

SB 472

.J7





Residential Sites and Environments

PRESS OF
A. T. DE LA MARE PRINTING AND PUBLISHING COMPANY, LTD.
NEW YORK.

RESIDENTIAL SITES

AND

ENVIRONMENTS

THEIR CONVENIENCES, GARDENS, PARKS,
PLANTING, ETC.

BY

JOS. FORSYTH JOHNSON, F. R. H. S.

CONSULTING LANDSCAPE GARDENER AND GARDEN ARCHITECT

AUTHOR OF "NATURAL PRINCIPLES OF LANDSCAPE GARDENING"

NEW YORK

A. T. DELAMARE PRINTING AND PUBLISHING CO. LTD.

NOS. 2 TO 8 DUANE STREET

1898

2nd COPY,
1898.

11861



TWO COPIES RECEIVED.

SB472
'J7

Entered according to Act of Congress, in the year 1898, by
JOSEPH FORSYTH JOHNSON
in the Office of the Librarian of Congress at Washington

7158

Entered at Stationers' Hall, London, England

All Rights Reserved

PREFACE

THIS world abounds in beauty and light, and Nature yields an everlasting inspiration which is to be gained only by true admiration of herself in all her moods.

The existence of plants, their structure, and their growth, serve to demonstrate their development, but satisfaction is not given to our sense of pleasure from the mere sight of plant beauty unless we have the ability to contemplate the specific character of each plant observed. "God has introduced man to be a spectator" said Epictetus. In our Parks and Gardens, for instance, you may walk a mile and not see a single example of natural growth of either tree or shrub, although you will pass hundreds of both, but bundled together so that it is not possible to distinguish the beauty of one individual plant from another. This is destruction, not development, of plant life, yet it is dangerous to point out these facts, for some writer, belonging to a powerful newspaper, will cry out "This means destruction to our Parks and Gardens, with vistas, etc."—as if we could see behind brick walls! Destruction is not good, and the calling of bad things good makes them much worse than calling such truly by their proper terms.

In our Parks and Gardens, age has established growths of trees which none would wish to touch, for the effect of years cannot be gained in a day, nevertheless the defects of a faulty arrangement should be made known, so that new land to be developed shall not go on in perpetual repetitions of the same faults. The belts of "Capability Brown" are things of the past. We show in the following pages how to treat boundaries of public parks, as well as their interiors.

In the would-be arrangements of a residential environment there is often much effort made that is opposed to Nature. It is hurtful to true admiration. In this work, the object is to move the mind to the best of things, so that by labor helping Nature, unthought-of great results will come forth.

The majority of the plans given in the following pages are reproductions of what have been put into effect; many have been executed specially for this volume, and for the use of some of the blocks I have to thank the proprietors of AMERICAN GARDENING, and also for permission to utilize certain passages from that paper. In placing the manuscript of this work in the press, I thank Mr. Leonard Barron, F. R. H. S., Editor of AMERICAN GARDENING, very sincerely for his valuable assistance.

J. F. J.

TABLE OF CONTENTS

PART I

THE RESIDENTIAL SITE

	Page
Introduction	9
The Residential Site	13
Five to Forty Acres	16
Model Home Ground	20
Thinning Out Woodlands	28
The Park Home, No. 1	31
The Park Home, No. 2	33
Beauties of Plant Life	37
Special Effect of Trees and Shrubs	43
Special Effect of Carpeting Plants	44

PART II

PLANTING AND INTRODUCTION TO UNDULATIONS

Planting	49
Transplanting Trees and Large Plants	53
Natural Mass Planting	55
Natural Grouping in Boundaries	57
Grouping Trees	63
Sloping Banks	65
Planting Borders	65
Herbaceous Garden and Borders	66
Perpetual Effect	69
Rockeries	73
Aquatic and Bog Garden	78
Water Garden	80
Natural Garden	83

PART III

VILLA GARDENS AND PUBLIC GROUNDS

Small Grounds	89
Corner Lots	91
A Southern Garden	95
Planting a Church Front	98
Locating Entrance Roadways	99
A Villa Plot	100
The Terrace Effect	102
Planting a Very Small Garden	104
Making the Most of the Back	108
A Town Square	110
INDEX	115

LIST OF ILLUSTRATIONS

	Page
Points for Residential Site, Scale of Value	13
Terracing, Showing Arrangement of Ground for House Foundations	14
The Ha-Ha	15
Too Deep Planting	50
Correct Planting	50
How to Tie	50
Good and Bad Planting	52
Moving Large Trees	54
Bad Massing	55
Natural Mass Planting	55
Development of Outlines	57
Planting a Slope	65
Rockeries	73, 74, 75
How to Grade for a Terrace	103

PLANS

No.		Page
1.	Bad Arrangement	16
2.	Good Arrangement, Broad Views	17
3.	Good Arrangement, Long Views	18
4.	Waterside Property, Long Views	19
5.	Model Home Ground	26
6.	Forming a Homestead from Woodlands and Thickets	29
7.	A Park Home and its Environments, No 1	<i>to face</i> 32
8.	Park Home and its Environments, No. 2	35
9.	Grouping Various Forms into Harmony	59
	Key to Plan No. 9	61
10.	Grouping Trees Together in Planting	64
11.	The Herbaceous Border for Public Gardens and Parks	67
12.	Arrangement for Perpetual Effect, Combining Natural and Formal Styles	71
13.	An Aquatic and Bog Garden	79
14.	The Water Garden, Margined with Hemlocks	81
15.	The Natural Garden	85
16.	Bad Arrangement of Corner Lots	89
17.	Good Arrangement of Corner Lots	91
18.	Park and Water Effect	93
19.	A Southern Garden	96
20.	Ornamental Planting of a Church or Hall Front	98
21.	Home Grounds, Illustrating Location of Roadways	99
22.	A Villa Plot	101
23.	Terrace Effect	102
24.	A Very Small Garden, Temporarily using Adjoining Lot	105
25.	Making the Most of the Back	109
26.	A Town Square, Showing Development of Building Plans	111

PART I

RESIDENTIAL ENVIRONMENTS

INTRODUCTION

THE art of landscape development is second to none in its grateful effects upon home comfort, and its comparatively recent introduction is the only reason which might be advanced for placing it in a secondary position. It is the genius of man which has seized upon the life of the earth and pressed it into service for man's development: the higher intuition of the present age aspires to more aesthetic surroundings.

Through all times we find traces of an aim after these natural impresses in what is called ancient gardening, but, by examining the evidences of this past work, we find that all these attempts did more to destroy the life of beauty than to bring forth its developments, for ancient gardening was more or less the development of limitations, and it is the modern artists (authors and men of deeds) who have progressed towards the "infinite" of landscapes, and thereby have made the earth's beauty a first (if not the first) item of importance.

"The smile of mankind is but what is caught from Nature," Lord Lytton said. "In life the truth is not what we gain but what we do; it is not what we receive but what we give."

Landscape gardening is the art of developing land to meet human requirements, by displaying the characters of plants adapted to buildings, sky, land and water, as the circumstances demand, arranging this life (plant life) to move the human emotions into the harmonies of infinitude; for emotion is life; impressions sway emotions; the beauties of Nature to the true admirer are more varied than the tones of music to the ear, more minute than the microscope can explain, yet more impressive to the sight than the mountains.

Beauty gives motive to our inner life, to our being. Impressions are unfathomable in their benefits, perpetual and illimitable in their action, and infinite in their results. To reveal this to humanity is true development.

To produce natural effects is far better art, more easy, and much less expensive than to endeavor to create weak fanciful effects of limitations.

The ground in the immediate neighborhood of residences (as well as buildings appertaining) requires a particular adjustment, not only that it may subserve all necessary purposes, but likewise that it may yield its fitting quota of embellishment to the general scene. It must first be our study to have the essentials of a residence so placed as not to interfere with each other, and the arrangements of the surrounding lands must harmonize with the outlines of the mansion, so that each part is complete in itself, still uniting naturally with the others to form a perfect whole. Our efforts in this way will at first be in the direction of the surfaces, straight and curved, formal outlines, and strong colors; these gradually blending, by means of intermediate forms and hues, with the natural undulations, so that whether we view the landscape from the window, or, sallying out, survey the house and its surroundings, the impression on the mind will be soothing and agreeable, though in different degrees from different points. Houses, as a general rule, are built too much alike, but we may always contrive that their environments shall exhibit each its own special arrangement, and be in harmony with the surrounding landscape.

Home scenery, so to speak, rarely has full justice done it. The ground near the house may be rightly treated, but the natural outlines beyond will often be either forgotten, or else permitted to assume an almost wild aspect while yet in contiguity to the formal garden and mansion itself; instead of which the edifice should form a jewel of which the scenery in the immediate surrounding is the setting; in short a portrait to which it is as the drapery.

In selection of a site there are a few cardinal points demanding attention:

The depression of the valley must be avoided on account of dampness, stagnant air, and want of prospect. Some elevated mound, or small hill, high enough to command the distant view, yet not too high for easy approach, and surrounded within easy distance by foliage, will afford the greatest combination of natural advantages to each side; and a house so seated will form an agreeable object when looked upon from a distance, as it neither falls below the horizon nor rudely breaks the sky-line.

The various items that go to make up a home scene will depend much on circumstances. The sunlight is fraught with such numberless advantages that an abundant supply of it will prove one of our very best coadjutors.

In sections where the surface is level, no attempt should be made to imitate mountain scenery. A level country has a beauty of its own, and this demands a character of treatment very different indeed from that which we should think it expedient to adopt in a district of rocks and hills. In other respects, our outlines should be gracefully bold and sweeping, and the lines of planting on the whole in accordance with the general curvature of the soil. Occasionally, also, it may be found desirable to alter the natural lay of the land, as by forming miniature valleys, raising small hills, making breaks and curves to conceal objects that do not harmonize with the scene. These alterations are also sometimes necessary to bring into harmony of action a graceful union of distant views, and also occasionally for development of vegetation. Such diversification will also afford proper facilities for planting evergreens and deciduous shrubs, many of which do not now meet with the attention their beauty deserves.

It will be found desirable, too, that the natural contour of the soil itself should be made to yield assistance to development. Sometimes high ground in the vicinity of a house, as in cases where it intercepts the view, or is otherwise out of place, requires to be lowered. But this operation is rarely necessary; rising ground, especially in a level country, being extremely valuable with regard to the introduction of graceful curves. Close around the house itself, however, level ground must be had, forming a plaza or plateau of a size that will be in proportion with the house.

But it is inherent in man ever to long for that which he does not possess, and therefore it is that we occasionally witness attempts to realize level scenery in mountainous districts, and *vice versa*. Alterations, however, are not invariably improvements, and when the feeling of novelty begins to wear off more reasonable views concerning the matter succeed, and the mistake becomes apparent. Every effort must have an object.

The labor and cost of removing soil are items which cannot be overlooked, more especially where alterations have to be made on a large scale. Notwithstanding this, however, it is surprising how much can be done at moderate cost by judicious management, and by once removing each spadeful of soil into its proper place. Thus six inches of soil taken from the lower and added to the higher level, can be made to raise the latter one foot or even more, over the other.

So again, we may further impart an apparent greater elevation by planting the ground with vegetation of suitable form and color.

The forms and conditions of soil are matters very closely connected with all land development, and must become the subject of frequent consideration when such work is in question.

Land, in order to be beautiful, needs to have more or less undulation, and in truth, it is rarely found to be quite level, unless when it is rendered so by the busy hand of man. Undulations, when

absent from the land, may be developed by the correct planting of trees and shrubs, and not necessarily by the upheaval of the earth's surface. In studying the natural undulations of the soil, requirements of drainage and the service to which whatever water supply that may be found on the place can be put, are matters of the very greatest moment, and must be considered. We should also pay special attention to note elevations and low lands. Thus, in the laying out of ornamental grounds, great advantage will often accrue by, as it were, assisting Nature and causing the new undulations to harmonize with the existing curvature of the soil.

When properly managed, and when we have to deal with a dry subsoil, it is not so costly a matter as might be imagined to raise the ground some six feet or so. The elevation, however, should be effected in a natural manner, and generally by easy and almost imperceptible gradations. The proper elevation of the soil will vary according to circumstances, and likewise according to the demands of the plants meant to occupy it. Ground is raised to gain soil for the planting and to provide elevation for the effects. This is seldom required on a large scale, but it is often found requisite in order to conceal what otherwise might prove an eyesore, or to turn an objectionable feature, such as a stable, a back entrance, or kitchen door, into a pleasing one.

In home ground scenery—as indeed in all other—the lines of sight must receive due consideration; a tree or two may, as it were, break away from the more general masses, so as to impart interchanging effects of light and shade, and increase the diversity.

In our endeavor to assimilate distant views and expanses with those more immediately contiguous to the dwelling house, it will often prove of excellent service to use plants that may occupy an intermediate position, so to speak, between the artistic portion of the landscape and the natural undulations beyond, as well as to have something in common with both. For example, *Juniperus communis hibernica*, by its columnar character of growth, will be quite in keeping with the formal outlines of the middle line of sight belonging to a mansion, while its silvery hues will harmonize well with specimens of *Pinus excelsa* at a greater distance. As respects carpeting plants and shrubs, these should receive full development in the foreground. Shrubs, indeed, when properly handled, produce very successful results near a dwelling. As they do not rise above twenty feet, they can thus be brought nearer than many trees, and by their graceful forms and bright colors serve to enlighten the scene.

Each of our plants should display a certain fitness and harmony with its surroundings. There should, if I may so express myself, be no merely heaped-up mass of vegetation. Whenever possible, each beautiful feature that a plant possesses, should be displayed with loving care. It requires, no doubt, considerable space to do full justice to all the various characters of available trees and shrubs; still we have city parks, residential manors, and private gardens in abundance, where the more hardy species may have ample room allotted to them.

The boundaries of our home scenery, by means of suitable plantings, may, with great propriety, be made to assume much of the irregularity of natural outlines, every advantage being taken of any recesses that may exist, so that no limitations of boundaries shall appear from the residence.

Vegetation in newly-planted places will require attention as it progresses, growths used for present effects requiring to be removed as others of more permanent nature attain development. If a plot of ground be properly laid out it will be impossible for the owner, if he be a person of any good taste, ever to become tired of it; for here indeed each year would add a fresh beauty and develop characters unseen before, and the pleasure of arranging them to best advantage is great. As Repton so well remarks: "The most valuable lesson now left me to communicate is this: I am convinced that the delight I have always taken in landscapes and gardens, without any reference to their quantity or appropriation, or without caring whether they are forests or rosaries, or whether they were palaces, villas, or cottages, while I had leave to admire their beauties, and even to direct

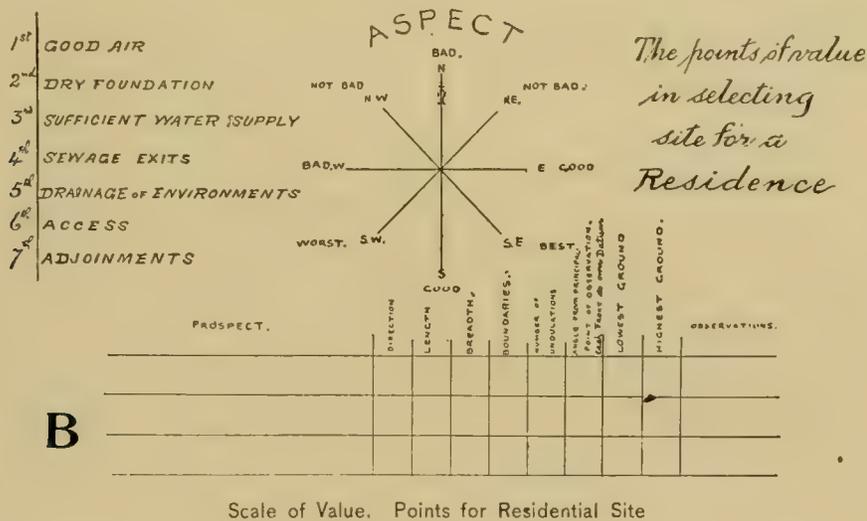
their improvement, has been the chief source of that large portion of happiness which I have enjoyed through life."

The work that can be done on a given piece of ground has, of course, its limitations; there should be no attempt in a villa garden to imitate the grounds of a palace, and, generally speaking, in villa effects the house should, so to say, be subservient to Nature, not dominating. In arranging the surroundings of a residence, it would be unreasonable to expect that the front entrance or back offices, or even the flower garden, should occupy nearly all the ground about the place. Yet often it happens that an undue amount of surface is taken up with one or the other; instead of this, each feature should receive fitting attention and be developed in accordance with its true proportion.



THE RESIDENTIAL SITE

IN the selection of a site for a residence it is of importance to pay proper attention to the essential features of the future building in order to display them to the best advantage. The residence must be given a certain prominence and, as it were, should be raised up from the surrounding land; therefore fairly high ground, as a small hill or even mound, should be selected. Every consideration should be duly and carefully weighed, and no mere fatuous likes or dislikes of the moment, the results of first impressions, should be allowed to influence the decision.



Scale of Value. Points for Residential Site

In order to simplify the argument, it is well to examine the accompanying diagram of the Points of Value (see diagram). There are eight chief points of the compass; each one has its advantages or disadvantages as the aspect of a residence, and their values must be carefully weighed. Then there are seven requirements to be considered from a hygienic view, these are imperative, and take precedence over prospect or aspect, which in turn must have attention. The accompanying schedule is sufficiently explanatory, and a careful study of the Points of Value shown in diagram, if taken in the preliminary stage, will avoid future disappointments, and prove a great saving in expense. Locality will vary the value of points, to which due allowance should be given, but every living room should receive the benefit of sunshine. To judge the value of your scenes, in reference to prospect, do not be guided by whims or fancies, which may prove misleading, but weigh well ultimate results. The diagram marked **B** is a form on which the different values may be recorded; it affords nine valuations to each picture or prospect, and through its use one may better judge that particular one which will produce the most satisfactory results.

THE BASE OF THE RESIDENCE

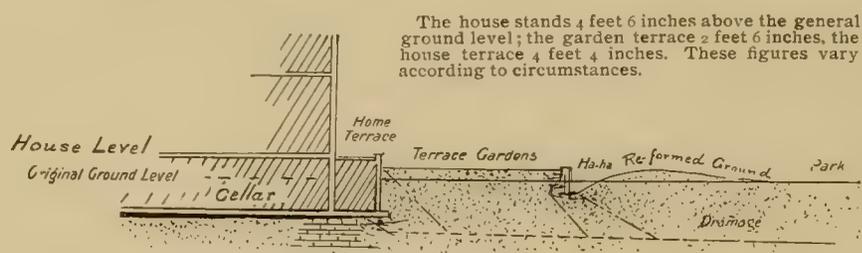
A site duly selected in consideration of the Points of Value just enumerated will naturally afford facilities for the setting of the residence on a suitable base. The setting of a house will vary according to the situation and circumstances; a building which is to be used as a residence should be so disposed on the ground as to be in harmony with its surroundings, and if this be not accomplished it matters not how expensive or elaborate a building it may be, the owner can never derive from its contemplation that sense of satisfaction and content which it is only proper should be afforded by a country home.

A building often seems to be disappearing into the ground, an impression produced in the mind of the beholder simply by its lack of base—by being placed too low in the ground. Very costly buildings often lack this seat on the ground, because the base, although provided, is not large enough in proportion to the size of the whole with regard to the natural features of the land. It is feasible enough to make a building plan in an office, but the proper siting of the residence to the contour of the land cannot be done in the same way. For best effects, then, a building must “sit” on the land, and the plans should be prepared with a live appreciation of the features of the latter.

In no country residence should the offices be placed under the living rooms nor above them; neither should they be separated from the house they have to serve, but should always form an integral part of the general assemblage of buildings, thus giving an impression of dignity and solidity. A mansion with all its outbuildings and appurtenances, an entity in the quiet repose of Nature's own surroundings, creates a far deeper and more satisfying feeling than is ever possible to be found in one of the hotel-looking class, no matter what its size may be, for in it is evidence of comfort and ample accommodation for the requirements of a life of repose amid surroundings of taste.

Servants' apartments attached to a mansion should properly form an important part in the view of the buildings, but it is seldom necessary that their ground floor be on the same level as that of the chief building, thus the connection of the kitchen and dining hall can go under the entrance hall of the principal building, the kitchen to be, say, two feet above the ground level and the dwelling rooms four feet six inches.

The roadway to the principal entrance can be raised cheaply, so as to reduce the steps of the entrance to an easy gradient, for, in excavating for the foundation of the mansion, the soil thus removed can be thrown up to form a roadway on the top of the original land, and this, at the same time, can be harmonized with the architectural features of the building, and worked, also, to suit the contour of the surrounding ground. If, at the beginning, the house be fixed at too low a level the trouble of subsequent adjustment to gain proper effect commences with the first spadeful of earth removed, and continues to the end.



