rubber rings fitting perfectly. Always remember your jars must be air-tight, or the contents will surely spoil.

AVOIDING WASTE

Whenever you have a surplus of fruit after a meal don't throw it away—can it! The method is easy. Just plainly stew the fruit until tender, either with or without sugar, in an agate or porcelain lined saucepan. Have a kettle of boiling water ready, with which to fill the jar, if necessary. Try your fruit with a clean broom straw, or skewer, and when tender and while boiling, pour it into the jar, which has previously been made hot with hot water. By putting a knitting needle or skewer into the jar, you will prevent its breaking when you pour into it the boiling fruit. Fill the jar to overflowing, and screw on the top. Turn the jar upside down until next morning, when it should be examined, and if it has not leaked it is air tight. If it has leaked, remove the fruit at once, to prevent the jar bursting, when the contents ferment. This fruit cannot be canned again. Use it at once. In this way, a jar at a time can be done with very little trouble, and you will soon have a large number on hand. Store in the dark, in a cool place.

VEGETABLES FOR NEXT WINTER

A few vegetables will also can well the same way—string beans, peas and tomatoes for example.

Lima beans, asparagus and corn are better when put into the jars raw, and steamed for three or four hours, with the boiling water kept half way up the jars. Then fill to overflowing with boiling water, and seal.

New York.

E. M. BARRON.

BONORA

Greatest
Plant Food
in the World

Thousands have tried it and attest to its wonderful merits. Used by the most prominent growers in the United States, and endorsed by Luther Burbank. It will make



your plants bloom in profusion, and your vegetables tender, juicy and sweet, maturing them two to three weeks earlier. BONORA will make all plant life grow where nothing else will. BONORA on your lawns will produce a dark luxuriant growth, lasting throughout the season. Those that use it will not do without it.

Put up as follows:
1, 2, 5 and 10 gallon kegs, per gal. \$2.00 Half Barrels, (cont. 25 gals.) per gal. \$1.75
Barrels, (cont. 5 gals.) 1.50 One gallon makes 100 gals.

Put up in dry form in all size packages as follows:

1 lb.,	28 gallons, postpaid,	\$.65	5 lbs., 1120 gallons.....	\$20.00
5 lbs.,	140 "	2.50	100 lbs., 280 "	37.50
10 lbs.,	280 "	4.75	200 lbs., 560 "	70.00

BONORA CHEMICAL CO.

584 Broadway - - - - - NEW YORK

Bay Trees, Boxwood and English Ivies

We have a large collection of these popular decorative trees in both Standard and Pyramid styles.

LARGE VINES GROWING IN POTS

FOR IMMEDIATE PLANTING

We have a fine lot of Hardy Vines and Climbers growing in pots that can be planted now.

- Aeriodia Polygama.** Excellent for covering walls, large trellises and screens. 75c. each; \$5.00 per dozen.
- Aechia Quintana.** A beautiful creeper and climber. Fine for any position. 50c. ea.; \$5.00 per doz.
- Ampelopsis Engelmanni.** A beautiful climber. Its magnificent brilliant scarlet foliage in fall is very attractive. 75c. each; \$6.00 per dozen.
- Ampelopsis Quincquefolia (American Ivy).** Virginia Creeper, fine plants, 7 ft. \$1.00 each; \$6.00 per dozen.
- Ampelopsis Viticillii (Boston Ivy).** Very strong. 35c. each; \$3.50 per dozen.
- Ampelopsis Viticillii Rubra Purpurea.** A beautiful new vine. It is a decided improvement of the old form of Boston Ivy. Its name fully describes its distinct merit. 75c. each; \$6.00 per dozen.
- Aristolochia Sipho (Dutchman's Pipe).** This is a very handsome climber for piazzas, pergolas, summer arbors, etc. 75c. each; \$6.00 per doz.
- Bignonia Radicans (Trumpet Creeper).** Splendid for covering unsightly stumps, dead trees and places where other vines will not grow. 50c. each; \$3.50 per dozen.
- Clematis.** Large flowered Jackmanni varieties. All colors. 75c. each; \$7.50 per dozen.
- Clematis Paniculata.** This is a beautiful white-flowered Autumn flowering Japanese variety. 35c. each; \$3.50 per dozen.
- Ivies.** We have a splendid lot of both English and Irish varieties. Plants in all sizes from 15c. to \$5.00. (Ask for particulars.)
- Hydrangea scandens (Climbing Hydrangea).** A very attractive climber. 75c. each; \$6.00 per dozen.
- Kudzu Vine.** This is the latest growing vine ever introduced, often making a growth of 40 to 50 feet in one season. \$1.00 each; 6.00 per doz.
- Lonicera (Honeysuckle).** We have a quantity of fine plants seven feet long in Belgica and other strong growing kinds. \$4.50 each; \$15.00 per dozen.
- Lonicera Halleana and Golden Varieties.** Strong plants. 35c. each; \$3.50 per dozen; \$6.00 per doz.
- Periplaneta Græca (Silk Vine).** A wonderfully rapid growing and attractive vine. 50c. each; \$5.00 per dozen.
- Polygonum Balzambanicum.** A very useful climbing plant. When in bloom it very much resembles Clematis Paniculata, but is far more handsome. \$1.00 each.
- Wistaria Chinensis.** This is the beautiful Japanese Wistaria. Fine plants. \$4.50 each; \$15.00 per dozen.

