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PLANS

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BOOK OF GARDEN PLANS

BOOK OF GARDEN PLANS

BY
STEPHEN F. HAMBLIN

TWENTY BLUEPRINT PLANS AND MANY
HALF-TONE ILLUSTRATIONS

GARDEN CITY NEW YORK
DOUBLEDAY, PAGE & COMPANY
1916

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TO
MY MOTHER
FROM WHOM CAME THE INSPIRATION
OF A GARDEN

CONTENTS

	PAGE
INTRODUCTION	xi
FARM HOME OF FIVE ACRES	3
VILLAGE HOME OF FIVE ACRES	9
PLANTING A SMALL SUBURBAN LOT	15
SHRUB PLANTING FOR A VILLAGE HOME	21
ROSE GARDEN	29
BOULDER WALL WITH VINES	35
ARBOR WITH VINES	39
SMALL INFORMAL GARDEN	47
POPPY BED	51
NATURALISTIC ROCK GARDEN	57
NATURAL ROCK GARDEN	61
AMERICAN WALL GARDEN	67
NATURALISTIC WATER GARDEN	73
ARTIFICIAL WATER GARDEN	79
WOODLAND GARDEN	85
WILD PLANTING	91
ANNUAL GARDEN	97
FORMAL GARDEN OF JAPANESE PLANTS	103
BORDER OF FRAGRANT FLOWERS	109
SPECIAL COLOR BORDER	115

ILLUSTRATIONS IN TEXT

	PAGE
A Home Seen from the Street	4
Smoke Bush for Mid-summer Effects	5
A Simple Country Home	17
The Japanese Snowball as a Specimen Plant	22
Tree or Telephone Pole?	27
If Vines Are Allowed Freedom of Growth, They Will Almost Hide the Wall from Sight	42
Hybrid Mock Orange Excellent as a Background for Highly Colored Flow- ers in June	50
The Stately Oriental Poppy	52
Nature Has This Site Ready for a Rock Garden	60
The all too Common Rock Pile	62
Summer Boarding-house Rockery	64
A Small Pond with Good Proportion of Water Lilies and Open Water	74
The Big Umbrella Leaves of May-apple	86
The Best Border Plant for Spikes of Blue in Mid-summer, Japanese Speed- well	104
Hardy Chrysanthemums	108
What Shelter Will Do	123

INTRODUCTION

THE plans presented in the following pages are offered merely as suggestions showing how some of the principles of modern gardening may be applied to everyday problems. A rough plan, even if very incomplete, will often be far more helpful in explaining arrangement and grouping than will pages of verbal instruction. It must not be supposed that any of these plans can be actually carried out on some piece of ground that you have in mind, for every garden site has its peculiarities that demand local treatment. But so as to help make these plans more definite than could be the case if they were purely ideal, an actual piece of property was in mind in each case, in the north-eastern portion of the United States or southern Canada. Some of the conditions are given, and one solution of the problem is offered. All garden operations are in the nature of problems to be solved. Should you wish to use the suggestions of any of these plans you will find them so arranged that by cutting out quantities or some of the species used, as well as shortening distances, the same general arrangement can be adapted to a smaller area.

These plans are arranged in a certain order, from the study of the general placing of large trees to the definite location on small areas of herbs to get certain effects in detail. They show a possible treatment of the different types of topography upon which gardening operations will be carried out.

Only the planning of the plant arrangement is the main object at present; design, arrangement of walks and roads, grading, construction—these and similar problems are treated only insofar as they affect the plant grouping. These as well as the planting should always be studied each by itself and at the same time in relation to all the other considerations, and detailed plans for planting can be made only after the larger questions of general arrangement have been definitely settled.

Supposing, then, that the main features on his imaginary piece of ground have been decided upon, the garden maker can refer to the blueprints and see how, by the arrangement of our garden material, he can best add to the natural beauties of the ground and give them the touch of human hands.

The botanical names used in the planting lists will undoubtedly present several unfamiliar words as generic names; they show changes that

are not recorded in any save the most recent books on botany and gardening. As these new names are however now fixed for us and must sooner or later become generally known, we may as well learn them as rapidly as we can, and let us hope that nurserymen will adopt them soon. If you have not a copy of Bailey's Standard Cyclopedia to consult, or some list that gives these latest changes in plant names, you will have a hard time getting some of these plants from dealers if you ask for them under their new names. Fortunately for us, these changes are not many nor difficult to remember. The most important for garden planners to know are:

Virginia creeper and Boston ivy are no longer *Ampelopsis* but *Parthenocissus*.

Azalea becomes *Rhododendron* with the specific names little changed.

The evergreen barberries with compound foliage are now *Mahonia*.

The common trumpet creeper has been taken from *Bignonia* to *Campsis*.

The Japanese quinces are now *Chaenomeles*, leaving the quince tree alone as *Cydonia*.

Euonymus is now spelled *Evonymus*, and the specific names that were formerly in *us* now end in *a*.

The day lilies known as *Funkia* are now listed under *Hosta*.

The hickories are to take permanently the generic name of *Carya*.

The apples, both the crabapples and the orchard forms, take the generic name of *Malus*, and only the pears are to be known as *Pyrus*.

The smoke bush and its American relative are taken from *Rhus* and form the genus *Cotinus*.

The chokeberries are taken from *Sorbus* and form the genus *Aronia*; the mountain ashes alone are in *Sorbus*.

Many other lesser changes have been made, particularly in the specific names, but usually something in the new name will give the reader a clue to the identity of the plant.

BOOK OF GARDEN PLANS

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FARM HOME OF FIVE ACRES

(SEE PLAN NO. 1)

ON A five-acre lot just outside a large village stands a big square old-fashioned house. The country is very level and few trees relieve the scene. The former owners never thought of shade in summer nor of shelter in winter, and cared not for green of leaf and color of flower.

Though the new owner has little time or money to spend on fine garden details, he is very fond of trees and intends to have many upon his home grounds since he appreciates their advantages. He expects to collect many of them from the neighboring fields, and since he knows how to root prune a year ahead of moving, and has a team of his own so that he may move them when weather conditions are right, we may expect that his planting will be a success. He is rather a crank on getting trees found in his native New England, though not all the species that he hopes to plant are found growing naturally in his town. Let us make for him a suggestion for arrangement as a guide in his work, since his planting will take several years to complete.

Three main divisions may be made of the property—(1) the house areas and the lawn; (2) the barn, outbuildings, vegetable garden, poultry-yard and cow-yard; and (3) the orchard. Fortunately the house was set well back from the street, and the barn was not too near the house. The roadway has been relocated and most of the smaller buildings given new locations to better serve their respective uses.

The orchard and windbreak (since the country is nearly level) are best on the north side of the property. For a windbreak to be effective when made of but a few trees, the coniferous evergreens native to that region are best. We shall plant a group of White Pine in the extreme north corner and a few Hemlocks by the barn.

In the orchard we can plant such fruit trees as the owner desires to give a continuous supply for the family the year round, putting the taller and more permanent trees, as Pear and Apple, farthest from the buildings, and reserving an area near the barn for the small fruits. Grapes we may put on the boundary fences in places not too near to the street. The vegetable garden and the yards for poultry and cattle will take up the western part of the farm lot.

To give shade for the cattle—their grazing grounds must be beyond the

area considered now as the home area—native nut trees, as Hickory, Butternut, and Chestnut, are planted particularly with a thought for the children. The trees will not be injured by the cows. Since these trees grow slowly, and quick effects of shade for the cows and poultry and green foliage when seen from the house are desirable, such rapid-growing trees as Black Locust and Tree-of-Heaven may be introduced in the extreme west; when they get too large they may be cut down for their wood, and vigorous sprouts will take their places. Fruit trees may be put also in the poultry-yard, to the advantage of both the fruit and the hens; they may even crowd into the cattle-yard, and the cow, if she be well-trained, as a compensation for the loss of grass in the yard, be allowed to assist in the mowing of the lawn, for the lawn area will not be as carefully clipped as if on a city lot.

Though the vegetable garden is very close to the house—to keep it near to the kitchen—it is completely screened from the street and lawn by a belt of low trees, as Sumacs and Birches, with Flowering Dogwood and Lilacs to give bright flowers, and Red Cedar for the green of its foliage in winter.

A HOME SEEN FROM THE STREET
Man and Nature together make the home

The larger ornamental trees are along the drive and about the house and barn, for shade and shelter, as a first consideration, but also as objects for visual enjoyment. A group of Oaks along the driveway, Maples and Lindens to make a shelter for the play lawn for the children, Elms near the barn, and Tulip trees about the house, will give us the picture and comfort that we desire. The highway was bare, so a row of trees along the property line, mostly Sugar Maples, will benefit the public and cast shadows upon the lawn along with the Birches. An Arborvitæ hedge may seem necessary as a screen along the east property line, or a group of native shrubs may be more suitable.

Later, when these trees are all well started, it may seem well to add a few other trees near the house and groups of shrubs of the best old-fashioned sorts, as the owner may desire, but these will make problems for the future. At present it is enough to get the trees well started.

SMOKE BUSH FOR MID-SUMMER EFFECTS

Though much neglected of late in many old gardens you still can see the Smoke Bush (*Cotinus Coggygrio*) a billowy mass of color when flowers on the shrubbery are scarce

PLANTING LIST FOR PLAN No. I

FARM HOME OF FIVE ACRES

COMMON NAME	BOTANICAL NAME
1. White Pine	<i>Pinus Strobus</i>
2. Hemlock	<i>Tsuga canadensis</i>
3. American Elm	<i>Ulmus americana</i>
4. Slippery Elm	<i>Ulmus fulva</i>
5. American Linden	<i>Tilia americana</i>
6. Sugar Maple	<i>Acer saccharum</i>
7. Red Maple	<i>Acer rubrum</i>
8. Shagbark Hickory	<i>Carya ovata</i>
9. Butternut	<i>Juglans cinerea</i>
10. American Chestnut	<i>Castanea dentata</i>
11. Tree-of-Heaven	<i>Ailanthus glandulosa</i>
12. Black Locust	<i>Robinia Pseudacacia</i>
13. White Ash	<i>Fraxinus americana</i>
14. White Oak	<i>Quercus alba</i>
15. Pin Oak	<i>Quercus palustris</i>
16. Scarlet Oak	<i>Quercus coccinea</i>
17. Tulip tree	<i>Liriodendron tulipifera</i>
18. Sycamore	<i>Platanus occidentalis</i>
19. Staghorn Sumac	<i>Rhus typhina</i>
20. Smooth Sumac	<i>Rhus glabra</i>
21. Moosewood	<i>Acer pennsylvanicum</i>
22. River Birch	<i>Betula nigra</i>
23. Black Birch	<i>Betula lenta</i>
24. Yellow Birch	<i>Betula lutea</i>
25. Canoe Birch	<i>Betula papyrifera</i>
26. Redbud	<i>Cercis canadensis</i>
27. Flowering Dogwood	<i>Cornus florida</i>
28. Common Lilac	<i>Syringa vulgaris</i>
29. Red Flowering Dogwood	<i>Cornus florida, var. rubra</i>
30. Red Cedar	<i>Juniperus virginiana</i>
31. Arborvitæ	<i>Thuja occidentalis</i>

A FARM HOME OF FIVE ACRES

1" = 30'

STEPHEN F. HANBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER
PLAN NO. 1.

VILLAGE HOME OF FIVE ACRES

(SEE PLAN NO. 2)

HERE is a village lot of about five acres where there will not be any farming operations, save a small vegetable garden. The owner wishes it to be mostly in lawn heavily bordered with trees gathered from all parts of the globe. Flowering trees are his special delight, and they will crowd the grounds somewhat, even to the exclusion of what might seem to be necessary features of the estate.

The house, drive, and service buildings being located, we have only to arrange these trees to their best possible advantage. A future house on the lot (to be occupied later by others of the family), a tennis court that will serve both families, and a vegetable garden, are all the other constructions to be provided. In the western part of the property we have a small brook that will give moisture, if not running water, all summer. Later, this area may be developed by the planting of shrubs, but there is to be no planting of shrubs about the house, except the lower growing species of Maple, Magnolia, etc.

Along the street we may put a row of trees, mostly Elms and Maples, with flowering trees that are of erect growth, thus giving shade and not decreasing the size of the lawn. The house, other buildings, and tennis court will be partially screened by tall trees, using some of the larger evergreens also.

Upon the lawn groups of Magnolias and low flowering trees will serve as shrubs; their arrangement as to color and season of bloom is thought out in much the same way as if they were of lower stature and not to become in time very large trees, yet they are spaced widely apart to get specimen development.

The brook area will be developed as a wood, using Birches, Oaks, Beeches, etc. These in time will shut out all views to the north and west, but that is desirable, for the only fine views are toward the south.

Dwarf Apples, Peaches, and Plums, as well as the small fruits, can best be put in the area between the brook and the barn and garden, unless fresh milk from the family cow seems more important than fruit from trees. With only five acres and such a wealth of trees there will be little room for many farm animals, nor are these greatly in favor to-day about the homes in our larger villages.

Only the lawn between the house and main street will be cut by the mower. All other open spaces will be sown to coarse meadow grasses and natural wild flowers, cut twice a year with the scythe, for this estate also has no gardener. Once the trees get well established, the interest of their owner and lover will see to it that they get the care that their needs require.

PLANTING LIST FOR PLAN No. 2

VILLAGE HOME OF FIVE ACRES

COMMON NAME	BOTANICAL NAME
1. Large-leaved Linden	<i>Tilia platyphyllos</i>
2. Cork-bark Elm	<i>Ulmus racemosa</i>
3. Scotch Elm	<i>Ulmus scabra</i>
4. English Elm	<i>Ulmus campestris</i>
5. Austrian Pine	<i>Pinus Laricio</i> , var. <i>austriaca</i>
6. Nordman's Fir	<i>Abies Nordmanniana</i>
7. White Spruce	<i>Picea alba</i>
8. Engelman's Spruce	<i>Picea Engelmanni</i>
9. Southern Hemlock	<i>Tsuga caroliniana</i>
10. Arborvitæ	<i>Thuja occidentalis</i>
11. Sweet Gum	<i>Liquidambar styraciflua</i>
12. Maidenhair Tree	<i>Ginkgo biloba</i>
13. Horsechestnut	<i>Æsculus Hippocastanum</i>
14. Red-flowered Horsechestnut	<i>Æsculus carnea</i>
15. Sugar Maple	<i>Acer saccharum</i>
16. Norway Maple	<i>Acer platanoides</i>
17. Chinese Cork Tree	<i>Phellodendron amurense</i>
18. Yellowwood	<i>Cladrastis lutea</i>
19. Kentucky Coffee Tree	<i>Gymnocladus dioica</i>
20. Western Catalpa	<i>Catalpa speciosa</i>
21. Umbrella Tree	<i>Magnolia tripetala</i>
22. Mossy-cup Oak	<i>Quercus macrocarpa</i>
23. English Oak	<i>Quercus pedunculata</i>
24. Shingle Oak	<i>Quercus imbricaria</i>
25. European Beech	<i>Fagus sylvatica</i>
26. Cut-leaved Beech	<i>Fagus sylvatica</i> , var. <i>heterophylla</i>
27. River's Purple Beech	<i>Fagus sylvatica</i> , var. <i>Riversii</i>
28. Canoe Birch	<i>Betula papyrifera</i>
29. Japanese Birch	<i>Betula Maximowiczii</i>
30. Japanese Alder	<i>Alnus tinctoria</i>
31. Japanese Larch	<i>Larix leptolepis</i>
32. Japanese Walnut	<i>Juglans Sieboldiana</i>
33. Japanese Magnolia	<i>Magnolia Kobus</i>

34. Showy Magnolia	<i>Magnolia Yulan</i>
35. Hybrid Magnolia	<i>Magnolia Soulangeana</i>
36. Hall's Starry Magnolia	<i>Magnolia stellata</i>
37. Japanese Cherry	<i>Prunus Pseudo-Cerasus</i>
38. Parkman's Crab	<i>Malus Halliana</i>
39. Japanese Tree Lilac	<i>Syringa japonica</i>
40. Japanese Pagoda Tree	<i>Sophora japonica</i>
41. Cockspur Thorn	<i>Cratægus Crus-galli</i>
42. English Hawthorn	<i>Cratægus monogyna</i> , in variety
43. Golden Chain	<i>Laburnum vulgare</i>
44. Varnish-tree	<i>Koelreuteria paniculata</i>
45. Sorrel-tree	<i>Oxydendron arboreum</i>
46. Kadsura-tree	<i>Cercidiphyllum japonicum</i>
47. Hercules' Club	<i>Aralia spinosa</i>
48. Flowering Dogwood	<i>Cornus florida</i>
49. Cherries, Peaches, Plums	
50. Dwarf Apples	

A VILLAGE HOME OF FIVE ACRES.

10 11 20 30

STEPHEN F. HANBLIN, BOSTON — MASS.
LANDSCAPE DESIGNER. DECEMBER, 1913.

PLAN NO. 2

PLANTING A SMALL SUBURBAN LOT

(SEE PLAN NO. 3)

A SIMPLE shrub planting can be carried out on the usual suburban lot of 50-60 feet frontage and a depth of 100-110 feet. Many lots are smaller than this, but on a smaller area there cannot be much planting. In this case we do not strive for an extended garden effect nor for flowers the summer through. The most that we can do is to relieve the flat bare appearance of the lot—the whole block was graded level long before this lot was occupied—to tie the rather ordinary-looking house to the lawn and give the whole area a feeling that somebody lives there and takes pride in his home.

To make our problem more definite we shall further suppose several things. Although the five lots which are near to this one are occupied or soon will be, it has been found impossible to get the neighbors to coöperate and plan the whole block as a unit. Instead of this larger treatment the home owner will go ahead on his own lot independently, and perhaps his success will induce his neighbors to try some planting on their own bare lots. There are no vistas in any direction—merely street, houses, clothes reels, and garbage cans, and other features of our community life. There is nothing particularly interesting beyond the lot and too little area to get any enclosed garden effects.

The house faces due south, and the main approach is from the eastern end of the east-west street. There are two cement walks leading up from the street walk, young trees along the street, but none on the lot. There is no construction of any kind on the lot save the house. The subsoil was covered with a foot of fairly good loam, and a lawn started on the whole area before the present owner bought the house.

The house we will imagine to be about 30 by 40 feet, of wood with brick foundations, set back about 15 feet from the sidewalk, and placed to the west of the centre of the lot. It is painted in some neutral color with green-stained shingles. There is a covered porch in front and an open piazza at the rear. We will suppose that it is early spring and the new owner is about to move in. He does not wish to spend over \$50 for planting—at least at present. The plan presented is simply one possible solution.

There is room for but a few trees. The street trees will in time shade the front of the house sufficiently. Two or three trees on the west prop-

erty line will be enough; they will give shelter for a hammock or a few chairs, and throw shadows upon the lawn. A smaller lot will allow of no more than one tree. The first thought would be to get Poplars, but more permanent and equally quick-growing trees are available. One Sugar Maple for shade, a Catalpa for shade and flowers, and two Ailanthus in the rear for leaf effect will suffice for the present. Other trees, as White Ash, Honey Locust, Oriental Plane, Pin Oak, European Linden, English Oak, and Norway Maple, are excellent trees for urban conditions, but do not forget that they require room, and that more than four or five trees will crowd the lot. No evergreens are suggested, as they require room at the base, and they are too expensive for the sum at present allowed.

The shrubs planted are neither to shut in the lot nor to shut out the surroundings. We shall merely partially hide the house foundations, and in places mask the lot line, using inexpensive and easily obtained material. In front, Thunberg's Spirea will keep close to the foundations; while the most excellent Van Houtte's Spirea will shut out the kitchen entrance. The rear porch, where visible from the street, may be softened by one of the later Spireas, as the Japanese or Bumald's.

The east side of the house particularly shows a bare base from the street. If the first-floor windows are high try Flowering Currant and Bladder Senna for interesting flower and fruit effects; if lower shrubs are needed, try the Slender Deutzia (*Deutzia gracilis*) and the Japanese Rose (*Kerria japonica*). Along the street a few small masses of Japanese Barberry or similar low shrub will set off the lawn from the street—a hedge is too formal. The southeast corner may be emphasized by a small group of Common Barberry, High Bush Cranberry, Snowberry, or other dense shrub with winter berries; for this planting we have chosen Barberries.

At the rear of the lot, since the other lots are not attractive, groups of Aralia and Sumac will give a pleasing leaf effect and break the level of the soil surface. These should be faced down with a few easily grown low shrubs, as represented by the Flowering Raspberry. A small group of Hydrangea near the centre of the east line will fill the break in the Sumacs when seen from the street approach, while a few Weeping Golden Bells to the back of the rear porch will be in line with the other break in the rear planting, and give privacy to the porch itself. Japanese Privet will hide the clothes reel when it is in use.

A few vines may well be placed upon the house as it has no fine architectural details that would be hidden. Dutchman's Pipe, Bittersweet, or any of the Grapes will quickly shade the rear porch, while the closed porch in front may have Dorothy Perkins or other climbing rose and the Panicked Clematis upon the posts, and Virginia Creeper as a screen to keep out the sun.

We have placed upon the lot about all for which there is room. With

a smaller lot or larger house the border shrubbery must be nearly omitted, and even the planting about the foundations reduced. If we wish to have flower effects, a well-filled window box or two will greatly add to the appearance of the house front, while a narrow belt of hardy annuals near the Sumacs will give color and flowers for cutting all summer.

Whatever we do, let us not get round or star-shaped beds in the lawn itself; there is little enough grass as it is without chopping it up into flower beds.

Instead of annuals in an informal border at the rear some people will prefer a few hardy perennial herbs, as German and Siberian Iris, Garden Phlox and Creeping Phlox, Larkspurs, Coreopsis, Pinks, Day Lilies, and other such permanent plants. Quite a show can be obtained with ten dollars' worth of roots, or even with less, if you choose and plant wisely. Hardy bulbs, as Scilla, Crocus, and Poet's Narcissus, perhaps five hundred altogether, may be cheaply naturalized under the Spireas and Hydrangeas and elsewhere, and will be most welcome in early spring.

After the main arrangement has been decided upon, these details will be an interesting feature to study and live by as one's garden knowledge grows from year to year.