Terracing—Showing Arrangement of Ground for House Foundations

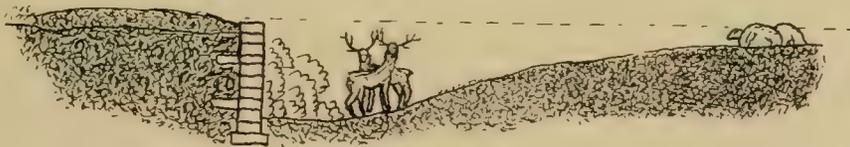
Terraces have been for ages past an important factor in the setting of buildings. They are powerful for good or for ill effects; they are, indeed, to the beauty of buildings like fire and water in

Nature: they perfect the whole or destroy it. It is impossible to make a terrace without consideration of all the other surrounding features of the landscape; its size and the proportion of its curvatures can only be determined by one who is on the site and sees with an eye that can mentally construct the different masses in their comparative relation the one to the other. The principle of terracing is to some extent referred to and explained in figure herewith. Every building does not require a base-ment of terraces. At other times terraces form the proper connection between the outlying lands and the building.

In the surroundings of a country residence there should be provision made for the accommodation and introduction of those many factors which, combined, distinctively brand what we call a country life. The home must be set amid jeweled gardens, surrounded with parks which must also be possessed of life. The majestic tops of the towering trees, breaking the sky-line with beautiful variety, should find their reflection in the surface of a lake or other water, for no landscape is complete without water; let anyone make a mental comparison of a scene with and without water, and the charm that comes from its existence may be somewhat realized.

Moving life is as necessary, not only for its own inherent charms, but also for the figure of comparison it affords the eye in viewing distant scenes. In order to comprehend the full beauty of a distant view, the mind must be capable of instituting comparison with an object of some known size. Moving life in a landscape fulfills this purpose, for it is a matter of common knowledge as to what is the size of a deer, a cow, horses, sheep, or what not. Without this adjunct of life extensive views do not create in the mind that impression of largeness which really is theirs.

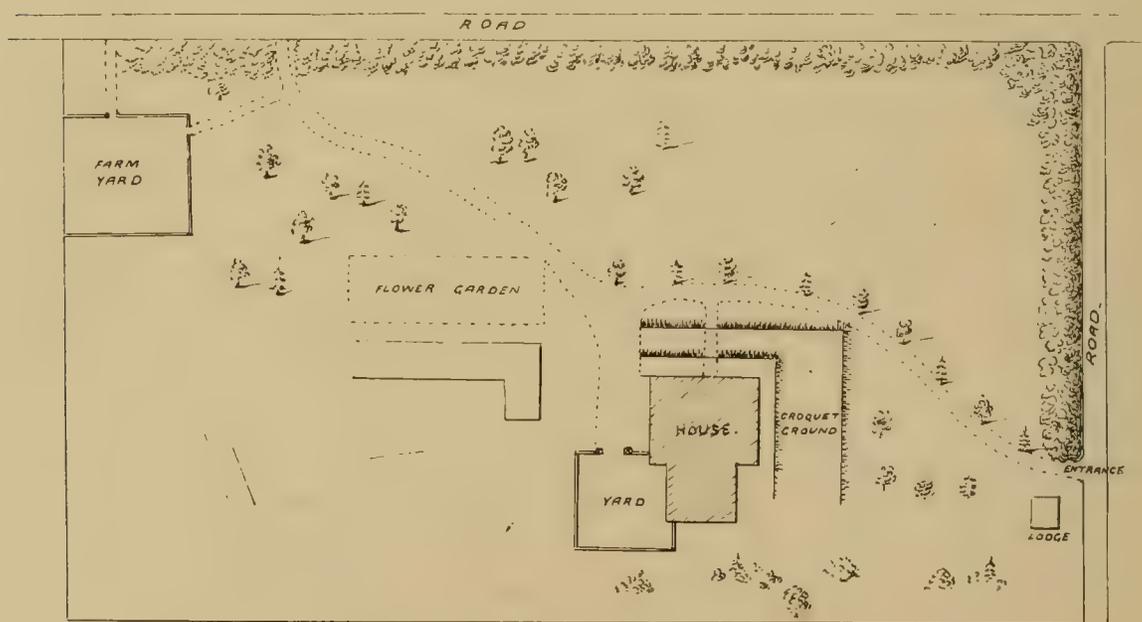
The Ha-ha is used in landscape art for the purpose of eliminating the visible fence line, and yet retaining its advantages of enclosure; by its use the grounds of the garden proper can be brought, so far as the view is concerned, into perfect unity with the park and distant lands beyond. Moreover, it enables the park to be brought right up to the garden, allows of a concentration of the garden, and yet withal enormous depth of view. Acres of mowing grass and areas of gardening without an object, where park effects should exist, are not pleasant to contemplate; by the use of the Ha-ha these eyesores are made unnecessary. No fence should be in sight in a perfect view; the world should appear yours. The accompanying figure will illustrate the construction and use of the Ha-ha, as well as point out a few other principles in the ground construction.



The Ha-ha

FIVE TO FORTY ACRES

IN looking at the style of arrangement often in vogue and comparing it with proper development, it will be seen how easy a matter it is to spoil the whole. This is done by not systematically applying the principles of arrangement, by omitting to place things in their proper positions for usefulness and through not developing the view lines that the land possesses. To explain these differences examine Plan 1, the production of a noted landscape gardener, concerning whose work, when finished, I had the honor to be consulted and for which I made another plan.



Plan 1.—Showing Bad Arrangement

BAD ARRANGEMENT

Firstly, examine Plan 1 as regards utility. The entrance drive from the roadway comes to the south front, exposing the east front in doing so; it takes you around by the west front to the stables and kitchen entrance. Under such a road arrangement every cart and wagon, as well as every cab and carriage, coming to the residence, display their various objectionable features in the foreground of every view from all the principal rooms in the house.

The conservatories are so far from the house that it would not be easy for any corridor to be made to connect them, and we are thereby cut off from a protected promenade that is so valuable an adjunct to a residence in rough weather.

The farmyard is placed in such a bad position that it necessitates the planting of a third of the grounds on that side of the house to hide it.

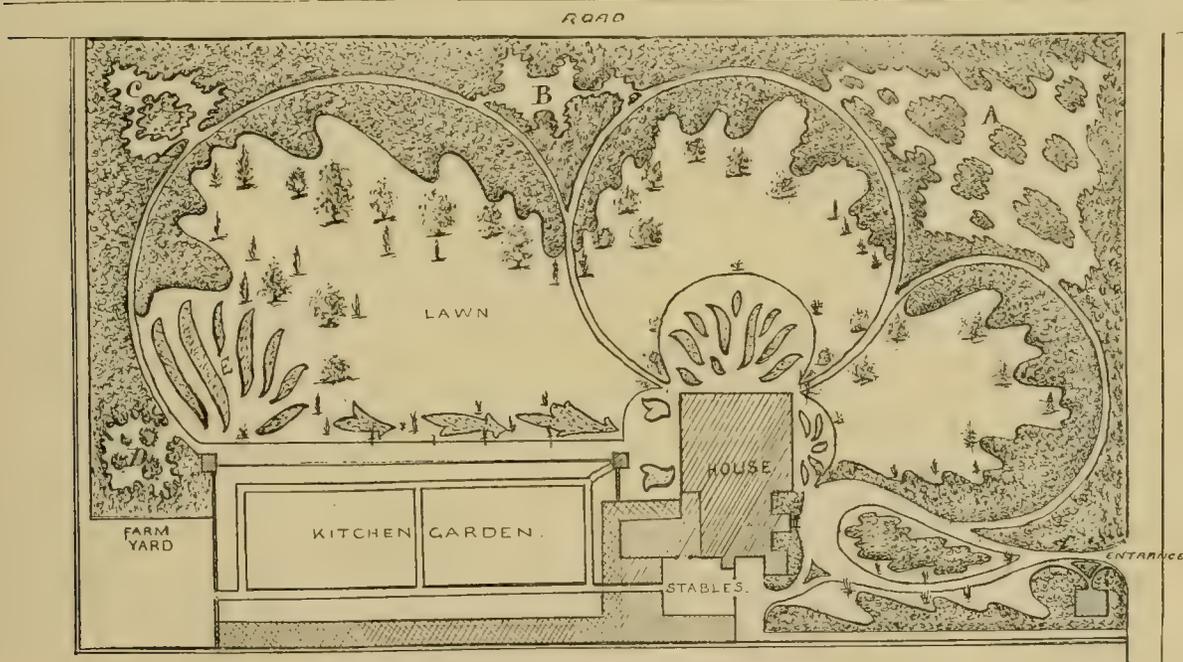
The shrubbery planting follows the fence so strictly that the general view is not superior to that of the fence line.

Under such conditions no natural impression can be made to give satisfaction. A piece of grass of any extent, surrounded by limitation lines, cannot possibly unite its contents to the undulations of the land and sky. Therefore, in such a plan as this, the natural effects of the country home can never be attained by its owner. The mind, in such a place, is always fenced in and more or less limited in its ideas, and thereby irritated; in such surroundings there can be no harmony, and the calm repose which is the birthright of every outlook of a country home is lacking sadly.

Instead of exhibiting to the mind a living world of beauty, it makes one exist behind an inclosed fence line, caged up as a bird or some inferior animal.

GOOD ARRANGEMENT—BROAD VIEWS

Plan 2 is the identical piece of ground, public roads, etc., the same as before, but all the arrangements are for harmony and repose and home conveniences. Select the smallest plot of grass on this



Plan 2.—Showing Good Arrangement; Broad Views

plan and take a dozen photographs of it from different positions, also do likewise with Plan 1, and it will be found that those of the latter are all alike, that the fence line gives limitation and repetition to every feature; but the pictures furnished by Plan 2, will be found all varying, and each one perfect in itself.

It will be observed that not many trees are shown; there are a few planted on the lawn, a like proportion are intended to be used in that portion of the plan drawn dark to indicate shrubs. This style of planting is shown in detail in Plan 5. There is a necessity in such grounds as these of always having abundance—you can form many delightful pictures with the numerous varieties of hardy flowering and evergreen shrubs. Tree effects in such an area should be very impressive and various

in proportion to the grounds. In this case each picture can have its particular tree in the east, west and south fronts, as is better shown in Plan 7; also the various walks can have each its different species of tree, as every walk and road should possess suitable shade trees; the trees in the fence line should not all be stationed round like a row of sentries or lamp posts, but should vary in accordance to the undulations of the planting so that they harmonize with the sky-lines of your grounds instead of with the fence lines.

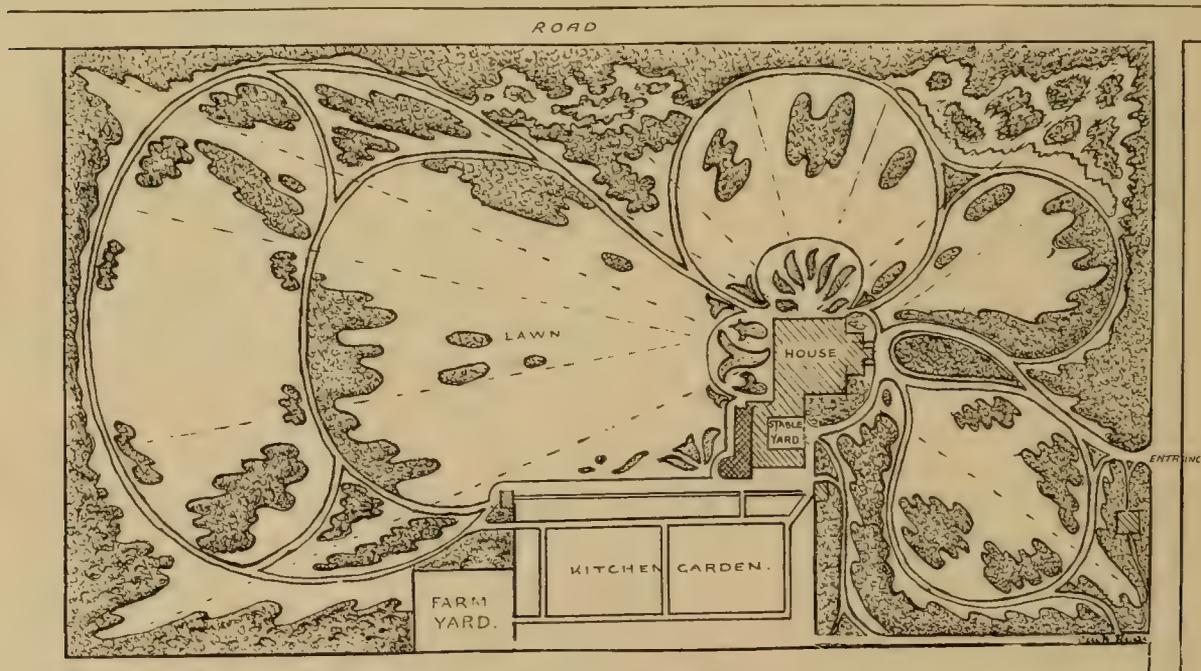
In this plan there is to be a flower garden on the south front of the house for summer bedding; on the east side along the promenade, bordering the kitchen garden, beds are provided for mixed flowers; particular attention ought to be here given to spring flowers, and the beds must be planted to show effects all the year round. At the termination of this walk is the Rose garden, convenient to the house, still not too near, as the fashion is to grow those plants chiefly that give a few large flowers in the year, and when not in bloom they are not effective enough to afford much pleasure to the eye. Letter A, represents Rhododendrons; B, hardy Ferns; C, water effects, and D, alpine plants.

It will be observed that the entrance to the house and stables does not interfere with the complete privacy of those who reside in the house. The conservatories are placed so that they may be connected with the house, if desired. The farmyard is convenient and the back road thereto is not objectionable.

All landscapes consist of broad and long pictures; one is generally the principal and the other subservient thereto. It will be observed in this plan that views or pictures are both long and broad; the long views are retained, but the principal development of the ground is accomplished by broad views.

GOOD ARRANGEMENT—LONG VIEWS

In Plan 3 we have another arrangement for the identical ground, in which the long views are made the principal development and the broad views made subservient thereto. The variations of

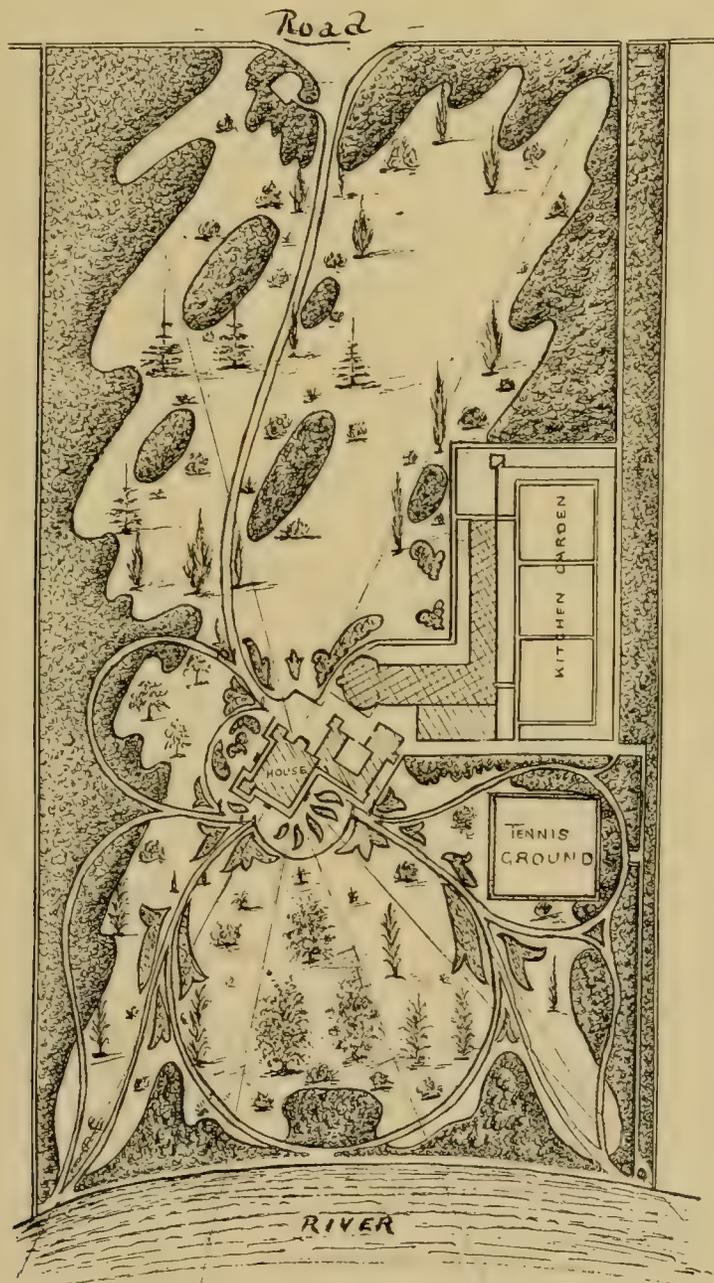


Plan 3.—Showing Good Arrangement; Long Views

this plan can be seen without explanation. The carriage entrance is made grander and the road to the farmyard is taken at the back of the kitchen garden.

WATERSIDE PROPERTY—LONG VIEWS

There is no landscape complete without water. Wherever we find pure water in any form, here do we find, the whole world over, the most valuable building sites, and when nearing the large towns the land becomes more or less cut into strips as shown in Plan 4. In such positions as this the principal rooms of the house should not merely look across a river, but they should also afford



Plan 4.—Waterside Property; Long Views

opportunity to look up and down the river as shown. Another important feature in these long strips of ground is that the carriage drive from the road to the house naturally develops long views, for in such a position the broad views do not possess sufficient value to become dominant. Here we

show how such views can be developed, and when this natural way is followed it will surprise many by the effect produced, for it gives infinity of impression instead of limitation of the grounds. The various arrangements for utility can be seen on the plan. The views from the river would also be many and pleasing. This plan, it may be added, gave satisfaction to the gentleman for whom it was made.

MODEL HOME GROUND

THE leading features of the drawing for a model Home Grounds (Plan 5), show a residence with environments suitable to the comfort of its occupants, according to acknowledged canon laws; the way to enter a domain, how to select the site of a house, how to arrange the elevations of its foundations suitably to the land, where to dispose its principal rooms, how to approach a house, and how to show a house from the surrounding lands; how to place the objects of a homestead to the advantage of its tenants, viz.—showing where to locate the servants' offices, how to see the park front from the residence, the gardens, stables, conservatory, terraces, out-buildings and endless variations of plant life.

We show a dwelling house, with the surroundings which are acknowledged as properly belonging to it, and how final results can be eventually accomplished by first fixing the structure in the right place, so that it will form the nucleus from which the completed garden or park will arise. The plan covers six acres and can be used, with some variations, for smaller or larger grounds.

The correct entrance to a home from the public road has long been established; it should be at right angles, so that carriages coming along the road from either side of the gateway can have easy access (see *A.*). The best point of entrance, if otherwise suitable, is from a recess or bend in the road; our plan shows the best way of making this entrance recess from an ordinary roadside.

To this the carriage approach must be free, direct, and easy, so that a conveyance can land its passengers at the door (*B* to *K*), without slackening speed to turn abrupt corners.

The senses should be prepared to receive properly the correct impressions of the residence; thus the drive should go through a landscape impression of dense shade before reaching the light effect of the house picture; this successional light and shade effect is necessary in the arrangement of all landscapes.

The following standards have long been established: The first view of the house should not be too near or it will not be seen to best advantage. It should not be too far off or the house will appear small. It should show the house in perspective, two sides at once (*B*). The offices, servants' building, etc., should be indicated through the shrubs and trees (*C*). This canon law may shock non-students. It took 200 years to determine that they should appear as an adjunct to the residence, as a wing to the mansion, in the same style of architecture, but with less development, and while these buildings are often not carried so high, nevertheless, they must appear in perfect union with the main structure. When study is given to the accessories of a house many advantages will be perceived from this method which floods every room with light and sunshine, which yields of all four sides (fronts), for your own benefit, with scope for every natural want, supplying the means of a perfect service without mixing servants and visitors, without smell of cooking or noise of work from kitchen, laundry, dairy, etc. These facts make the north entrance the very best.

We indicate a character for each portion of the ground and show how it unites with others. In so

small a place much variation in trees cannot be attempted; of course the choice of plants can be varied according to the circumstances of climate; we merely suggest a particular effect for each picture, to be altered as conditions dictate. In trees we confine ourselves principally to the Grecian or Sycamore Maple (*Acer pseudo-platanus*), German Linden (*Tilia europæa*), with a few *Abies nobilis*, American Hemlock (*Abies canadensis*) and Rhododendrons. These latter two form the general outlines of the boundary. To assist the development of these plants, we show five Tulip Trees (*Liriodendron tulipifera*), to give height to the general arrangement, as they produce a world of undulations above the ordinary growths, thereby forming bold outlines to the sky-line. A few White Willows are planted in the boundaries among the Hemlocks to develop their deep rich colors; for the same object Silver Birches are occasionally planted in the foreground. To sharpen the fine lines of light and shade we have occasionally planted columnar trees and shrubs to hide the boundaries in the mid-distance, assisting the trees and Rhododendrons named.

Each character can have great development in detail, but when it has been satisfactorily developed no more should be attempted, or monotony is liable to encroach on the scene. For blanks in the original scenery a new character should be commenced at once at a different elevation. A great variation of small plants can be given, particularly in shrubby types, as well as herbaceous forms, which are generally neglected.