These are all described in our *New Illustrated Catalogue*, which you should be glad to send for to various growers.

BOBBINK & ATKINS Nurserymen, Florists & Landscape Gardeners
RUTHERFORD, N. J.



A Valuable Book for the Amateur

An eminently practical work on the subject of fruits for the home.

HOW TO MAKE A FRUIT GARDEN

By S. W. FLETCHER.

THIS is the best and most beautifully illustrated book on the subject which has yet appeared. Nearly 200 photographs by the author. (\$2.20 postpaid.)

UNIFORM WITH THE ABOVE:

How to Make a Vegetable Garden By Edith L. Fullerton. A real necessity for a suburban or country home. 250 beautiful photographic illustrations. (\$2.20 postpaid.)

How to Make a Flower Garden.

A charming and practical book by experts on every branch of the subject. 219 beautiful photographic illustrations. (\$1.76 postpaid.)



COUNTRY LIFE
IN AMERICA



THE WORLD'S WORK
FARMING



THE GARDEN
MAGAZINE

DOUBLEDAY, PAGE & Co. NEW YORK.

MENNEN'S

BORATED TALCUM

TOILET POWDER



At the Seashore when a delicate skin is severely tried by wind and sun, the Summer Girl realizes how indispensable is MENNEN'S. It is refreshing and delightful, even to the most delicate skin, and immediately relieves Prickly Heat, Chafing, Sunburn, and all other skin troubles of summer.

MENNEN'S BORATED TALCUM TOILET POWDER

has for years been used and recommended by physicians and nurses for its perfect purity and absolute uniformity; in the nursery it is supreme; after bathing and after shaving it is a luxury. For the protection of our patrons, we have perfected a non-refillable box, which will guarantee that you get the genuine MENNEN'S.

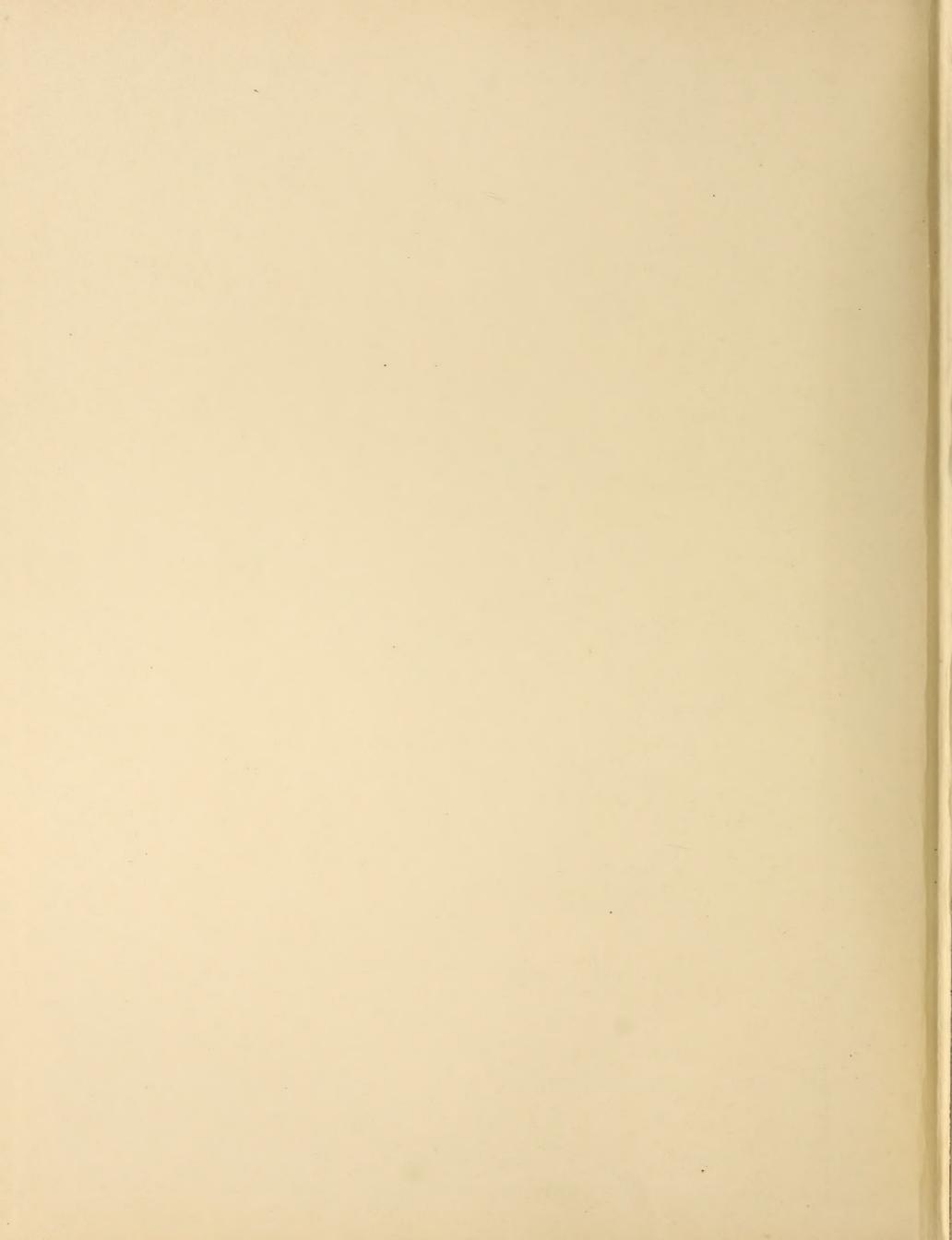
Don't be misled into buying substitutes by a cheap price or a fancy package. It is the powder, not the box, which goes on your skin. MENNEN'S face on top of the box is a guarantee of the powder inside. Get the genuine.