A SIMPLE COUNTRY HOME

There has been little expenditure in this garden save of love—and that is all that most of them require

PLANTING LIST FOR PLAN No. 3

PLANTING A SMALL SUBURBAN LOT

COMMON NAME	BOTANICAL NAME	QUANTITY
A. Sugar Maple	<i>Acer saccharum</i>	1
B. Indian Bean	<i>Catalpa speciosa</i>	1
C. Tree-of-Heaven	<i>Ailanthus glandulosa</i>	2
1. Thunberg's Spirea	<i>Spiræa Thunbergii</i>	10
2. Van Houtte's Spirea	<i>Spiræa Van Houttei</i>	5
3. Japanese Spirea	<i>Spiræa japonica</i>	10
4. Flowering Currant	<i>Ribes odoratum</i>	10
5. Bladder Senna	<i>Colutea arborescens</i>	5
6. Japanese Barberry	<i>Berberis Thunbergii</i>	50
7. Purple Barberry	<i>Berberis vulgaris</i> , var. <i>atropur- purea</i>	5
8. Five-leaved Aralia	<i>Acanthopanax pentaphyllum</i>	10
9. Smooth Sumac	<i>Rhus glabra</i>	10
10. Staghorn Sumac	<i>Rhus typhina</i>	15
11. Ramanas Rose	<i>Rosa rugosa</i>	10
12. Flowering Raspberry	<i>Rubus odoratus</i>	15
13. Wild Hydrangea	<i>Hydrangea arborescens</i>	5
14. Weeping Golden Bell	<i>Forsythia suspensa</i>	3
15. Japanese Privet	<i>Ligustrum Iboia</i>	10
16. Dutchman's Pipe	<i>Aristolochia macrophylla</i>	2
17. Japanese Bittersweet	<i>Celastrus orbiculatus</i>	2
18. Rose—Dorothy Perkins		2
19. Panicked Clematis	<i>Clematis paniculata</i>	2
20. Virginia Creeper	<i>Parthenocissus quinquefolia</i>	2

A PLANTING FOR SMALL SUBURBAN LOT.

STEPHEN F. HAMBLEN, BOSTON, MASS.
 LANDSCAPE DESIGNER, DECEMBER, 1913.
 PLAN NO. 3.

SHRUB PLANTING FOR A VILLAGE HOME

(SEE PLAN NO. 4)

A GREAT deal of thought can be expended upon the arrangement and planting of a village lot of two or more acres. The lot that we have chosen as typical is about 400 by 225 feet, and the north line adjoins one of the residential streets of a thriving village. The lots on the east and west are similar large areas with fine houses, but there is no possibility of coöperation in planting. The land slopes gently to the south and affords a fine view in this direction of cultivated fields and rolling meadows with low hills beyond, and there are no near buildings to mar the view. On the northeast are the buildings of a small factory which it will be well to hide.

The house itself sets well back from the street, and northeast of the centre of the lot. Considerable grading was done about the house, but as a whole the natural slope of the lot has been preserved. Several large existing trees, especially toward the south, have been carefully saved and will be features in the garden treatment. More trees will be added, but the owner wishes his lawn to be quite open, in keeping with the broad outlook, though there are enclosed vistas toward the street.

The entrance road and paths decided upon, we shall consider the shrubbery planting, which is the main feature of the estate. Areas devoted to flowering herbs might be indicated, especially among the shrubs, but nothing will be done toward this planting at present, as the owner does not care for the more elaborate garden effects, nor does he intend to employ a gardener. His own spare moments from a professional life and the occasional help of a man to mow the lawn or handle soil will care for the shrubs and lawn when these are properly started.

A vegetable garden is considered a necessity, so to separate it from the lawn it is placed in the southwest corner and screened by tall shrubs. As the walk reaching from it to the house is rather steep, large flat field stones are sunk into the turf of the lawn spaced as irregular steps. The area west from the house has been somewhat formally treated as a lawn partially enclosed to be seen from the west piazza of the house. The greater part of the planting is arranged in irregular masses, particularly about the borders of the lot and near the house itself. On the plan each number refers to a group of five to twenty shrubs of a kind shown on the planting list. On a plan as small as this it is possible only in a general

way to show the arrangement of the different species. Minor changes in arrangement would naturally be made as the plants are put in place.

Large refined shrubs along the street, taller coarser ones at the rear of the lot, a high screen on the northeast, and low flowering shrubs on the west lawn—this is in general the scheme of arrangement. Some of the minor effects that we note from a study of the plan are: broad-leaved evergreen shrubs south of the play lawn; Viburnums along the path to the south; tall-growing Roses in the region of the laundry yard; Barberries along the entrance drive; Lilacs, Weigelas, and Deutzias along the street; yellow pea-flowers in the first pair of rectangular beds; Azaleas in the second pair; low, pink-flowered shrubs with evergreen foliage in the third; vines with heavy foliage or showy flowers on the roof of the west piazza.

There are even individual shrub groups that are specially placed: a mass of Red Bud at the end of the play lawn in May; a blaze of yellow Golden Bells on the southwest corner of the house; fragrance in the leaves below the wall of the south terrace; winter berries and bright twigs on the taller shrubs at the north of the house; and low dense evergreens where they will be particularly admired in winter. These lesser details can be indefinitely elaborated, and upon their character will depend much of the pleasure given by the planting to garden lovers.

THE JAPANESE SNOWBALL AS A SPECIMEN PLANT

PLANTING LIST FOR PLAN No. 4

SHRUB PLANTING FOR A VILLAGE HOME

Trees

COMMON NAME	BOTANICAL NAME
a. Norway Maple	<i>Acer platanoides</i>
b. Tulip-tree	<i>Liriodendron tulipifera</i>
c. Showy Magnolia	<i>Magnolia Yulan</i>
d. Coffee-tree	<i>Gymnocladus dioica</i>
e. Indian Bean	<i>Catalpa speciosa</i>
f. Yellowwood	<i>Cladrastis lutea</i>
g. European Beech	<i>Fagus sylvatica</i>
h. Maidenhair Tree	<i>Ginkgo biloba</i>
i. English Elm.	<i>Ulmus campestris</i>
j. Engelmann's Spruce	<i>Picea Engelmanni</i>
k. Hemlock	<i>Tsuga canadensis</i>
l. Siberian Arborvitæ	<i>Thuya occidentalis</i> , var. <i>plicata</i>
m. Dwarf Arborvitæ	<i>Thuya occidentalis</i> "Tom Thumb"
n. Japanese Yew	<i>Taxus cuspidata</i>

Shrubs

1. Hercules' Club	<i>Aralia spinosa</i>
2. Tree-of-Heaven	<i>Ailanthus glandulosa</i>
3. Dwarf Buckeye	<i>Æsculus parviflora</i>
3. Red Bud	<i>Cercis canadensis</i>
5. White Fringe.	<i>Chionanthus virginica</i>
6. Witch Hazel	<i>Hamamelis virginiana</i> and <i>H. japonica</i>
7. Rose of Sharon	<i>Hibiscus syriacus</i>
8. Flowering Dogwood	<i>Cornus florida</i>
9. Cockspur Thorn	<i>Cratægus Crus-galli</i>
10. Hall's Starry Magnolia	<i>Magnolia stellata</i>
11. Flowering Plum	<i>Prunus triloba</i>
12. Parkman's Crab	<i>Malus Halliana</i>
13. Bechtel's Double Flowering Crab	<i>Malus ioensis</i> , var. <i>fl. pl.</i>
14. Common Barberry	<i>Berberis vulgaris</i>
15. Chinese Barberry	<i>Berberis sinensis</i>
16. Siebold's Barberry	<i>Berberis Sieboldii</i>

COMMON NAME	BOTANICAL NAME
17. Five-leaved Aralia	<i>Acanthopanax pentaphyllum</i>
18. Shadbush	<i>Amelanchier canadensis</i>
19. False Indigo	<i>Amorpha fruticosa</i>
20. Flame Azalea	<i>Rhododendron calendulaceum</i>
21. Strawberry Shrub	<i>Calycanthus floridus</i>
22. Bladder Senna	<i>Colutea arborescens</i>
23. Burning Bush	<i>Evonymus europæa</i>
24. Winged Burning Bush	<i>Evonymus alata</i>
25. Japanese Oleaster	<i>Elæagnus multiflora</i>
26. Weeping Golden Bell	<i>Forsythia suspensa</i>
27. Green-barked Golden Bell . .	<i>Forsythia viridissima</i>
28. Winterberry	<i>Ilex verticillata</i>
29. Tartarian Honeysuckle . . .	<i>Lonicera tatarica</i>
30. Early Honeysuckle	<i>Lonicera Standishii</i>
31. Chinese Privet	<i>Ligustrum sinense</i>
32. Staghorn Sumac	<i>Rhus typhina</i>
33. Buckthorn	<i>Rhamnus cathartica</i>
34. Hop-tree	<i>Ptelea trifoliata</i>
35. Double Tall Deutzia	<i>Deutzia scabra</i> "Pride of Rochester"
36. Pink Tall Deutzia	<i>Deutzia scabra</i> , var. <i>Watereri</i>
37. Lemoine's Deutzia	<i>Deutzia Lemoinei</i>
38. Pink Weigela	<i>Diervilla florida</i>
39. White Weigela	<i>Diervilla florida</i> , var. <i>candida</i>
40. Red Weigela	<i>Diervilla florida</i> , var. <i>Eva Rathke</i>
41. Rose Weigela	<i>Diervilla florida</i> , var. <i>Abel Carrière</i>
42. Yellow Weigela	<i>Diervilla sessilifolia</i>
43. Sweet Pepper Bush	<i>Clethra alnifolia</i>
44. Alternate-leaved Dogwood . .	<i>Cornus alternifolia</i>
45. Purple Hazel	<i>Corylus maxima</i> , var. <i>purpurea</i>
46. High Bush Cranberry	<i>Viburnum Opulus</i>
47. Arrow-wood	<i>Viburnum dentatum</i>
48. Japanese Snowball	<i>Viburnum tomentosum</i> , var. <i>plicatum</i>
49. Japanese Viburnum	<i>Viburnum tomentosum</i>
50. Himalayan Lilac	<i>Syringa villosa</i>
51. White Hybrid Lilac	<i>Syringa vulgaris</i> , var. <i>Mad. Lemoine</i>
52. Red Hybrid Lilac	<i>Syringa vulgaris</i> , var. <i>Chas. X.</i>
53. White Lilac	<i>Syringa vulgaris</i> , var. <i>alba</i>
54. Mock Orange	<i>Philadelphus coronarius</i>
55. Hybrid Mock Orange	<i>Philadelphus speciosissimus</i>
56. Van Houtte's Spirea	<i>Spiræa Van Houttei</i>
57. Snow Garland	<i>Spiræa arguta</i>
58. Ash-leaved Spirea	<i>Sorbaria Aitchinsoni</i>

A VILLAGE HOME

STEPHEN F. HAMBLEN
LANDSCAPE DESIGNER
BOSTON, MASS.
DECEMBER, 1913

PLAN NO. 4

COMMON NAME	BOTANICAL NAME
59. Red-berried Elder	<i>Sambucus pubens</i>
60. Tamarisk	<i>Tamarix gallica</i>
61. Flowering Currant	<i>Ribes odoratum</i>
62. Many-flowered Rose	<i>Rosa multiflora</i>
63. Prairie Rose	<i>Rosa setigera</i>
64. Ramanas Rose	<i>Rosa rugosa</i>
65. Sweet Brier Rose	<i>Rosa rubiginosa</i>
66. Red-leaved Rose	<i>Rosa ferruginea</i>
67. White June Rose	<i>Rose Mad. Plantier</i>
68. Pink Hybrid Ramanas Rose	<i>Rosa rugosa</i> , var. <i>C. F. Meyer</i>
69. White Hybrid Ramanas Rose	<i>Rosa rugosa</i> , var. <i>Sir Thomas Lipton</i>
70. Fragrant Sumac	<i>Rhus canadensis</i>
71. Mountain Laurel	<i>Kalmia latifolia</i>
72. Great Rose-bay	<i>Rhododendron maximum</i>
73. Mountain Rose-bay	<i>Rhododendron punctatum</i>
74. Hybrid Rose-bay	<i>Rhododendron catawbiense</i> hybrids
75. Japanese Barberry	<i>Berberis Thunbergii</i>
76. Evergreen Barberry	<i>Berberis Neubertii</i>
77. Slender Deutzia	<i>Deutzia gracilis</i>
78. Thunberg's Spirea	<i>Spiræa Thunbergii</i>
79. Japanese Spirea	<i>Spiræa japonica</i>
80. Bumald's Spirea	<i>Spiræa Bumalda</i>
81. Japanese Azalea	<i>Rhododendron japonicum</i>
82. Ghent Azalea	<i>Rhododendron gandavense</i>
83. Evergreen Azalea	<i>Rhododendron indicum</i> , var. <i>amœnum</i>
84. Japanese Mountain Azalea	<i>Rhododendron indicum</i> , var. <i>Kämpferi</i>
85. Yellow Bush Pea	<i>Coronilla Emerus</i>
86. Dwarf Broom	<i>Cytisus supinus</i>
87. New England Whin	<i>Genista tinctoria</i>
88. Scotch Broom	<i>Cytisus scoparius</i>
89. Garland Flower	<i>Daphne Mezereum</i>
90. St. John's Wort	<i>Hypericum densiflorum</i>
91. Prostrate Rose-box	<i>Cotoneaster horizontalis</i>
92. Sand Myrtle	<i>Leiophyllum buxifolium</i>
93. Stagger-bush	<i>Pieris floribunda</i>
94. Hairy Rose-bay	<i>Rhododendron hirsutum</i>
95. Flowering Almond	<i>Prunus sinensis</i> , var. <i>fl. pl.</i>
96. White Flowering Rasp- berry	<i>Rubus deliciosus</i>
97. Sweet Pea Shrub	<i>Lespedeza Sieboldii</i>

COMMON NAME	BOTANICAL NAME
98. Coralberry	<i>Symphoricarpos orbiculatus</i>
99. Evergreen Garland Flower	<i>Daphne Cneorum</i>
100. Thread Lily	<i>Yucca filamentosa</i>
101. Virginia Creeper	<i>Parthenocissus quinquefolia</i>
102. Dutchman's Pipe	<i>Aristolochia macrophylla</i>
103. Sterile Grape	<i>Vitis labrusca</i> , var. <i>sterilis</i>
104. Japanese Bittersweet	<i>Celastrus orbiculatus</i>
105. Chinese Wisteria	<i>Wisteria chinensis</i>
106. Traveller's Joy	<i>Clematis vitalba</i>
107. Pink Climbing Rose	<i>Rose Debutante</i>
108. Hall's Honeysuckle	<i>Lonicera japonica</i> , var. <i>Halliana</i>
109. Climbing Knotweed	<i>Polygonum Baldschuanicum</i>
110. Panicked Clematis	<i>Clematis paniculata</i>

TREE OR TELEPHONE POLE? THE HORSECHESTNUT HAS
THE RIGHT OF FIRST POSSESSION

ROSE GARDEN

(SEE PLAN NO. 5)

A RECTANGULAR plot of ground about 75 by 100 feet will give space enough for quite a large rose garden. We will imagine it centred upon a walk to a distant orchard, the long axis extending in an east-west direction. An arbor covered with Climbing Roses and Clematis affords shade for our garden-loving friends. Several posts in pairs set along the walk connect the arbor with the house. Climbing Roses are also trained upon them. Seats are provided in the arbor, and also two large curved garden benches at the west end under the large Flowering Dogwoods (*Cornus florida*).

The five-foot walk is divided and becomes two three-foot walks with a ten-foot strip between them for the best Everblooming Roses. A fifteen-foot grass area lies on either side, and beyond this lawn a ten-foot bed for Hybrid Roses. We have room for two rows of Hybrid Perpetuals and one of Hybrid Teas, allowing about three feet apart each way. They are often planted more closely than this, but we wish to have large specimen shrubs.

The planting outside the rectangle is mostly of single-flowered Roses, or shrubs with flowers of the rose form. To bound the garden on the sides we shall set concrete posts ten feet apart and connect them by chains; upon these will be trained the single-flowered forms of the newer hybrids of *Rosa Wichuraiana*, in the lighter shades of color. A few specimen evergreens within the garden give emphasis to the exit toward the orchard, and are of particular interest when the Roses are out of bloom.

We plant the Hybrid Perpetuals and Hybrid Teas in groups of twelve each, using only the best sorts, the taller kinds in back, and grouping red and white on one side and the pink shades on the other. Other eighteen equally good sorts may be chosen, but we have taken some of the best known which harmonize well and yet contrast in habit height, and color.

The centre bed contains the best Everbloomers for northern latitudes, and will be bright with color from June to frost. The roses in the centre of the bed are chosen rather for their height than their continuous bloom, while the Baby Ramblers used as edging, though low in stature, will always be in bloom. The Coral Bells among them, if they succeed in this garden, will greatly help out in the color effect; if they are not

thrifty, as is sometimes the case, then Shasta Daisies, or other perennial of low stature and long season of bloom may be used to fill all spaces not taken by the stems of the Roses.

Several groups of Garden Phlox are indicated on the plan; these are to give color when the Hybrid Perpetuals have ceased blooming, but they must not be placed too near, so as to crowd upon them. The whole front edge of the beds is to be covered with a neat dense mat of foliage of dense low perennial herbs, of which the flowers are pink or white. A few thousand small bulbs, mostly with white flowers, may be tucked away among them, and they will start the garden early in the spring, even before the Roses have thought of waking from winter. The whole planting is arranged for flowers in shades of red, pink, and white. Though the main show is in June and July, yet there is color throughout the growing season.

Except for the two beds of Maman Cochet, which are a minor incident, no winter covering is needed and no annual care, save for pruning, different from that given to any herbaceous border. The soil beneath the Hybrid Perpetuals should be deeply covered with leaves the first year, and this covering, left undisturbed, will soon be covered by the herbs. These cover herbs will hide all the bare earth between the plants.

The planting is arranged to be permanent when completed, and should be reset only when renewal is absolutely needed, perhaps once in six to ten years, according to the soil and the care given the plants.

PLANTING LIST FOR PLAN No. 5

ROSE GARDEN

Hybrid Perpetual Roses

NAME	COLOR	QUANTITY
1. General Jacqueminot	Crimson	12
2. Mrs. John Laing	Deep Pink	12
3. Magna Charta	Carmine Rose	12
4. Frau Karl Druschki	White	12
5. Paul Neyron	Rose Pink	12
6. Marchioness of Londonderry	White	12
7. Baron Bonstettin	Dark Red	12
8. Margaret Dickson	White	12
9. Louis van Houtte	Deep Red	12
10. Captain Christy	Pink	12
11. Clio	Salmon Pink	12
12. Soleil d'Or	Salmon Rose	12

Hybrid Tea Roses

13. Gruss an Teplitz	Scarlet	12
14. Etoile de France	Red	12
15. Mad. Caroline Testout	Rose Pink	12
16. La France	Pink	12
17. Kaiserin Augusta Victoria	White	12
18. White La France	White	12

Everblooming Roses

19. Hermosa	Rose	24
20. Clothilde Soupert	Pink	24
21. Perle des Blanches	White	12
22. Coquette des Blanches	White	12
23. Souvenir de Malmaison	Light Pink	12
24. Maman Cochet	Pink	12
25. White Maman Cochet	White	12
26. Baby Rambler	Red	24
27. Baby Dorothy	Pink	24
28. White Baby Rambler	White	100

Climbers and Vines

	NAME	COLOR	QUANTITY
29.	Rose Baltimore Belle	White	4
30.	Rose Dawson	Pink	2
31.	Rose Crimson Rambler	Crimson	4
32.	Rose Dorothy Perkins	Pink	2
33.	Rose White Dorothy Perkins	White	2
34.	Rose Débutante	Pink	2
35.	Rose Tausendschon	Pink	4
36.	Rose Excelsa	Crimson	4
37.	<i>Clematis Jackmanni</i>	Purple	2
38.	<i>Clematis Henryi</i>	White	2
39.	<i>Clematis Ramona</i>	Blue	2
40.	<i>Clematis</i> Duchess of Edinburgh	Double White	2
41.	<i>Clematis paniculata</i>	White	4

Roses on Fence

42.	Hybrid Wichuraiana Evangeline	Pink	5
	Hybrid Wichuraiana Minnehaha	Pink	5
	Hybrid Wichuraiana Wedding Bells	Pink	5
	Hybrid Wichuraiana Delight	Pink	5

Tall Herbs

a.	Phlox Richard Wallace	White with red eye	25
b.	Phlox Independence	White	50
c.	Phlox Miss Lingard	White with rose eye	50
d.	Phlox Le Soleil	China rose	50
e.	Phlox L' Esperance	Lavender	25
f.	Phlox Von Hockberg	Crimson	50

Cover Herbs

	COMMON NAME	BOTANICAL NAME	
g.	Tufted Violet	<i>Viola cornuta</i> , var. <i>alba</i>	500
h.	White Stonecrop	<i>Sedum album</i>	200
i.	Moss Pink	<i>Phlox subulata</i> , var. <i>rosea</i>	200
k.	Moss Pink	<i>Phlox subulata</i> , var. <i>alba</i>	200
l.	Coral Bells	<i>Heuchera sanguinea</i>	500
m.	Giant Snowdrop	<i>Galanthus Elwesii</i>	1,000
n.	Dutch Crocus	<i>Crocus vernus</i> , var. <i>albus</i>	2,000
o.	Squill	<i>Scilla sibirica</i> , var. <i>alba</i>	2,000

1	20	44	46
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PLAN NO. 5.

BOULDER WALL WITH VINES

(SEE PLAN NO. 6)

A GOOD opportunity for using vines as a covering is afforded by a rough boulder wall bordering a highway. In the case selected here an entrance of four back-pointed boulder piers gives a chance to plant some of the close-clinging vines upon them, but the rough wall itself is hidden by scrambling vines planted at the back and allowed to droop forward and over.

We may suppose a forty-foot highway with an eight-foot planting space occupied by young Pin Oaks planted forty feet apart. A five-foot sidewalk extends between the planting space and the property line. To give the vines room we shall set the wall about five feet back from the property line, the strip to be kept in mown lawn. Beyond the wall the main lawn soon begins, with its trees, shrubbery, and open spaces. To hide the back of the wall, as seen from the house, and the soil hump and the bases of the vines, a narrow, irregular belt of shrubbery is suggested upon the lawn. These features are not a part of the present plan since we are considering the wall planting only; they are merely added to make the problem more concrete.

The vines are planted in groups of three or four of a kind, from three to five feet apart, depending on their vigor, and they are allowed to grow as they will, care being taken to keep them off the lawn and shrubbery, and from falling forward upon the sidewalk. To accomplish this we prune in winter, cutting back the long shoots, or tying them over open spaces on the wall.

The section and elevation on the plan give sufficient graphic instructions for construction, while the planting plan and key indicate the arrangement. Neither end of the wall is shown in the plan; we may suppose that the wall is more than four hundred feet long, and that a similar planting is carried to its limits.

Arrangement as to texture, growth, and flower color, can be studied from the plan. Each group has a definite part to play in the whole planting. In a general way the purpose is to give a refined effect with flowering vines near the entrance, with coarser material at a distance; there is both repetition and variety in leaf effect, and in height and habit. A planting similar to this will give a pleasing picture to the eye and joy to the heart of the garden lover every day in the year.