In this small plan we have 30 distinct long views, 14 distinct tree effects, 6 special gardens, 12 special shrub effects; all have space given them to develop their beauty, and are so arranged that the effects unite to each other and produce a harmonious whole. These principles are good for all grounds, but large areas naturally give greatest opportunities.

The house appears encircled with Grecian Maples. This is its picture frame. The stables (*D*) and conservatory (*E*), are also intended to peep out from among the trees and shrubs, giving a thorough impress to the mind of the extent of the homeland buildings.

GENERAL VIEWS

B is the point of observation in this plan for the first view—2, 2, 2, 3 and 5 show the assemblage of buildings that form the residence and its offices. From this point, also, come four long views across the property, averaging 600 feet in length. *B*₄, to the right, water views. *B*₅, aspiring Spruces appear, with boundaries of Maples. Many other scenes are to be obtained from this first view (*B*), giving variations, extent, and richness that no mere door-front effect can produce, and yet we have the other fronts of the house kept for private use capable of greater effects, beyond comparison, particularly when the land is not too confined.

The back entrance to the house or into the demesne (see road to extreme left of plan) is properly designed for work, without being obtrusive to the main entrance. The stables (*D*) are convenient without being too near to give offence. The engine house (*H*) is located to supply heat, electric light, motive power, etc., to the whole series of household and garden buildings. All requirements are placed to serve their object without interfering with the full enjoyment of the property.

K 6. From the entrance door a scene of aspiring character appears (*Abies nobilis*) with boundaries vanishing amid Hemlocks, etc.; the view is intended for one of elevating, calm repose. After passing through the entrance hall and reception room, and coming to the house terrace (*N*), the boundaries disappear. Trees and shrubs show themselves in mysterious masses, with distances vanishing to the sky-line (7) among Hemlocks, White Willows, Tulip Trees, and large Rhododendrons, these latter planted only in sufficient quantities (with the help of the other planting) to hide the boundaries around the property; the limited square of six acres being thereby turned into a garden and park of infinite extent and filled with mysterious beauty.

From the point *N* (South front), by directing the sight to different elevations, many scenes appear. In looking over the flower garden we see general view (8), moving life of sheep, cows, or horses, according to the owner's desire (deer can only be admitted in large grounds). Trees and shrubs are to be protected by wire-fencing, shown by the dotted square line around the enclosure. The specimens shown on the grass must have wire protection in the usual way.

The Ha-ha (*V*) protects the house fronts in such a way that nothing can cross or interrupt the line of vision from the mansion.

Also, in this south view, the flower garden, Maples and moving life, near Japanese grounds, act as a foreground to the Lindens arranged in massing lines to give impressions of lace-like beauty to the eye. From this same observation point (*N*), to the left the fruit garden appears, faced with trees, shrubs and flowers. Looking to the right comes the distant views of columnar trees. Walking around to the west front of the terrace (*N*), the centre view is one of Maple and Tulip trees (12). We have long views of Maples, Lindens, etc. (13). On the right appears the lake (14), developing upright and pendulous tree characters. View lines are given to assist the reader in testing how to develop views and unite them together.

From the house terrace appears beautiful general views (15) of the terrace gardens, with their plants, shrubs and flowers, and vases; these latter built up in the walls so that the wind cannot blow them over, and in a style suitable to the architecture of the building, and of a size sufficient to hold plants suspended over the curving wall and Ha-ha. All these general results we have produced to create a permanent effect with evergreen trees and shrubs, Rhododendrons, Hemlocks, etc., and yet leave ample space for deciduous plants between them, so as to show their own beauty without injuring the permanent or winter impressions.

PARTICULAR VIEWS

Descending the house terrace we leave general views and examine particular effects. Entering the west terrace (*O*), scene 16 shows the plants on the side of the straight walk to consist of golden Yews and green Yews (*Taxus stricta*), intended for the side of the centre of the grass figure. The impression aimed for here is one of restfulness.

The south front, scene 17, gives the flower garden in a natural development of beds, all various in form, and in proportion to the size of the surrounding scenes. These are shown cut in grass, to be margined with grey plants, such as *Antennaria dioica rosea* and *A. d. minima*, the beds to be set out with abundant flowers, blue predominating (formed by *Plumbago capensis*, etc.); also scarlet Geraniums and Verbenas.

However much beautiful foliage you may use, let it always be subservient to flowers; show the gold and crimson of the *Coleus*, but let flowers be abundant in order to produce the most brilliant effect possible.

East front (18) is a pendulous Yew scene (*Taxus baccata Dovastoni*) to give graceful repose.

Upon entering the grounds from the east terrace (19) is a scene of four groups of the beautiful low growing *Gaultheria procumbens*, *G. Shallon*, *G. nummulariæfolia*, and *Vaccinium vitis Idæa* and three masses of tall Rhododendrons.

To the right (20) a dozen masses of *Andromeda floribunda* and three Rhododendron groups.

The long walk or promenade (21) comes next in rotation. On the left hand side is a south border to be filled with such herbaceous plants as will produce good flowers and sweet perfumes, suitable for cutting blossoms for use in the house.

The tennis grounds (22), 100x60, are shown with *Kalmia latifolia* planted in the surrounding

groups. This directs attention to the fact that each scene must be watched in arrangement, for it will be observed when some of these groups face in other directions, we have recommended other plants.

The circular garden (23) is intended as a rosary. The large and small beds are for general plantations, the small surrounding trees are pendulous Silver Birches; the central erect plants to be of Irish Juniper (*Juniperus communis hibernica*).

BOUNDARY FEATURES

Leaving the rosary we enter the Japanese walk (*T 24*), to be planted with varieties of *Retinospora* and the small growing Umbrella Pine or Parasol Fir (*Sciadopitys verticillata*). These types are planted in the foreground, and to be carpeted with *Euonymus radicans* which forms a good edging as it can be cut into any form. This outer border is wide enough for a deciduous character to be introduced into the background among the *Rhododendrons* and *Hemlocks*. Behind the Japanese plants, variations of *Lilacs* (*Syringa*), can be shown carpeted with *Mahonia aquifolia*. Among these carpets will be plenty of space for varieties of effective herbaceous plants, such as *Hollyhocks*, *Delphiniums*, *Phloxes*, etc. This idea of herbaceous plants can be carried all the way down this border to the lodge after you have planted the plants we recommend, but in all your arrangements always look for your effect; never let desire for variety lead you away from beauty. The zig-zag edging in the plan on boundary walk is formed by placing a row of stones, to be covered with *Ampelopsis Veitchii* or other creepers, to create a permanent edging, that will give good effects and cost nothing to maintain.

Rhododendrons, also bog plants generally, are provided for at (26). All the fine varieties should here be shown that your space and the climate will allow. The development of these effects to be assisted with golden Yews, and the bare ground to be carpeted with *Epigæa repens* (Ground Laurel or Trailing Arbutus), a native over a great part of the American continent; its early spring flowers, exhaling a rich, spicy fragrance, and its effective evergreen leaves making it a very valuable carpeting plant.

All plant gardens should have a soil from two to three feet deep. This is the foundation for all good cultivation. No half-way measures should be adopted.

After leaving the *Rhododendron* ground ascend the park mound (27). This should be built up entirely of good soil rising to the height of ten feet (one-sixth higher to allow for settlement) by soil taken from the water formation. On the top a temple or summer-house should be erected in suitable tone to the mansion, not necessarily the same style. From this mound beautiful views of the house (in perspective), will be seen rising from the terraces among Grecian Maples, and moving life and trees and other shrubs from the park in the foreground, with various other scenes to the right and left.

Before leaving the mound cast an eye along the mass of planting to the left (28) the series of low plants indicated allow of a view 500 feet long, and are so arranged as to give the eye a vista of silent plant life, ever varying in outlines, on each side of the view lines. The beauties of the deciduous *Magnolias* may be shown in many variations, and their particular beauties can be seen in due course by following the boundary walk. This mound may be carpeted with *Jasminum nudiflorum*, dotted with *Scillas*, and Golden Honeysuckles (*Lonicera brachypoda aureo-reticulata*).

On returning to the boundary walk a Juniper effect (29) is shown, carpeted with *Ericas*. This is very charming.

An effect of *Berberis* (30) may be developed in the background.

The next special effect (31) is a ground for Alpines and Ferns, a rockery formed by rising soil in the beds and holding and covering them with rocks, the whole to be carpeted with *Antennaria*

tomentosa. Plans showing how to build rockeries to contain plants and show off their full beauty are given further on.

Leaving the rockery, space may be given for the beautiful variations of American Arbor-vitæ (32).

In the background a Spiræa effect (33), using the beautiful *S. Lindleyana* in quantity; it requires protection in winter in the eastern states.

A recess for a Virgin Bower arbor (*Clematis flammula*), is at (34); its white sweet scented flowers in spring, and its complete covering of thread-like flower effect of the seed vessels in the autumn, are extremely charming.

A general Hydrangea effect may be worked in about (35).

Beyond the arbor (34) variations of Biota may be shown (the Chinese Arbor-vitæ) (36).

A Hawthorn effect (37) is given in the background (Paul's Double Flowering Thorn and others).

The boundary walk beyond the lake has variations of the Azalea, more particularly of *A. amœna* (38).

From the position (39) are three dwarf effects of the beautiful Japanese Maples.

The five beds on the water side (40) develop Bamboos and Lilies.

In the lodge corner (41) may be introduced variations of the Viburnums (Snowballs), among the Rhododendrons and Hemlocks.

The Woodbine mound (42) near the lodge to be carpeted with varieties of Honeysuckle.

On the top of the mound (43) some simple protection for shade and seats should be provided. The views from here of the house, lake, and general impressions will be magnificent. Both these mounds (27 and 42) show many beauties we have not named.

The general effect of the lake (44) will be pendulous and upright growth, produced by planting the three upright groups shown with *Cupressus Lawsoniana*; in exposed places the Red Cedar can be substituted (*Juniperus Virginiana*). The remaining six groups to consist of pendulous plants as follow: Two beds for the variations of Cherries, one for Willows, one for *Betula Youngi* (a pendulous Birch), one for Poplar (*grandidentata pendula*), and one of *Populus Parasol de St. Julien*.

It will be well to confine the water plants to a few. *Nymphæa odorata* will answer nicely for your white effects, and *N. odorata rosea*, the very beautiful Cape Cod variety, for pink. Add to this *Nelumbium speciosum* and *N. luteum*. These will be sufficient for hardy species. To obtain gold, scarlet and blue effects, plunge in tubs the following tender species so that they can be removed readily from the lake into the hothouse in winter: *Nymphæa Devoniensis* (scarlet), *N. Zanzibarensis cœrulea* (blue), and *Limnocharis Humboldtii*, the Water Poppy, for masses of gold.

Group between the lodge and lake (45) is of Rhododendrons and *Betula pendula laciniata* with *Mahonia aquifolia* acting as a carpet.

The beds on the side of the carriage drive (46) are to be developed with *Taxus* (Yew) and Grass variations near the water.

On the left hand of the lodge (47) plant Hollies among Rhododendrons.

The effect (48) to be varied with *Rhus Cotinus*.

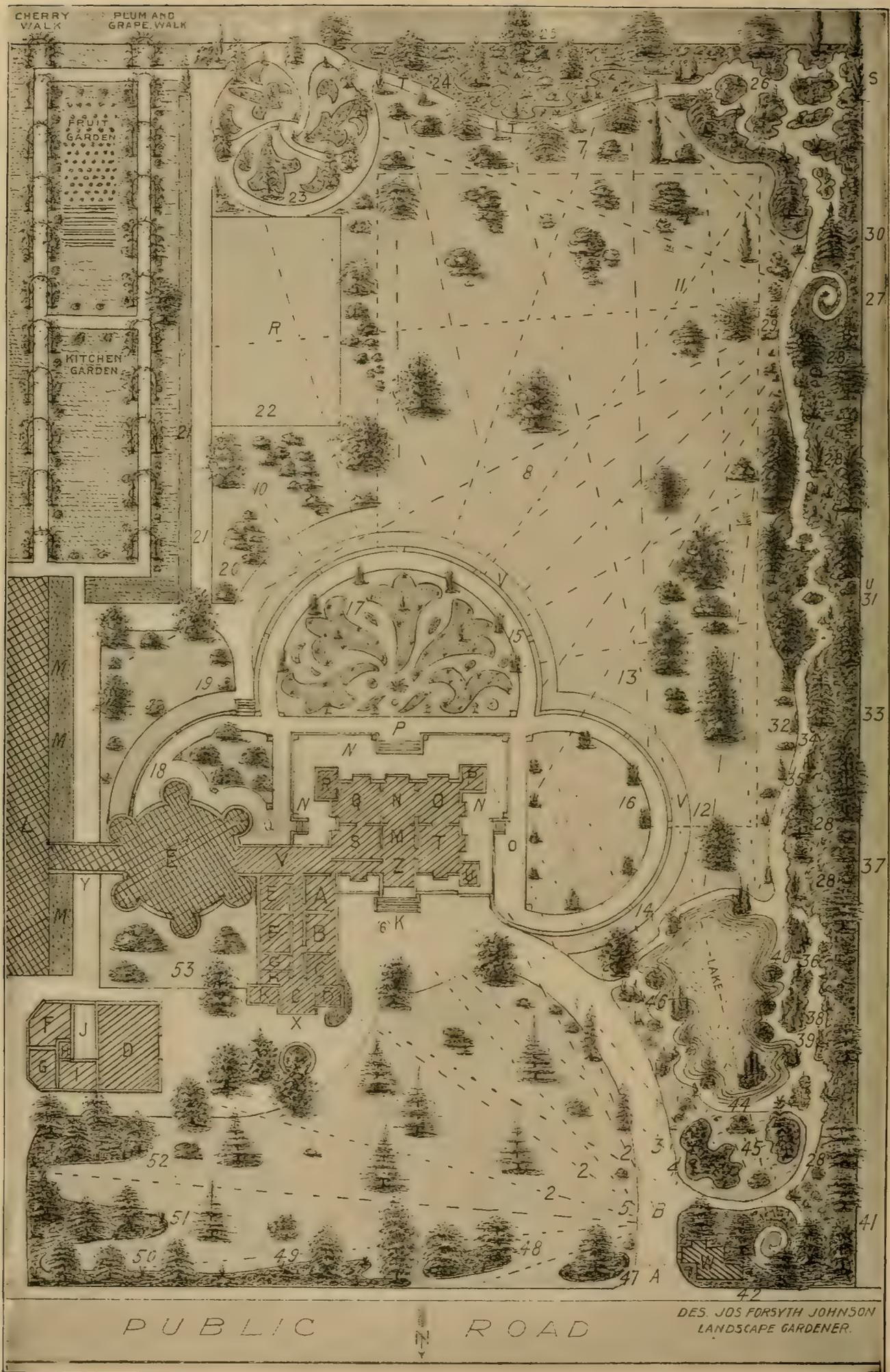
The group (49) to be varied with *Robinia* and Dogwood.

Variations (50) to be *Amelanchier* and *Althæa*.

Variations (51) *Laburnum* (*Cytisus*) and *Kerria* (*Corchorus Japonica*).

Mountain Ash (*Pyrus Aucuparia*) and *Daphne* are shown at (52); and (53) is *Clematis* variations.

This plan, which is drawn to a scale of six acres, embraces all the essential principles for the proper development of the special characters of the various plants used. Many portions of the plan can be utilized to advantage for even relatively small estates.



Plan 5.-A Model Home Ground.

REFERENCE TO PLAN 3

Italic Capitals Refer to Views; Roman Capitals to the Buildings

- A*—Entrance.
B—First view.
C—Offices to be divided as follows:
 A—Butler's Pantry. *B*—Kitchen.
 C—Scullery. *D*—Housekeeper's
 room. *E*—Servants' hall. *F*—
 Laundry. *G*—Stillroom. *H*—
 Larders. *K*—Dairies.
D—Stables.
E—Conservatory.
F—Garden house for fruit rooms,
 tools, etc.
G—Coal house.
H—Engine room, boilers, etc.
I—Cow house.
J—Reserve space for additional
 buildings.
K—Front door of dwelling house.
L—Greenhouses, to be divided into
 vinery and plant houses accord-
 ing to requirements.
M—Border for tender flowers in-
 tended chiefly for cutting.
N—House terrace.
O—West terrace.
P—Flower garden terrace.
Q—East terrace.
R—Tennis grounds.
S—Rhododendron ground.
T—Japanese scene.
U—Fernery and Alpine ground.
V—Ha-ha.
W—The Lodge.
X—Entrance to offices.
Y—Tunnel under conservatory con-
 nections.
Z—House.
 M—Entrance hall. *N*—Reception
 room. *O*—Drawing room. *P*—
 Boudoir. *Q*—Library. *R*—Study.
 S—Breakfast room. *T*—Dining
 room. *U*—Room for smoking or
 business purposes. *V*—Picture
 gallery.

General Views

- A*—Entrance scene.
*B*₂—House.
*B*₃—Park view.
*B*₄—Lake view.
*B*₅—*Abies nobilis* and Maples.
*K*₆—Entrance door.
N—House terrace.
*N*₈—Park view.
*N*₉—Linden view.

- N*₁₀—Fruit gardens, etc.
*N*₁₁—Columnar trees.
*N*₁₂—Central view, Maples and
 Tulip Trees.
*N*₁₃—To the left, long view of Maples
 and Lindens,
*N*₁₄—To the right, water effects.
*N*₁₅—General effect of all the terraces.

Particular Views

- O*₁₆—West terrace.
*P*₁₇—Flower garden.
*Q*₁₈—East terrace.
*Q*₁₉—East steps, views of raised car-
 pet, etc.
*Q*₂₀—Andromeda and Rhododen-
 drons.
*Q*₂₁—Promenade and herbaceous
 border.
*R*₂₂—Rhododendrons.
*R*₂₃—Rosary.
 53—*Clematis* variations, creeping
 over large rocks.
 46—*Taxus* (Yews) and Grasses.

Boundary Features

- T*₂₄—Japanese plants.
*T*₂₅—Lilacs.
*S*₂₆—Rhododendron garden.
 27—Park mound.
 28—*A vista*—*Magnolias*, etc.
 29—Junipers.
 30—Berberis.
 31—Rockery—Ferns and Alpine
 Plants.
 32—American *Arbor-vitæ*.
 33—*Spiræa Lindleyana*, etc.
 34—Virgin Bower, *Clematis flam-*
 mula.
 35—Hydrangeas.
 36—*Biota* (Chinese *Arbor-vitæ*).
 37—Hawthorns.
 38—Azalea, plenty of *A. amœna*.
 39—Japanese Maples.
 40—Bamboos and Lilies.
 41—Snowballs (*Viburnum* variations).
 42—Woodbine mound (Lodge).
 43—Magnificent views from mound.
 44—Water.
 45—Rhododendrons and Birches.
 47—Hollies and Rhododendrons.
 48—*Rhus cotinus*, etc.
 49—Robinia and Dogwood.
 50—*Amelanchier* and Hibiscus.
 51—*Laburnum*, *Kerria*, *Tamarix*, etc.
 52—Mountain Ash and *Daphne* varia-
 tions, etc.