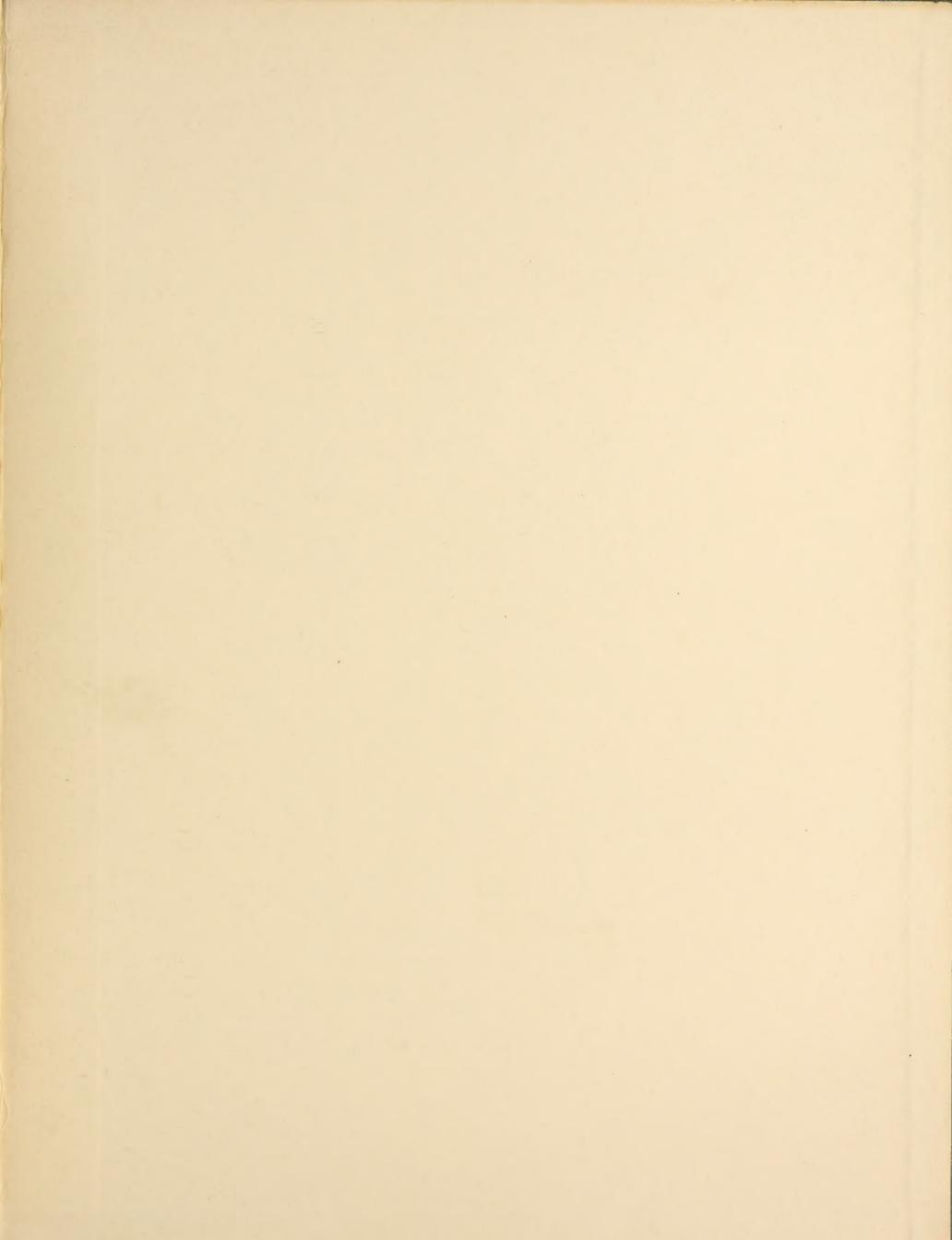
Sold everywhere or by mail 25 cents. Sample free

GERHARD MENNEN COMPANY, 76 ORANGE STREET, NEWARK, NEW JERSEY

Try MENNEN'S VIOLET (Borated) TALCUM







SMITHSONIAN INSTITUTION LIBRARIES



3 9088 01700 1298