PLANTING LIST FOR PLAN NO. 6

BOULDER WALL WITH VINES

COMMON NAME	BOTANICAL NAME
1. Evergreen Euonymus	<i>Evonymus radicans</i>
2. Silver Vine	<i>Actinidia arguta</i>
3. Wild Grape	<i>Vitis labrusca</i>
4. Roxbury Waxwork	<i>Celastrus scandens</i>
5. Japanese Waxwork	<i>Celastrus orbiculatus</i>
6. Virginia Creeper	<i>Parthenocissus quinquefolia</i>
7. Asiatic Creeper	<i>Ampelopsis heterophylla</i>
8. Boston Ivy	<i>Parthenocissus tricuspidata</i>
9. Trumpet Honeysuckle	<i>Lonicera sempervirens</i>
10. Japanese Honeysuckle	<i>Lonicera japonica</i>
11. Climbing Knotweed	<i>Polygonum Baldschuanicum</i>
12. Trumpet Creeper	<i>Campsis radicans</i>
13. Matrimony Vine.	<i>Lycium halimifolium</i>
14. Weeping Golden Bell	<i>Forsythia suspensa</i>
15. Five-leaved Akebia	<i>Akebia quinata</i>
16. Virgin's Bower	<i>Clematis virginiana</i>
17. Japanese Panicked Clematis	<i>Clematis paniculata</i>
18. Rose Hiawatha	
19. Rose Baltimore Bell	
20. Rose Farquhar	
21. Rose White Dorothy Perkins	

A BOULDER WALL WITH VINES.

0 20 40 60 80

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER, DECEMBER, 1933.
PLAN NO. 6.

1000

*Douglas Spruce
 *Flowering Dogwood
 *Maple
 *Sugar

Sugar Maple
Oak
Flowering Dogwood

Property - 5

Side walk

ENTRANCE DRIVE

HYGHWAY

SECTION

DECLARATION

ARBOR WITH VINES

(SEE PLAN NO. 7)

CLIMBING vines, especially those that twine, will be needed in covering a long arbor or pergola, and such a planting will serve to illustrate their proper use.

Let us imagine a rectangular plot enclosed on three sides by a pergola five feet wide and eight to ten feet high. The fourth side is the west wing of the house. A walk runs beneath the pergola its whole length and connects the house with other features of the estate. We shall further suppose a teahouse and other accessories, as seats and flower plantings, but our study at present is the pergola planting. The enclosed lawn may be used as a playground for the children, a croquet court, small, formal garden, rose garden, as the case may be.

The structure may be built of rough cedar logs or of stained cypress beams set over concrete posts—whichever fits the style of the house and grounds and the purse of the owner—for vines will grow equally well when trained on either.

There will be an arch over the main walk, the teahouse, and the piazza to be covered with very tall vines, a portion of the house to be concealed by clinging vines, while low vines will be needed on the continued low trellis along the outer side of the north and west portions of the pergola. The posts are set in pairs ten feet apart, and a tall vine is planted at each post, often with a low variety of vine to help hide the base of the post. The south side is to be very open at the bottom to allow a perennial border on each side and views out across the lawn southward.

Let us plant the pergola vines. The coarser-growing sorts will be used on the north part of the structure, refined blossoming vines on the south section. The inner side of the west section will be mostly climbing Roses, as also beyond the pergola itself on posts along the walk to the greenhouse. Each number on the plan means one strong plant; about 125 woody vines and 30 perennial vines are needed.

It is expected that each plant will have room enough to attain a goodly size at length, and that every straggling shoot will be cut off or tied to the beams where it will be most useful. During the first and second years after planting, annual vines such as Morning Glories, Moonflowers, etc., will help to give color and shade, but they will not be

needed long and are of doubtful value. For immediate effect it would be better to purchase some of the plants in large sizes so that they reach the top of the pergola the first season.

Only the north portion of the pergola will be heavily shaded. The teahouse and the opposite arch are draped with Wisteria in purple and white. Showy scarlet flowers are the main effect on the outer side of the arbor on the west, and double pink and white Roses on the inner side. These same Roses and others are planned to meet overhead on the south arbor, while some of the robust species of Clematis, in several colors, will hide the bare bases of the Roses.

Few vines will grow upon the house itself, as much of the wall gets but little sun. Virginia Creeper, trained upon wires over the woodwork, and Evergreen Euonymus upon the foundations and other stonework, are about all the vine effect we can hope to maintain here.

The outer north side shows heavy dark foliage rather than flowers, from Grape, Moonseed, Dutchman's Pipe, Silver Vine, etc., and this effect is again suggested over the middle of the south arbor by a pair of Sterile Grapes and Moonseeds. Between the posts on the outer side of the north portion a low lattice is built to give the play lawn complete seclusion from that side. To cover this lattice the Japanese Honeysuckle is planted for its foliage, as flowers will be few under such conditions of shade, but the vines will be vigorous enough for our purpose.

The inner side of the north arbor partly repeats the outer side, but it has also robust vines with showy flowers, foliage, or fruit.

The west arbor has also a trellis for screen, the inner side with low netted wire to support Perennial Pea, the outer with a coarse-meshed wire to the top for such stout perennial twiners as Hops, Kudzu Vine, and Perennial Moonflower. If they force the woody vines among them to grow only on the top of that part of the pergola no harm is done, as the perennial sorts will effectively screen in summer the greenhouse and its soil piles from the little lawn and the house.

Though this planting is as a whole one that you might never want to carry out, yet many of the details may give suggestions useful in similar and smaller plantings.

PLANTING LIST FOR PLAN No. 7

ARBOR WITH VINES

COMMON NAME	BOTANICAL NAME
1. Dutchman's Pipe .	<i>Aristolochia macrophylla</i>
2. Chinese Wisteria	<i>Wisteria chinensis</i>
3. White Chinese Wisteria .	<i>Wisteria chinensis</i> , var. <i>alba</i>
4. Japanese Wisteria	<i>Wisteria multijuga</i>
5. White Japanese Wisteria . . .	<i>Wisteria multijuga</i> , var. <i>alba</i>
6. Silver Vine. . .	<i>Actinidia arguta</i>
7. Asiatic Creeper	<i>Ampelopsis heterophylla</i>
8. Roxbury Waxwork	<i>Celastrus scandens</i>
9. Japanese Waxwork	<i>Celastrus orbiculatus</i>
10. Crimson Glory Vine	<i>Vitis Coignetiae</i>
11. Sterile Grape	<i>Vitis labrusca</i> , var. <i>sterilis</i>
12. Chicken Grape .	<i>Vitis cordifolia</i>
13. Japanese Honeysuckle	<i>Lonicera japonica</i>
14. Hall's Honeysuckle	<i>Lonicera japonica</i> , var. <i>Halliana</i>
15. Trumpet Honeysuckle	<i>Lonicera sempervirens</i>
15. Five-leaved Akebia	<i>Akebia quinata</i>
17. Virginia Creeper	<i>Parthenocissus quinquefolia</i>
18. Engelmann's Creeper.	<i>Parthenocissus quinquefolia</i> , var. <i>Engelmanni</i>
19. Silk Vine .	<i>Periploca græca</i>
20. Evergreen Euonymus	<i>Euonymus radicans</i>
21. Virgin's Bower	<i>Clematis virginiana</i>
22. Panicked Clematis .	<i>Clematis paniculata</i>
23. Traveller's Joy .	<i>Clematis Vitalba</i>
24. Yellow Clematis	<i>Clematis tangutica</i>
25. Purple Clematis .	<i>Clematis Jackmanni</i>
26. Henry's White Clematis . . .	<i>Clematis Henryi</i>
27. Hybrid Lilac Clematis	<i>Clematis Viticella</i> , var. <i>lilacina</i>
28. Scarlet Clematis	<i>Clematis texensis</i>
29. Moonseed .	<i>Menispermum canadense</i>
30. Climbing Knotweed .	<i>Polygonum Baldschuanicum</i>

COMMON NAME	BOTANICAL NAME
31. False Climbing	
Hydrangea . . .	<i>Schizophragma hydrangeoides</i>
32. Trumpet Creeper . . .	<i>Campsis radicans</i>
33. Rose Lady Gay . . .	
34. Rose Baltimore Belle	
35. Rose Dawson . . .	
36. Rose Dorothy Perkins	
37. Rose White Dorothy Perkins	
38. Perennial Pea . . .	<i>Lathyrus latifolius</i>
39. Kudzu Vine . . .	<i>Pueraria Thunbergiana</i>
40. Hardy Moonflower . . .	<i>Ipomœa pandurata</i>
41. Hops	<i>Humulus Lupulus</i>

IF VINES ARE ALLOWED FREEDOM OF GROWTH THEY WILL
ALMOST HIDE THE WALL FROM SIGHT

AN ARBOR WITH VINES.

0 10 20 30

STEPHEN F. HANBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER. DECEMBER, 1913.
PLAN NO. 7.

SMALL INFORMAL GARDEN

(SEE PLAN NO. 8)

FOR a planting study of a small formal garden that has little formality about it let us take a rectangular area about 30 by 50 feet, lying beyond the west porch of the residence, its long axis upon an east-west walk that terminates, after dividing, by two simple garden seats. On the axis of the walk as seen from the house we may place a bird fountain or similar garden feature, with a background of evergreen shrubs such as Yew and Cedar. Outside of this area there is a planting somewhat as suggested upon the plan, giving the garden as a unit a definite relation to the general planting of the property.

An informal group of dwarf coniferous evergreens on either side of the walk as the garden is approached from the house, a planting of Red Cedars west of the garden, and of Hemlocks on the northwest will give solidity to the whole planting and furnish an evergreen background for the flowers and flowering shrubs that are indicated.

A long irregular belt of low shrubbery on the east, and another of taller shrubbery on the west, finish the frame and give the border seclusion. This shrub planting forms the bounds of the garden; an enclosing wall or hedge would be rather too elaborate for such a simple planting as this.

We shall make a five-foot bed around the interior of this area, planting only the very best sorts of perennials in groups of five to ten plants. Two numbers in the same bed indicate that the plants are to be interplanted, each sort growing independently of the other. Only herbs that will grow for at least five years without resetting are suggested, and great variety in habit and color of bloom as well as eight months of display are sought.

The central three-foot turf walk is bordered by two three-foot planting strips planted with refined, long-blooming herbs set in parallel lines. This is the most formal feature and aims to give color in mass. For this effect we have chosen Shasta Daisies and blue Plantain Lilies, the outer lines of scarlet Coral Bells and blue of Carpathian Harebells, respectively.

The two five-foot grass strips that are nearly enclosed give a foreground to the beds as we sit on the garden seats at the end of the walk and look back toward the house and the dwarf evergreens. There is a particularly fine view across country westward through the Red Cedars, so

we shall turn the seat on the south side nearly halfway round that we may look from it either within the garden or outside and beyond to the distant hills.

The features of this planting may be discovered from a study of the plan and referring to the key list. There is a concentration of yellow about the bird bath (this will be very effective when seen from the house) and of white at the entrance to the garden. Tall herbs are planted in the back of the border, next to the surrounding shrubbery, and a continuous border of low herbs borders the grass panels. The south side is known in its season by its many tall Iris, the south seat has broad heavy foliage around it. Other features of the garden you may readily discover. Harmony of form, color, and foliage, as well as eight months of bloom are provided for. Every inch of the soil is covered, even to a ground cover of low herbs—Speedwell, Mountain Spurge, Periwinkle, and others of similar nature—under the shrubbery that borders the walk.

The area is not overplanted, though a substitute effect could be obtained from using fewer species in larger masses, but more care would have to be taken that there be no times of little bloom. Bulbous plants, as Tulips, Crocus, etc., could be added indefinitely, for added bloom in early spring and late autumn.

PLANTING LIST FOR PLAN No. 8

SMALL INFORMAL GARDEN

Shrubs

COMMON NAME	BOTANICAL NAME
a. Hall's Starry Magnolia	<i>Magnolia stellata</i>
b. Hall's Pink Magnolia	<i>Magnolia stellata</i> , var. <i>rosea</i>
c. Flowering Plum	<i>Prunus triloba</i>
d. Slender Deutzia	<i>Deutzia gracilis</i>
e. Pink Slender Deutzia	<i>Deutzia rosea</i>
f. Red Cedar	<i>Juniperus virginiana</i>
g. Japanese Yew	<i>Taxus cuspidata</i>

Tall Herbs

1. New England Aster	<i>Aster novæ-angliæ</i>
2. Sneezeweed	<i>Helenium autumnale</i>
3. Lance-leaved Sunflower	<i>Helianthus orgyalis</i>
4. Rosin-weed	<i>Silphium terebinthinaceum</i>
✓ 5. Bee Larkspur	<i>Delphinium elatum</i>
6. St. Peter's Staff	<i>Thermopsis caroliniana</i>
7. Late-flowering Monkshood	<i>Aconitum autumnale</i>
✓ 8. Balloon-flower	<i>Platycodon grandiflorum</i>
9. Red Garden Phlox	<i>Phlox</i> Mad. P. <i>Langier</i>
10. Pink Garden Phlox	<i>Phlox</i> <i>Le Soleil</i>
11. White Garden Phlox	<i>Phlox</i> <i>Richard Wallace</i>
12. White Garden Phlox	<i>Phlox</i> <i>Jeanne d'Arc</i>
13. Early White Phlox	<i>Phlox suffruticosa</i> , var. <i>Miss Lingard</i>
14. White Peony	<i>Pæonia albiflora</i> , var. <i>Festiva Maxima</i>
15. Red Peony	<i>Pæonia albiflora</i> , var. <i>Louis van Houtte</i>
16. Blue-veined Plaited Flag	<i>Iris plicata</i> , var. <i>Mad. Chereau</i>
17. Great Lavender Flag	<i>Iris pallida</i> , var. <i>speciosa</i>
18. Great Blue Flag	<i>Iris pallida</i> , var. <i>dalmatica</i>
19. Yellow German Iris	<i>Iris flavescens</i>
20. Siberian Flag	<i>Iris sibirica</i>
21. White Siberian Flag	<i>Iris sibirica</i> , var. <i>alba</i>
22. Late Siberian Flag	<i>Iris sibirica</i> , var. <i>orientalis</i>
23. Snow Queen Iris	<i>Iris sibirica</i> , var. <i>orientalis alba</i>

COMMON NAME	BOTANICAL NAME
24. Jacob's Ladder	<i>Polemonium cæruleum</i>
25. Yellow Button Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
26. Late-flowered Lemon Lily	<i>Hemerocallis Thunbergii</i>
27. Showy Coneflower	<i>Rudbeckia speciosa</i>
28. Lemon Lily	<i>Hemerocallis flava</i>
29. Dwarf Orange Lily	<i>Hemerocallis Dumortieri</i>

Medium Herbs

30. Shasta Daisy	<i>Chrysanthemum maximum</i> "Shasta Daisy"
31. Lance-leaved Day Lily	<i>Hosta lancifolia</i>
32. Blue Day Lily	<i>Hosta cærulea</i>
33. Showy Stonecrop	<i>Sedum spectabile</i>
34. Persian Daisy	<i>Chrysanthemum coccineum</i>
35. Mountain Phlox	<i>Phlox ovata</i>
36. Peach Bells	<i>Campanula persicifolia</i>
37. European Dwarf Iris	<i>Iris pumila</i>
38. Orange Sneezeweed	<i>Helenium Hoopesii</i>
39. Chinese Larkspur	<i>Delphinium grandiflorum</i>
40. Tickseed	<i>Coreopsis lanceolata</i>
41. Double Baby's Breath	<i>Gypsophila paniculata</i> , var. <i>fl. pl.</i>
42. Coral Bells	<i>Heuchera sanguinea</i>
43. Leopard's Bane	<i>Doronicum plantagineum</i> , var. <i>excelsum</i>
44. Japanese Speedwell	<i>Veronica longifolia</i> , var. <i>subsessilis</i>
45. Hoary Speedwell	<i>Veronica incana</i>
46. Orange Globe-flower	<i>Trollius asiaticus</i>
47. Carpathian Harebell	<i>Campanula carpatica</i>

Edging Herbs

48. Scotch Pink	<i>Dianthus plumarius</i>
49. Lovely Phlox	<i>Phlox amœna</i>
50. White Stonecrop	<i>Sedum album</i>
51. Rock Speedwell	<i>Veronica rupestris</i>
52. White Moss Pink	<i>Phlox subulata</i> , var. <i>alba</i>
53. Wild Sweet William	<i>Phlox divaricata</i>
54. Lavender Cotton	<i>Santolina Chamæcyparissus</i>
55. Horned Violet	<i>Viola cornuta</i>

Bulbs

56. Dutch Crocus	<i>Crocus vernus</i> , in variety
57. Meadow Saffron	<i>Colchicum autumnale</i>

A SMALL INFORMAL GARDEN.

0 5 10 20 30

STEPHEN F. HAMBLIN,
LANDSCAPE DESIGNER.
BOSTON, MASS.
DECEMBER, 1913.
PLAN NO. 8.

COMMON NAME	BOTANICAL NAME
58. Poet's Narcissus . . .	<i>Narcissus poeticus</i>
59. Double Daffodil . . .	<i>Narcissus Pseudo-Narcissus</i> , var. <i>Van Sion</i>
60. Red June Lily . . .	<i>Lilium elegans</i>
61. Madonna Lily . . .	<i>Lilium candidum</i>
62. Late Tulip . . .	<i>Tulipa Gesneriana</i> , in variety
63. Siberian Squill . . .	<i>Scilla sibirica</i>

Ground Cover

64. Common Speedwell . .	<i>Veronica officinalis</i>
65. Heart-leaved Rockfoil .	<i>Saxifraga cordifolia</i>
66. Japanese Mountain Spurge . . .	<i>Pachysandra terminalis</i>
67. Mother of Thyme . .	<i>Thymus Serpyllum</i>
68. Periwinkle . . .	<i>Vinca minor</i>

HYBRID MOCK ORANGE (PHILADELPHUS AVALANCHE)
EXCELLENT AS A BACKGROUND FOR HIGHLY COLORED
FLOWERS IN JUNE.

POPPY BED

(SEE PLAN NO. 9)

SPECIAL gardens for favorite herbs, as Iris, Peony, Phlox, etc., are quite common in the gardens of enthusiasts. We may suppose that a friend is very fond of Oriental Poppy—who is not?—and wishes a bed of one hundred plants in ten varieties. Though of regal splendor it has a few peculiarities which must be considered. It is coarse in habit, blooms only in June, dies down in July to be lost until September, and then grows again in late autumn, while the carrot-like root must not be disturbed. The problem is to find suitable plants that will adapt themselves to its habits and yet give a continuous season of eight months' bloom.

We shall suppose a bed about 10 feet by 60 feet, along a three-foot path. Behind the bed the ground rises somewhat; this slope is planted with hybrid Mock Orange, or similar dense white-flowered shrub blooming in June, as a background for the Poppies. Across the path we may have a planting of dwarf shrubs, such as the lower species of *Spirea*, *Deutzia*, etc. The bed itself we shall divide into ten nearly equal plots, and in these plant the roots in August, one kind to a plot, irregularly about three feet apart, mostly toward the back of the bed. On the plan the star-shaped marks represent the location of each poppy root.

In September or October the front of each plot may receive a dozen Lilies, in ten species—scarlet, yellow, white—while in front of them we put a thousand Snowdrops in ten varieties or species, in irregular masses for early bloom. Among the Lilies the following August we put a thousand white Autumn Crocus (*Colchicum autumnale*, var. *album*) for bloom in September. The front edging should be of some robust tufted evergreen perennial, perhaps Sea Thrift (*Armeria vulgaris*) in several varieties. Plant these in September, and then add a thousand or more white Dutch Crocus (*Crocus vernus*, var. *albus*) for spring bloom.

Among the Lilies and halfway back in each plot we put some long-lived, slender-growing, white-flowered erect perennial which will bloom during July and August. The rear half of each plot may have a dozen autumn-blooming Asters or related plants, mostly in blues and purples for variety. These will not interfere with the Poppies if not too robust sorts are chosen. Darwin Tulips in many colors may be added among these Asters to precede them in bloom; their growth ceases before

the Asters have made much start. Tulips and Poppies will overlap in time of bloom, so watch out for color discords; perhaps the Tulips had better be all in white or very light shades.

Iceland Poppies (*Papaver nudicaule*) in three colors—white, yellow, and orange—may be placed back of the edging in front to add to the Poppy effect; these will require frequent renewal. It may be that after a few years these will not be considered necessary.

The whole border should be permanent—a flame of scarlet relieved by white—and it will have no dull season. The arrangement of each plot, from back to front, in five zones is given more in detail in the planting list.

THE STATELY ORIENTAL POPPY

This is an excellent illustration of the value of massing. One flower standing alone would look weak (Garden of Mr. R. B. Whyte, Ottawa, Can.)

PLANTING LIST FOR PLAN No. 9

POPPY BED

Plot No. 1

- a. *Papaver* "Blush Queen," with *Aster Townshendi* and Darwin Tulips.
- b. *Campanula carpatica*, var. *alba*, with *Lilium speciosum*, var. *album*.
- c. *Papaver nudicaule* Yellow, with White Crocus and *Colchicum autumnale*, var. *album*.
- d. *Armeria vulgaris*, var. *rosea*, with *Galanthus Elwesii*.

Plot No. 2

- a. *Papaver* "Beauty of Denismere," with *Boltonia latisquama* and Darwin Tulips.
- b. *Phlox paniculata*, var. Tapis Blanc, with *Lilium canadense*, var. *flavescens*.
- c. (As Plot 1.)
- d. (As Plot 1.)

Plot No. 3

- a. *Papaver* "Salmon Queen," with *Aster Lady Trevellyn* and Darwin Tulips.
- b. *Scabiosa caucasica*, var. *alba*, with *Lilium Henryi*.
- c. (As Plot 1.)
- d. *Armeria vulgaris*, with *Galanthus Elwesii*, var. *robustus*.

Plot No. 4

- a. *Papaver* "Duke of Teck," with *Aster Roycroft Pink* and Darwin Tulips.
- b. *Gypsophila paniculata*, var. *fl. pl.*, with *Lilium candidum*.
- c. *Papaver nudicaule* White, with White Crocus and *Colchicum autumnale*, var. *album*.
- d. *Armeria vulgaris*, var. *alba*, with *Galanthus nivalis*.

Plot No. 5

- a. *Papaver* "Parkmanni," with *Aster novæ-angliæ* and Darwin Tulips.
- b. *Delphinium grandiflorum*, var. *album*, with *Lilium Batemanni*.
- c. (As Plot 4.)
- d. (As Plot 4.)

Plot No. 6

- a. *Papaver* "Beauty of Livermere," with *Aster tataricus* and Darwin Tulips.
- b. *Gypsophila acutifolia*, with *Lilium superbum*.
- c. (As Plot 4.)
- d. *Armeria vulgaris*, var. *robusta*, with *Galanthus Fosteri*.

Plot No. 7

- a. *Papaver bracteatum*, with *Aster novæ-angliæ*, var. *roseus* and Darwin Tulips.
- b. *Euphorbia corollata*, with *Lilium Martagon*.
- c. *Papaver nudicaule* Orange, with *Crocus White* and *Colchicum autumnale*, var. *album*.
- d. (As Plot 6.)

Plot No. 8

- a. *Papaver* "Grand Mogul," with *Aster longifolius*, var. *formosus* and Darwin Tulips.
- b. *Linum perenne*, var. *album*, with *Lilium speciosum*, var. *album*.
- c. (As Plot 7.)
- d. *Armeria vulgaris*, var. *splendens*, with *Galanthus plicatus*.