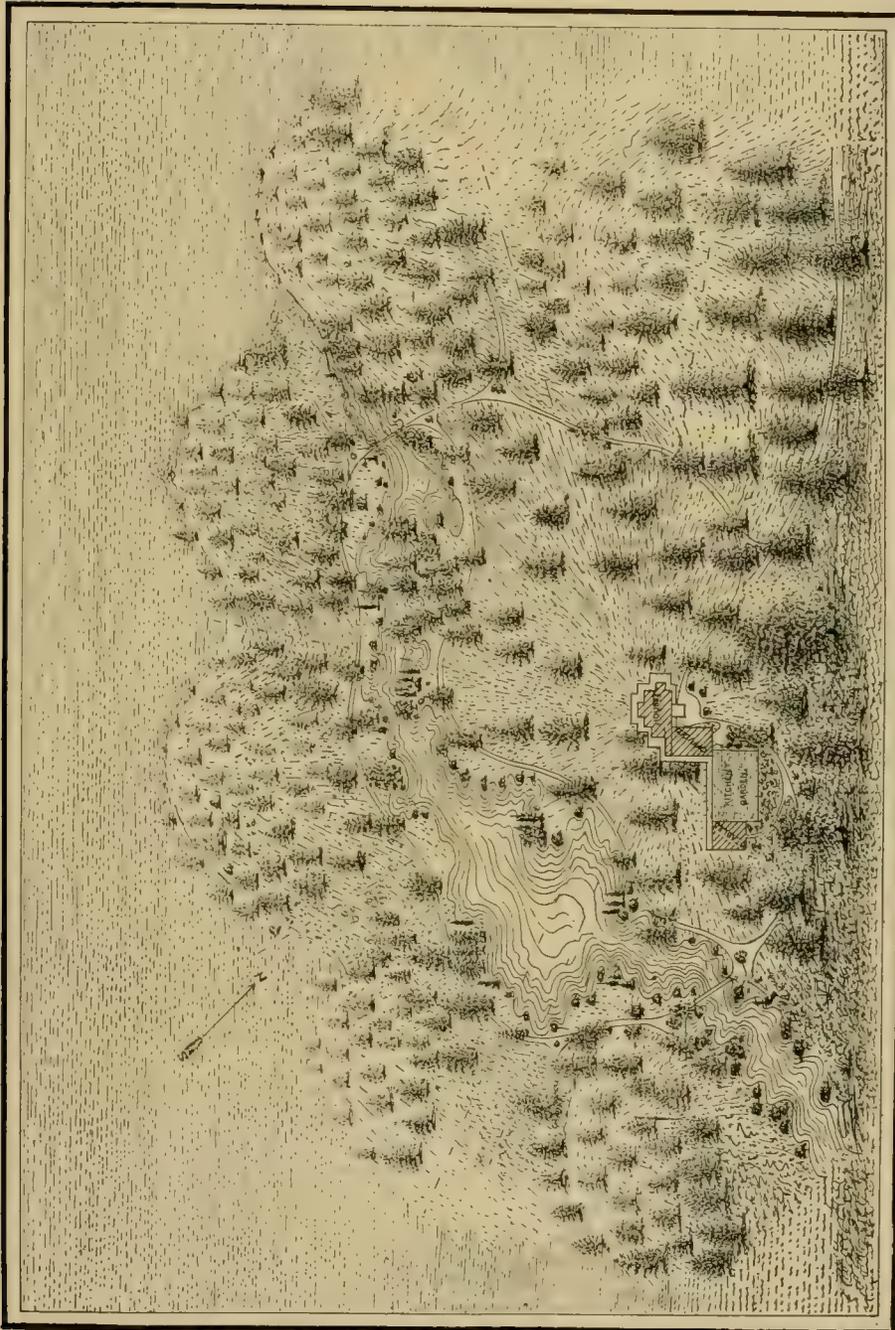
THINNING OUT WOODLANDS

WHEN it is possible to select for the homestead a position which is closely surrounded by woodland, this will be found of decided advantage; but the necessary thinning out of the trees, etc., must not be carried out on the wrong lines, as too often happens. The general method adopted is to clear all ground from brush growth and to cut off the branches of the trees about eight feet from the ground; the results are most unsatisfactory, being injurious to beauty and utility, reducing protection from strong winds, and showing many other serious faults.

The first thing to be done is to select trees that are not mere sticks, that is long poles with a few branches on the top, all the lower ones having been killed off. The trees left for permanent growth must have the possibility of side branches; when these are located all the trees of a "stick" formation must be cleared away from them on all sides, so that the tips of the branches of the selected trees will have room for growth and plenty of air, and not by any means permit the wind whipping the tips off their branches against surrounding trees. The undergrowth, or what we term bushes, it may also be very desirable to save, for among them may be found native shrubs of great value for effect and protection.

It generally happens that the land is not perfectly level but more or less undulating, this will give low or rising ground and hills and valleys. Thinnings should show to advantage the principal views of the grounds; these vary in all instances, and no general instructions could be given that would apply to all environments. Every beautiful object in the landscape should be shown, and objectionable features, such as unsightly buildings, roads, and particularly limitation lines, as, for instance, fences, have to be banished from the sight. On Plan 6 is shown where, under ordinary circumstances, the main views would go through the valleys, reserving them principally for grass and water, on the high grounds we retain and plant according to requirements; thus making the low grounds appear lower than they did when the development was commenced and the high grounds to appear higher. It will be observed that the water is made broader where the view lines from the house intersect. The proper position is shown for residence, servants' offices, kitchen garden, stable and farm.

In this plan trees are shown separately to give the reader an idea how to plant; their effects from all distant points of observation would be that of masses of lights and shades; they would only become single upon near approach.



Plan 6.—Forming a Homestead from Woodlands and Thickets

PARK HOME, No. 1

THE mansion shown in the annexed plan (No. 7) is located so as to have the benefit of sunshine from every point of the compass. The servants' apartments are detached in a manner to be convenient yet not objectionable to those who reside in the mansion. The yard is walled in, attached to the kitchens, so that receiving of coal and the general wants of the house can be supplied without giving any offence to the surroundings. The stables are similarly accommodated. The diamond spaces denote conservatories or other structures, giving the advantage of protected promenades. The small square north of the conservatory is intended for the water tower. The small square to the north of the entrance is to be devoted to the sanitary arrangements, water closets, bath rooms, etc., so that sunshine can be obtained and repairs made without interference with the residence.

The roads are adapted for the various necessities. The terrace around the house is shown by the steps therefrom, and the walk around the house also gives convenience of access to every portion of the homeland, and connects with the (Cedar) promenade which is an essential feature of every good home. The main road to the house crosses the bridge and shows a view of the mansion, two fronts at one time. The back road is located so as to give no annoyance to the residents.

The straight lines from the house represent the chief views or pictures that are seen from the mansion; those marked with the figure 1 are supposed to go into distances beyond these grounds.

The mere placing of one thing by itself is not development; it is indeed more often the proof of an inability to arrange. The right principle to be observed is placing one plant in one elevation of the profile of one picture; one feature of the landscape requires one subject as its dominant. By examining this plan carefully it will be seen that a single subject is ever the principle for each impression.

The picture frame of the residence is of Cedars of Lebanon and upright trees, so that their natural horizontal and perpendicular lines may harmonize with those in the buildings and terraces. Similar groups near the bridge are to harmonize with the water lines.

From the entrance to the residence the groups of pyramidal trees are to be *Picea pungens*; the shade trees beyond are to be Red Maples. The groups in the south part are Sycamore Maples. The pyramidal plants in the east front are *Picea concolor*.

On the east front is located a garden, the material used being composed principally of hardy plants. We term it a natural perpetual garden, and will endeavor to show the many advantages it possesses for continuous effect united with economy; to do it full justice, however, is almost impossible within the limits at our command; no home ground is complete that does not make provision for the plants that are hardy to the climate, and no form of planting gives such satisfactory results in proportion to the space occupied and the money expended.

When the design has been staked off, the soil should be thrown from the pathways into the grouping ground or beds. The centre of this garden should be depressed at least eighteen inches; this will do much toward obtaining the necessary undulations and view lines that harmonize so well with plant outlines.

The prominent features of the garden should be planted with bushy evergreens, such as Rhododendrons and English Yews, four to six feet high. Particular effects (nooks, corners, broad and long views) are obtained by planting one special form of shrub or tree in groups, according to the requirements of the picture; a variety of Juniper might be shown in one, *Taxus stricta* in another, the Umbrella Pine of Japan for another. *Ilex crenata* is very valuable and probably the most hardy evergreen shrub in America; the delightful pendulous Chinese Cherries, the Cut-leaf Birches, are all available; in fact there is no limit to variety or selection.

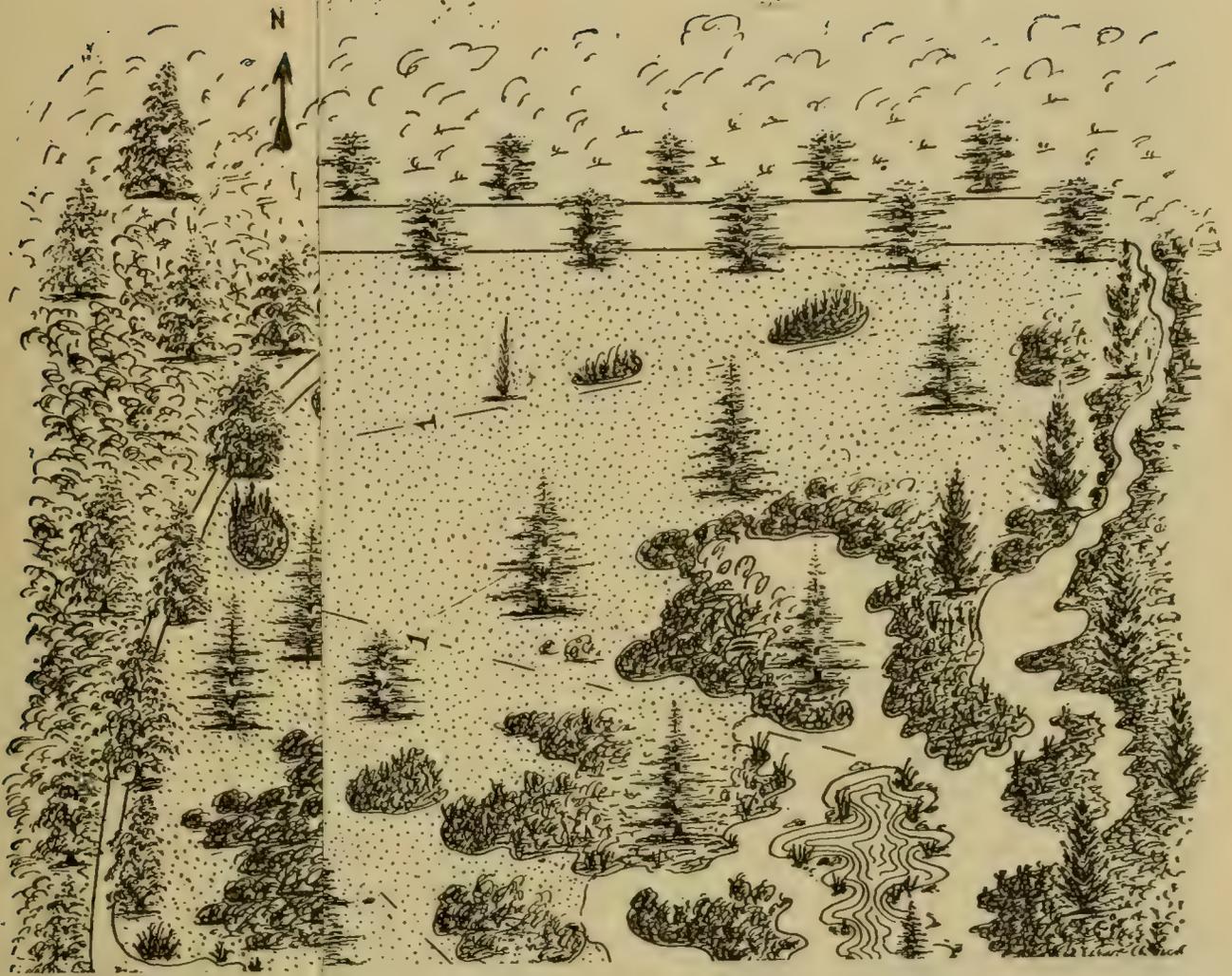
The edging of all groups and beds should be constructed for permanence, so that they shall not be destroyed when digging the beds or through the use of the footpaths; this can be very easily accomplished by lining the figures off with coarse stones, say six, nine to twelve inches in diameter, and the rougher the better; larger stones can be used in prominent corners and covered with Boston Ivy (*Ampelopsis Veitchii*) or other creeping plants. The edging is then to be covered with plant life: *Vinca minor* and the white form of it, *alba*, are well adapted to this purpose. Behind this stone protection and encircling each figure to a width of twelve inches, more or less, the ground should be thickly carpeted with masses of Snowdrops, Crocus, and *Scilla Siberica*, interspersed with hardy Alpine plants. Use Alpine Dianthus, and *Lychnis*, *Arabis*, *Alyssum*, *Armeria*, etc., and such plants as will continue flowering from early spring to midsummer. This arrangement of a perpetual bed will not occupy more space than the twelve inches of grass edging usually placed in the same position, and which costs so much to keep in bad order ever afterward.

We have still remaining ample available space in which to provide for the midsummer until fall flowering plant beds and groups, such as masses of Phloxes, Delphiniums, Helianthus, Pyrethrums, Scabiosas, etc. After giving these attention, comes the work of carpeting the intervening bare ground with such plant forms as creeping Junipers, *Arenaria*, *Spiræa Waterer*, *Daphne cneorum*, *Genista*, the minute Thymes, and others; carpeting plants are obtainable in endless variety, and care must be taken to select forms harmonizing with the plant beds to be carpeted. For instance a bed of Phlox might be carpeted with Juniper prostrata; while a bed of the blue *Linum* would appear to advantage with a carpet of *Thymus lanuginosa*.

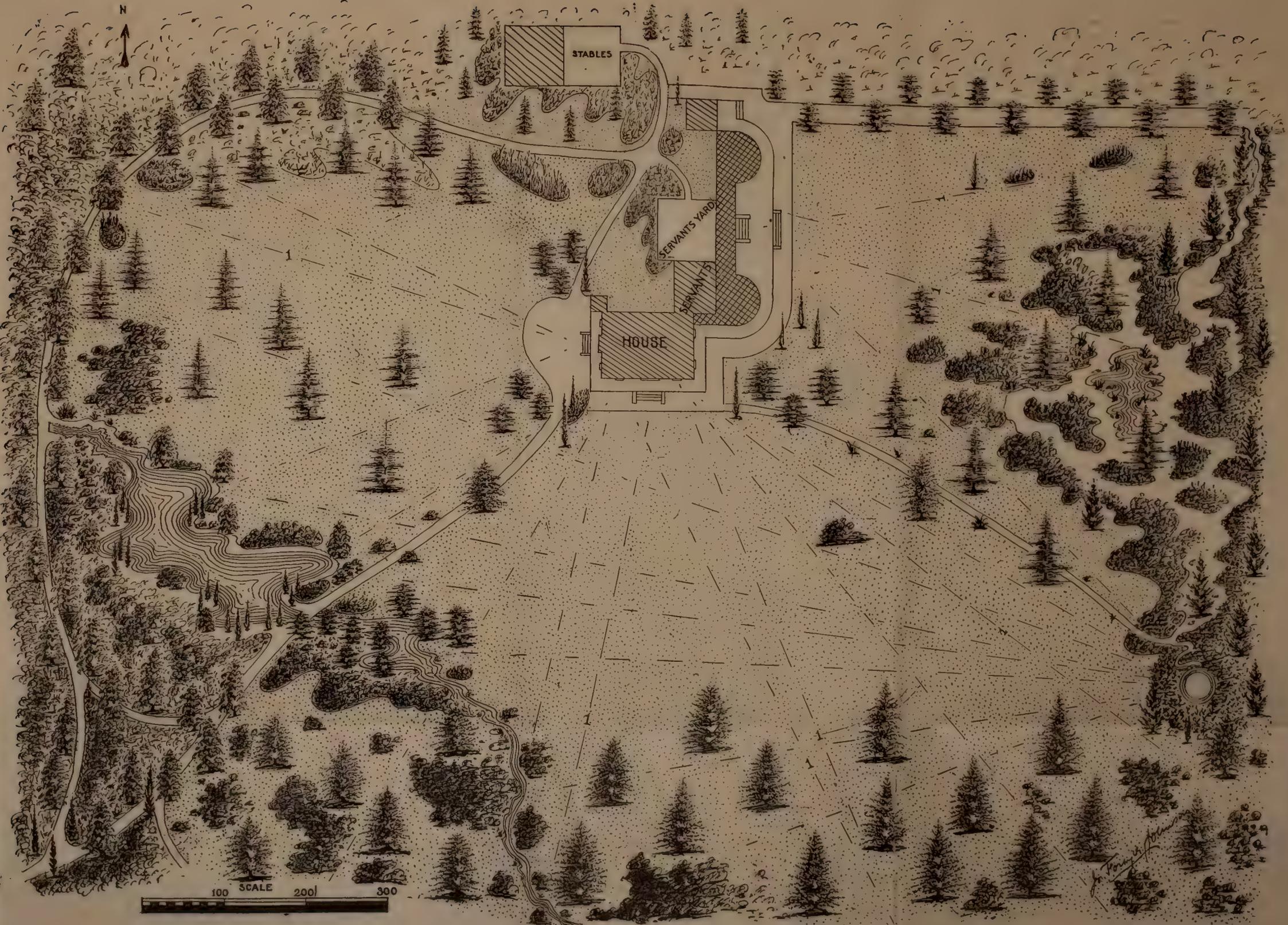
From the raised mound in the southeastern section of the garden, views affording great variety and extensive pictures of the mansion and grounds can be had. The water (east) not only adds impressiveness and value to the general effect of such a garden as this, but in itself can serve as the home of tender water plants; if the very slight expense attendant on the culture of aquatics is not desired, however, a natural flow of water springing from its bosom may be contrived, but the use of cheap iron fountain work should be avoided as the plague.

The planting of the margins of the walk around the lake (west) should be attended to with taste and care, for these are open to any effect the mind can suggest; every yard of walk should give a new impression, and the nooks, recesses, and promontories are planned to assist that endeavor.

Natural gardens are shown in Plans Nos. 2, 3, and 5, Part I.; also in Rockery, Bog Garden, and Natural Garden, Part II.







Plan 7.—A Park Home and its Environments, No. 1.—(See page 31.)

PARK HOME, No. 2

THE proper placing of every feature which is to surround the home gives charm to life: misplacement means dissatisfaction and failure. Place is a word that conveys an injunction of the very first importance as to fixing buildings, planting trees, shrubs, flowers, etc. Natural beauty is infinite in its results on our emotions; and development of this is a natural desire possessed by all who have the power of perception. Habit and vanity often injure this desire; thus, to take extreme ideas, living amongst the wheels of machinery may give a fancy that all things should be round; living amongst straight streets gives a queer notion that vegetation ought to be made to grow into street-like formation. When these styles are placed on the land, however expensive or rich in color, they may cause slight satisfaction to light fancies, but they never can satisfy ultimate desires which are for infinity, and so require suggestion of the infinite which these fancies do not create, but rather, indeed, limit the power, and stop the natural desires. What truly satisfies is the perfect development of life. When the true mind sees the beauty of natural development it is satisfied, charmed, inspired and moved into that higher *motif* of life which is unfathomable. But mutilation of any living subject does not give this, and any arrangement that injures plant life limits its powers of inspiring, however numerous the bushes, flowers and trunks of trees may be. Injury will not satisfy the power of admiration; large masses of green leafage will, undoubtedly, bring delight, and those of limited perception may fancy that such is enough; but the truth is when delight is limited the results cannot satisfy natural desires. Not appreciating that plant life sways the sentiments even more than one is aware, mere cultivation is adopted, and here commences the destruction of natural beauty by cutting out its character; strong branches of trees are lopped off, and the young growth pinched with finger nails. Not only soft wooded plants are thus treated, but the noble Rocky Mountain Spruces even do not escape the hands of desecration.

It is admitted that Nature possesses the beautiful, but when its creations are to be revealed it is surprising to any intelligent mind how very few really know what constitutes the beauties of Nature, although, when they are revealed, of course, all can see them. A very short time shows that the would-be arranger knows nothing of the production of natural beauty; the lover of Nature feels and the artist mind knows that Nature develops beauty by character, whereas the would-be arranger destroys this character and endeavors to fix his own habits on vegetation. It is not uncommon to see in the gardening world an admittedly skilled gardener who is a good cultivator of cut flowers, fruits, and vegetables, entirely deficient in perception of natural beauty; and when you see the cutting and pinching work of such men on what they term improvements on the noble Abies, all its beauty vanishes and these plants, which possess miracles of loveliness for all, are injured beyond the power of language to define. Examine what they try to give for the character they destroy. Nothing but the form of a dumpling or a pruned gooseberry bush!

A landscape should give pleasure the whole year through, successive characters becoming the governing principles in rotation. Each special season with its own growth; flowers, fruit, or winter evergreen leaves become the predominant feature in turn.

Planting is a very important feature of landscape, our views of its natural development need not be given here as they have in Plan 5 already been discussed. Plan 8 shows a mansion with suitable surroundings, developed naturally, and revealing the scenery of the land. The arrangement is planned on what is called the English Park style. This plan shows also the proper position for the various rooms of a house, and where the entrance should be. Also the proper way to provide for additions (conservatory for instance). The stables would have to be moved to a greater distance should many horses be kept. The outline of the flower garden (South) is surrounded by the Ha-ha, and joins to the terrace wall of the west front, so that the parklands with their cattle and adjuncts can be fully enjoyed from the residence. The shrubberies and gardens are supposed to be connected with the east front. The carriage entrance is in the best possible position, the north front. Wire fencing protects the carriage drive from encroachment of cattle.

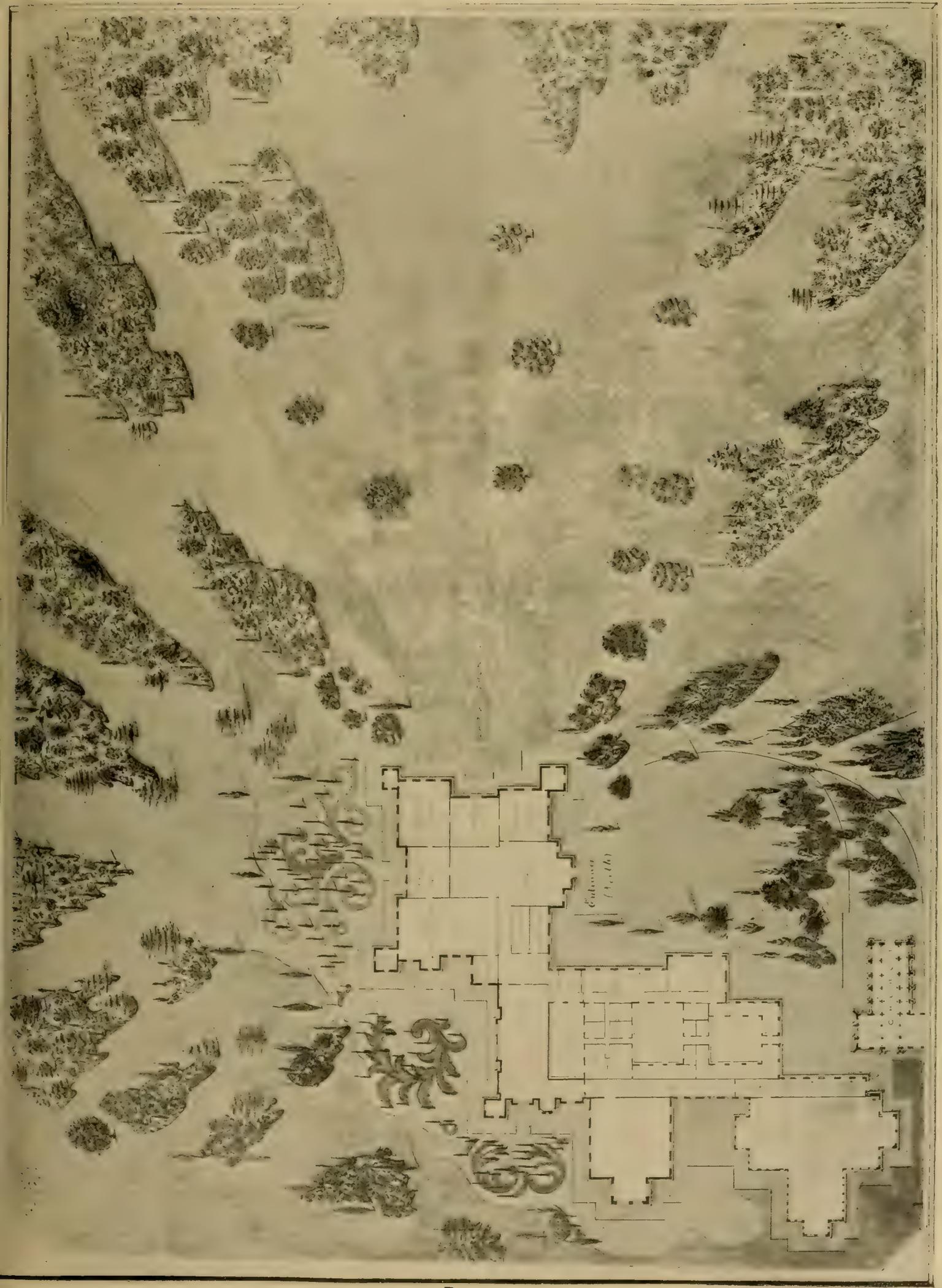
Without going into details we may note in the general contour of this plan the distance views—they are entirely different from the old fashion of an age that is passed, when mere streets were cut into woods, and long rows of trees were planted in straight lines to make long prospects. However beautiful these may have been, a natural view, as indicated in our design, would produce infinitely more beauty from the same expenditure. Until the designer understands the difference between infinite effect and limited effect he should not attempt to plan a landscape.

Views of rows of trees may delight through grandeur, historic association, and age, but the same grand development along natural lines would add incomparably to the permanent results. Walk down the grandest straight avenue you know—it becomes tiring before the first mile is complete. Look at the view of the grandest straight line of trees you know—however impressive it may be on the first walk, it fails to afford continued satisfaction. But a naturally developed grouping ever satisfies, never becomes tiring to the senses; the ever-varying light and shade lend new impressions, and changes are created by every shift of season or sunlight.

The natural protection for lands is trees and shrubs, and these also are the very best for residences. These break the wind and make it lose its force.

When a gentleman builds a residence in a large natural landscape, with extensive views, the question arises how best to unite the architectural impressions of the mansion to the grand effects of the surroundings in such a way as to secure that perfect harmony which is the aim of all who possess good taste. This is accomplished by proper development according to the principles of natural undulations in regard to their various masses and distances. On learning the formation of these a knowledge of the whole is gained, and then the mind acquires a base to enable it to allot in true proportions a space for each object, gardens, parks, etc., that may be required. To unite these together into a harmonious whole, intermediate forms between the various departments or components are necessary. For instance, the plateau of the residence is more or less refined by stretches of mowing grass, gardens, etc. These can be large or small according to the owner's wish, but the pictures connected with the residence must be in true proportion; if we make these too small or too large the harmony of the mansion will be ruined, however much money may be expended for its development. To unite this more or less formality of the residence to the surrounding natural undulations, intermediate groups of shrubs or trees, or both, as the proportions may demand, should be placed between them; in size these should be in proportion to the ground, but in form they should be in character with the undulations of the land. If this is properly done the residence will harmonize with the surrounding country, be it small or distant mountains. It is character and proportion that give harmony to formation. This subject is too large for further amplification here; it is discussed in full in "Principles of Landscape Gardening," (London, 1874) a re-issue of which is contemplated.

W



Plan 8.—A Park Home and its Environments, No. 2.

E

Planting is a very important feature of landscape, our views of its natural development need not be given here as they have in Plan 5 already been discussed. Plan 8 shows a mansion with suitable surroundings, developed naturally, and revealing the scenery of the land. The arrangement is planned on what is called the English Park style. This plan shows also the proper position for the various rooms of a house, and where the entrance should be. Also the proper way to provide for additions (conservatory for instance). The stables would have to be moved to a greater distance should many horses be kept. The outline of the flower garden (South) is surrounded by the Ha-ha, and joins to the terrace wall of the west front, so that the parklands with their cattle and adjuncts can be fully enjoyed from the residence. The shrubberies and gardens are supposed to be connected with the east front. The carriage entrance is in the best possible position, the north front. Wire fencing protects the carriage drive from encroachment of cattle.

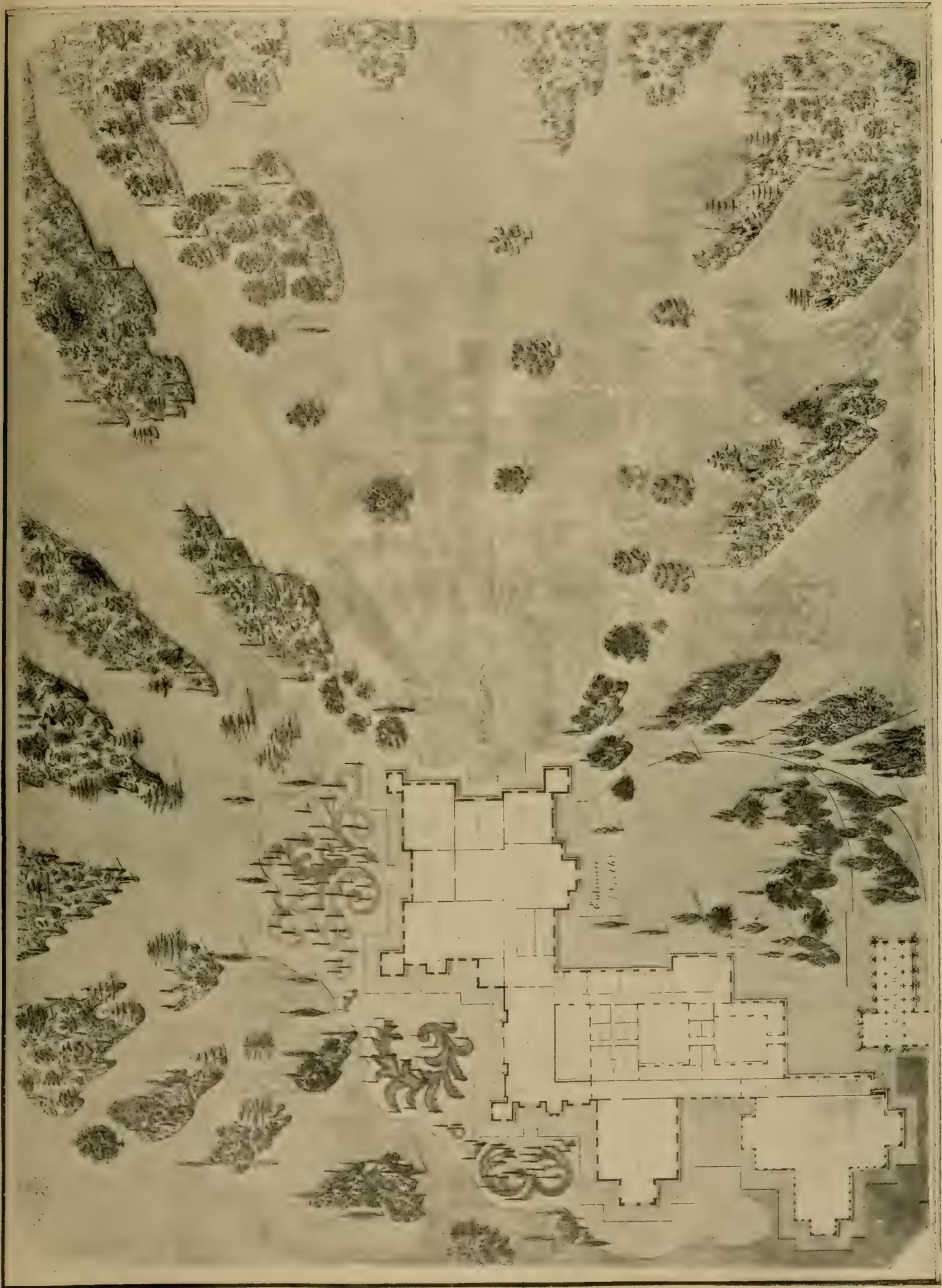
Without going into details we may note in the general contour of this plan the distance views—they are entirely different from the old fashion of an age that is passed, when mere streets were cut into woods, and long rows of trees were planted in straight lines to make long prospects. However beautiful these may have been, a natural view, as indicated in our design, would produce infinitely more beauty from the same expenditure. Until the designer understands the difference between infinite effect and limited effect he should not attempt to plan a landscape.

Views of rows of trees may delight through grandeur, historic association, and age, but the same grand development along natural lines would add incomparably to the permanent results. Walk down the grandest straight avenue you know—it becomes tiring before the first mile is complete. Look at the view of the grandest straight line of trees you know—however impressive it may be on the first walk, it fails to afford continued satisfaction. But a naturally developed grouping ever satisfies, never becomes tiring to the senses; the ever-varying light and shade lend new impressions, and changes are created by every shift of season or sunlight.

The natural protection for lands is trees and shrubs, and these also are the very best for residences. These break the wind and make it lose its force.

When a gentleman builds a residence in a large natural landscape, with extensive views, the question arises how best to unite the architectural impressions of the mansion to the grand effects of the surroundings in such a way as to secure that perfect harmony which is the aim of all who possess good taste. This is accomplished by proper development according to the principles of natural undulations in regard to their various masses and distances. On learning the formation of these a knowledge of the whole is gained, and then the mind acquires a base to enable it to allot in true proportions a space for each object, gardens, parks, etc., that may be required. To unite these together into a harmonious whole, intermediate forms between the various departments or components are necessary. For instance, the plateau of the residence is more or less refined by stretches of mowing grass, gardens, etc. These can be large or small according to the owner's wish, but the pictures connected with the residence must be in true proportion; if we make these too small or too large the harmony of the mansion will be ruined, however much money may be expended for its development. To unite this more or less formality of the residence to the surrounding natural undulations, intermediate groups of shrubs or trees, or both, as the proportions may demand, should be placed between them; in size these should be in proportion to the ground, but in form they should be in character with the undulations of the land. If this is properly done the residence will harmonize with the surrounding country, be it small or distant mountains. It is character and proportion that give harmony to formation. This subject is too large for further amplification here; it is discussed in full in "Principles of Landscape Gardening," (London, 1874) a re-issue of which is contemplated.

W



E

Plan 8.-A Park Home and its Environments, No. 2.



BEAUTIES OF PLANT LIFE

AS the unfolding of a plant through its several seasons gives forth continually varying and charming effects, a close study and observation of its periodical changes are requisite, and the system here recommended to the earnest student seeking his initiation into the mysteries of plant life will be found of great assistance. With the use of this form, by noting in it the changes observed at the different periods of the year, a knowledge will be quickly acquired which will enable the student to so understand his subject and the beauties of plant life, as to enable him to plan successfully the development of land. We require one hour, or more, every twenty-four hours to feed the body, yet at every moment of these same twenty-four hours, our mind is open to impressions of greater or lesser import, of which those to be derived from plant observation should not be among the least to all who love Nature.

The botanist has given us, through critical analysis, a vast knowledge of the anatomy of vegetation. But this knowledge is, in great part, confined to its value to the physical system and its use as applied to the sustenance of material life. He gives us no idea of character, which is the essence of beauty. If we examine a botanist's genus, we will find that it does not inform us as to the aesthetic side of plant life, nor does it serve to convey those impressions which are ever a source of the keenest gratification. As an example, take *Euonymus*; some of these carpet the ground in various colors; other species are bushes, and still other species trees. All contain abundant variety of form and color, each species yielding its individual impression as it develops.

When laying out grounds we must arrange plants each with an eye to its own particular form; and in sufficient variety, so that in any month throughout the year we can discover subjects for pleasure and admiration. We claim that every individual is in possession of more senses than the standard five, at least the reception of impressions opens such a wide vista of delight that a large classification must be accorded them. When the senses have been satiated by one particular form and color, still another impression may be found to carry yet higher the sense of perception of this gratification; this sensation we obtain by passing from the observation of the character of one species of plants to that of another species.

Time effect in landscape observation is composed of succession and special effects. If a dark scene has been planned it is necessary to provide also for a light effect as an offset. Thus we may first observe the Beeches when they unfold their leaves in spring; these we term impressions of light and innocence. From such a scene as this we turn to groups of Pines for dark effect, to the White Oaks for picturesque effect; then observe the majesty of the Cedars, or the aspiring life scenes of the Piceas, and so on through a countless panorama of ever changing beauty.

A general effect should be first sought for by placing evergreen trees and shrubs on salient points of development, having a reason for each particular one so planted; this leaves ample space for filling in with other subjects. The division of plant time will be found complete by noting the tabular arrangement given further on in this chapter; it is still further explained and carried out in every plan shown in this book.

Land should be so laid out as to produce effective results for many ages as well as for present time; this is easy of accomplishment, for the permanent effects intended for future development require such little space in the first planting, being from one hundred to two hundred feet apart in tree life, that they will not interfere with those desired for immediate results. If your land is laid out in the manner we have indicated, each year will see produced many new, delightful and surprising impressions.

The first consideration when selecting plants for development is to secure those variations of forms which will be adaptable to the various pictures the land possesses: when this has been secured, group planting follows, so that pronounced colors may predominate each in its most suitable place, the grouping to be arranged with a view to perfect results in lights and shades, so that even in a very small space, or with small plants, all the possible gratification to be secured may be yours. As an example, leaving the trees in abeyance, let us put down a group of scarlet and white autumn Phloxes; then a bed of gorgeous Sunflowers; these should have dark surroundings or purple flowers to offset them *ad libitum*. Many of our plans show these details, particularly No. 5, Part I, and Nos. 9, 10, and 11, Part II.

In laying out land for development it is absolutely necessary to give true proportions to your pictures. How often do we see large open spaces around a residence wasted, and the appearance of the house seriously injured; the proportions of the residence to its surroundings being thereby thrown out of harmony. It is not at all difficult to make manifest all the large pictures the land possesses, and this may be readily done without destroying the plateau of the mansion.

An air of repose is the concomitant of all scenery. This must surely be striven for; size is but one feature appertaining to the general development (see plans Nos. 5, 7, and 8, Part I.). However magnificent and impressive scenes of gigantic timber trees may be, however glorious an impression they yield us, however brilliant immense masses of summer flowers; all must be subservient to repose and harmony. So that, after we have designed our scenes of large impressions, the necessary proportion of more simple effects should be filled in. Picture how enjoyable to the eye will appear a small plot of grass, surrounded by shrubs, after one of these ground scenes.

Every effect has its outline, but it should be so broken that none can tell where the boundary of each particular scene finishes; the various impressions observable from grass to sky-line should group themselves together as harmoniously as the leaves group themselves into masses, and as these masses again group themselves into the outlines of a fully developed tree.

In following with the eye the salient points of scenery we find it composed of lights and shades. These, we now know, are produced by undulations, and the undulations again are composed of promontories and recesses, these latter giving us position for the time effects of the year. The promontories and high features of the land designate the positions for evergreen trees and shrubs: these are the salient points; the intervening spaces are for more deciduous subjects, but without any divisional line. This rule may be said to have its exceptions, for there are occasions when deciduous subjects may be grown on promontories and evergreen subjects in recesses. This principle of the arrangement of evergreen plants on salient points should also be carried out when carpeting the ground with small plants; of these we have an ample choice: Saxifragas, Sedums, Ericas, Vincas, Gaultherias, Cotoneasters, Ivies, Junipers, Euonymus, etc. Thus when your evergreen shrubs, trees, and carpeting plants have taken possession of the salient points, you may readily grasp the features yet to be taken advantage of, and the remaining development becomes a comparatively easy task.

Time, which so powerfully influences affairs here below, exercises an agency of the very greatest moment in all decorative efforts. Vegetation varies materially at the different periods of existence. Cedrus Libani, for example, has a spiral form of growth in its early days, and gains a sort of table-

shaped summit when it reaches maturity. Many plants are effective only during a few months, while others are so throughout the entire twelve. Time, indeed, must be taken into consideration in every arrangement which we may happen to make. Wait, only wait, and often, as through a species of magic, results ensue which were the least hoped for, and as charming as they are unexpected.

In all our operations the various so-termed permanent plants must prove the basis. Ever-bounteous Nature has provided these sufficiently for every display, the flowers taking precedence in summer and the fruitage in autumn.

When the period of each plant's life comes to a close, another plant should be coming forward to occupy its place. In general we should so order our operations that each season may manifest a beauty of its own. Many vegetable forms yield effects for so very brief a period that it needs care to replace them by others of a more durable kind.

In studying how we may render our grounds beautiful, not for months only, but for years, it will be necessary to have recourse to means adapted to the end. Some growths endure but for a season, while others last for whole hundreds of years. Three points demand our closest attention in respect of planting—permanency of effects, future effects, and present effects.

Many plants do not show their fullest beauty until touched by the hand of Time—for example, the British Oak (*Quercus Robur*), *Cedrus Libani*, *Taxus baccata*, and others. In arranging these long-lived growths, their after effects, which must also prove an after effect to us, have to be most attentively considered. Indeed, certain examples give us a sort of foretaste of the pleasure which is to fall to the lot of others. Trees such as these strike even the most careless with admiration, and are worthy of a lasting place in our regards. They do not, in the first instance at least, interfere with any of our other combinations; they require but a small amount of space in their early days, and always form a portion of the scenery. As they should be generally planted at long distances apart, ample scope will be commonly left for developing other and quicker reaching effects.

What I would term future or prospective effects are not always held of sufficient account. Many plants do not begin to develop their character of beauty until perhaps some ten or twenty years have elapsed. Mistakes are made in reference to this matter, and not discovered before it proves almost too late to rectify them. Unremitting attention and care, always bearing in mind the successes which our growths are intended to achieve, can alone ensure us success. Plants used for present purposes can be removed in due course as the more permanent ones gain in dimensions. A season before removal their roots ought to be prepared in the usual way.

In respect of the treatment of trees and shrubs, proper thinning out is too frequently neglected. Were such matters seen to in proper time they might be obviated, and short-lived and quick-growing trees and shrubs would not then be allowed to injure plants of a more permanent description. The duration of plants, to whatever class they may happen to belong, holds an important place in our arrangements, for trees and shrubs of the longest endurance are most worthy of the highest rank in our esteem.

The space lying between the back outlines and the foreground of our landscape ought, in general, to be allotted to growths that display effects during the summer period. The outlines of foreground and background, on the other hand, should be occupied by plants giving permanent display, more especially in winter. All our planting, indeed, must have an object in view. Each effect, in order to achieve beautiful results, must be complete in itself. In this we only follow the order pursued by Nature. A mound of undulating outlines, suitably decorated, will present attractions, each succeeding the other, throughout the whole course of the year. As for the general outlines, they may be completed by the introduction of permanent plants, giving successional effects six winter months of the year, and forming most beautiful outlines for summer. Special results are best realized in all their

glory by availing ourselves of the attractions of plants in succession after succession, singly or in groups, each complete in itself.

In studying effective arrangements, nothing, comparatively speaking, will be found so desirable as to make use of plants that will bear the vicissitudes of our climate. In other respects, a splendid display in summer can alone be achieved by resorting to tender plants; but, by proper proportions of outlines and mid-lines of sight, beautified by hardy plants, a far greater brilliancy could be given to this effect; and, on the whole, a natural and permanent beauty must be principally sought for by resorting to plants which our climate is capable of developing. This premised, we must seek for those forms and colors in vegetation that will yield an outcome at every period of the year, but for permanent results, we shall, perforce, have recourse to hardy forms of vegetation.