Plot No. 9

- a. *Papaver* "semiplenum," with *Aster Madonna* and Darwin Tulips.
- b. *Gypsophila paniculata*, with *Lilium canadense*.
- c. (As Plot 7.)
- d. *Armeria vulgaris*, var. *Laucheana*, with *Galanthus nivalis*, var. *fl. pl.*

Plot No. 10

- a. *Papaver orientale*, with *Aster Mrs. W. F. Raynor* and Darwin Tulips.
- b. *Aster ptarmicoides*, with *Lilium speciosum*.
- c. (As Plot 7.)
- d. (As Plot 9.)

A POPPY BED.

STEPHEN F. HANBLIN,
LANDSCAPE DESIGNER.
BOSTON, MASS.
DECEMBER, 1913.
PLAN NO. 9

NATURALISTIC ROCK GARDEN

(SEE PLAN NO. 10)

A ROCK garden that is wholly artificial requires much skill in construction in order that it may appear somewhat as a part of the natural soil formation. We shall imagine for our present purpose that on a rather steep bank of good loamy soil sloping to the northeast there are already three big boulders, marked A, B, and C on the plan. The contour lines, marked at the ends with numbers, show approximate successive elevations in feet above the base of one of the large trees upon the slope.

We shall add rocks in small sizes as indicated by the cross-hatched areas, putting gritty soil between them, and lay out a path before we consider the planting, for it is a question of planting an irregular border on a steep slope, using dwarf herbs, not necessarily alpine or rock-loving species.

To complicate our problem we indicate the presence of two big Kentucky Coffee Trees (*Gymnocladus dioica*) below the rocks on the north side, and they shade a part of the area all the day; while a group of Sugar Maples (*Acer saccharum*) above the bank casts shadows on the garden most of the afternoon.

A row of flat stones makes the path, and gives the idea that a real ledge lies beneath. I have indicated only the larger rocks to be added; the smaller ones used as wedges are not shown. Each stone is to be set deeply enough that it cannot slide, and no rocks are to be set one upon another.

Each letter or number on the plan means a group of ten or more of the plant indicated by the list. The effects aimed for may be easily learned from a study of the plan and list. Blue is the prevailing color, with white and pink for contrast. Construction and planting could be finished by two men in three days if the soil works readily. If the garden is the success that it should be, in another year it may be extended along the bank.

The shrubs that we use are of a dense dwarf spreading nature and hold their foliage the season through. We have put them mostly along by the stones that make the path to mark it plainly for our feet.

The herbs also that we use are mostly of an evergreen character and their tufted green leaves will be interesting all winter. As far as possible

PLANTING LIST FOR PLAN No. 10

NATURALISTIC ROCK GARDEN

Shrubs

COMMON NAME	BOTANICAL NAME
a. Prostrate Savin Juniper . .	<i>Juniperus Sabina</i> , var. <i>prostrata</i>
b. Small-leaved Rose Box .	<i>Cotoneaster microphylla</i>
c. Hairy Rose Bay	<i>Rhododendron hirsutum</i>
d. Heather	<i>Calluna vulgaris</i>

Herbs

1. Heart-leaved Rockfoil . .	<i>Saxifraga cordifolia</i>
2. Maiden Pink	<i>Dianthus deltoides</i>
3. Rock Soapwort	<i>Saponaria ocymoides</i>
4. Thrift	<i>Armeria vulgaris</i>
5. White Stonecrop	<i>Sedum album</i>
6. Creeping Stonecrop	<i>Sedum stoloniferum</i>
7. Carpathian Harebell	<i>Campanula carpatica</i>
8. Bluebell	<i>Campanula rotundifolia</i>
9. Tufted Harebell	<i>Campanula cæspitosa</i>
10. Wild Sweet William	<i>Phlox divaricata</i>
11. Rock Speedwell	<i>Veronica rupestris</i>
12. Hoary Speedwell	<i>Veronica incana</i>
13. Saxifrage Pink	<i>Tunica Saxifraga</i>
14. Mother-of-Thyme	<i>Thymus Serpyllum</i>
15. Horned Violet	<i>Viola cornuta</i>

A NATURALISTIC ROCK GARDEN.

0 5 10 20 40

STEPHEN F. HAMBLIN,
LANDSCAPE DESIGNER,
BOSTON, MASS.
DECEMBER, 1913.

PLAN NO. 10

Open Meadow

Group of Sugar Maples

Level Lawn.

we put the tufted sorts, as Thrift, in the narrow flatter crevices where they will not be crowded, and the drooping sorts where they may hang down over the rock faces. As nearly all this planting is on a very steep slope, all the herbs used are of a creeping and drooping nature. They should hang down over the rock faces in sheets of foliage; so their actual placing in the ground will depend on the position of the rocks as found at time of planting, rather than their detailed arrangement on the plan.

Between the stones of the path we place low creeping herbs that keep close to the ground, as Thyme and dwarf Speedwells, that we may step over them easily. Horned Violets give patches of color all summer, while at the upper end of the path the big leaves of the Rockfoil seem to terminate the garden.

Once you get the spirit of this kind of planting you will add innumerable little touches, for the beauty of such a planting rests finally in the attention given to the details.

NATURE HAS THIS SITE READY FOR A ROCK GARDEN

NATURAL ROCK GARDEN

(SEE PLAN NO. II)

SUPPOSE a ledge of rock cropping out near an area that is to become a smooth sloping lawn. We may wish to blast out the entire ledge but that would be a mistake, for we have here an opportunity to make a rare feature—a natural rock garden. The accompanying plan gives the essential topography of such an outcrop near a path leading from the house and across the lawn. The cross-hatched areas represent the rock face in plan, and the length of line used suggests the actual elevation of the larger rocks. The land slopes toward the north and east, and while the upper edge of the ledge is but little above the surrounding lawn, the lower portion is quite rugged. The whole region is fully exposed to the sun all day long.

So great a proportion of rocks is provided naturally that no stones need be added, save to complete the walk where the spaces are too wide to be stepped across easily, for, though there are steep little slopes, most of the rock may be walked upon in any direction regardless of the plants. For these added stones be sure to get rock of the region (either from the ledge itself or a similar formation near by). This outcrop we suppose to be pudding-stone, granite, or other hard stone, and scarcely weathered. Much of it is lichen-covered, and such exposed faces are to be carefully preserved, while no dirt-marked faces are to be uncovered.

To support much herbage it will be necessary to add gritty soil to the hollows and crevices, for centuries of rain have washed bare the rock face. The less elevated central portion may receive a foot of sandy composted soil, so that we may grow dwarf shrubs in that part of the garden. The outer side of the rock area should be thoroughly enriched for low shrubbery and lawn.

Only plants with iron-clad constitutions will thrive in this garden. There is no under drainage, no flow from moisture below in summer; so the soil will be baked dry as dust in August, and flooded by winter rains; while frost will heave the plants where the soil is thin, and ice will form in the hollows. We put on soil enough that water will not stand in all the hollows in winter, yet leave enough hollows that some of the summer rain will be held, for we cannot reach this region with the hose from the lawn. Succulent plants and other desert lovers are the main feature, especially the great tribe of Sedums and their relatives.

On the plan each *letter* means a group of several shrubs of that sort; each *number*, a mass of at least a dozen herbs as shown by the list. A detailed plan like this makes it possible to plant the garden by easy stages, year by year, especially if you wish to raise a part of your plants yourself from seed or division. Put the herbs in thickly for immediate effect; later, if the shrubs partly cover them, thin and plant elsewhere. A good garden laborer can clean off the weeds and loose rubbish in less than a week, and add good soil and the necessary stones and put in the plants that are ready; but the planting will not be finished the first year, for you will find that some of the herbs will prove failures under these conditions and must be replaced by others more suited to the location.

Properly started, an annual weeding is all that the garden should require, unless some plants get too luxuriant and have to be restrained as are the weeds. How much better to the eye of the garden lover is such a planting than the usual tangle of Poison Ivy on the field ledge or even the velvet lawn that might have been built there! Smooth lawn and rock garden will each be the more satisfying for the presence of the other.

THE ALL TOO COMMON ROCK PILE THAT IS SO OFTEN MIS-
CALLED A "ROCKERY"

PLANTING LIST FOR PLAN No. 11

NATURAL ROCK GARDEN

Shrubs

COMMON NAME	BOTANICAL NAME
A. Common Juniper . . .	<i>Juniperus communis</i>
B. Prostrate Savin Juniper . . .	<i>Juniperus Sabina</i> , var. <i>prostrata</i>
C. Bearberry . . .	<i>Arctostaphylos Uva-Ursi</i>
D. Spreading Rose Box . . .	<i>Cotoneaster horizontalis</i>
E. Chinese Barberry . . .	<i>Berberis sinensis</i>
F. Box-leaved Barberry . . .	<i>Berberis buxifolia</i>
G. Small-leaved Barberry . . .	<i>Berberis stenophylla</i>
H. Wilson's Barberry . . .	<i>Berberis Wilsonæ</i>
I. Buckley's St. John's Wort . . .	<i>Hypericum Buckleyi</i>
J. Southernwood . . .	<i>Artemisia Abrotanum</i>
K. Albert's Honeysuckle . . .	<i>Lonicera spinosa</i>
L. Dwarf Japanese Quince . . .	<i>Chænomeles Maulei</i>
M. Dwarf Siberian Pea . . .	<i>Caragana pygmæa</i>
N. Single White Scotch Rose . . .	<i>Rosa spinosissima</i>
P. Bristly Rose . . .	<i>Rosa nitida</i>

Herbs

1. Evergreen Spurge	<i>Euphorbia Myrsinites</i>
2. Rocky Mountain Thread Lily	<i>Yucca glauca</i>
3. Wall Pepper	<i>Sedum acre</i>
4. Creeping Stonecrop	<i>Sedum stoloniferum</i>
5. Pink-flowered Stonecrop	<i>Sedum Ewersii</i>
6. Mossy Stonecrop	<i>Sedum sexangulare</i>
7. Orange Stonecrop	<i>Sedum kamschaticum</i>
8. White Stonecrop	<i>Sedum album</i>
9. Yellow-flowered Stonecrop	<i>Sedum Aizoon</i>
10. Dwarf Yellow Stonecrop	<i>Sedum Maximowiczii</i>
11. Showy Stonecrop	<i>Sedum spectabile</i>
12. Japanese Stonecrop	<i>Sedum Sieboldii</i>
13. Hen-and-Chickens	<i>Sempervivum tectorum</i>
14. Spider's-web House Leek	<i>Sempervivum arachnoideum</i>
15. Globular House Leek	<i>Sempervivum globuliferum</i>
16. California House Leek	<i>Sempervivum californicum</i>

COMMON NAME	BOTANICAL NAME
17. Indian Fig	<i>Opuntia vulgaris</i>
18. Western Prickly Pear	<i>Opuntia Rafinesquii</i>
19. Prickly Pear	<i>Opuntia missouriensis</i>
20. Dwarf Rock Cress	<i>Arabis alpina</i>
21. Mother-of-Thyme	<i>Thymus Serpyllum</i>
22. Woolly Thyme	<i>Thymus Serpyllum</i> , var. <i>lanuginosus</i>
23. Mountain Thyme	<i>Thymus Serpyllum</i> , var. <i>montanus</i>
24. Early Saxifrage	<i>Saxifraga virginiensis</i>
25. Saxifrage Pink	<i>Tunica Saxifraga</i>
26. Sandwort	<i>Arenaria verna</i>
27. Yellow Whitlow Grass	<i>Draba aizoides</i>
28. White Whitlow Grass	<i>Draba incana</i>
29. Woolly Chickweed	<i>Cerastium tomentosum</i>
30. Rupture Wort	<i>Herniaria glabra</i>
31. Carolina Phlox	<i>Phlox ovata</i>
32. Heath-leaved Aster	<i>Aster ericoides</i>
33. Creeping Chalk-plant	<i>Gypsophila repens</i>
34. Woolly Yarrow	<i>Achillea tomentosa</i>

SUMMER BOARDING-HOUSE ROCKERY THAT IS MORE ROCK
THAN GARDEN

A NATURAL ROCK GARDEN

0 10 20 30 40

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER, DECEMBER, 1914

PLAN NO. II.

AMERICAN WALL GARDEN

(SEE PLAN NO. 12)

GIVEN a long, low retaining wall of rough boulders, laid up with good soil and no cement, backed by good loam, facing in an easterly or westerly direction, and a skillful gardener can grow upon it many alpine and rock-loving herbs, even in our northern states. Witness the "weeds" that fill the crevices of many a mossy old pasture wall. A much finer result for near effects can be thus obtained than by planting the wall with clinging vines below or scrambling vines to hang down from above.

Let us imagine such a wall about five feet high and of unknown length. It is at the back of the house, along a much-used walk to the barn, garage, or other necessary feature of the home. Let us plant a portion of it. There are three parts of the planting—erect bushy herbs to partly hide the large stones at the base, slender-stemmed herbs to hang down on the wall face, and low tufted succulent herbs to grow on the top of the wall at the edge of the lawn. The first and last beds can be better planted after the stones of the wall are well settled in place, and the soil become firm, but upon the wall face greater success may be looked for if the herbs are put in as the wall is laid up. So as we build the wall we shall insert our colonies of plants, running their long roots as far back as possible.

A gritty soil with no clay, but plenty of well-decayed vegetable matter, must be insisted upon. As there is no cement used the stones must be carefully placed, that the weight of the soil behind, aided by water and frost, cannot topple the wall over. Big flat stones, the long diameter reaching back from the wall face, will help anchor the whole. Don't forget to lay each large rock with an upward tilt to the front, and give the whole wall a pronounced batter, for further stability, and to catch the rain. Put flat shaly chips in the soil that the big rocks may not lie too closely together, but leave root room for the plants.

On the plan the wall face is shown as if we were looking at it from the path—as if it stood before us at eye level. The foot of the wall shown below it, and the wall top shown at the top of the plan, are drawn as if seen from above, looking down upon them from the upper lawn. These three parts are thus shown as disconnected, except by guide lines at either end, so that the two different ways of looking at the wall may be

seen on the same plan at the same time. The section shown at the bottom of the plan gives an idea of how an imaginary end of the wall looks, and shows how the rocks are set into the bank.

The quantity of herbs in each spot should be at least half a dozen plants, but on the wall face they should be in larger masses of a dozen or more as the arrangement of the boulders allow. Arrows indicate the approximate location of each group among the rocks. You cannot put the plants in regular order should you try; the more irregular the outline to the plant groups the better.

The plants on the wall face should be in general about halfway down, to keep out of the way of the plants hanging down from the wall top, and not to get hidden by the taller herbs at the base of the wall.

On the list the three plantings are separated, as the herbs used in each group are quite different in character.

No special effects are aimed at, save to get plants suited to these conditions, a pleasing foliage effect, and some show of flowers from May to September. In its details the planting may be infinitely varied from the arrangement that the plan suggests.

PLANTING LIST FOR PLAN No. 12

AMERICAN WALL GARDEN

Wall Face

COMMON NAME	BOTANICAL NAME
1. Maiden Pink	<i>Dianthus deltoidea</i>
2. Bluebells	<i>Campanula rotundifolia</i>
3. Rock Candytuft	<i>Iberis sempervirens</i>
4. Purple Rock Cress	<i>Aubrietia deltoidea</i>
5. Rock Soapwort	<i>Saponaria ocymoides</i>
6. Creeping Chalk Plant	<i>Gypsophila repens</i>
7. Rock Speedwell	<i>Veronica rupestris</i>
8. Common Speedwell	<i>Veronica officinalis</i>
9. Creeping Speedwell	<i>Veronica repens</i>
10. White Stonecrop	<i>Sedum album</i>
11. Orange Stonecrop	<i>Sedum kamtschaticum</i>
12. Pink-flowered Stonecrop	<i>Sedum Ewersii</i>
13. Japanese Stonecrop	<i>Sedum Sieboldii</i>
14. Woolly Yarrow	<i>Achillea tomentosa</i>
15. Tufted Harebell	<i>Campanula cæspitosa</i>
16. Clustered Harebell	<i>Campanula glomerata</i>
17. Alpine Catchfly	<i>Lychnis alpina</i>
18. Alpine Aster	<i>Aster alpinus</i>
19. Woolly Chickweed	<i>Cerastium tomentosum</i>
20. Saxifrage Pink	<i>Tunica Saxifraga</i>
21. Golden Aster	<i>Chrysopsis falcata</i>
22. Pine Aster	<i>Aster linariifolius</i>

Top of Wall

23. Wall Pepper	<i>Sedum acre</i>
24. Creeping Stonecrop	<i>Sedum stoloniferum</i>
25. Mossy Stonecrop	<i>Sedum sexangulare</i>
26. Early Saxifrage	<i>Saxifraga virginicensis</i>
27. Hen-and-Chickens	<i>Sempervivum tectorum</i>
28. Spider's-web House Leek	<i>Sempervivum arachnoideum</i>
29. Field Chickweed	<i>Cerastium arvense</i>
30. Moss Pink	<i>Phlox subulata</i>
31. Mother-of-Thyme	<i>Thymus Serpyllum</i>

COMMON NAME	BOTANICAL NAME
32. Woolly Thyme	<i>Thymus Serpyllum</i> , var. <i>lanuginosus</i>
33. Mountain Thyme	<i>Thymus Serpyllum</i> , var. <i>montanus</i>
34. Rupture Wort	<i>Herniaria glabra</i>

Base of Wall

35. Coral Bells	<i>Heuchera sanguinea</i>
36. Showy Stonecrop	<i>Sedum spectabile</i>
37. Red Columbine	<i>Aquilegia canadensis</i>
38. Mexican Columbine	<i>Aquilegia Skinneri</i>
39. Blue Columbine	<i>Aquilegia cærulea</i>
40. Tall Yellow Yarrow	<i>Achillea filipendulina</i>
41. Greek Yarrow	<i>Achillea Tournefortii</i>
42. Beaked Madwort	<i>Alyssum rostratum</i>
43. Asiatic Aster	<i>Calimeris incisa</i>
44. Carolina Phlox	<i>Phlox ovata</i>
45. Lavender Cotton	<i>Santolina Chamæcyparissus</i>
46. Leopard's Bane	<i>Doronicum caucasicum</i>
47. Gentian-leaved Speedwell	<i>Veronica gentianoides</i>
48. Hoary Speedwell	<i>Veronica incana</i>
49. Canada Violet	<i>Viola canadensis</i>
50. Rocky Mountain Thread Lily	<i>Yucca glauca</i>

AN AMERICAN WALL GARDEN.

STEPHEN W. HAMBLIN
LANDSCAPE DESIGNER
BOSTON, MASS.
DECEMBER, 1914.
PLAN NO. 12.

NATURALISTIC WATER GARDEN

(SEE PLAN NO. 13)

A POOL and marshy area lies west of the residence. It is surrounded by low hills—a “kettle-hole”—and by means of a short dam at the south end provided with an overflow a permanent water level can be retained, with an approximate area of two acres of water surface. The shores are rather marshy, the soil of the basin a soft black ooze, and in no place is the water over five feet deep. This is an ideal location for a real Water Garden. The banks are of good soil, but lack vegetation, save pasture grasses, for the land has been long in pasturage. On the high knoll at the north a wood mostly of Oak and Chestnut stretches away in the distance; while a grove of Sugar Maple on the eastern shore and half a dozen sapling White Pine near the outlet represent the tree growth. On the western meadow slope there are scattered clumps of Bayberry, Sweet Fern, etc., and near the water Alder and High Blueberry have escaped the cows, but for the most part the native shrubs have vanished.

After the additional trees have been placed along the shore and the main points of interest located we are ready to put in the paths and trails. These in the main will make a double circuit of the pond, one set at a higher level and one near the water, connecting at various points, and extending toward the house to join paths upon the lawn.

The shrub planting will be the main feature of this garden, made up mostly of plants native to that section of the country and arranged somewhat as they would be found naturally. Related exotic species are placed with them to add to the garden effect. Except for the Water Lilies the areas for herbaceous plants are merely indicated as “marsh” and “bog,” as it will be several years before these features are developed.

Across the outlet a planting of Hemlocks will be started at once as a background for the Rhododendrons and their relatives, which will make one feature of the garden. Along the outlet we shall put a group of Red Maples, Birches, and Black Ash, all native trees and all moisture lovers. Sweet Gum, Sour Gum, and Sassafras are to stand along the east shore (Willows may be planted near them to be cut after a few years), but large open spaces must be left so that the pond is quite visible from the house.

The cold bog under the Larches with its cold springs is a home for

the dwarf Heaths and suitable bog herbs, while the marshy area in the west meadow will ultimately be devoted entirely to marsh herbs whose bright summer colors will be seen even from across the water in the direction of the house. (See list.) The shore next to the lawn is developed very simply as the short abrupt slope above it cuts it off from sight from the house.

On this plan each *letter* indicates a tree growing naturally; each *number* a group of six or more shrubs or herbs as the key list shows. Remember that the aquatics are to be so placed that the pond will have considerable area of open water, not only in the middle, but in places along the shore.