There are two great divisions, one suitable for winter, the other for summer; and for these we refer our readers to the tables which follow; this grouping will be found best adapted to the natural arrangement and harmonious combination which ought to subsist in all scenery. At the same time, there ought to be a continuity between both of these divisions, so that there shall be visible no abrupt line of demarcation. Many of our Rhododendrons, indeed, will often yield a considerable display at both periods of the year. In fact, we are not to be bound too strictly by square and line, but should endeavor to blend our harmonies by conforming to Nature's laws, according to the facilities at our disposal. This division of time, taking into account the availability of the soil, the climate, and all other considerations, will fulfil all requisites.

It is when summer's reign is over that we begin more fully to appreciate the beauty of our ever-green plants. With all their varying lights and shades they embellish our pleasure grounds, and soften to us the rigors of the season until spring shall return, laden with treasures, in order to scatter them in rich profusion at the very foot of man. Summer shines throughout with a yet more glowing radiance than the spring in the brilliancy with which she clothes the earth, the enchanting fragrance which she scatters broadcast, the soft haze with which she veils the landscape, the sunny beauty of her skies. Closely following summer's footsteps comes autumn, bearing richest fruits, touching as with a magic wand the trees that presently are to glow with many a wondrous tint of crimson, and of scarlet, and of gold.

There are various natural scenes which show forth beauties from early spring till latest autumn without any assistance from art. Some old Hawthorn hedge, for example, will display a pleasant bordering of early Primroses and Violets, and, when May arrives, wraps itself over with fair sweet flowers. Then the Wild Rose peeps forth with her lovely delicate buds, and in autumn Rose and Thorn alike vie with each other in bright array of scarlet fruitage—a perfect delight to look at—yielding a regale for the birds in requital of their songs. Yet many a scene would manifest results not less charming than these would we only avail ourselves of Nature's guidance; but, led astray by technical principles, we fail to understand, and miss the pleasures which otherwise we might enjoy.

We frequently see groups of Thorns or other trees with hardly anything but grassy space around them. What a blessing grass, in its various forms, has proved to mankind. Nevertheless, it is not desirable to employ invariably one kind of grass in our arrangements, or occupy with it the entire arena of any scene. It will, in most cases, be rendered more effective by the adjunct of various other carpeting plants, as in Nature. These may be connected with the trees, by intermediate growths, shrubs, for example, and the like. Nature garlands her trees in the most lovely fashion with climbing plants—a decoration in which we may invest when we will.

This earth, which we inhabit, provides us with all the sustenance we need. But it does something far transcending this. Numberless, indeed, are the sources of knowledge, of delight, of love, with which it everywhere abounds; numberless, in truth, as are the sands on the shores of the great deep

A SCHHARACTER AND BEAUTY

S.

	SUBJECT	FLOWERS			FRUIT			STEM			OBSERVATIONS
		M	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	
TREES	Cedrus Libani	al	Light Yellow.	10 to 12	Ovalish, Flat Headed Cones.	Dark Rich Brown.	7 to 9	Rugged and Strong.	Dark and Light Browns.	1 to 12	P—Permanent. Figures indicate the number of the month.
SHRUBS											
CARPETING PLANTS											



A SCHEME FOR THE SYSTEMATIC OBSERVATION OF PLANT CHARACTER AND BEAUTY

FOR STUDENTS, COLLEGES, AND PUBLIC SCHOOLS.

	SUBJECT	OUTLINES			MASSES			YOUNG LEAFAGE			PERFECT LEAFAGE			FALL OF LEAF			FLOWERS			FRUIT			STEM			OBSERVATIONS	
		FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME	FORM	COLOR	TIME		
TREES	Cedrus Libani	EVERGREEN	Bold Zigzag, Tabulate Top.	Deep Green.	P	Horizontal in Thick Shades.	Deep Dark Shades with High Lights.	P	Tender and Fine.	Light Golden.	5 to 7	Strong and Fine.	Dark Olive.	1 to 13	Hard and Sharp.	Brown.	5 to 7	Conical Cup.	Light Yellow.	10 to 12	Ovalish, Flat Headed Cones.	Dark Rich Brown.	7 to 9	Rugged and Strong.	Dark and Light Browns.	1 to 12	P—Permanent. Figures indicate the number of the month.
		DECIDUOUS																									
SHRUBS		EVERGREEN																									
		DECIDUOUS																									
CARPETING PLANTS		EVERGREEN																									
		DECIDUOUS																									

itself. The earth is to many like an unexplored country, the mysterious recesses of which they have never striven to penetrate. A boundless kingdom of beauty, if only we had eyes wherewith to see it, stretches around us on every hand; a well-spring of joy, which subsists till earth's loveliness pales around us and another life begins. It is said that at the sight of the Apollo Belvidere, the human body involuntarily erects itself, and assumes a more lofty attitude. And thus it is with objects which inspire us with just and true perceptions; they elevate our moral nature, and purify the heart. There seems, indeed, a sort of kinship between beauty and goodness, and where the one is we would fain discover the other also.

Let us, then, strive to render our landscapes beautiful year by year—nay, rather day by day—and plan carefully before planting, so as to avoid alterations later. If ground be properly laid out, these will seldom prove needful; and should it, in any case, be found desirable to add new features this should be done as much as possible without disturbing older ones. We occasionally hear evergreens objected to, as possessing, so to speak, too serious an aspect. But if fittingly arranged, the effects produced with their aid may be soft or bright at pleasure. They are not only lovely in themselves, but often alike afford shelter to other plants from winter's blast or summer's scorching ray. It is astonishing what a large number of growths there are that continue to gladden us throughout the year. Many of the very noblest forms of vegetation are evergreen, and some of these—*Cedrus Libani*, for example—are covered with a profusion of flowers in the early winter months. It is, perhaps, during this occasionally rather dreary period that evergreens appear to give us the greatest amount of pleasure. They shine brightly forth amid November's mists, seeming to gain fresh lustre from the moisture which envelops them. Should frost arrive, they will then be laden with glittering masses of exquisite beauty, the long, dark extended branches, as in the case of our larger Firs, contrasting most strikingly with the stainless whiteness of the new fallen snow. Evergreens, in fact, furnish nearly the principal effects during nine months of the year.

I am of opinion that were the outlines in our shrubberies and gardens more generally planted with a view to winter effects, it would lead us thus to the introduction of many growths most suitable for our purposes in foregrounds as well as in backgrounds. And Nature provides a rich abundance of structures adapted for our uses to show forth various phases of character, were we but to arrange them harmoniously and well. As regards carpeting plants, a very small space indeed, will sometimes suffice to yield the most charming results. The term, carpeting plants, I have ventured to apply to those various small growths that do, indeed, make it their principal object to carpet the ground. The name includes alpine plants, herbaceous, rock, bedding plants, and many others, and is used for convenience when referring to these low growths in general. Too often these are, as it were, dotted over the surface, instead of covering it as in Nature. If we have only enough for mere specks, it would be better to hold them in reserve until we had wherewithal to suffice, and had ascertained by observation the best situation in which to place them. There are, indeed, many herbaceous growths that would hold out most agreeably for a term of three years, or even a much longer period, as may be witnessed throughout Nature's fair abodes. In other respects provision may be made for such plants as require special care.

Endeavors are sometimes made in flower gardens to supplement the deficiency of brightness in winter by having resort to bulbs, shrubs, colored minerals, and such like, occupying with these the space usually filled by flowers in summer. Such results, however, should not be aimed at in too direct contravention of natural arrangements. They may sometimes prove desirable in contiguity to a mansion or to buildings where the outlines in winter foregrounds do not yield perfect satisfaction.

Those plants which are productive of effects throughout the entire year are most justly subjects for our admiration. The *Rhododendron*, before commented on—the *Yew*, the *Ilex*, the *Berberis*—all

enchant us with their flowers and fruitage alike, while smaller growths of many and various kinds can be had recourse to in furtherance of our designs, and, when not in their special effect, give a base to the beauty of other growths.

Nature's operations are at once ever beautiful and ever sure. They repose on a basis firm as is the structure of the globe itself. Every plant we make the object of study is found to display a beauty of youth, of maturity, and of decline. The tender grass renders our valleys replete with verdure; trailing vines hang on many a tree; while in sequestered, shady nooks lurk Mosses and graceful Ferns. Many a hilly tract is covered by the Rhododendron and Kalmia, and far-extending slopes by the majestic Pine. High up on mountain sides peep forth sweet Alpine flowers, snow-protected during the greater portion of the year, and which appear as perfect miracles of loveliness in spring.

We do not soon tire of plants that display beauties which are rare at the season in which they appear. The Snowdrop, for example, Crocus, Scilla, Violet, Anemone, Daphne, and Hepatica, are all effective in the extreme, and can be disposed so as not to interfere with other combinations. Grasses of various outlines impart an agreeable diversity. We need not always have recourse to ordinary grasses when so many other kinds exist—such as *Festuca ovina*, *Carex pendula*, and the lovely *Gynerium argenteum* (Pampas grass), *Stipa pennata*, and *Pennisetum*.

The Vincas, more especially the varieties of *Vinca minor*, are very serviceable in places otherwise not suitable for grass. In some such I have seen the blue and white flowers of both green-leaved varieties and variegated endure the winter through. Ivies, which Nature well knows how to handle, can be so disposed, both as regards outline and hue, so as to suit every curvature of the soil for covering land. As a ground for other effects, Ferns, in shady dells and hollows where sufficient moisture abounds, most agreeably cover the soil. Many varieties of the well-known *Cydonia*, which have fine early flowers, and subsequently very curious fruitage, are well adapted for covering banks and other scenery. The different kinds of *Amygdalus*, although not permanent effective plants, might be much more extensively cultivated than they at present are. They can be planted with the greatest advantage in recesses and places not too conspicuous. And when their beautiful flowers appear, they claim a very high place in our estimation as harbingers of spring.

The various special beauties of a scene should succeed each other, so as not to destroy one another's effects by coming in opposition or together. As all outlines govern the scene, they should at all times possess an effect of their own, and also should be suitable for making all their various special effects complete in their respective seasons. Even deciduous scenes require some plants of an evergreen character, not only to assist their winter's effect, but to assist their development, and to impress their effects on the mind. Therefore, it may be said that the boundary outlines of scenery always require assistance from permanent plants, either in the foreground or background of the scenes or outlines, or in both. Many books and catalogues enumerate the varieties of permanent plants, necessary for forming outlines and bases to scenery, as well as giving particular beauties of their own, varying in all sizes, from forms just veiling the earth to giants of majesty; and in the same sources of information, the less permanent varieties of effective plants, which are more or less temporary in their beauties, will be found noticed. All plantings should be allowed full justice, both for their growth and effects in the natural arrangement, without destroying the permanency of the general results.

The equality or repetition given in technical art is completely out of place in Nature's effects. In the undulations of vegetation and land, ever varying forms succeed each other in perfect balance and proportion, so that each plant, or group of plants, while being complete within itself, still lends its quota to the maintaining of the general effects; group succeeding group produces infinite beauty throughout the periods of the year. It will surprise those who have not arranged for perpetual beauty, how very few groups in the various lines of sight form a base and give a permanent character, leaving

room for the introduction of any special object that may be wanted. These bases should principally form part of the outlines or winter's division of effects.

The accompanying tables may assist some to divide their special effects into suitable periods. They are merely suggestive, and may be extended from the student's own knowledge or observation.

SPECIAL EFFECTS OF TREES AND SHRUBS

SHOWING HOW TO ARRANGE PLANTS FOR TIME EFFECTS.

WINTER DIVISION.

OCTOBER, NOVEMBER, AND DECEMBER.	DECEMBER, JANUARY, AND FEBRUARY.	FEBRUARY, MARCH, AND APRIL.
<p>Pyrus, scarlet berries Salix, of sorts* Betula, various* Cedrus Libani</p>	<p>Evergreens are now the principal effects, and possess many distinctive beauties.</p>	<p>Amygdalus cochinchinensis Persica, of sorts Sambucus, golden foliage in April Acer, do Populus, do</p>
<p>Garrya, of sorts (P) Azalea, Ghent varieties [Scarlet leaves] Althæa frutex Coronilla Emerus Monthly Roses Berberis Thunbergi Cotoneaster, various, fruit Pyracanthus, fruit</p>	<p>Jasminum nudiflorum Andromeda, of sorts (P) Corchorus (Kerria) japonica.*</p>	<p>Abelia floribunda Berberis, of sorts (P) Cydonia japonica Forsythia Daphne, of sorts Mahonia, of sorts (P) Ribes, of sorts Persica, of sorts</p>

SUMMER DIVISION.

MAY, JUNE, AND JULY.	JULY, AUGUST, AND SEPTEMBER.
<p>Dogwood Robinia, of sorts Cratægus, of sorts Catalpa Pyrus Aucuparia (Mountain Ash) Æsculus hippocastanum</p>	<p>Tree effects, even now, receive great assistance from Evergreen forms.</p>
<p>Andromeda, of sorts (P) Amorpha fruticosa Azalea (hardy) Buddlea globosa Ceanothus, of sorts Clematis, of sorts Colutea, of sorts Coronilla Cytisus, of sorts Genista, of sorts Deutzia, of sorts Pyracanthus (P) Philadelphus, of sorts Pæonia, Tree Syringa, of sorts (Lilac) Sambucus, of sorts Spiræa, of sorts Rhododendrons (P) Rosa, of sorts Lonicera, of sorts (Honeysuckle)</p>	<p>Abelia rupestris, June to Dec. ——— uniflora. Clethra arborea Althæa frutex (in September) Genista sibirica and G. tinctoria Hydrangea Spiræa, of sorts Clematis of sorts Passiflora, of sorts</p>

Names marked thus (*) continue their effects until May. (P) means permanent or evergreen.

SPECIAL EFFECTS OF CARPETING PLANTS

WINTER DIVISION

OCTOBER, NOVEMBER, AND DECEMBER.	DECEMBER, JANUARY, AND FEBRUARY.	FEBRUARY, MARCH, AND APRIL.
<i>Erica herbacea carnea*</i> <i>Chrysanthemum</i> — <i>Vinca minor*</i> — <i>minor alba*</i> <i>Rosa</i> <i>Aster</i> , of sorts <i>Tritoma Uvaria</i> <i>Gynerium argenteum</i>	The beautiful early leaves of— <i>Aquilegia</i> , of sorts <i>Aconitum</i> , of sorts <i>Centaurea montana</i> <i>Lupinus</i> , of sorts <i>Verbascum Thapsus</i> <i>Pæonia</i> , of sorts* The flowers of— <i>Galanthus nivalis</i> (Snowdrops) <i>Helleborus niger</i> <i>Arabis albida</i> <i>Antennaria margaritacea*</i> (the leaves)	<i>Anemone</i> , of sorts* <i>Hepatica</i> , of sorts* <i>Polygala Chamæbuxus</i> <i>Iris reticulata</i> <i>Narcissus</i> in variety <i>Tulipa</i> , of sorts* <i>Gentiana acaulis*</i> <i>Lithospermum prostratum</i> <i>Omphalodes verna</i> <i>Corydalis</i> , of sorts <i>Alströmeria caryophyllea</i> <i>Ranunculus amplexicaulis</i> <i>Arabis albida*</i> <i>Scilla</i> , of sorts* <i>Erythronium dens-canis</i> (Dog's Tooth [Violet]) <i>Muscari</i> , of sorts <i>Fritillaria</i> , of sorts
Names marked thus (*) continue their effects until May.		

SUMMER DIVISION.

MAY, JUNE, AND JULY.	JULY, AUGUST, AND SEPTEMBER.
<i>Cistus</i> <i>Helianthemum</i> <i>Erica multiflora alba</i> — <i>multiflora rubra</i> <i>Pyrethrum</i> , of sorts <i>Viola</i> , of sorts <i>Pæonia</i> , of sorts <i>Dianthus</i> , various <i>Linum</i> , of sorts <i>Phlox</i> , of sorts (Alpine) <i>Polemonium</i> , of sorts <i>Papaver</i> , of sorts <i>Lupinus</i> , of sorts <i>Cheiranthus alpinus</i> <i>Hieracium</i> , of sorts (P), cover the ground from weeds <i>Trollius</i> (golden cups of flowers in May) <i>Veronica spicata</i> <i>Lilium undulatum</i> (scarlet) <i>Orobis atropurpureus</i> (dark) <i>Oenothera</i> , of sorts <i>Funkia</i> , of sorts <i>Hemerocallis</i> , of sorts <i>Lilium</i> , of sorts <i>Iris</i> , of sorts <i>Asphodelus</i> , of sorts <i>Convallaria</i> (Lily of the valley) <i>Hesperis</i> , of sorts <i>Iberis</i> , of sorts <i>Anemone fulgens</i>	<i>Erica cinerea</i> <i>Erica coccinea</i> <i>Erica Petralix pallida</i> <i>Erica vagans</i> <i>Potentilla</i> , of sorts <i>Polygonum</i> , of sorts Bedding plants Annuals Hollyhocks <i>Lobelia</i> , herbaceous varieties <i>Tradescantia</i> , of sorts <i>Oxalis lasiandra</i> <i>Campanula</i> , of sorts <i>Anchusa semperflorens</i> <i>Pentstemon</i> , of sorts <i>Phlox</i> , of sorts <i>Astrantia</i> , of sorts <i>Verbascum</i> , of sorts <i>Veronica</i> , of sorts <i>Salvia</i> , of sorts <i>Arundo conspicua</i> <i>Scabiosa</i> , of sorts <i>Antennaria margaritacea</i> <i>Linum</i> , of sorts <i>Coreopsis</i> , of sorts <i>Calliopsis</i> , of sorts <i>Helianthus</i> <i>Lilium</i> , of sorts <i>Czackia Liliastrum</i> <i>Epilobium</i> , of sorts <i>Funkia subcordata</i> <i>Colchicum</i> , of sorts <i>Digitalis</i> , of sorts <i>Statice</i> , of sorts <i>Stipa pennata</i> <i>Spiræa filipendula</i> <i>Gunnera</i> , of sorts <i>Lathyrus</i> , of sorts <i>Monarda</i> , of sorts <i>Lythrum</i> , of sorts

AUTUMN EFFECTS

The hues worn by the trees in the Fall afford a most valuable feature for effect. The Maples, Oaks, and others, assume the very richest tints. As on a soft bright day we survey some woodland scene, bathed in golden sunshine, with leafage all aglow, it would seem almost as though some high festival of Nature were in preparation to celebrate the happy fruitions of the year.

Different varieties of what are termed Ghent Azaleas, impart a very pleasing autumnal warmth by their leaves giving a bright scarlet; while among others *Althæa frutex* displays its pretty blossoms, even as late as October and November.

What are commonly termed Monthly Roses will in mild seasons and in sheltered situations, yield abundant flowers throughout October, November, December, and January; and in most gardens a place suitable for these plants can be found. It will often prove advantageous to have some early Chrysanthemums, in spots not too conspicuous, however; the pompon varieties can be drawn from, and yield a wealth of bloom. Large groups of *Tritoma Uvaria* afford an excellent display, and, when in good condition, the foliage proves effective during a great portion of the year. The flowers themselves, indeed, are very handsome, and often a single plant will present as many as thirty spikes at one and the same time. Many places may be suitably occupied by these plants, which harmonize well with more permanent growths. *Andromeda floribunda*, and others, will further assist the autumn and winter effects.

The colored stems of some trees, those of the Willows and *Betula alba*, for example, often help to brighten our winter landscape; and the Dogwoods (*Cornus*), are excellent in park scenery. Combined with Pines they are very effective. *Deutzia crenata flore-pleno* has a pale yellowish bark in winter, and much variety in this respect exists amongst deciduous growths. *Jasminum nudiflorum* is of great importance as regards the winter effects of climbers.

MIDWINTER EFFECTS

The months of December, January, and February need not prove so deficient in the matter of flowers, as the general aspect of gardens at this season might imply. Not very much choice have we, it is true; still, there are plants enough wherewith to create a most agreeable diversity. Nor need these winter arrangements interfere with later ones. In sheltered spots a number of plants will thrive throughout most winters, and, should an exceptionally severe season ensue, and they should run any risk of perishing, we can always yield them sufficient protection. Generally speaking, however, the ground, when properly handled, will afford the best shelter. Plants, again, when arranged according to natural exigencies, do much to shield and protect one another. But tender plants, of small size, exposed in our grounds in winter, often require—and, indeed, imperatively demand—as much heedful care as do our Geraniums within doors, to prevent them from being dug over and buried in the ground.

I have watched the unfolding of the white and blue flowers of *Vinca minor*, and *Vinca minor alba*, from autumn until late in spring. In sheltered spots, indeed, numerous plants display their flowers throughout the winter months. There are, again, growths which exhibit their beautiful leafage. Such are various forms of *Aquilegia* (leaves coming like Roses), *Lupinus*, *Aconitum*, *Centaurea montana*, *Antennaria margaritacea* (like tips of snow), and others. Many varieties of *Ferula* and *Arum* deserve attention, also various herbaceous Pæonies, with their ruddy young leaves, and later foliage as bright as that of Irisine. The dark evergreen foliage of the Christmas Rose, or *Helleborus niger*, used in proper proportion, will much enhance many winter effects. The garden must indeed be small where some few square yards of space cannot be conceded for such subjects as these. Not very exacting in respect of nourishment, they can often be seen doing well in a poor, dry soil. *Eranthis hyemalis* (the Winter Aconite), even in early January, will often be covered with a perfect profusion of golden flowers. And along with the flowers of autumn and winter effects come the berry-bearing plants, which impart a very pleasing aspect. Were we, in truth, but so minded, our grounds in winter might yield very many more effects than what is commonly the case.

SPRING EFFECTS

Various species of *Prunus* give a fine display of white flowers in April and May. Varieties of *Persica* and *Mespilus* prove charming, small-sized, early flowering trees. Then, to speak of shrubs, we have *Abelia floribunda*, many kinds of *Berberis* and *Daphne*, the golden-flowered *Forsythia viridissima*,

and *F. suspensa*, and the *Andromeda*, *Cydonia japonica* (and varieties) is an extremely handsome plant, producing an abundance of scarlet or white flowers. It also admits of being trained into the most formal shapes, so as to suit an Italian garden. Its curious autumnal fruitage harmonizes well with the quaint architectural recess. Many varieties of *Cydonia* do best in sheltered portions of the shrubbery, where they often assume the most fantastic forms.

There are various growths which might be arranged so as most beneficially to occupy the ground and foregrounds, and many of these might be so disposed as to grow up through small carpeting plants, grouped according to character; such as Crocuses, Snowdrops, Hepaticas, Anemones, *Iris reticulata*, Tulips, Scilla; while such as *Myosotis*, *Gentiana acaulis*, the beautiful blue *Omphalodes verna*, and others, would form carpeting groups themselves. The numerous kinds of Primrose and *Polyanthus*, in certain situations, constitute a perfect delight in the spring by the abundance of their flowers, and, when the summer comes, their leaves often serve as a capital margin. The *Cheiranthus alpinus* produces an excellent effect in spring, and the curious evergreen leaves are often serviceable when arranged with other plants. The Phloxes possess many beautiful effects. Many other plants there are, however, which I have not enumerated, but which might be grown with every advantage during the early months of the year.

Snowdrops, as well as other bulbous growths, can be planted in abundance midst the grass of shrubberies and parks, and round borders and beds, in more formal arrangements, and this without interfering in the least with the larger occupants of the soil; we can always prevent their being injured by any digging operations. It would prove very desirable were these growths permitted a longer period—say a week or a fortnight—in order to ripen their foliage. Were this done, a greater number of bulbs and finer flowers the next year would prove the result, than when the leaves are allowed to be cut off before being dead. *Erythronium dens-canis* will be itself most serviceable when not interfered with. *Iris reticulata* is an early flowering bulbous plant, not sufficiently cultivated. Anemones, again, would cover with great advantage much of the apparently barren ground which gardens are wont to exhibit in the early season of the year.

Many of the plants that bloom early will continue to display their flowers, such, for example, as *Arabis*, *Myosotis*, and others. The beautiful effects of Horse Chestnuts, at this period, have always been justly admired; they are commonly found to sustain very strong blasts indeed, but the delicate *Acacia*, which begins to flower much about the same time, will need very careful and tender handling to select a place sheltered from wind. In return it will richly reward us with its graceful leafage, and flowers of many a hue. The different species of *Cratægus*, *Syringa*, and also *Cytisus* (*Laburnum*), are very lovely objects when fittingly displayed. Later in the season, we have Roses which, with their rich variety of tints, prove perfect fountains alike of beauty and of perfume. Many hardy specimens of *Azalea* unfold their flowers early in summer, as likewise plants belonging to the following genera: *Ceanothus*, *Clematis*, *Kalmia*, *Buddlea*, *Sambucus*, *Lonicera*, late varieties of *Spiræa*, *Jasminum*, and *Philadelphus*. Places for these—and many more besides—can be found in a garden of very moderate dimensions, in the outlines of the scenes, without in any way interfering with other or subsequent effects.

PART II

PLANTING AND INTRODUCTION TO
UNDULATIONS

PLANTING

IN PREPARING land for planting we have to take a general view of the land and water and sky surrounding. When these are brought into harmony with the silent life of plants they give breath to our worldly existence. When these elements have grown together and formed their pictures in their own way ages will often be taken to produce some of their wonderful effects; but when man's helping hand is added to nature's unthought of and quick results are produced. Look in any well planted land and you will find springing forth to satisfy man's desire for beauty, the whole world's efforts within a given range of temperature. For instance, Japanese plants help out the native flora in almost every garden in the temperate zone. When we leave the hard ground to plant itself, it is only after ages of successive creation and destruction that lovely local beauty appears, but in order to gain the essence of the world's beauty quickly, man's efforts must be introduced to assist nature.

To be able to thin out thickets and woodlands, or to properly plant land, a knowledge of plant requirements is necessary. To develop the beauty of the land it is necessary to understand the power of perception of the human eye; its angles of observation, and its limits of discernment; and to be able to grasp the natural pictures that every piece of land possesses. Knowledge of the character of the components of a picture is absolutely necessary for its appreciation, and to properly produce various and impressive effects. When the wants of any particular spot are known, you will be in a position to begin to develop them.

Before commencing to prepare a piece of land for planting, roads for the intended objects should be laid out, for the land devoted to these must not be sub-soiled. Plants set out in unprepared land grow by inches, while those planted in properly prepared ground grow by feet. Land for production of trees and shrubs ought, as a general rule, to be prepared at least three feet deep; of course there are a few exceptions, such as low lying bottom land, that lies near the water level; land on the tops of rocks, and very steep land liable to wash away (such land is easily held up by proper planting). Trenching land with good spade men is the best way of preparing it for our purposes, but of course it is expensive, nevertheless nurserymen in England do it for business purposes. I have had trees (*Eucalyptus globulus*) grow eighteen feet six inches in one season.

In preparing land not previously trenched, care must be taken to keep the top soil near the surface, as it takes considerable time for soil to become aerated sufficiently for it to be in best condition for plant growth. When the practice of deep plowing first came into use, many farmers made the mistake of turning the bottom soil to the surface at the first turning, thereby having to wait some time for results. It is a very well known fact that a rich mud taken from a farmyard pond will not grow weeds the first six months, but afterwards, when aerated, it produces growth so luxurious that it makes our old acquaintances appear as new species.

The cheapest way to prepare land is to double plow it by taking a good, suitable plow for the land, one that will go as deep as possible, upwards of a foot, which is followed by a sub-soiling plow working in the trench formed by the first plow, going as deep as possible, upwards of two feet. Sufficient horse power must be used to do the work in hand; two horses generally will work the first

plow and four the second. After the plowing is done the general drainage requires attention. The low water-logged land requires to be suitably tiled.

A very first consideration must be given to all land as to how to prevent accumulation of water, so that no rivulets or washings are formed in the heavy rains. This is very easily done by having suitable catch-pools to receive the water in proper places, and in sufficient number, conducting the water into suitable waterways. When this is accomplished all the good soil ought to be taken from the road sites and placed on the land allotted for the planting of the principal trees and shrubs; by this means the principal features of planting can be made very effective at comparatively small cost.

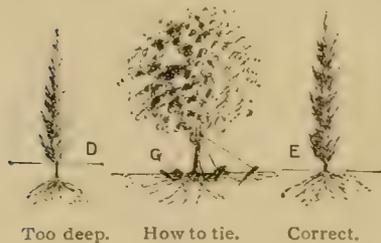
When we have determined to develop our land, the first problem to be settled is: Where shall we build and plant, where shall be the grass, water, and roads, to harmonize naturally and eventually give us a perfect picture? By planting in the usual way, *i. e.*, mixing plants together regardless of size and requirements, they grow into masses which destroy their natural beauty, forming shapeless clumps and failing to show the true characteristics of the component individuals.

In many grounds where attempts have been made to show the beauty of vegetation, this clumping together is held up to public admiration. Of course, the vista of leaves and opened spaces retained near our large towns delights the eye, and the ordinary observer is liable to be satisfied with these until he discovers what are the unnatural effects of plants, for these clumps die away at the bottom, and when their beauty should be developed, they exhibit stumps of trees and shrub stems, perhaps only with mop heads of branches and leaves, or a few of these on one side only.

Planting in properly prepared land gives results beyond general expectation. The writer has seen a Holly hedge planted without any preparation, which kept so very small that it was hard to tell, after several years' existence, whether the plants had not grown smaller instead of larger; whereas, another Holly hedge, planted in the immediate vicinity, and at the same time, produced an excellent fence, compact and close, ten to fifteen feet high, a difference due solely to the preparation of the soil. It is nothing extraordinary for well planted Hollies to grow three feet in a season. The father of fishing (Izaak Walton) said that "Hollies produced the quickest fences." When I planted the railroad gardens at the stations between Atlanta and Savannah, although set out in the month of May and June many of the trees made five feet growth the first season, particularly the Poplars and Willows; a result due solely to proper preparation of the ground.

HOW TO PLANT

Deep planting means ruin to the tree. The original roots die, and if the tree overcomes this bad planting, it does so by forming new roots on its buried stem. This detail is important, and its importance can be easily understood by taking up a deep-planted tree after three years have passed (often more time is required to start real growth after bad planting), when no marked advancement can be observed. Examine the natural growth of our forest trees, and you will find their roots start right at the surface of the ground; as for example in the Ash (*Fraxinus*). They seem to delight in forcing their roots on the very top of the land before descending into the earth. In the accompanying illustration is shown the depth to which the natural surface roots should be planted, they should be only just deep enough to be covered with soil not more than two or three inches below the finished surface of the planting ground. Before setting the plant in the ground, examine the roots, and should any bad or injured ones exist, remove them by a clean cut with a sharp knife (the nipping tools, scissors, etc., are apt to crush the tissues and open the way to decay). In pruning the roots of trees,



Too deep. How to tie. Correct.

be sure to only remove the damaged ones; don't form the opinion that the roots must be cut into a nice round ball, and remember that every fibre removed takes away from the plant one of its natural means of sustenance.

In transplanting deciduous trees their heads should only be slightly reduced; the cutting of tree tops to the hard stem is absolutely wrong, for where a cut is made into old established wood there will remain an opening for disease for all time, and if a so-called good head be formed it is invariably broken by wind or snow sooner or later.

When you show the ordinary man how to plant properly, he cries out at once; "Oh! the wind will blow it over;" but no deep planting will prevent the wind injuring a newly set plant with a large head unless it is properly protected: so, after planting, allow no time for the wind to sway the plant and thereby injure the roots. The first step adopted by all good planters is to make a soft collar, which is placed around the stem, as shown in *How to Tie*. This collar can be made of soft ropes or the edgings of Cuba matting, and from it the wire or cord is fastened to stakes driven into the ground, as shown in same figure. The collar is to be somewhat loose to prevent its injuring the bark of the tree.

It is advantageous to mulch newly planted subjects, and supply sufficient water to keep the roots damp; no mere surface water will suffice. To water satisfactorily and well all good planters form a "dish" or "saucer" for a short distance around the stem by raising a miniature bank of earth three to four inches high, to hold the water applied, thus enabling it to settle to the roots. (See figures below.)

WATERING

When your plant is getting dry is the time to water again. Evening is the best time, but rather than see the plants die in mid-day for want of it, water then. Roots require to be kept damp until plants start into growth, but care must be taken to avoid chilling them. In very dry, hot weather, and in a sandy soil, they may require water two or three times a day, while in other cases once a week may be enough. The greatest advantage to plants is gained by keeping the foliage damp until they start into growth. At the last Paris exhibition this was the plan adopted in order to quicken growth. Great repute was gained by producing established trees at once; that is absolutely necessary to attain good effects around large buildings, mere beds of Cannas alone will not accomplish this.

GOOD AND BAD PLANTING

It is a generally recognized rule in planting, whether of trees, shrubs, or smaller growing plants, that in order to obtain their greatest development, there should be three feet of soil allowed, and for the perfection of trees it is an absolute necessity. This is especially the case in a climate, such as ours, with plenty of hot sunshine which often dries up the land to a depth of six inches or more. For general planting, trenching the area will be sufficient preparation of the land; but when great effect and quick results are wanted it is often necessary to add good soil. The surface addition of soil as explained later is not a very expensive proceeding.

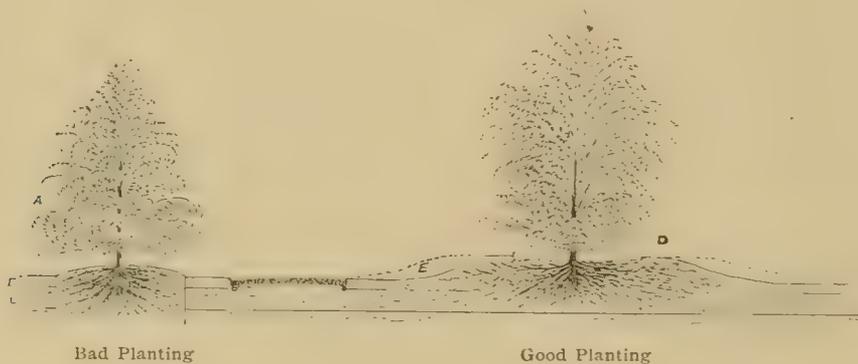
THE BAD SYSTEM

Our sketch shows an ordinary, but incorrect, method of increasing the available soil for trees and shrubs. In preparing the ground in this way the foot depth of surface soil—more or less—(marked B) is thrown to one side, and two feet of the subsoil (C) are dug out and carted away; good new earth is brought in to fill up, the top soil just removed being included, and the whole finished off with a rounded top as shown. Now this system has very objectionable features; in the first place, the new material being surrounded with the hard pan of the original soil is apt to sour, especially when,

as is often the case, the roots do not occupy the soil during the first year; secondly, when the roots do occupy the soil they soon exhaust the available food supplies and extending ever outwards they have to enter the till, when the vigor of the tree is arrested and its general health suffers, because the roots will lack the aeration so necessary to their well being. As regards the surface of the bed; the form here depicted is bad because its shape tends to throw off the water from where it is wanted. In all plantings, whether on the level or on hillsides or hilltops, it is always necessary to make due arrangements for the retention of water.

THE GOOD SYSTEM

The method now recommended (see sketch below) has proved itself to be a worthy one in the hands of all who have honestly carried out its principles, but failure has followed where attention has not been paid to the surface, and it has been finished off as just explained. Instead of digging



out two feet of the sub-soil, as in A, we merely trench it up to a depth of two feet; in planting, the surface soil, and a certain amount of carted soil is built up on the top as is shown in the cut (two feet being added), thus providing the requisite depth of three feet. By this means the roots are allowed freedom of growth and can easily spread through the surface soil, which is well aerated and the food supplies are not so easily exhausted. When necessary, in the course of time, after the roots have spread themselves through the added soil, the bank may be built up with good soil, as is shown by the lines E, merely taking off the sod and carting in the new material. This is a method which has been found most advantageous in dealing with the keeping up of large specimens, and is called the "piece-meal" system. The formation of the top of the bed as shown, is a feature to be closely regarded as the slight cupping is invaluable as a means of holding water. Finally, the pictorial effect of trees, shrubs and flowers in general thus planted, as seen from the roadway, is greatly superior to that obtained by the other method. The trees will thrive and the immediate results are finer than would be obtained by the ordinary method after two or three years of waiting. And, after all, this is but following Nature, who increases the available soil by surface additions; she does not dig holes.

TRANSPLANTING TREES AND LARGE PLANTS

IT IS frequently necessary, in order to give an appearance of finish and establishment to a new place, to resort to the transplanting of large trees from other quarters, and indeed in our opinion, if the new place be any but a very small one, it is always advisable to put in a few good sized trees. In cases where this is not done at the first, the owner feels very soon that there is an absence of shade and a too great appearance of newness in the garden, to remedy which all the bother of transplanting large specimens has to be endured at a time when the garden should have been completely established.

Now, it is very easy to make either a good or a bad job of the work in hand, and provided that due regard has been paid to the selection of the specimen and also to the proper preparation of the ground (as previously set forth), success or failure may be said to depend on the care and attention given to the digging up of the tree from its old quarters.

The one thing to be observed is that the young roots and rootlets be damaged as little as possible, as it is by these alone that a plant absorbs nourishment from the ground—not by means of the old stout roots which only serve to support the trunk and head and to act as channels for the materials taken in at the tips of the roots.

The illustration (Fig. 1), shows the natural spread of the roots as far as the trenches marked H, which is the proper place for the digging down to be done. This would leave an excessive amount of earth in the ball, which would render removal very difficult, and there is also the danger of the ball splitting into two and thus a portion of the fibrous rootlets would be torn off. Practice teaches us that a smaller ball is better, and if of the size as shown by F, a sufficiently large ball will be left, providing the spreading roots are taken up as shown at B, in fig. 3.

The error usually made is in merely cutting down at the point F, by which method, as will be easily seen, the ends of the roots are cut off and the tree appears as in A (Fig. 2). The natural result is that there is too much leaf transpiration for the reduced roots to cope with and the tree becomes sickly. As a remedy, in common practice, the top is cut back and a mere stump is seen, which is not nearly so good for the production of a fine specimen as a younger tree would have been.

When trenched as at H (Fig. 1), the soil to be removed is, with a steel fork, gently pulled away from the roots, leaving them comparatively uninjured, and the tree is lifted with the same sized ball of earth as in the other case, but the fibrous roots are retained beyond it.

These roots can be bundled together as their ramifications will allow, then each string of roots being covered with moss, mats, or bags, as circumstances demand, is tied up to the trunk, as shown in B (Fig. 3). The roots may, by this means, be kept damp until the tree is replanted.

In replanting plenty of sharp sand should be on hand to work amongst the rootlets as you proceed, since it induces the formation of fresh rootlets, as all propagators well know. Fine leaf-mould is also very advantageous; we usually run it through a riddle to get it fine enough to work in amongst the rootlets. The roots should be laid out radially from the main stem of the tree on a nicely prepared bed of soil, only laying enough roots to slightly cover the ground, then working in amongst them a little

of your sand and leaf mould as they seem to require; cover all over with a few inches of soil and prepare another bed, laying out more roots as you did before; thus spreading tier above tier

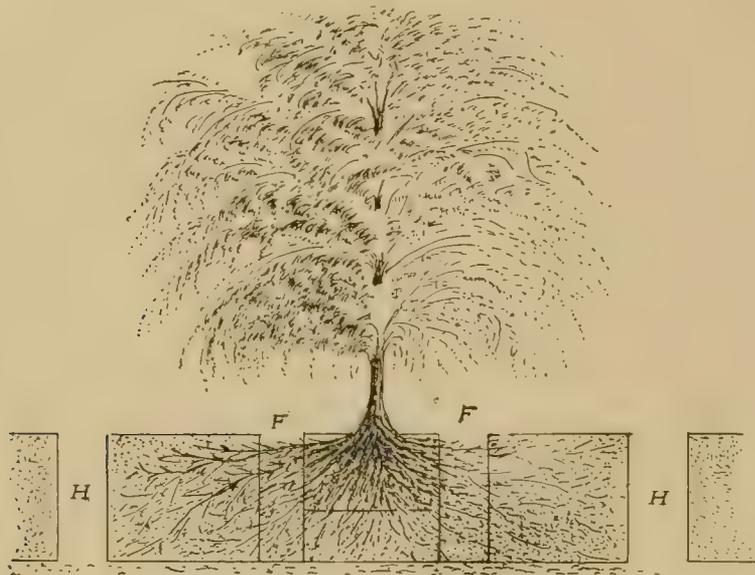


Fig. 1.—The proper (H) and improper (F) trenches for removing a large tree



Fig. 2.—Improperly removed tree

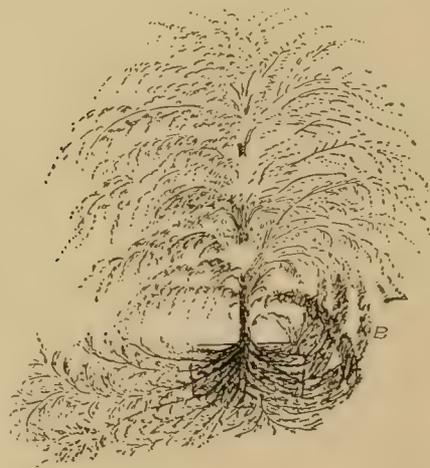


Fig. 3.—Properly removed tree with all its roots attached

until all the roots are firmly replanted in as natural a manner as possible, finally beating or treading down the soil, but being careful not to injure the roots in so doing.

The transplanting principle is, taking care of the plant's small rootlets, for these are the feeding powers of the plant.

NATURAL MASS PLANTING

PLANTING is in reality like the painting of an artist. It is not mere imitation; the infinite impulse is realized by the impressions developed in the lights and shades of plant character, of land, and of water. A few acres of well laid out grounds contain more landscape pictures than all the canvases of the world portray. Planting as shown in Fig. 1 causes so much destruction to plant beauty that it is entirely useless. The common reply of the planter who adopts this method is: "We do it to form a blind." But the plantings signally fail of their purpose; the bottoms of the plants die away, and you see right through them. No blind can be made except by proper undergrowth, rising from the ground to at least five feet in height.