A SMALL POND WITH GOOD PROPORTION OF WATER LILIES
AND OPEN WATER

PLANTING LIST FOR PLAN No. 13

NATURALISTIC WATER GARDEN

Trees

COMMON NAME	BOTANICAL NAME
a. Hemlock	<i>Tsuga canadensis</i>
b. Red Maple	<i>Acer rubrum</i>
c. River Birch	<i>Betula nigra</i>
d. Canoe Birch	<i>Betula papyrifera</i>
e. Black Ash	<i>Fraxinus nigra</i>
f. Sweet Gum	<i>Liquidambar styraciflua</i>
g. American Larch	<i>Larix americana</i>
h. Sassafras	<i>Sassafras variifolium</i>
i. Sour Gum	<i>Nyssa sylvatica</i>
j. White Willow	<i>Salix alba</i>

Shrubs

1. Sweet Bay	<i>Magnolia glauca</i>
2. White Fringe	<i>Chionanthus virginica</i>
3. Button Bush	<i>Cephalanthus occidentalis</i>
4. Spice Bush	<i>Benzoin æstivale</i>
5. Witch Hazel	<i>Hamamelis virginica</i>
6. Alternate-leaved Dogwood	<i>Cornus alternifolia</i>
7. Speckled Alder	<i>Alnus incana</i>
8. Leatherwood	<i>Dirca palustris</i>
9. Winterberry	<i>Ilex verticillata</i>
10. Sweet Gale	<i>Myrica gale</i>
11. Swamp Rose	<i>Rosa carolina</i>
12. Common Elder	<i>Sambucus canadensis</i>
13. Nannyberry	<i>Viburnum Lentago</i>
14. Witherod	<i>Viburnum cassinoides</i>
15. Sweet Pepper Bush	<i>Clethra alnifolia</i>
16. Swamp Blueberry	<i>Vaccinium corymbosum</i>
17. Flame Azalea	<i>Rhododendron calendulaceum</i>
18. Clammy White Azalea	<i>Rhododendron viscosum</i>
19. Pinxter Flower	<i>Rhododendron nudiflorum</i>
20. Smooth Azalea	<i>Rhododendron arborescens</i>
21. Evergreen Azalea	<i>Rhododendron indicum, var. amænum</i>

COMMON NAME	BOTANICAL NAME
22. Rhodora	<i>Rhododendron canadense</i>
23. Leather-leaf	<i>Chamædaphne calyculata</i>
24. Bog Rosemary	<i>Andromeda glaucophylla</i>
25. Stagger Bush	<i>Pieris floribunda</i>
26. Labrador Tea	<i>Ledum palustre</i>
27. Mountain Laurel	<i>Kalmia latifolia</i>
28. Sheep Laurel	<i>Kalmia angustifolia</i>
29. Swamp Laurel	<i>Kalmia polifolia</i>
30. Great Laurel	<i>Rhododendron maximum</i>
31. Hybrid Rose Bay	<i>Rhododendron catawbiense</i> , hybrids
32. Dwarf Rose Bay	<i>Rhododendron punctatum</i>
33. American Cranberry	<i>Vaccinium macrocarpon</i>

Aquatics

34. Common Pond Lily	<i>Nymphaea odorata</i>
35. Yellow Pond Lily	<i>Nymphaea odorata</i> , var. <i>sulphurea</i>
36. Pink Pond Lily	<i>Nymphaea odorata</i> , var. <i>rosea</i>
37. White Water Lily	<i>Nymphaea alba</i> , var. <i>candidissima</i>
38. Hybrid Water Lily	<i>Nymphaea Laydeckeri</i> , var. <i>purpurata</i>
39. Chinese Water Lily	<i>Nymphaea pygmæa</i>
40. Yellow Chinese Water Lily	<i>Nymphaea pygmæa</i> , var. <i>Helvola</i>
41. Eastern Lotus	<i>Nelumbo nucifera</i>
42. American Lotus	<i>Nelumbo lutea</i>
43. Cow Lily	<i>Nuphar advena</i>
44. Cattail	<i>Typha latifolia</i>
45. Pickerel Weed	<i>Pontederia cordata</i>

Herbs for Marsh Area

Forget-me-not	<i>Myosotis scorpioides</i>
Blue Flag	<i>Iris versicolor</i>
Yellow Flag	<i>Iris pseudacorus</i>
Siberian Flag	<i>Iris sibirica</i>
Tawny Flag	<i>Iris fulva</i>
Swamp Lily	<i>Lilium canadense</i>
Purple Loosestrife	<i>Lythrum Salicaria</i>
White Loosestrife	<i>Lysimachia clethroides</i>
Marshmallow	<i>Hibiscus Moscheutos</i>
White Turtlehead	<i>Chelone glabra</i>
Pink Turtlehead	<i>Chelone Lyonii</i>
Purple Milkweed	<i>Asclepias incarnata</i>
Ironweed	<i>Vernonia novaboracensis</i>
White Swamp Aster	<i>Aster umbellatus</i>

A NATURALISTIC WATER GARDEN.

STEPHEN HAMBLEN, BOSTON, MASS.
LANDSCAPE DESIGNER. DECEMBER, 1914.
PLAN NO. 13.

MEADOW

Moss

Shrub

Tree

Rock

Water

Path

Gate

House

POND

White Pine

Box

Yew

Juniper

Red Cedar

Oak

Maple

House

PLAN

To House

To House

COMMON NAME	BOTANICAL NAME
Joe-Pye-Weed	<i>Eupatorium purpureum</i>
Boneset	<i>Eupatorium perfoliatum</i>
Closed Gentian	<i>Gentiana Andrewsii</i>

Herbs for Bog Area

Marsh Marigold	<i>Caltha palustris</i>
Swamp Buttercup	<i>Ranunculus septentrionalis</i>
Golden Ragwort	<i>Senecio aureus</i>
Swamp Pink	<i>Calopogon pulchellus</i> -
Golden Trumpets	<i>Sarracenia flava</i>
Cardinal Flower	<i>Lobelia cardinalis</i>
Deer Grass	<i>Rhexia virginica</i>
Arrowhead	<i>Sagittaria latifolia</i>
Royal Fern	<i>Osmunda regalis</i>
Cinnamon Fern	<i>Osmunda cinnamomea</i>
etc., etc.	

ARTIFICIAL WATER GARDEN

(SEE PLAN NO. 14)

ON A rather large village lot the owner wishes to build a small pool and Marsh Garden. A small but constant supply of water can be had through a pipe, either from town or private supply or from distant brook or spring by gravity or hydraulic ram. Since this water is probably too cool for Water Lilies it may be well to build an open warming tank into which the water may flow before it runs into the pool. If the source of supply is a deep well the water is probably very hard, and it will be well to turn the rainwater from the house conductors into the pool.

From the tank the water will run in a gentle rill into the pool; the bed of this tiny stream must be made of concrete which we hide by stones and pebbles put on while the concrete is still soft. The pool and tank will be made of concrete, the rims partly hidden by large stones laid on the soft cement. These stones are suggested on the plan by the cross-hatched areas. Other screen will be furnished by the planting. Near the seat under the Ginkgo trees (B on the plan), or other striking pair of trees, the rim may show hard and firm with a broad step which people may stand upon as they look down into the water.

In the tank the water may be less than a foot deep in order to get warmed by the rays of the sun; and in the pool the average depth will be two feet as the Water Lilies are all in tubs which are removed in the winter. A clean-out drain should be provided that the pool may be drained in the fall and the concrete covered deeply with leaves and straw, for we have imagined the frost conditions of our northern winters. Unless the water supply is abundant no overflow outlet to the pool is needed. Let the water flow off in a shallow rill and sink away in the soil. A heavy clay soil will require drain tile to carry the surplus water away, but a sandy or porous soil will drain itself, particularly if the land drops to the west. This marsh will be the home for small shrubs that are moisture-loving. At the lower end of the marsh take out the original soil and add good peat, for evergreen Heaths are a feature of this part of the garden. Simple paths of gravel or turf are necessary that we may get close to the plants to admire them, and wherever the soil becomes boggy we put down flat field stones.

Tall trees and tall shrubbery will enclose this garden on three sides,

leaving the side next the lawn quite open. We must have the pool open to the sun at least all the morning.

The planting of the rest of the lawn is not indicated. In fact, it might be much like that of the village home of Plan No. 2, for this treatment might be applied to the rear portion of that lot in place of the vegetable garden.

Only a few species of water-loving herbs will be put in at first, but large masses of the most refined and pleasing sorts in soil that suits them. Forget-me-not and Cardinal Flower will be at home in the marshy part, and Iris in several colors will stand about the pool margin.

Most of the plants within the area bounded by the walk do not exceed a height of two to three feet, but between the walk and the property line the sorts suggested are to grow at least to six feet and form as complete a screen as conditions on the adjoining lots seem to require.

PLANTING LIST FOR PLAN No. 14

ARTIFICIAL WATER GARDEN

Trees

COMMON NAME	BOTANICAL NAME
A. Austrian Pine	<i>Pinus Laricio</i> , var. <i>austriaca</i>
B. Maidenhair Tree	<i>Ginkgo biloba</i>
C. Tulip Tree.	<i>Liriodendron tulipifera</i>
D. Pin Oak	<i>Quercus palustris</i>
E. Swamp White Oak	<i>Quercus bicolor</i>
F. Sugar Maple	<i>Acer saccharum</i>
G. Shining Willow	<i>Salix pentandra</i>
H. Golden Larch	<i>Pseudolarix Kämpferi</i>

Shrubs

1. Alternate-leaved Dogwood .	<i>Cornus alternifolia</i>
2. Witch Hazel	<i>Hamamelis virginiana</i>
3. Leatherwood	<i>Dirca palustris</i>
4. Sweet Pepper Bush	<i>Clethra alnifolia</i>
5. Winterberry	<i>Ilex verticillata</i>
6. Hobblebush	<i>Viburnum alnifolium</i>
7. Sweet Bay	<i>Magnolia glauca</i>
8. Pinxter Flower	<i>Rhododendron nudiflorum</i>
9. Clammy Azalea	<i>Rhododendron viscosum</i>
10. Flame Azalea	<i>Rhododendron calendulaceum</i>
11. Rhodora	<i>Rhododendron canadense</i>
12. Evergreen Azalea	<i>Rhododendron indicum</i> , var. <i>amænum</i>
13. Virginia Willow	<i>Itea virginica</i>
14. Rosemary Willow	<i>Salix incana</i>
15. Moorwort	<i>Andromeda polifolia</i>
16. Heather	<i>Calluna vulgaris</i>
17. Sand Myrtle	<i>Leiophyllum buxifolium</i>
18. Labrador Tea	<i>Ledum palustre</i>
19. Mountain Laurel	<i>Kalmia latifolia</i>
20. Southern Fetterbush . . .	<i>Leucothoë Catesbæi</i>
21. Staggerbush	<i>Pieris floribunda</i>
22. Japanese Staggerbush . .	<i>Pieris japonica</i>
23. Early Rose Bay	<i>Rhododendron præcox</i>

COMMON NAME	BOTANICAL NAME
24. Rusty Rose Bay .	<i>Rhododendron ferrugineum</i>
25. Hairy Rose Bay . . .	<i>Rhododendron hirsutum</i>
26. Southern Rose Bay . .	<i>Rhododendron punctatum</i>

Aquatics

27. Pink Water Lily	<i>Nymphæa Laydeckeri</i> , var. <i>rosea</i>
28. White Water Lily . . .	<i>Nymphæa Marliacea</i> , var. <i>albida</i>
29. White Water Lily . . .	<i>Nymphæa alba</i> , var. <i>candidissima</i>
30. Yellow Water Lily . . .	<i>Nymphæa Marliacea</i> , var. <i>chromatella</i>
31. Chinese Water Lily . . .	<i>Nymphæa pygmæa</i>
32. Yellow Chinese Water Lily .	<i>Nymphæa pygmæa</i> , var. <i>Helvola</i>
33. Eastern Lotus	<i>Nelumbo nucifera</i>

Shore Herbs

34. Yellow Flag	<i>Iris pseudacorus</i>
35. Siberian Flag	<i>Iris sibirica</i> in variety
36. Japanese Iris	<i>Iris lævigata</i>
37. Oriental Flag	<i>Iris ochroleuca</i>
38. Yellow Fleur-de-Lis . . .	<i>Iris flavescens</i>
39. Tawny Flag	<i>Iris fulva</i>
40. Thunberg's Lemon Lily .	<i>Hemerocallis Thunbergii</i>
41. Marsh Marigold	<i>Caltha palustris</i>
42. Cardinal Flower	<i>Lobelia cardinalis</i>
43. Marsh Mallow	<i>Hibiscus Moscheutos</i>
44. Forget-me-not	<i>Myosotis scorpioides</i>
45. Closed Gentian	<i>Gentiana Andrewsii</i>
46. Royal Fern	<i>Osmunda regalis</i>
47. Maidenhair Fern	<i>Adiantum pedatum</i>
48. Canada Violet	<i>Viola canadensis</i>

etc., etc., etc.

AN ARTIFICIAL WATER GARDEN

0 20 40 60 80 100

STEPHEN HAMBLYN
LANDSCAPE DESIGNER
BOSTON, MASS.
DECEMBER, 1914
PLAN NO. 14

WOODLAND GARDEN

(SEE PLAN NO. 15)

A WOOD like that of which a part is shown on the accompanying plan offers unusual opportunity for a special kind of garden. We shall take this spur projection of the forest, and as a winding path already exists through the kind offices of shade-seeking cows, the site is ready for us. Various Oaks, Hickories, Chestnuts, and Sugar Maples are the chief trees of the forest, though White Birches, Black Birches, Lindens, Ashes, and other forest trees may appear in small groups or singly. The round dots on the plan indicate the trunks of these deciduous trees; the dot-and-cross represents the evergreen trees. All the trunks are not indicated nor the foliage shown, else the plan would be too crowded to be intelligible.

The group of White Pine and that of Hemlock adds interest and variety to the forest and has special value in winter. If no evergreen trees exist, start two groups at once.

We shall first clear away the dead lower limbs of the trees near the path, and remove the undergrowth in places to add other species, but except near the path the wood shall be as Nature makes it.

No two woods are alike as to floor conditions, but we may imagine that this grove has been kept rather open by grazing animals. A few individual trees of distinctive character will be added to give points of interest, particularly Red Cedars at the entrance, and Beech, Holly, and Moosewood to frame a picnic grove that may have seats and a table.

The shrubs are arranged in small masses to give pleasing groups against the tree trunks and to border the path. They are species that grow well in partial shade and in a rather dry soil. Not more than fifty feet on each side of the path should be cleared and planted, and we make the dividing line very irregular and indefinite, rather than as distinct as the plan would seem to indicate.

For the picnic grove we clear away a larger area and bring in seats and a plank table for use in picnics. The planting about this part should be of rather a tall nature and such that it will not be much injured by the frolics that the children will here enjoy. Quite frequently a few large boulders may be found in such a wood as this, or they may be slyly inserted to act also as seats and as a wall to the outdoor room as well. The cross-hatched areas on the plan suggest their location.

The shrubs are mostly native deciduous sorts, probably already existing or to be collected near by; but in the picnic area and near the entrance a few broad-leaved native evergreens are indicated, as Mountain Laurel and Inkberry, for we may like to visit our garden even when the snow lies deep upon it.

An unlimited number of wood-loving herbs may now be added. The natural growth of wood herbs may be supplemented somewhat as the list shows, in no order or color scheme, but in large and irregular masses, each in proper soil and shade conditions. There will be bloom from Hepatica and Snowdrop (for we may introduce whatever will grow for us) to Asters and Goldenrod of autumn, as we imitate what may be found growing naturally on the floor of our northern woods, and modify its arrangement to suit our fancy to outdo Nature at her best.

THE BIG UMBRELLA LEAVES OF MAY-APPLE (*PODOPHYLLUM PELTATUM*) HIDE THE FLOWER.

PLANTING LIST FOR PLAN No. 15

WOODLAND GARDEN

Trees

COMMON NAME	BOTANICAL NAME
A. Red Cedar	<i>Juniperus virginiana</i>
B. Hop Hornbeam	<i>Ostrya virginica</i>
C. Moosewood	<i>Acer pennsylvanicum</i>
D. Hornbeam	<i>Carpinus caroliniana</i>
E. American Beech	<i>Fagus grandifolia</i>
F. Smooth Sumac	<i>Rhus glabra</i>
G. American Holly	<i>Ilex opaca</i>

Shrubs

a. Inkberry	<i>Ilex glabra</i>
b. Mountain Laurel	<i>Kalmia latifolia</i>
c. Sheep Laurel	<i>Kalmia angustifolia</i>
d. Bayberry	<i>Myrica carolinensis</i>
e. Dockmackie	<i>Viburnum acerifolium</i>
f. Flowering Dogwood	<i>Cornus florida</i>
g. Shadbush	<i>Amelanchier canadensis</i>
h. Sweet Pepper Bush	<i>Clethra alnifolia</i>
i. Witch Hazel	<i>Hamamelis virginiana</i>
j. Blueberry	<i>Vaccinium corymbosum</i>
k. Pinxter Flower	<i>Rhododendron nudiflorum</i>
l. Virgin's Bower	<i>Clematis virginiana</i>
m. Creeping Strawberry Bush	<i>Evonymus obovata</i>
n. Bristly Dewberry	<i>Rubus villosus</i>

Herbs

Wild Ginger	<i>Asarum virginicum</i>
European Ginger	<i>Asarum europæum</i>
May-apple	<i>Podophyllum peltatum</i>
Larger Bellwort	<i>Ucularia grandiflora</i>
Fringed Polygala	<i>Polygala pauciflora</i>
Bunchberry	<i>Cornus canadensis</i>
Smaller Solomon's Seal	<i>Polygonatum biflorum</i>

COMMON NAME	BOTANICAL NAME
False Solomon's Seal	<i>Smilacina racemosa</i>
White Baneberry	<i>Actæa alba</i>
Red Baneberry	<i>Actæa spicata</i> , var. <i>rubra</i>
Bloodroot	<i>Sanguinaria canadensis</i>
Dutchman's Breeches	<i>Dicentra Cucullaria</i>
Spring Beauty	<i>Claytonia virginica</i>
False Mitrewort	<i>Tiarella cordifolia</i>
Yellow Star Grass	<i>Hypoxis hirsuta</i>
Liverleaf	<i>Hepatica triloba</i>
Rue Anemone	<i>Syndesmon thalictroides</i>
Canada Violet	<i>Viola canadensis</i>
Common Ladies' Slipper	<i>Cypripedium acaule</i>
Shinleaf	<i>Pyrola elliptica</i>
Partridge Berry	<i>Mitchella repens</i>
Spikenard	<i>Aralia racemosa</i>
Bugbane	<i>Cimicifuga racemosa</i>
White Snakeroot	<i>Eupatorium urticifolium</i>
Wreathrod	<i>Solidago cæsia</i>
Spiked Goldenrod	<i>Solidago squarrosa</i>
White Wood Aster	<i>Aster divaricatus</i>
Big-leaved Aster	<i>Aster macrophyllus</i>
Blue Wood Aster	<i>Aster lævis</i>
Wood Lily	<i>Lilium philadelphicum</i>
Lily-of-the-Valley	<i>Convallaria majalis</i>
Common Snowdrop	<i>Galanthus nivalis</i>
Two-flowered Squill	<i>Scilla bifolia</i>
Christmas Fern	<i>Polystichum acrostichoides</i>
Ebony Spleenwort	<i>Asplenium platyneuron</i>
Marginal Shield Fern	<i>Dryopteris marginale</i>
Hay-scented Fern	<i>Dennstædtia punctilobula</i>

A WOODLAND GARDEN.

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER, DECEMBER, 1914.
+ PLAN NO. 15.

Open Meadow

Pasture.

WILD PLANTING

(SEE PLAN NO. 16)

A BUNGALOW site at the edge of a wood, facing a river, lake, mountain, or other fine piece of natural scenery calls for a natural treatment; using native or even local material. The plan shows a bungalow placed on the slope of a rather steep hill, with an unobstructed view to the river about 250 feet below it on the east. The dotted lines with the numbers at the ends show approximate successive elevations of five feet from the river. The hill continues to rise to the west of the bungalow, but on the north a shallow valley stretches away in the wood and suggests a trail for a woodland ramble.

The wood about consists of Chestnut, Oak, and Hickory, with a few Sugar Maple and Gray Birch. Hazels (*Corylus americana*), Sumacs (*Rhus typhina*), and Sweet Fern (*Comptonia asplenifolia*) compose the chief shrub growth. The area that we treat may be as large or small as we like, there are several acres of land, in wood and field, in this property.

The house is built to fit the site, and is half hidden by the trees. There was little grading done as there was no cellar built. Special instructions were given to the workmen to save the existing growth and to disturb the natural soil surface as little as possible. A cheap dirt road to lead up from the street below, a path to the river, and a few woodland trails are constructed. The bungalow is occupied intermittently from April to November. The owner is willing to spend any reasonable sum in planting. What shall we do?

Obviously, we may add very little or we may make extensive additions and alterations to the existing growth. For the sake of example we shall choose a middle course. It will probably not be necessary to add any trees, at least any new species, but a group of evergreens on the north side would contrast well with the deciduous trees, especially in autumn. Use the species most common in that section of the country suited to your soil, as Hemlock, White, Pitch, or Red Pine, and Red Cedar. White Pine, with a few Red Cedars near the house, will most generally fit naturally into the native forest growth.

The shrub planting is the real part of this problem. First make a careful list of the species upon or near the property, and then seek to add to the quantities of these or introduce similar species, placing them in as natural a way as you are able. Though many arrangements are possi-

ble, and no two sites can possibly have the same treatment, yet we shall suppose that the accompanying plan is fairly typical of what we may plant. Each figure or letter represents a group of about ten plants, irregularly spaced, and though placed as Nature would grow them, yet planted in such a way that one does not interfere too much with the development of the others.

Dogwoods and Elder, as they are tall and vigorous, border the drive; Sumacs and Bayberry are added along the trail to the river. The valley north of the bungalow is planted in large masses of the lower shrubs that have showy flowers, as Flowering Dogwood at the end of the trail with Pinxter Flower, Shadbush, Sweet Pepper Bush, Witch Hazel, etc., for a succession of bloom, while the foliage of Mountain Laurel will make a permanent green background.

When the shrubs are placed we put in great masses of showy native herbs, particularly along the slope below the bungalow where they will be visible from the piazza; then large groups under the shrubs along the drive, and on both sides of the trails. They are not planted in any scheme or order, but merely where they will thrive under the conditions offered them and give masses of color in their season.

Wherever the soil has been disturbed we sow seed of the most showy wild flowers of the region, collect quantities of the few most effective sorts from the nearby fields, and add smaller touches as time goes on of other American or exotic material. When all this has been carefully and sympathetically carried out Nature will have been beaten at her own game, and to lovers of fields and gardens the charm of this hillside can never pass away.

PLANTING LIST FOR PLAN No. 16

A WILD PLANTING

Trees

COMMON NAME	BOTANICAL NAME
A. White Pine	<i>Pinus Strobus</i>
B. Red Cedar	<i>Juniperus virginiana</i>

Shrubs

1. Common Juniper	<i>Juniperus communis</i>
2. Smooth Sumac	<i>Rhus glabra</i>
3. Field Sumac	<i>Rhus copallina</i>
4. Fragrant Sumac	<i>Rhus canadensis</i>
5. Bayberry	<i>Myrica caroliniensis</i>
6. Shining Rose	<i>Rosa virginiana</i>
7. Bristly Rose	<i>Rosa nitida</i>
8. Flowering Raspberry	<i>Rubus odoratus</i>
9. Witch Hazel	<i>Hamamelis virginiana</i>
10. Mountain Laurel	<i>Kalmia latifolia</i>
11. Sheep Laurel	<i>Kalmia angustifolia</i>
12. Mountain Maple	<i>Acer spicatum</i>
13. Dockmackie	<i>Viburnum acerifolium</i>
14. Arrow-wood	<i>Viburnum dentatum</i>
15. Shadbush	<i>Amelanchier canadensis</i>
16. Common Barberry	<i>Berberis vulgaris</i>
17. Sweet Brier Rose	<i>Rosa rubiginosa</i>
18. Red-berried Elder	<i>Sambucus pubens</i>
19. Panicle Dogwood	<i>Cornus racemosa</i>
20. Silky Cornel	<i>Cornus Amomum</i>
21. Red Osier Dogwood	<i>Cornus stolonifera</i>
22. Flowering Dogwood	<i>Cornus florida</i>
23. Sweet Pepper Bush	<i>Clethra alnifolia</i>
24. Pinxter Flower	<i>Rhododendron nudiflorum</i>
25. Roxbury Waxwork	<i>Celastrus scandens</i>
26. Virginia Creeper	<i>Parthenocissus quinquefolia</i>

Herbs

a. New England Aster	<i>Aster novæ-angliæ</i>
b. Blue Wood Aster	<i>Aster lævis</i>

COMMON NAME	BOTANICAL NAME
c. White Wood Aster	<i>Aster divaricatus</i>
d. Spiked Goldenrod	<i>Solidago squarrosa</i>
e. Wreathrod	<i>Solidago cæsia</i>
f. Blazing Star	<i>Liatris squarrosa</i>
g. White Snakeroot	<i>Eupatorium urticifolium</i>
h. Butter-and-Eggs	<i>Linaria vulgaris</i>
i. Butterfly Weed	<i>Asclepias tuberosa</i>
j. Tall Anemone	<i>Anemone canadensis</i>
k. False Solomon's Seal	<i>Smilacina racemosa</i>
l. White Baneberry	<i>Actæa alba</i>
m. Liverleaf	<i>Hepatica triloba</i>
n. Bloodroot	<i>Sanguinaria canadensis</i>
o. May-apple	<i>Podophyllum peltatum</i>
p. Bird's-foot Violet	<i>Viola pedata</i>
q. Wood Lily	<i>Lilium philadelphicum</i>
r. Moss Pink	<i>Phlox subulata</i>
s. Tawny Day Lily	<i>Hemerocallis fulva</i>
t. Thread Lily	<i>Yucca filamentosa</i>

A WILD PLANTING.

0 20 40 60 Feet

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER. DECEMBER, 1914.
PLAN NO. 16

500 Feet above river

ANNUAL GARDEN

(SEE PLAN NO. 17)

THIS garden is a representation of a typical annual cut-flower garden, grown as a part of a vegetable garden, partly screened from the lawn, with a few simple garden features, such as small rough trellises, simple seats, and straight walks to give it distinction. Most of the plan is self-explanatory. The walks are simply the earth packed down by the treading of feet, the beds are measured off each year, and outlined by stakes and strings until the seedlings have become easily visible.

The narrow cross-paths are not much used as garden walks, but are put through simply to give ease in cultivation when the plants are young; later the blossoming plants will nearly hide them. The central path may be made usable in wet weather by a plank walk laid down in sections.

In October we take up the three benches, the board walk, the poles of the arbor and those for the beans, and dig the bulbs and tubers. In late October or in early April we plow this area again along with the vegetable garden; fertilize, harrow, and rake; and again stake out the beds, somewhat as before, or differently in details. Thus the soil preparation will be easy but thorough.

This garden will supply a small village with cut flowers if it thrives as it should, yet it will be no more care than a vegetable garden of the same size. All the sorts suggested may be sown directly in the ground in early May as they are all hardy species of annuals; many of them even will self-sow and make trouble the next season. Some of them may be started in flats and transplanted about a foot apart, except the edging plants which should be set or thinned to stand much more closely. Have an oversupply of seedlings and plant a reserve among the vegetables, to fill in wherever a plant fails. Poppies, Blanket Flower, Lupine, California Poppy, and others, do not transplant well, and must be sown in place. Large seeds as of Sunflower, Lupine, Castor Oil Bean, Four-o'clock, Nasturtium, Morning Glory, and such should be placed separately at least a foot apart, as almost every seed will germinate under normal conditions.

For this planting you should get seed from one of the larger seed houses that offers separate colors in the best of strains; bought from the grocery store you will get grocery store quality of bloom, and not

the large fine flowers of the up-to-date seedsman. You will be able to save a part of your seed each year, if you know the failings of home-grown seed. The bulbs and tubers are not absolutely necessary for a full effect; some of the showy annuals may be used in their place; but they give strength to the garden and fill the beds when the early annuals shall have died down. If dug and stored in winter their expense is not repeated, and they will increase yearly in numbers. A few only might be bought at first; a few more yearly with the natural increase would soon give the suggested quantity. The named sorts will be more satisfactory than mixtures in a thought-out planting like this. I would advise getting the Cannas for the centre the first year.

No garden whose season is of but one summer only and the cost very slight can give more of a blaze of color than this. The arrangement of the plants is so planned as to give definite color, height, and seasonal effects. Color contrasts are particularly well worked out, as these annuals have a long period of bloom. Such a scheme as this is far different from the usual unplanned arrangement.

On the south side the plants are not of very tall growth and the colors are blue and yellow in the main. The north side has tall Sunflowers and Dahlias with the scarlet of Poppies and Sage in front. The west end rises in successive heights of orange and yellow Composites, from French Marigold, Calendula, and Blanket Flower, to Zinnia, African Marigold, and Sunflowers; while a hedge of Castor Oil Bean divides flowers from vegetables. The east end is for the evening: Morning Glories on the lattice fence, with Four-o'clocks to keep them company, and white flowers to shine at night make us linger on the seats after dark.

The cross panels at the eastern end are devoted to annuals with blue or lavender flowers, while the bulbs that accompany them bloom in white or pink. The centre panel flares in the scarlet and crimson of Gladioli and Cannas, with such plants growing beneath them as will best cover the soil. Red California Poppy seems appropriate edging for the main cross-walk, and white Alyssum for the centre walk. Dwarf Nasturtiums harmonize with the orange and yellow of the west end, and white Candytuft best borders the walk at the east. All the paths may have edging plants, but the tall fellows in most of the beds will at length smother them.

The whole garden may be planted at one time, with no provision for succession of bloom, for as each early blooming plant has passed its prime it should be removed to make room for the bulbs to develop. After mid-June this garden will glow with color until cut down by the frosts of September.

PLANTING LIST FOR PLAN No. 17

AN ANNUAL GARDEN

COMMON NAME	BOTANICAL NAME
1. Japanese Hops	<i>Humulus japonicus</i>
2. Morning Glory, in variety	<i>Ipomœa purpurea</i>
3. Scarlet Runner Bean	<i>Phaseolus multiflorus</i>
4. Castor Oil Bean, in 4 varieties	<i>Ricinus communis</i>
5. Branching Single Sunflower	<i>Helianthus annuus</i> , var. <i>cucumerifolius</i>
6. Double Sunflower	<i>Helianthus annuus</i> , var. <i>nanus fl. pl.</i>
7. Single Dahlia, in variety	<i>Dahlia rosea</i>
8. Yellow Zinnia	<i>Zinnia elegans</i> "Giant Sulphur Yellow"
9. Dark Yellow Zinnia	<i>Zinnia elegans</i> "Giant Golden Yellow"
10. Summer Cypress	<i>Kochia scoparia</i>
11. Hardy Grasses, Mixed	
Fountain Grass	<i>Pennisetum villosum</i>
Cloud Grass	<i>Agrostis nebulosa</i>
Job's Tears	<i>Coix Lacryma-Jobi</i>
Quaking Grass	<i>Briza maxima</i>
12. Canna, in 4 varieties with White Floss-flower	<i>Ageratum Houstonianum</i> "Imperial Dwarf White"
a. Canna "Pennsylvania"—vermilion.	
b. Canna "Italia"—scarlet.	
c. Canna "King Humbert"—scarlet.	
d. Canna "Allemania"—salmon.	
13. Gladiolus, in 4 varieties with Annual Pinks	<i>Dianthus chinensis</i> var. <i>Heddewigii</i>
a. Gladiolus "America"—pink.	
b. Gladiolus "Brilliant"—scarlet.	
c. Gladiolus "Columbia"—scarlet.	
d. Gladiolus "Wm. Falconer"—pink.	
14. Summer Hyacinth	<i>Galtonia candicans</i>
Opium Poppy	<i>Papaver somniferum</i>
15. Red Tobacco-plant	<i>Nicotiana Sanderæ</i>
16. Scarlet Sage	<i>Salvia splendens</i>

COMMON NAME	BOTANICAL NAME
17. Lupine, in variety	<i>Lupinus hirsutus</i> , <i>L. luteus</i> , etc.
18. Shirley Poppy	<i>Papaver Rhæas</i>
19. Calliopsis	<i>Coreopsis tinctoria</i>
20. Yellow African Marigold	<i>Tagetes erecta</i> "Lemon Queen"
21. Orange African Marigold	<i>Tagetes erecta</i> "Orange Prince"
22. Annual Blanket Flower	<i>Gaillardia pulchella</i> , var. <i>picta</i>
23. Yellow Pot Marigold	<i>Calendula officinalis</i> "Meteor"
24. Orange Pot Marigold	<i>Calendula officinalis</i> "Orange King"
25. White Zinnia	<i>Zinnia elegans</i> "Giant White"
26. Dwarf Nasturtium	<i>Tropæolum minus</i>
27. Four-o'clock	<i>Mirabilis Jalapa</i>
28. White Canna	<i>Canna</i> "Maros"
Annual Larkspur	<i>Delphinium Ajacis</i> , in variety
29. Red California Poppy	<i>Eschscholtzia californica</i> "Crimson King"
30. White Candytuft	<i>Iberis amara</i> "Giant Snowflake"
31. Dwarf Sweet Alyssum	<i>Alyssum maritimum</i> "Little Gem"
32. White Pot Marigold	<i>Calendula officinalis</i> , var. <i>Pongei</i> fl. pl.
33. French Marigold	<i>Tagetes patula</i> , in variety
34. Dwarf Scarlet Sage	<i>Salvia splendens</i> "Bonfire"
35. Rose Satin Flower	<i>Oenothera Whitneyi</i> "Brilliant"
36. Panicked Annual Larkspur	<i>Delphinium consolida</i> , in variety with White Gladiolus "Blanche"
37. Love-in-a-Mist	<i>Nigella damascena</i> with Pink Gladiolus "Shakespeare"
38. Sweet Scabious	<i>Scabiosa atropurpurea</i> , in variety
39. Sweet Sultans	<i>Centaurea moschata</i> , in variety
40. Drummond's Annual Phlox	<i>Phlox Drummondii</i> , in variety

AN ANNUAL GARDEN.

STEPHEN F. HANBLIN,
LANDSCAPE DESIGNER,
BOSTON, MASS.
PLAN NO. 17.

0 5 10 20 30

FORMAL GARDEN OF JAPANESE PLANTS

(SEE PLAN NO. 18)

A FRIEND of ours who has considerable worldly possessions, and is a lover of Nature, wishes a garden of Japanese plants, not a Japanese garden, but an American garden using practically only hardy plants which have been comparatively recently introduced from Japan and the Far East. As the trees are to be arranged somewhat in a regular manner for a fancied oriental effect that equal spacing may give, the general outline of the garden will be formal in character. It was decided to put a six-foot wall entirely around the area that the plants may seem to be wholly separated from the rest of the estate. There seems to be the most room for this garden on the north side of the house, and the walk into it from the house will end in the garden.

All the construction will be of permanent material, either of concrete or brick, as this garden is planned to far outlast its builder. In fact, it will take many years for the trees to take on the form that will carry out the feeling desired by the planner. The walks will be of gravel, edged with concrete.

Beyond the garden a low hill rises at the north, and on this most of the evergreen trees will be placed, outside the garden wall, as a background for the garden. Though regularly spaced at first, they will also be placed in natural groups to clothe the whole hill and give the garden shelter. Only a bit of the planting outside the garden wall is shown; we have no room to indicate how the other planting will join it, and it would not be of Japanese character, but related native species.

The arrangement itself is rather simple, perhaps too simple, but the garden will look quite different to the eye than it does on the plan, especially when the rows of trees get to some considerable size.

At termini of the walks we place seats or stone lanterns, as indicated by the shaded areas on the plan. The two central panels have each a regular row of Kadsura trees alternated with Chinese Redbud; one is for outline, the other for flower, and both are similar in leaf. The two outer pairs of panels have an equal number of Ginkgo trees alternated with Japanese Flowering Dogwood, one for height and form, and the other for flowers. The two narrower beds are for show of flowers from the Evergreen Azaleas and the winter color of the Japanese Yew.

A row of Japanese Tree Lilacs stands outside the wall, and a pair

of Golden Larches guards the entrance. Except for the foliage of the Ginkgo and Kadsura trees the shape and foliage effects of the trees will be scarcely different from those of our native trees. These two dominate the garden.

Around the wall, within and without the garden, are shrubs and vines, many of them well-known, but all of eastern origin, planted to hide most of the brick or stone of the wall. Other lower shrubs, showy in leaf or flower, make lines of foliage between the outer walk and the wall, while tall shrubs of unique characteristics make accent points in the garden.

The herb planting is the main feature as one wanders within the garden. Each of the eight panels is treated similarly in plan but differently as to species used, usually in three belts with herbs of three heights, the tallest in the centre and the lowest used as edging. Each bed will thus make three separate shows of flower, but the central strip of each side of each panel will have also plants of other species in irregular masses, as indicated in the list but not outlined on the plan. Infinite variety in detail is thus assured, yet the main lines of color will be strong in their season.

It is impossible to say what a garden of this nature would cost, as many of the plants cannot yet be bought in great quantity. We might well start a nursery of our own while the wall and walks are being built.

Aside from the fancied value due to the fact that all the plants in this garden are eastern in their origin, the garden itself should be a delight every day in the year to him who walks and thinks within it.

THE BEST BORDER PLANT FOR SPIKES OF BLUE IN MID-SUMMER, JAPANESE SPEEDWELL (*VERONICA LONGIFOLIA*, VAR. *SUBSESSILIS*).

PLANTING LIST FOR PLAN No. 18

FORMAL GARDEN OF JAPANESE PLANTS

Trees

COMMON NAME	BOTANICAL NAME
A. Maidenhair Tree . . .	<i>Ginkgo biloba</i>
B. Tree Lilac . . .	<i>Syringa japonica</i>
C. Kadsura Tree . . .	<i>Cercidiphyllum japonicum</i>
D. Golden Larch . . .	<i>Pseudolarix Kämpferi</i>
E. Japanese Hemlock . . .	<i>Tsuga diversifolia</i>
F. Japanese Arborvitæ . . .	<i>Thuja japonica</i>
G. Hybrid Magnolia . . .	<i>Magnolia Soulangeana</i>

Shrubs

1. Japanese Flowering Dog-wood . . .	<i>Cornus Kousa</i>
2. Japanese Yew . . .	<i>Taxus cuspidata</i>
3. Chinese Redbud . . .	<i>Cercis chinensis</i>
4. Hall's Starry Magnolia . . .	<i>Magnolia stellata</i>
5. Japanese Mountain Azalea . . .	<i>Rhododendron indicum</i> , var. <i>Kämpferi</i>
6. Japanese Holly . . .	<i>Ilex crenata</i>
7. Japanese Box . . .	<i>Buxus japonica</i>
8. Tree Peony . . .	<i>Pæonia Moutan</i>
9. Japanese Hercules' Club . . .	<i>Aralia japonica</i>
10. Cut-leaved Red Japanese Maple . . .	<i>Acer palmatum</i> , var. <i>ornatum</i>
11. Cut-leaved Japanese Maple . . .	<i>Acer palmatum</i> , var. <i>dissectum</i>
12. Green-barked Golden Bell . . .	<i>Forsythia viridissima</i>
13. White Weigela . . .	<i>Diervilla candida</i>
14. Van Houtte's Spirea . . .	<i>Spiræa Van Houttei</i>
15. Red Weigela . . .	<i>Diervilla Eva Rathke</i>
16. Silver Kerria . . .	<i>Kerria japonica</i> , var. <i>variegata</i>
17. Japanese Snowball . . .	<i>Viburnum tomentosum</i> , var. <i>plicatum</i>
18. Siebold's Barberry . . .	<i>Berberis Sieboldii</i>
19. Japanese Spirea . . .	<i>Spiræa japonica</i>
20. Thunberg's Spirea . . .	<i>Spiræa Thunbergii</i>
21. Bumald's Spirea . . .	<i>Spiræa Bumalda</i>
22. Pink Sweet Pea Shrub . . .	<i>Lespedeza Sieboldii</i>

COMMON NAME	BOTANICAL NAME
23. White Sweet Pea Shrub .	<i>Lespedeza japonica</i>
24. Japanese Barberry	<i>Berberis Thunbergii</i>
25. Slender Deutzia . . .	<i>Deutzia gracilis</i>
26. Evergreen Azalea	<i>Rhododendron indicum</i> , var. <i>amœnum</i>
27. White Panicked Clematis	<i>Clematis paniculata</i>
28. Boston Ivy	<i>Parthenocissus tricuspidata</i>
29. Japanese Wisteria	<i>Wisteria multijuga</i>
30. White Japanese Wisteria .	<i>Wisteria mulijuga</i> , var. <i>alba</i>
31. Climbing Knotweed . . .	<i>Polygonum Baldschuanicum</i>
32. Shrubby Evergreen Eu- onymus	<i>Evonymus radicans</i> , var. <i>vegetus</i>

Herbs

a. Japanese Mountain Spurge	<i>Pachysandra terminalis</i>
b. Japanese Lily	<i>Lilium speciosum</i>
c. Gold-banded Lily	<i>Lilium auratum</i>
d. Japanese Windflower	<i>Anemone japonica</i>
e. Hardy Chrysanthemum . . .	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
f. Peony	<i>Pæonia albiflora</i> , in variety
g. Japanese Iris	<i>Iris lævigata</i> , in variety
h. Late Lemon Lily	<i>Hemerocallis Thunbergii</i>
i. Bleeding Heart	<i>Dicentra spectabilis</i>
j. Balloon Flower	<i>Platycodon grandiflorum</i>
k. Giant Knotweed	<i>Polygonum Sieboldii</i>
l. Orange Day Lily	<i>Hemerocallis Dumortieri</i>
m. Japanese Eulalia	<i>Miscanthus sinensis</i>
n. Showy Stonecrop	<i>Sedum spectabile</i>
o. Variegated Plantain Lily	<i>Hosta cærulea undulata variegata</i>
p. Broad-leaved Plantain Lily	<i>Hosta cærulea</i>
q. Lance-leaved Plantain Lily	<i>Hosta lancifolia</i>
r. Fortune's Blue Day Lily	<i>Hosta Fortunei</i>
s. Siebold's Blue Day Lily	<i>Hosta Sieboldiana</i>
t. White Day Lily	<i>Hosta plantaginea</i>
u. Japanese Goat's Beard	<i>Aruncus astilboides</i>
v. Japanese Speedwell	<i>Veronica longifolia</i> , var. <i>subsessilis</i>
w. White Loosestrife	<i>Lysimachia clethroides</i>
x. June Lily	<i>Lilium elegans</i>
y. Tiger Lily	<i>Lilium tigrinum</i>
z. Japanese Groundsel	<i>Senecio japonicus</i>
Giant Groundsel	<i>Senecio Clivorum</i>

Also in bed e—in small groups

Japanese Baneberry

Actæa spicata

A FORMAL GARDEN OF JAPANESE PLANTS.

0 20 40 60 80 100 120

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER, DECEMBER, 1914.

PLAN NO. 18.

COMMON NAME	BOTANICAL NAME
Blackberry Lily	<i>Belamcanda chinensis</i>
Orange Stonecrop	<i>Sedum kamtschaticum</i>

Also in bed w—in small groups

Queen-of-the-Meadow	<i>Ulmia purpurea</i>
False Goat's Beard	<i>Astilbe japonica</i>
Dwarf Yellow Stonecrop	<i>Sedum Maximowiczii</i>

Also in bed u—in small groups

Late-flowering Monkshood	<i>Aconitum autumnale</i>
Japanese Squill	<i>Scilla japonica</i>
Yellow Stonecrop	<i>Sedum Aizoon</i>

Also in bed v—in small groups

Japanese Scabious	<i>Scabiosa japonica</i>
Spring Adonis	<i>Adonis amurensis</i>
Siebold's Stonecrop	<i>Sedum Sieboldii</i>

HARDY CHRYSANTHEMUMS

Unsurpassed for the border and for cutting during the last days of autumn. The great variety of color and form includes something that will suit everybody.

BORDER OF FRAGRANT FLOWERS

(SEE PLAN NO. 19)

FRAGRANCE in flowers is an added charm in any garden planting, but too frequently it is wholly a chance event in planning the border. A charming effect may be obtained by using plants, both shrubs and herbs, exclusively for their fragrance in a special border of not too great size. Something of a finished garden effect may perhaps of necessity be sacrificed, but as the fragrance can only be truly enjoyed when near at hand the border must be near the house, preferably near the piazza or the living rooms. Also there should be a shaded seat where we may sit and dream in this garden of sweet odors.

Then, though many flowers are most fragrant in full sun, some are soon robbed of odor by high heat and last longest in shade, while not a few of our most odorous blossoms guard their sweet savors from the sun and pour forth only with the dews of night. Again, while Purple Lilac, Sweet Syringa, Valerian, Sweet Rocket, and many more are so powerful that they may even be objectionable when close at hand, and far sweeter when borne to us by the breeze, a greater number have a more elusive fragrance and should be close at hand to give a strong effect. So though one Lilac may be enough for a garden, we need a large bed of Violets or Lily-of-the-Valley to get a corresponding amount of perfume.

We must beware, too, of mixing several strong odors in the garden at one time, the result may be a discord to the sense of smell—there is no term to describe it—and even nausea may result. Time of bloom must also be carefully worked out, and odors that do not harmonize must be the whole length of the garden apart. While adjusting the arrangement by season of bloom do not forget to provide for eight months of flowers—from Hyacinths in April to Yellow Chrysanthemums in October.

It is possible to arrange a performance of star performers with a change every two weeks, the minor parts being carried by plants of lesser fragrance, but still necessary to give body to the whole effect. Plants with fragrant leaves are excellent for the chorus work, especially when in strong sunlight or near the path.

Many varieties of fragrant species are nearly odorless. There is endless variety in intensity of odor in Phloxes, Irises, Peonies, Lilacs, Roses, Pinks, etc. Some named sorts are far more fragrant than those our grandmothers knew, while some new kinds are practically odorless;

not only is there a difference in quantity but in quality. Add to all these factors the usual considerations of foliage harmony, season's bloom, height of plant and season of growth, and we discover that a fragrance border is not so easy to plan as an ordinary border.

The accompanying plan is suggestive of what might be done to carry out the idea of a garden of sweet odors. I know that I have too many odors there, but what am I to do? I want Hyacinth, Violet, Peony, Pink, Mock Orange, Strawberry Shrub, and many more, and my walk is but a hundred feet long. Fortunately the time of bloom varies, and some of my favorites are censors by night only. The great rush of odor comes in June and July, though each month and each part of the day has its particular fragrance as we sit and muse on the garden seat at the end of the walk under the tall White Lilacs.

The straight walk to the east piazza is bordered with herbs and backed by shrubs, the two sides somewhat alike, yet not the same. Open lawn stretches to the south and a heavy belt of evergreen trees and flowering shrubs give shelter on the north. If the little garden be in a slight hollow then the winds will not so easily blow away the odors, but they may lie like light vapors over the walk and seat, especially at evening.

The planting list explains the arrangement, and a study of it in its relation to the plan will reveal many of the details of the composition. Night odors gather around the seat, foliage effects are more studied near the house, etc. Rue, Rosemary, Thyme, etc., being evergreen, or nearly so, are particularly adapted for edging. To give relief and background to the whole, generous masses of herbs but slightly fragrant, but of excellent habit of growth and long period of bloom, are added to the central part of the border. Many more plants could be included, but I am sure that we have already too many strong odors.

I might have Four-o'clocks among the Peonies, but I cannot approve of a mixture of annuals and perennials, for the requirements of culture are too different for the good of either when together. If you prefer Alyssum, Stocks, Sweet Sultans, etc., try the alternative list, which refers to the same key numbers on the plan, annuals superseding the perennials of the first list. Results will be different, but equally pleasing.

Though the store of fragrant plants of easy culture is but partially drawn upon in making these lists, if we wish for any reason to add other herbs to this scheme it will be well to choose those that are practically lacking in fragrance.

PLANTING LIST FOR PLAN No. 19

BORDER OF FRAGRANT FLOWERS

Shrubs

COMMON NAME	BOTANICAL NAME
1. White Lilac . . .	<i>Syringa vulgaris</i> , var. <i>alba</i> , May
2. Hungarian Lilac . . .	<i>Syringa Josikæa</i> , June
3. Early Fragrant Lilac . . .	<i>Syringa oblata</i> , May
4. Hybrid Mock Orange . . .	<i>Philadelphus speciosissimus</i> , June
5. Sweet Pepper Bush . . .	<i>Clethra alnifolia</i> , July
6. Flowering Currant . . .	<i>Ribes odoratum</i> , May
7. Strawberry Bush . . .	<i>Calycanthus floridus</i> , June
8. Early Fragrant Honey-suckle	<i>Lonicera fragrantissima</i> , April
9. Standish's Fragrant Honeysuckle	<i>Lonicera Standishii</i> , April
10. Pink Tartarian Honeysuckle	<i>Lonicera tatarica</i> , var. <i>rosea</i> , May
11. Southernwood	<i>Artemisia Abrotanum</i>
12. Japanese Honeysuckle	<i>Lonicera japonica</i> , June

Herbs—Perennial

A. Sweet Violet	<i>Viola odorata</i>
B. Scotch Pink	<i>Dianthus plumarius</i>
C. Lily-of-the-Valley	<i>Convallaria majalis</i>
D. Gas Plant	<i>Dictamnus albus</i>
E. Pink Peony	<i>Pæonia albiflora</i> , var. <i>Humei rosea</i>
F. Pink Peony	<i>Pæonia albiflora</i> , var. <i>grandiflora</i>
G. Garden Heliotrope	<i>Valeriana officinalis</i>
H. Evening Primrose	<i>Cœnothra biennis</i>
I. Yellow Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
Sweet Rocket	<i>Hesperis matronalis</i>
J. Orris-root	<i>Iris florentina</i>
K. Garden Hyacinth	<i>Hyacinthus orientalis</i>
L. White Phlox	<i>Phlox paniculata</i> , var. <i>alba</i>
Crown Imperial	<i>Fritillaria imperialis</i>
M. White Day Lily	<i>Hosta plantaginea</i>
N. Lemon Lily	<i>Hemerocallis flava</i>

COMMON NAME	BOTANICAL NAME
O. Mother-of-Thyme . . .	<i>Thymus Serpyllum</i>
P. Lavender Cotton . . .	<i>Santolina Chamæcyparissus</i>
Q. Rue	<i>Ruta graveolens</i>
R. Hyssop	<i>Hyssopus officinalis</i>
S. Rosemary	<i>Rosmarinus officinalis</i>
a. Blue Day Lily . . .	<i>Hosta cærulea</i>
b. Lance-leaved Day Lily	<i>Hosta lancifolia</i>
c. Shasta Daisy	<i>Chrysanthemum maximum</i> "Shasta Daisy"
d. Blanket Flower . . .	<i>Gaillardia aristata</i>
e. Horned Violet . . .	<i>Viola cornuta</i>
f. Carpathian Harebell .	<i>Campanula carpatica</i>

Herbs—Annual

A. Pansy	<i>Viola tricolor</i>
B. French Marigold . .	<i>Tagetes patula</i>
C. Wallflower	<i>Chieranthus Chieri</i>
D. Red-flowered Tobacco	
Plant	<i>Nicotiana Sanderæ</i>
E. Four-o'clock	<i>Mirabilis Jalapa</i> , Red
F. Four-o'clock	<i>Mirabilis Jalapa</i> , White
G. Stocks	<i>Matthiola incana</i>
H. White Tobacco Plant	<i>Nicotiana affinis</i>
I. Sweet Sultans	<i>Centaurea moschata</i>
J. Verbena	<i>Verbena hybrida</i>
K. Evening Stock . . .	<i>Matthiola bicornis</i>
L. Pink Petunia	<i>Petunia hybrida</i> "Rosy Morn"
M. African Marigold . .	<i>Tagetes erecta</i>
N. Heliotrope	<i>Heliotropium peruvianum</i>
O. Sweet Alyssum	<i>Alyssum maritimum</i>
P. Annual Pinks	<i>Dianthus chinensis</i>
Q. Mignonette	<i>Reseda odorata</i>
R. Pot Marigold	<i>Calendula officinalis</i>
S. Candytuft	<i>Iberis amara</i>
a. Dwarf Zinnia	<i>Zinnia elegans</i>
b. California Poppy . .	<i>Eschscholtzia californica</i>
c. Snapdragon	<i>Antirrhinum majus</i>
d. Annual Blanket Flower	<i>Gaillardia picta</i>
e. Love-in-a-Mist	<i>Nigella damascena</i>
f. Blue Love-in-a-Mist .	<i>Nigella damascena</i> "Miss Jekyll"

A BORDER OF FRAGRANT FLOWERS.

STEPHEN F. HAMBELIN, BOSTON, MASS.
 LANDSCAPE DESIGNER, DECEMBER, 1914.
 PLAN NO. 19.

Flowering Shrubs
 Windbreak of Evergreens

SPECIAL COLOR BORDERS

(SEE PLAN NO. 20)

AN UNUSUAL treatment of a border of perennials would be offered us if all herbs in the bed were to be of one color, say white, red, yellow, or blue. Give these a background of refined flowering shrubs of a contrasting color, red for the white border, yellow for the blue, white for the red or blue, and blue and purple for the yellow border. Behind the whole planting put a background of evergreen trees, such as Hemlocks or White Pines, and the color picture is complete.

Though big masses of clear color are the main consideration and the finer garden effects are not sought, yet height, season of bloom, habit of growth, and leaf texture are also studied. Eight months of bloom are to be provided for, and only permanent, hardy, and not too weedy herbs and shrubs are suggested. No annuals are used, for there will be only occasional weeding and resetting in this planting, as the plants are chosen because they are as near to being self-supporting, as well as refined and sturdy, as garden plants can be. Each species is to be planted in large, uninterrupted masses to get its full color value during its season. Ere this has passed away a nearby species takes up the task, and at no time will there be a lack of display from mid-March to October.

This is the main scheme, but endless are the variations, even with the same list of plants, and the list of sorts is easily modified. Then when actually planted, minor groups and individuals of other colors should be added to lend interest and variety and contrast—not affecting the main masses of color as seen from a distance, but giving a proper foil to the stronger colors when viewed close at hand. The reds will need a few white flowers in addition to the white-flowered background, and even a few red-flowered shrubs will help the red flowers to shine full value. The white bed will be better for touches of pink and pale blue; the yellow will be strengthened by pale blue and white with orange to give areas of greater intensity, while a blue planting would be lightened by pink, yellow, or white.

The accompanying plan is one of many arrangements possible with the same list of plants. Instead of an entire bed with an adjacent background of evergreen trees, I have supposed the planting on the west side of the house and broken it by paths from the lawn to the piazza. Further planting is not indicated, but it will consist of the same species used

in this special garden in addition to other species used elsewhere on the grounds, in order to tie this planting to the main shrub and herb planting of the lawn and drive. Wherever this special garden is planted, it must fit into the whole lawn treatment as well as the site on which it is placed.

This particular plan requires about 500 shrubs, the larger ones planted about five feet apart, the low border herbs set from three feet apart to less than a foot, and a thousand or so perennials from three feet apart to less than a foot, with as many hundred bulbs as you are willing to put in—the space will accommodate thousands of Crocus or Squill and a few hundred bulbs of other color than the main feature. There is no definite size set for the planting, you may make it as much larger or smaller as you wish, and even plant it in sections as your enthusiasm grows. No added cost will result from the emphasis on special color, and many of these plants you may grow from seed or division yourself. Knowing your own garden resources, you can build the planting as you get the material ready.

The numbers and letters upon the plan refer to the lists of plants. The plants in each list are as nearly alike as can readily be made. The same plan serves them all, as there is little difference in effect of foliage, height, or season of bloom, and were the plants of the four lists placed in trial plots the main difference from a distance would be that of color. Having chosen the color that you prefer, then disregard the other lists entirely. Don't try to follow the plan too literally—use it merely as a suggestion—and you will then learn the value of mass color in pictures out of doors.

PLANTING LIST FOR PLAN No. 20

RED BORDER

Shrubs

COMMON NAME	BOTANICAL NAME
1. White Lilac	<i>Syringa vulgaris</i> , var. <i>alba</i>
2. White Hybrid Lilac.	<i>Syringa vulgaris</i> "Frau Bertha Damman"
3. Bechtel's Flowering Crab	<i>Malus ioensis</i> , var. <i>fl. pl.</i>
4. Beach Plum	<i>Prunus maritima</i>
5. Double White Rose of Sharon	<i>Hibiscus syriacus</i> , var. <i>totus albus</i>
6. Hall's Starry Magnolia	<i>Magnolia stellata</i>
7. White Tartarian Honeysuckle	<i>Lonicera tatarica</i> , var. <i>alba</i>
8. White Weigela	<i>Diervilla hybrida</i> , var. <i>candida</i>
9. White Weigela	<i>Diervilla florida</i> , var. <i>alba</i>
10. Flowering Dogwood	<i>Cornus florida</i>
11. White Hybrid Ramanas Rose.	<i>Rosa rugosa</i> "Sir Thomas Lipton"
12. White June Rose	Rose "Mad. Plantier"
13. Many-flowered Rose	<i>Rosa multiflora</i>
14. Slender Deutzia	<i>Deutzia gracilis</i>
15. White Flowering Almond	<i>Prunus sinensis</i> , var. <i>alba fl. pl.</i>
16. White Japanese Meadowsweet	<i>Spiraea albiflora</i>
17. Thunberg's Snow Garland	<i>Spiraea Thunbergii</i>
18. White Hardhack.	<i>Spiraea tomentosa</i> , var. <i>alba</i>
19. Red-twigged Ash-leaved Spirea	<i>Sorbaria Aitchinsonii</i>
20. White Shining Rose	<i>Rosa virginiana</i> , var. <i>alba</i>
21. White Baby Rambler	<i>Rosa multiflora</i> "Catherine Zeimet"

Perennials

A. Red Hollyhock	<i>Althea rosea</i> —Red
B. Oriental Poppy	<i>Papaver orientale</i>
C. Bronze Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hor-torum</i>
D. Persian Daisy	<i>Chrysanthemum coccineum</i> , var. <i>atrosanguineum</i>
E. Red Peony	<i>Pæonia albiflora</i> "General Grant"
F. Red Peony	<i>Pæonia albiflora</i> "Louis van Houtte"
G. London Pride	<i>Lychnis chalcedonica</i>

COMMON NAME	BOTANICAL NAME
H. Red Turtle-head	<i>Chelone Lyonii</i>
I. Red Garden Phlox	<i>Phlox paniculata</i> "Mad. P. Lan- gier"
J. Red Garden Phlox	<i>Phlox paniculata</i> "Gen. Chanzy"
K. Red Garden Phlox	<i>Phlox paniculata</i> "Boule de Feu"
L. Red Japanese Lily	<i>Lilium speciosum</i> "Kratzeri"
M. Red June Lily	<i>Lilium umbellatum</i>
N. Orange Iceland Poppy . .	<i>Papaver nudicaule</i> , var. <i>auranti-</i> <i>acum</i>
O. Double German Catchfly .	<i>Lychnis viscaria</i> , var. <i>splendens</i> <i>plena</i>
P. Coral Bells	<i>Heuchera sanguinea</i>
Q. Lovely Phlox	<i>Phlox amœna</i>
R. Pink Lupine	<i>Lupinus polyphyllus</i> , var. <i>roseus</i>
S. Copper-standard German Iris	<i>Iris squalens</i> "Jacquesiana"
T. Red Darwin Tulip	<i>Tulipa Gesneriana</i> "Ariadne"
U. Pink Siberian Squill . . .	<i>Scilla sibirica</i> , var. <i>rosea</i>
V. Red-flowered Stonecrop .	<i>Sedum Ewersii</i>
W. Meadow Saffron	<i>Colchicum autumnale</i>

YELLOW BORDER

Shrubs

1. Purple Hybrid Lilac	<i>Syringa vulgaris</i> "Volcan"
2. Purple Hybrid Lilac	<i>Syringa vulgaris</i> "Michel Buchner"
3. Burning Bush	<i>Evonymus atropurpurea</i>
4. Carolina Allspice	<i>Calycanthus fertilis</i>
5. Blue Rose of Sharon	<i>Hibiscus syriacus</i> , var. <i>cœlestis</i>
6. Purple Hazel	<i>Corylus maxima</i> , var. <i>purpurea</i>
7. Strawberry Bush	<i>Calycanthus floridus</i>
8. French Tamarisk	<i>Tamarix gallica</i>
9. Early Tamarisk	<i>Tamarix parviflora</i>
10. False Indigo	<i>Amorpha fruticosa</i>
11. Purple Hybrid Ramanas Rose .	<i>Rosa rugosa</i> "Roserie de l'Hay"
12. Chaste-tree	<i>Vitex incisa</i>
13. Chinese Abelia	<i>Abelia chinensis</i>
14. Southernwood	<i>Artemisia Abrotanum</i>
15. Evergreen Azalea	<i>Rhododendron indicum</i> , var. <i>amœ-</i> <i>num</i>
16. Lead Plant	<i>Amorpha canescens</i>
17. Flowering Raspberry	<i>Rubus odoratus</i>
18. Sweet-scented Butterfly Shrub .	<i>Buddleia Davidii</i>
19. Bristly Tamarisk	<i>Tamarix hispida</i>

COMMON NAME	BOTANICAL NAME
20. Shrub Yellowroot	<i>Xanthorrhiza apiifolia</i>
21. Blue Spirea	<i>Caryopteris incana</i>
Perennials	
A. Yellow Hollyhock	<i>Althea rosea</i> —Yellow
B. Leopard's Bane	<i>Doronicum plantagineum</i> , var. <i>excelsum</i>
C. Yellow Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
D. Orange Sneezeweed	<i>Helenium Hoopesii</i>
E. Lemon Lily	<i>Hemerocallis flava</i>
F. Late Lemon Lily	<i>Hemerocallis Thunbergii</i>
G. Boneset Yarrow	<i>Achillea filipendulina</i>
H. Sneezeweed	<i>Helenium autumnale</i>
I. Showy Coneflower	<i>Rudbeckia speciosa</i>
J. Sweet Coneflower	<i>Rudbeckia subtomentosa</i>
K. Southern Coneflower	<i>Rudbeckia nitida</i>
L. Yellow Japanese Lily	<i>Lilium Henryi</i>
M. Bateman's Lily	<i>Lilium elegans</i> , var. <i>fulgens</i>
N. Yellow Iceland Poppy	<i>Papaver nudicaule</i> , var. <i>sulphureum</i>
O. Tickseed	<i>Coreopsis lanceolata</i>
P. Orange-scarlet Garden Phlox	<i>Phlox paniculata</i> "Coquelicot"
Q. Gold Dust	<i>Alyssum saxatile</i>
R. St. Peter's Staff	<i>Thermopsis caroliniana</i>
S. Yellow German Iris	<i>Iris flavescens</i>
T. Double Daffodil	<i>Narcissus Pseudo-Narcissus</i> "Van Sion"
U. Yellow Dutch Crocus	<i>Crocus Mæsiacus</i>
V. Orange Stonecrop	<i>Sedum kamtschaticum</i>
W. Golden Amaryllis	<i>Sternbergia lutea</i>

BLUE BORDER

Shrubs

1. Bladder Senna	<i>Colutea arborescens</i>
2. Orange-flowered Bladder Senna	<i>Colutea orientalis</i>
3. Flame Azalea	<i>Rhododendron calendulaceum</i>
4. Flowering Currant	<i>Ribes odoratum</i>
5. Witch Hazel	<i>Hamamelis virginiana</i>
6. Hybrid Golden Bell	<i>Forsythia intermedia</i>
7. Morrow's Bush Honeysuckle	<i>Lonicera Morrowii</i>
8. Yellow Weigela	<i>Diervilla sessilifolia</i>
9. Fly Honeysuckle	<i>Diervilla Lonicera</i>

COMMON NAME	BOTANICAL NAME
10. Cornelian Cherry	<i>Cornus mas</i>
11. Yellow Hybrid Rose	<i>Rose "Soliel d'Or"</i>
12. Harrison's Yellow Rose	<i>Rosa hemisphaerica</i> , var. <i>Harrisoni</i>
13. Persian Yellow Rose	<i>Rosa hemisphaerica</i> , var. <i>plena</i>
14. Caucasian Barberry	<i>Berberis sinensis</i>
15. Dwarf Broom	<i>Cytisus supinus</i>
16. Large-flowered St. John's-Wort.	<i>Hypericum aureum</i>
17. Kalm's St. John's-Wort	<i>Hypericum Kalmianum</i>
18. Scotch Broom	<i>Cytisus scoparius</i>
19. Shrubby Cinquefoil	<i>Potentilla fruticosa</i>
20. Yellow Scotch Rose.	<i>Rosa spinosissima</i> , var. <i>hispida</i>
21. Japanese Kerria	<i>Kerria japonica</i>

Perennials

A. True Monkshood	<i>Aconitum Napellus</i>
B. Bee Larkspur	<i>Delphinium elatum</i>
C. Violet Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
D. Jacob's Ladder	<i>Polemonium cæruleum</i>
E. Blue Indigo	<i>Baptisia australis</i>
F. Late Siberian Flag	<i>Iris sibirica</i> , var. <i>orientalis</i>
G. Balloon Flower	<i>Platycodon grandiflorum</i>
H. Rocky Mountain Sage	<i>Salvia azurea</i> , var. <i>grandiflora</i>
I. Lilac Garden Phlox	<i>Phlox paniculata</i> "Eugene Danzan-villiers"
J. Violet Garden Phlox	<i>Phlox paniculata</i> "Le Mahdi"
K. Violet Garden Phlox	<i>Phlox paniculata</i> "L'Esperance"
L. Wild Monkshood	<i>Aconitum uncinatum</i>
M. Wild Hyacinth	<i>Camassia esculenta</i>
N. Peach Bells	<i>Campanula persicifolia</i>
O. Chinese Larkspur	<i>Delphinium grandiflorum</i>
P. Japanese Speedwell	<i>Veronica longifolia</i> , var. <i>subsessilis</i>
Q. Blue Phlox	<i>Phlox divaricata</i>
R. Garden Lupine	<i>Lupinus polyphyllus</i>
S. Great Lavender Flag	<i>Iris pallida</i> , var. <i>speciosa</i>
T. Lilac Darwin Tulip	<i>Tulipa gesneriana</i> "Dream"
U. Two-leaved Squill	<i>Scilla bifolia</i>
V. Hoary Speedwell	<i>Veronica incana</i>
W. Showy Autumn Crocus.	<i>Crocus speciosus</i>

WHITE BORDER**Shrubs**

- I. Dark Red Hybrid Lilac . . . *Syringa vulgaris* "Louis Spæth"

SPECIAL COLOR BORDER

0 10 20 40

STEPHEN F. HAMBLIN, BOSTON, MASS.
LANDSCAPE DESIGNER
DECEMBER, 1914
PLAN NO. 20.

COMMON NAME	BOTANICAL NAME
2. Red Hybrid Lilac	<i>Syringa vulgaris</i> "Charles X"
3. Parkman's Crab	<i>Malus Halliana</i>
4. Double Flowering Plum . .	<i>Prunus triloba</i> , var. <i>fl. pl.</i>
5. Red Rose of Sharon . . .	<i>Hibiscus syriacus</i> , var. <i>roseus</i>
6. Pink Starry Magnolia . . .	<i>Magnolia stellata</i> var. <i>rosea</i>
7. Pink Tartarian Honeysuckle .	<i>Lonicera tatarica</i> , var. <i>rosea</i>
8. Red Hybrid Weigela	<i>Diervilla hybrida</i> "Eva Rathke"
9. Red Hybrid Weigela	<i>Diervilla hybrida</i> "Desboisii"
10. Red Flowering Dogwood . .	<i>Cornus florida</i> , var. <i>rubra</i>
11. Pink Hybrid Ramanas Rose .	<i>Rosa rugosa</i> "Conrad Ferdinand Meyer"
12. Red-leaved Rose	<i>Rosa ferruginea</i>
13. Hybrid Sweet Brier Rose . .	<i>Rosa rubiginosa</i> "Meg Merrilies"
14. Pink Slender Deutzia . . .	<i>Deutzia rosea</i>
15. Pink Flowering Almond . . .	<i>Prunus sinensis</i> , var. <i>fl. pl. rosea</i>
16. Pink Meadowsweet	<i>Spiræa japonica</i>
17. Bumald's Spirea	<i>Spiræa Bumalda</i>
18. Shrubby Bush Clover	<i>Lespedeza bicolor</i>
19. Siebold's Bush Clover . . .	<i>Lespedeza Sieboldii</i>
20. Shining Rose	<i>Rosa virginiana</i>
21. Baby Rambler	<i>Rosa multiflora</i> "Mad. Norbert Levavasseur"

Perennials

A. White Hollyhock	<i>Althea rosea</i> , var. <i>alba</i>
B. White Foxglove	<i>Digitalis purpurea</i> , var. <i>alba</i>
C. White Hardy Chrysanthemum	<i>Chrysanthemum indicum</i> , var. <i>hortorum</i>
D. White Persian Daisy	<i>Chrysanthemum coccineum</i> "Mont Blanc"
E. White Peony	<i>Pæonia albiflora</i> "Festiva maxima"
F. Snow Queen Iris	<i>Iris sibirica orientalis</i> "Snow Queen"
G. White Balloon Flower	<i>Platycodon grandiflorum</i> , var. <i>album</i>
H. Giant Daisy	<i>Chrysanthemum uliginosum</i>
I. White Garden Phlox	<i>Phlox paniculata</i> "Independence"
J. White Garden Phlox	<i>Phlox paniculata</i> "Richard Wallace"
K. Early White Phlox	<i>Phlox suffruticosa</i> "Miss Lingard"
L. White Japanese Lily	<i>Lilium speciosum</i> , var. <i>album</i>
M. Madonna Lily	<i>Lilium candidum</i>
N. White Iceland Poppy	<i>Papaver nudicaule</i> , var. <i>album</i>

COMMON NAME	BOTANICAL NAME
O. White Chinese Larkspur	<i>Delphinium grandiflorum</i> , var. <i>album</i>
P. Shasta Daisy	<i>Chrysanthemum maximum</i> , var. <i>hybridum</i>
Q. White Moss Pink	<i>Phlox subulata</i> , var. <i>alba</i>
R. White Garden Lupine	<i>Lupinus polyphyllus</i> , var. <i>albus</i>
S. White Orris-root	<i>Iris florentina</i> , var. <i>alba</i>
T. Poet's Narcissus	<i>Narcissus poeticus</i>
U. Giant Snowdrop	<i>Galanthus Elwesii</i>
V. White Stonecrop	<i>Sedum album</i>
W. White Autumn Crocus	<i>Colchicum autumnale</i> , var. <i>album</i>

WHAT SHELTER WILL DO

This garden of Mrs. Wyckoff, on the south shore of Long Island, is made possible by the hedge of Privet. Otherwise, the ocean winds would sweep over the spot. A hedge is both effective in framing the picture and in protecting the plants.

THE PRACTICAL SIDE OF PLANTING

PLANTING gives the finish to landscape construction. It has little consideration in the preliminary study for arrangement, as even the entire design of an estate may be decided upon regardless of the plants to be used; it has no relation to the engineering involved; and may be one of the smallest items of expense in construction. Yet it may dominate the design; may cause expensive construction; and the item of planting may exceed that of roads or structures. Further, good planting may cover up mistakes in design or of construction, and make great show at little expense; and equally, a poor use of plants may seriously mar a good design and outweigh a careful workmanship of construction. As it comes after the general considerations, it takes on undue importance in the eye of the average person.

In a sense, the planting is like the cover of a book, or the clothes a man wears. Its place is unique; it is the most elastic of the items to be considered; it is neither unimportant nor all-important; but is the obvious test of good work.

It should enter to a certain degree into every consideration of modifications of the landscape; and, while it may be decided after the work is well under way, it should influence all plan making from the very start.

The first general decision must be made as to amount. There are the two extremes. The simplest solution is to reduce all planting to the minimum, and there are places where this is desirable, especially in city conditions. Houses, trees, and cars can't occupy the same ground at once, and it is well that most foliage be omitted. A city is not a forest nor a lawn. But the grounds about many homes, churches, and municipal buildings are as bare as a barn or a bald head, and about as ornamental! Lack of ornamentation is not beauty, and most people who think at all about the matter will admit that a certain amount of trees, grass, and flowers is desirable wherever we go. Architects' show plans always have "foliage."

The other extreme is a wealth of plants wherever the space offers. There is no virtue in cramming a place with all the plants of which you are fond, making it a thicket, or a museum of freak plants. If you have no sense of restraint as to what to put in, you are not a garden builder, but rather have a nurseryman's viewpoint. One tree in its proper place is worth a dozen equally good ones crowded into the same space.

Safety is in the middle course between the two extremes; this involves far more than a consideration of the plants themselves. The test is "fitness" of the planting to its surroundings. This varies with the centuries, the topography and climate, the national life, and individual taste. From these arise the garden types—formal, natural, Italian, Japanese, rock, marsh, "wild," etc.—considered from the point of view of the plants used. Each arrangement has its uses, as a study of the garden art shows. I shall not pick flaws in the theories of the past, but outline some of the tendencies of to-day as we consider plan making.

CHOICE OF MATERIAL

With the esthetic sense of "fitness" is inseparably connected the aspect of physical "luxuriance." We insist that growing things look healthy as well as well-placed. A starved, neglected, though well-designed, planting has little artistic excellence. Even a luxuriant field of corn gives a sense of esthetic satisfaction that a most expensive formal garden may not have. This luxuriance comes from the choice of material used, the care with which it is planted, and then the upkeep.

While the plan for arrangement is being made is the time to decide on the tree and flower types to be used. Think first in *types* rather than in individual plants. If a tree, ask: is it to be tall or low-branched? for shade or flowers? with heavy or light foliage? etc. If a shrub: is it to be evergreen or not, for flower, fruit, or form, for screen, specimen, or ground cover? And how are the herbs to serve in the landscape: by their flowers, foliage, or roots? Merely because I like a certain plant it does not get on my planting plans, and often I use trees that individually I don't like, but they fill a purpose. There are available various lists indicating the effects of plants on the landscape; and it is educational to make them for yourself.

We might head our various lists as follows, though no two notebooks will have the same lists:

LIST OF PLANT TYPES

TREES		EXAMPLE	TREES		EXAMPLE
Height			Leafage— <i>Continued</i>		
Tall (100 ft.)	.	American Elm	Shade light	.	Locust
Large (60 ft.)	.	American Linden	Evergreen	.	Pine
Medium (40 ft.)	.	Crabapple	Autumn coloration	.	Red Maple
Small (20 ft.)	.	Flowering Dogwood	Large	.	Catalpa
Leafage			Small	.	Willow
Early in leaf	.	Larch	Hang late	.	English Oak
Late in leaf	.	Catalpa	Drop early	.	Sycamore
Shade dense	.	Horsechestnut	Cut	.	Weir's Maple
			Colored, Etc.	.	Purple Beech

TREES	EXAMPLE
Habit	
Narrow . . .	Lombardy Poplar
Spreading . . .	White Oak
Irregular . . .	Apple
Shrubby . . .	Hawthorn
Peculiar . . .	Weeping Beech
Etc.	
Growth	
Quick . . .	Poplar
Slow . . .	Tupelo
Easily moved . . .	Willow
Difficult to move . . .	Hickory
Hard wooded . . .	Black Walnut
Soft wooded . . .	Willow
Poor soil . . .	Gray Birch
Rich soil . . .	Magnolia
Wet soil . . .	Red Maple
Dry soil . . .	Black Locust
Insects and disease . . .	Cherry
Free from disease . . .	Ginkgo
Etc.	
Use	
Shade . . .	Maple
Flowers . . .	Horsechestnut
Fruit . . .	Apple
Bark . . .	Canoe Birch
Specimen . . .	Purple Beech
Forest . . .	Oaks
Lawn . . .	Magnolia
Windbreak . . .	Norway Spruce
Hedge . . .	Arborvitæ
Etc.	
SHRUBS	EXAMPLE
Height	
Treelike (over 15 ft.) . . .	Redbud
10-15 ft. . .	Viburnum Opulus
6-8 ft. . .	Rosa rugosa
3 ft. . .	Japanese Barberry
Trailing . . .	Dewberry
Etc.	
Leaves	
Evergreen . . .	Mountain Laurel
Large . . .	Hydrangea
Small . . .	Barberry
Colored . . .	Purple Barberry
Fragrant . . .	Sweet Fern
Cut . . .	Cut-leaved Hazel
Bark colored . . .	Red Osier Dogwood
Etc.	

SHRUBS	EXAMPLE
Flowers	
White . . .	Van Houtte's Spirea
Blue . . .	Rose of Sharon
Yellow . . .	Forsythia
Red . . .	Weigela
Fragrant . . .	Lilac
Early . . .	Forsythia
Late . . .	Witch Hazel
Fruit . . .	Barberry
Etc.	
Soil	
Sandy . . .	Sweet Fern
Peat . . .	Rhododendron
Very dry . . .	Sumac
Very wet . . .	Pussy Willow
Standing water . . .	Buttonbush
Full sun . . .	Spireas
Shade . . .	Blueberry
Etc.	
Care	
No pruning . . .	Hawthorn
Much pruning . . .	Hydrangea
Insects and disease . . .	Rose
Etc.	
Use	
Screen . . .	Privet
Hedge . . .	Barberry
Undergrowth . . .	Hazel
Specimen . . .	Rose of Sharon
Flower mass . . .	Van Houtte's Spirea
Lawn . . .	Weigela
Rock garden . . .	Hypericum
Waterside . . .	Elder
Etc.	
VINES	EXAMPLE
Habit	
Clinging . . .	Boston Ivy
Twining . . .	Clematis
Scrambling . . .	Rose
Size	
Tall . . .	Boston Ivy
Low . . .	English Ivy
Vigorous . . .	Actinidia
Slender . . .	Clematis
Etc.	
Leaf	
Large . . .	Dutchman's Pipe
Small . . .	Wisteria
Evergreen . . .	Evonymus radicans
Etc.	

VINES	EXAMPLE
Use	
Buildings . . .	Boston Ivy
Walls . . .	Virginia Creeper
Fences . . .	Grape
Trellis . . .	Clematis

VINES	EXAMPLE
Use— <i>Continued</i>	
Flowers . . .	Wisteria
Thickets . . .	Matrimony Vine
Ground cover.	Hall's Honeysuckle

PERENNIALS

Heights

from creeping to 10 ft.

Months of bloom

(from March to October)

Color of flower

PERENNIALS	EXAMPLE
Growth	
Long lived . . .	Peony
Transient . . .	Foxglove
Weedy . . .	Wild Geranium
Spreaders . . .	Golden Glow
Tender . . .	Canna
Bulbous . . .	Lily
Deep rooted . . .	Hollyhock
Shallow rooted . . .	Coreopsis
Shrubby . . .	Peony
Needs staking . . .	Larkspur
Raised from seed . . .	Larkspur
Hold seed all winter	Siberian Iris
Etc.	
Soil	
Aquatics . . .	Water Lily
Stream margins . . .	Caltha palustris
Bog. . .	Pitcher-plant
Wet meadow . . .	Joe-pye-weed
Moist woods . . .	Lady's Slipper
Dry open woods . . .	Wild Asters
Dense shade . . .	Plantain Lily
Poor soil in sun . . .	Butterfly-weed
Salty soil . . .	Marsh Goldenrod
Etc.	

Foliage

Evergreen . . .	Yucca
Effective after bloom is passed	Peony
Ragged after bloom . . .	Hollyhock

The most important lists

Many are given in various books, and from time to time in such periodicals as *The Garden Magazine*. See also nursery catalogues. Mrs. Sedgwick's book "Garden Month by Month" is very complete and usable.

PERENNIALS	EXAMPLE
Foliage— <i>Continued</i>	
Bold leafage . . .	Rhubarb
Finely cut foliage . . .	Meadow-rue
Aromatic . . .	Lavender
Resist autumn frosts . . .	Phlox
Killed by frost . . .	Plantain Lily
Etc.	
Flowers	
Very large. . .	Hollyhock; Peony
Inconspicuous . . .	Ferns
Massed above leaves . . .	Iris
Fragrant . . .	Pinks
Very early . . .	Siberian Squills
Very late . . .	Chrysanthemums
Long bloomers . . .	Shasta Daisy
Short bloomers . . .	Oriental Poppy
Etc.	

Use

Border . . .	Iris
Cut flowers . . .	Peony
Massing . . .	Phlox
Shrubby . . .	Bulbous plants
Formal garden . . .	Iris
Rock garden . . .	Creeping Phlox
Wild planting (see Soil) . . .	Native plants
Specimen . . .	Plume Poppy (spreads)
Special uses, etc.	

Having an image of the type forms needed, lists from which to choose, and data as to the requirements of the various species, then consider the soil in its relation to the plant growth, the climate and exposure, the

effect to be produced, the purse of the purchaser, the care to be given in the future, etc. All these are factors in the choice of materials.

Soil conditions come first usually. It is of no use to make over the soil; choose rather the plants that fit the local conditions. Thus on sandy soils all evergreens must be Pines and Junipers; on wet soils they may be Arborvitæ. Pines and Rhododendrons will not grow on a stiff clay soil; try Gray Birch. Hybrid Tea Roses insist on a bed of specially prepared soil; you had better plant the Rugosa Hybrids, if you want garden roses in summer to bloom when neglected. Dorothy Perkins and other Wichuraiana Hybrid Roses will grow in soil that Crimson Rambler cannot endure, for the root system of these two types is quite different.

The *future care* should greatly modify the planting—will there be an intelligent gardener in charge or will Nature have to care for it? The best-thought-out planting can “run to seed” and be “seedy” if left to itself. Use no soft Dogwoods or the Rose family (except Spiræa) unless some one will spray for scale. Deutzia must have the dead twigs cut out every year, etc. Yet there are plenty of plants that will “thrive under neglect.”

The *purse of the owner* influences the planting. Shall it be very inexpensive, of collected stock, or very elaborate, with specimen plants from nurseries? If the purse is limited and the soil not favorable, omit most of the evergreens.

The *effect* to be produced is a result of the genius of the designer and the natural beauty of the site. This is esthetic, but also practical. Colored foliage is too garden-like for natural planting; for tall clipped trees, Lindens are better than Sugar Maples; Sweet Williams are too common for formal gardens, etc. Some of the effects may be styled as formal, park-like, woodland, flower border, street, public grounds, seasonal, private, etc. No two pieces of work are ever alike, especially in this consideration of the effect to be secured.

TYPES OF ARRANGEMENT

Having then considered our materials, and the practical and esthetic limits placed upon their use, we make a list of the plants that would fit these conditions. We are now ready to think of arrangement in detail. For every planting should have a reason for its being, and not “grown” like Topsy. Every plant should speak for itself, and not require our arguments in defence of its location.

Are we planning for immediate or future effect? In most cases we strive to take care of both, and the problem is made more complex. Every planting is different in its final arrangements, and the details

depend too much on actual conditions to discuss them at present. But the several theories of plant arrangement we can touch upon.

(1) The *severely simple*, "somebody lives there." A simple grouping of simple types of plants for simple places, mere touches of vegetation to afford relief; the suburban lot may be so treated.

(2) *Special effects*, of form, foliage, formality, season, color, etc. Here the plants are grouped to give certain definite effects to carry out the design; much of the usual planting is mostly of this order.

(3) *Botanic relationship*, a study in the relation of form, foliage, etc., of various plants related botanically. The eye naturally sees the differences and likenesses of a group of the various Viburnums, Spireas, or other genus. This idea of plant relation may be introduced in very restricted areas, but a large estate will allow its greater development. It has nothing to do with a botanic garden.

(A) *Ecological*, or plant affinity groupings. A placing together of plants that are found together in Nature. This is most useful in "wild" planting. A group of Sumac, Sweet Fern, Asters, and Goldenrod has an artistic merit to our eye because we have seen them growing together on many New England hillsides. Again: Cattail, Water Lily, Elder. Such combinations are endless.

QUALITY OF MATERIAL

Arranged on the plan, the plants are next to be purchased. Well-developed nursery stock with straight stems and good root systems is always the cheapest and the best. No plant was ever too well grown. For immediate finished effect near the house the very best of plants are none too good. Put the money allowance into quality rather than in quantity, for a few well-developed plants are of far more value than a lot of skinny ones. On large estates, both at the beginning of the work and for maintenance, a nursery should be kept up, not so much for the money that *may* be saved, but to have a supply of well-grown plants within easy reach that can be drawn upon for immediate effects. But when a good deal of ground must be covered at little expense, and we are willing to wait a few years for finished results, then collected plants are the thing. Then the greater part of the appropriation can go into the soil preparation, and if the stock is suited to the soil and is given a fair chance, a few years hence it will even rival nursery stock. It is a question of plant habits rather than for argument. Sumac pulled from the woods is as good as the best nursery plants; but a collected Elm from the woods is worthless, as it will probably never have a high arching shape.

ESTIMATING QUANTITIES

Though the planting should follow all heavy construction, the final plans for plant arrangement should be made early, that necessary changes may be made; it is much easier to move plants on the plan than after they are two years planted. While estimating the quantities comes the question of distance apart. For immediate effect the plants should nearly touch when in leaf. This means that the usual nursery-grown shrubs will be placed 3 to 4 feet apart, and that is altogether too close for the good of the plants five years hence. We suppose that the gardener will year by year take out the crowding plants in such a way that the mass effect will be little changed. But suppose that nobody thinks of relieving their congested condition? Then mass planting for immediate effect is bad business. Given time, one Tartarian Honeysuckle will occupy the space formerly taken by ten, and be more healthy than they could ever be.

Suppose that we plant for the future comfort of the plants, how far apart? Many factors must be considered besides the present size—the soil in relation to the growth, the effect desired, the foliage about the planting, the size of the group, the care to be given, and the vigor and ultimate normal size of the species. The final spread of most woody plants will be equal to the height as given in catalogues and books. Take the height ultimately to be attained by the plant as your measuring stick in most cases, but consider the other factors.

This means that the larger Oaks and Elms may be placed 100 feet apart, trees the size of Apple require 40 feet for normal development; Plums, 30 feet; Lilacs and other small trees, 15 feet; *Spiræa Van Houttei*, 10 feet; *Berberis Thunbergii*, 5 feet; *Spiræa japonica*, 3 feet; Peonies, 2 feet; *Spiræa Anthony Waterer*, 2 feet; Phlox and large perennials, 2 feet; most perennials, 1 foot; and small bulbs 6 inches or less. Woody plants placed too closely will shoot upward or become permanently dwarfed; herbs will spread until all the ground is taken by their roots, and their tops crowd, then they lose vigor and must be reset. The open spaces between plants set for permanent effect can be taken up temporarily by the interplanting of other species. This is a subject in itself.

Soil preparation comes next in our consideration. This is outside our present discussion, but it affects vitally the welfare of the planting. The soil preparation must be *thorough*, we are not setting posts. In many places it should cost more to get the ground ready than to buy the plants; usually it should cost at least a dollar to plant a street tree. I can prepare a bed in five hours or five days, and it will look the same when the plants are set, but there will be a difference two years later.

WHEN TO PLANT

Fall or spring planting depends on species, soil, climate, and other factors. Thorough workmanship is more important than season. Spring-blooming perennials should surely be moved in early fall. Some trees and shrubs are not to be moved in the late fall, for example:

Evergreen trees, both coniferous and broad-leaved. (August-September better.)

Trees that grow very late, whose twigs scarcely ripen. Example, Peach.

Trees that bloom late in summer. Example, *Gordonia*.

Trees with soft punky roots. Example, *Magnolia*.

Trees of doubtful hardiness. Example, Empress tree (in New England).

Trees with thin bark. Example, Birch.

Trees with a naturally poor root system. Example, Hickory.

Perennials that bloom late. Example, *Chrysanthemums*.

Perennials of doubtful hardiness (unless well covered).

Of course it often happens that planting must be done while the work is being carried on, regardless of season. Shrubs and herbs may even be moved from a nursery in midsummer, if plenty of water is at hand. *Spiræas* don't mind a shift any day in the year, but *Roses* and *Hawthorns* will surely die if moved when in leaf. Success in out-of-season planting depends both on the care taken and the adaptability of the species.

After all the planting is over and the beds have been raked smooth comes the question of *maintenance*. Some gardens are fussed with too much, and many are left too much to Nature. A great many plants "thrive under neglect," and these should be used where we know that the pruning shears and spray pump will never enter, nor the spade come in to reset when the herbs are crowded. The *Ailanthus* may start the list of the large trees; the Flowering Dogwood of small trees; Van Houtte's *Spiræa* of large shrubs, Japanese Barberry of low shrubs; the Day Lilies are enduring herbs; and Periwinkle is a permanent ground cover. These plants always look healthy, though forgotten; they accomplish the impossible in the garden; they endure wear, neglect, poor soil, and insects. The list of such permanent plants is longer than at first would appear.

ESTIMATING COSTS

To estimate our work we compile cost data. For preliminary figures the following may be helpful, but remember that cost in any work depends first on local conditions, then on management.

Trees suitably grown for street planting, 1½-2 inches caliper, listed at		
Shrubs, 3-4 feet, best of stock	\$ 1.00	each
Shrubs, average stock	15.00	hundred
Large shrubs and small trees	12.00	"
Evergreen trees (with ball) large—about \$1.00 per foot in height	25.00	"
Evergreen trees (without ball) not over 5 feet	1.00	each
Broad-leaved evergreen trees and shrubs (with ball) 18-24 in.	75.00	hundred
Hybrid roses, 2 years, field grown	15.00	"
Perennials, strong field-grown plants	8.00	"
Perennials and ferns, collected stock	5.00	"
Ground cover herbs, collected	10.00	thousand
Freight and packing, 20 per cent. of list cost		
Preparation of soil	.05-10	square yard
Planting of trees—in prepared soil	.10-50	each
Planting of shrubs	.05	"
Planting of perennials, in special gardens	.01	"
Planting of perennials in wild gardening	¼	"
For quick estimating:		
Shrub borders, one shrub to square yard prepared and planted <i>with plant</i>	.20	per square yard
Perennial borders, one plant to square foot prepared and planted <i>with plants</i>	1.00	per square yard

These averages are safe only in *large plantings, stock bought at wholesale and planted under competent direction*. Smaller areas should be estimated only after the varieties to be used are determined and local conditions known, for with small areas the unit cost will be greater. Like all averages, these figures may be very helpful or very misleading.

The amateur garden builder more frequently buys his different plants singly or in quantities less than ten of a kind, at retail rates. If illustrated retail catalogues of nurserymen are not at hand a different estimate for the cost of stock is needed. While prices of single plants have a wider range than for large quantities, we might use the following as average values, bearing in mind that common plants and those easily grown are cheaper than rare plants or those of difficult culture. For instance, a Magnolia costs four times as much as a Lombardy Poplar of the same height, Privet is one of the least expensive of shrubs (it is easily raised), and named varieties of Iris, Phlox, Larkspur, etc., may cost nearly twice that of the old-fashioned sorts. Height is only one of the factors in judging the value of a plant, but it is the best general standard.

Deciduous trees from 5 to 8 feet (usual nursery size of the species)	\$.75 to 1.00	each
Deciduous trees, 10 feet or more (not "specimen")	1.50 to 2.50	"
Deciduous trees, rare kinds, from 3 to 6 feet (of good size)	2.00 to 5.00	"
Evergreen trees, with ball, 2 to 3 feet (smallest planting size)	.75 to 1.00	"
Evergreen trees, with ball, 4 feet or more (not "specimen") at least	1.00	per foot in height

Evergreen shrubs, with ball, 18 inches (small plants).	\$.50 or more each
Evergreen shrubs, with ball, 2 feet or more (large plants)	2.00 to 5.00 each
Common deciduous shrubs and vines, 2 to 3 feet (average small size of species)	.35 "
Common deciduous shrubs and vines, 4 feet (larger size)	.50 "
Azaleas, Hybrid Roses, and other special shrubs (usual small size, or 2 year)	.50 "
Azaleas, Hybrid Roses, and other special shrubs (2 feet, or 3 year)	.75 to 1.00 "
Perennial herbs, common varieties, field grown	.15 "
Herbs, less common sorts and named varieties, field grown (2 year)	.20 to .25 "
Peonies, rare species, and novelties (2-year size)	.50 to 1.00 "

Both cheaper and more expensive plants in these sizes can be bought, and actual comparison will show the difference to be real. When ten or a dozen of a kind are bought the rate will be 10 to 20 per cent. less than the *each* price; and there is a second similar reduction by the hundred for common plants. "Specimen plants," those larger than average nursery size, can be had at about double the above prices. These are for immediate effect, and if for a conspicuous place are worth the extra cost from the point of view of the appearance of the planting.

Though the cost of a plant is often the first item to receive attention in our garden planning, we must never forget that a similar amount of thought should be given to the other considerations. The greatest study as to its *placing* for the finest effect in the garden, the best of *preparation* of soil for its planting, the necessary *attention* for its proper growth, and then the fullest *enjoyment* of it as a part of the whole garden: these give us highest return value in our garden labors.

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