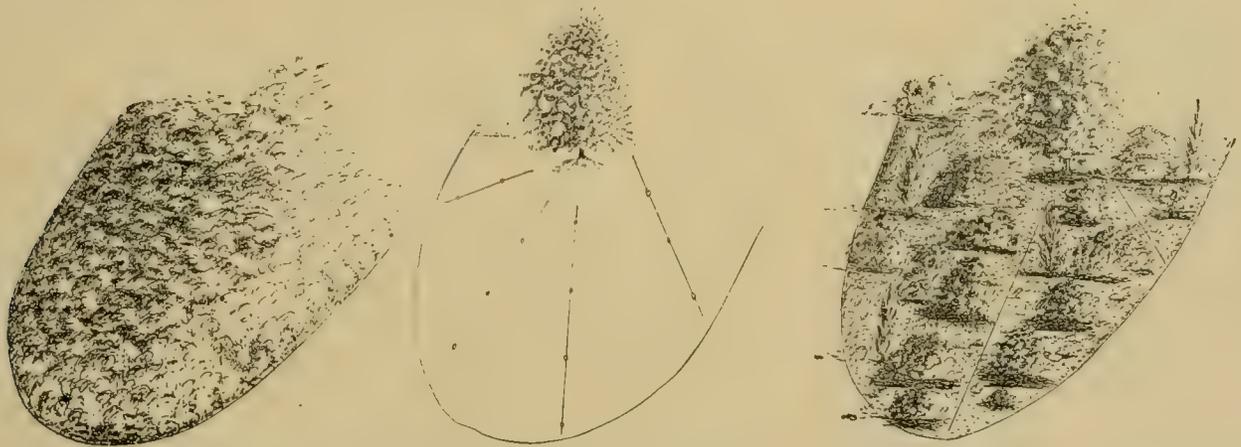


Fig. 1.—A commonly seen jumble, in which sooner or later the lower parts become bare and easily seen through

Fig. 2.—Skeleton for natural group planting. The lines show places for low growing planting

Fig. 3.—Group planting on natural lines; age adds to its effectiveness

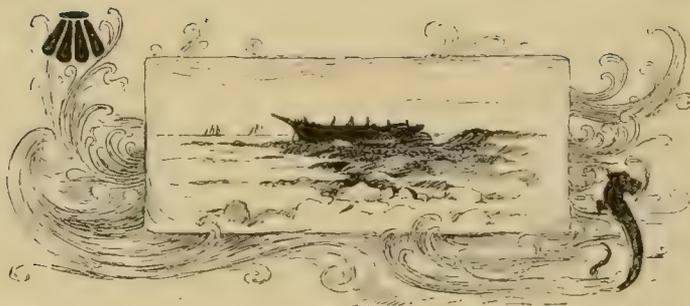
The beauty of light and shade in natural mass planting is very charming, and gives many surprising and delightful effects.

Figure 2 shows how to prepare ground for such natural mass planting; the lines indicate the views to be kept open by planting thereon only low growing forms of a nature suitable for carpeting the ground. The dots on these lines represent stakes placed in the ground before starting to plant, and indicate the portions reserved for low growing subjects.

Figure 3 shows the method of natural planting in a very simple form, and this style of planting is so full of capability that no two groups need ever be alike. It also shows a tree and a few shrubs forming a mass dense enough to blind anything beyond if rightly planted. A Linden tree (*Tilia europæa*) is grouped with a few *Rhododendron catawbiense* (Catawba Roseberry) and *Kalmia latifolia* (Mountain Laurel); the tall columnar plant is intended to represent *Juniperus chinensis* (the Chinese Juniper), and the ground is fully carpeted with *Juniperus prostrata*, a beautiful native species. Among these can be set the woodland flowers, Foxgloves, and other strong growing plants, which

give fine summer and autumn blooms. The Rhododendron supplies flowers in early summer, the Chinese Juniper forms perfect golden columns in spring, and the *Kalmia latifolia* has also beautiful flowers. The evergreen character of this group would make the arrangement permanently effective, and, of course, the desideratum of all gardens, spring flowering bulbs on the margin.

In natural planting it is possible that more plants are used than in the unnatural clumps to which we have been objecting. The difference between the two methods is that in bad planting too many trees and large subjects are used, while in good planting we utilize forms that grow to different heights, and are very careful not to select too many large growing subjects; we also plant those that will carpet the whole ground so that no objectionable feature can exist.



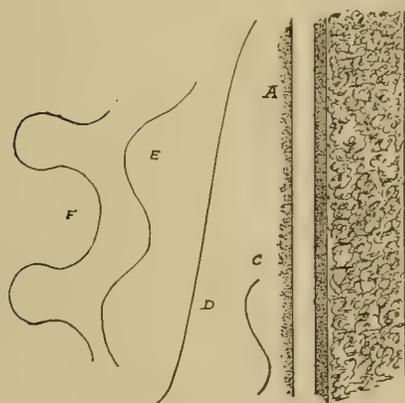
NATURAL GROUPING IN BOUNDARIES

IN PLANTING grounds it is easy to say, "plant so many acres of Beeches, so many acres of Pines, each by themselves," but in developing the beauty of land and plants we require something more than this; each tree should form a feature of its own, undoubtedly, but it should also unite its effects to other characters in the surroundings; this plan is so arranged, showing that variations depend upon the circumstances, the size and the wants of the object.

The forms of beauty in Nature are infinite, and to develop them to their fullest extent efforts have long been made in various schemes of tree planting. In any circumscribed area the one great feature to be borne in mind is the hiding, or indeed complete destruction of the effect of limitation which is not always done by the weak attempts at planting "boundaries" to gardens and parks. Such attempts are generally failures as they plainly exhibit the boundaries which it was intended they should hide. The effect should be to carry the line of sight beyond the limits planted, and make the nearer portions appear to be in unbroken sequence from the distance.

The art of arrangement in landscape art is essentially the revealing of the natural beauties of whatever is employed in the composition. All plants possess characters especially their own, and the use of an individual, in order to display its characteristics of beauty, depends entirely on how it is placed in relation to other individuals or masses.

In the development of land by landscape gardening a due knowledge of the requirements of your object is necessary. Given this knowledge it is a comparatively easy matter to select suitable subjects for the development; everything has its proper place, and it is the skill of selection which is the basis of the art to which we refer—the art of so placing your plants as to reveal in their true proportions the characteristics of each. When trees are planted closely in a continuous belt so as to hide the boundary the result is that after a few years the trees are, owing to crowding and other reasons, bare of leaves and branches in the lower portion. The eye can easily penetrate the "screen," and the very things which were to have been blocked out are laid bare to the view.



Development of Outlines (see text)

DEVELOPMENT OF OUTLINES

As brick and stone form buildings, so the variations of curvature build natural undulations that impress man according to his powers of perception.

In planting a boundary there is but very rarely any necessity to adopt the principle shown in A—a straight monotonous arrangement—for a slight gently sweeping curve can be as easily utilized, as, for instance, at D. At C is shown what is another very simple development from the straight line, but, of course, more advanced than D. In E and F are two types of continued curve, F being what should be most strenuously avoided; it is

the broken curve, that is to say the line instead of being gently progressive is abruptly broken at its change of direction, and so the continuous sweep is destroyed. In driveways this is not only bad in effect but decidedly dangerous.

Nature covers the ground with plant life, and no true arrangement for artistic effect can do less. Ornamental borders which consist very often of large patches of open soil dotted here and there with plants, are wrong in any broad scheme. Such a border is indeed only to be used in some out of the way place for experiment purposes, comparison, or where beauty is subservient to utility. Examples: the kitchen garden, or a botanical collection.

The greatest of injury is done to the plants themselves, and at the same time the complete obliteration of their artistic possibilities is obtained by planting in continuous straight lines through the mere fact of crowding into a given space more trees than it can properly develop. To correct such errors has been the aim in the plans in the present series.

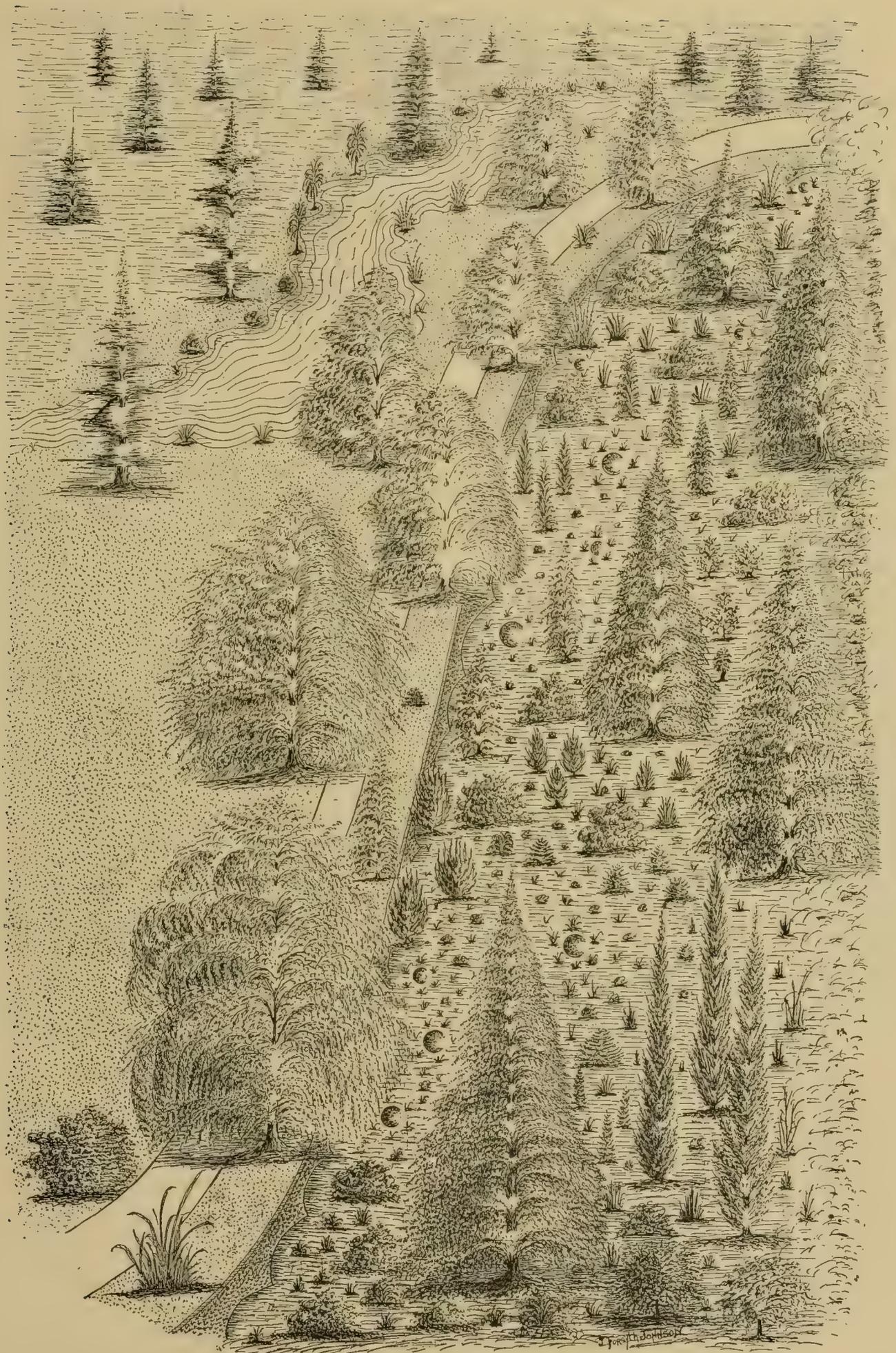
In permanent planting, where the whole is to be seen from many and every varying points of observation, each view line should show perfect outlines of its subjects—the trees, shrubs, and flowers—and distinctive features whether it be taken high or low. Special attention, indeed, should always be paid to the natural development of the outline of every plant that rises above the carpet level. If this be neglected and crowded grouping is followed the time will arrive when many of the most prominent objects will be injured by the encroachment of their fellows, resulting in a meaningless jumble, and a clashing of impressions. Such examples are far too frequent everywhere. In all good planting attention is required for the younger growth of early years—to remove plants placed for immediate effect as the permanent trees and shrubs advance. Local circumstances very often make one plant do better than another, therefore, a small amount of labor is necessary in the early years of planting, to do what may be called “touching up,” developing the characters which it is intended shall be permanent on the land.

The first object in planting on all grounds is to set trees, then plants growing to a lesser size, as trees growing to about fifty or one hundred feet high require space in proportion to their size, also space to be seen. This leaves a great deal of ground unoccupied, which affords places for many other subjects that grow to a lesser dimension. In general, too many plants that grow to one size are placed together, and this sort of thing is very common in our parks and gardens. This is bad for artistic effect and very bad for the growth of trees and shrubs; every leaf of a plant is so beautiful and the love of Nature so keen that many people enjoy these outrages and do not realize how much greater beauty ought to be theirs. This “clump planting” appears more or less as fence lines in the distances, and when on a closer approach, they become foregrounds, the plants bear more likeness to the remains after a battle by the destruction of branches and leafage than to a park scene.

We may often go through great quantities of planted grounds without seeing a single tree or shrub that we would say clearly illustrated the species to which it belongs. In going over these would-be-parks, where necessity has compelled many roads to meet, this compulsory leaving of space for the same has forced the giving of space for trees, and at such points of observation charming effects are given, but unintentionally.

GROUPING VARIOUS EFFECTS INTO HARMONY

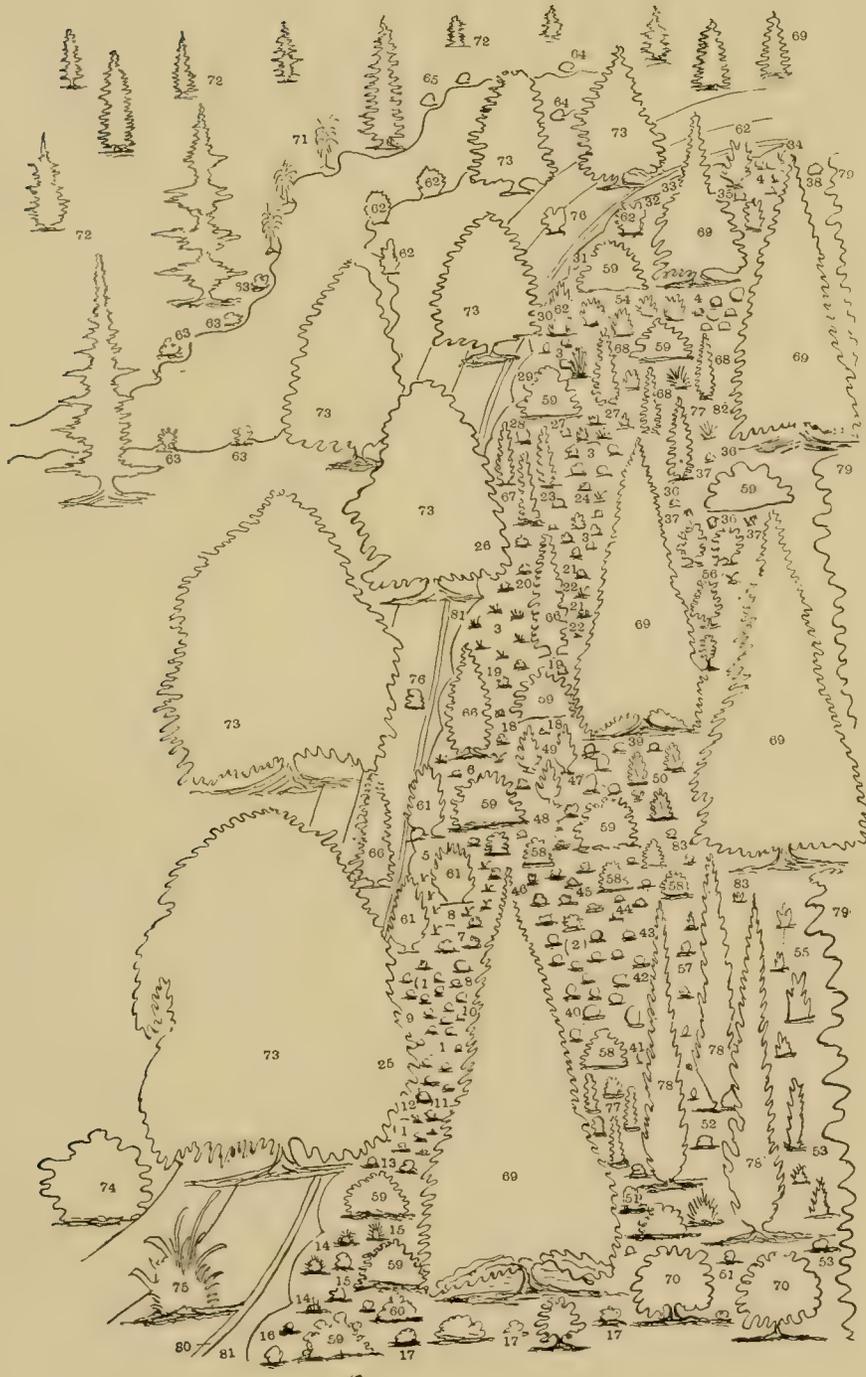
Plan 9, now presented, is an endeavor to, in a way, explain graphically how to give effect to what is propounded. When successfully carried out the result is so pleasing, pictorially, and gives such an atmosphere of liberty that the onlooker is impressed with its harmonies without, perhaps, comprehending how the result is arrived at. In the best plantations, where the most natural effect is produced, it will be found that the boundaries are invariably invisible. The effect produced



Plan 9.-Grouping Various Forms into Harmony

REFERENCE TO PLAN 9

1. Three round figures, formed by planting an edging of *Euonymus radicans variegata*, centre to be planted with scarlet *Geraniums* or other bright summer flowers. The six small plants round to be *Helleborus niger*.
2. Three circles, edging as above, centre bright summer flowers; the six surrounding plants to be *Tritoma Uvaria*.
3. Three circles, edging as above, centres to be golden yellow flowers (*Calceolarias* or other). Surrounding six plants, Tree *Pæonies*.
4. Three circles edging as above, centres blue *Plumbago capensis*; the three surrounding plants to be *Hemerocallis flava*.
5. Seven plants, *Daphne Mezereum*.
6. Three *Berberis Humboldtii*.
7. *Polygala Chamæbuxus*.
8. *Trollius europæus*.
9. *Ranunculus amplexicaulis*.
10. *Erica cinerea*.
11. *Alstromeria caryophyllæa*.
12. *Vaccinium Vitis Idæa*.
13. *Anchusa semperflorens*.
14. *Yucca gloriosa*.
15. *Salvia patens*.
16. *Gunnera*, in sorts,
17. *Hollyhocks*.
18. *Asphodeline lutea*,
19. *Verbascum Thapsus*.
20. *Erica herbacea carnea*.
21. *Andromeda floribunda*.
22. *Lupinus polyphyllus*.
23. *Erica multiflora alba*.
24. " " *rubra*.
25. Ground covered by large tree, on paper, that no tree would cover on land; might be brightened by planting blue flowering plants in clumps, covering about a square yard of space (not form); *Lithospermum prostratum*. *Aubrietia deltoidea*, *Gentiana acaulis*, *Iris reticulata*.
26. Another variation of blues, *Hepatica triloba*, *Omphalodes verna*, *Veronica* (dwarf growing sorts).
27. *Helianthus multiflorus*.
28. *Jasminum nudiflorum*.
29. Arc of circle in proportion to outline of *Iberis cordifolia*.
30. do *Erica fragrans*.
31. do Sweet William,
32. do *Phlox* (Alpine).
33. do *Stipa pennata*.
34. do Pansies.
35. do double Rockets.
36. *Epilobium angustifolia*.
37. *Scabiosa caucasica*.
38. *Tussilago fragrans*.
39. *Myosotis palustris*.
40. *Pentstemons* in sorts.
41. *Coreopsis lanceolata*.
42. *Lilium auratum*.
43. *Papaver orientalis*.
44. *Centaurea montana*.
45. *Corydalis* of sorts.
46. *Aconitum californicum*.
47. *Pæonia* (herbaceous).
48. *Statice latifolia*.
49. *Althæa frutex* var.
50. *Lilacs*.
51. *Cydonia japonica*,
52. *Deutzia crenata*.
53. *Diervilla aborea grandiflora*.
54. *Forsythia Fortunei*.
55. *Philadelphus* (large sorts).
56. *Dbl. flowering peaches*.
57. *Lonicera tartarica*.
58. Common Yew.
59. *Rhododendrons*.
60. *Hydrangea paniculata grandiflora*.
61. Golden Yew.
62. *Bambusa Metake*.
63. *Erianthus Ravennæ*.
64. *Eulalia japonica*, and *E. gracillima*
65. do *univittata variegata*.
66. *Thuja* var. *Geo. Peabody*.
67. do *Vervæneana*.
68. do *siberica*.
69. *Sequoia sempervirens*.
70. *Paul's dbl. red Thorns*.
71. *Cerasus japonica pendula*.
72. *Abies pungens*.
73. *Tilia europæa*.
74. *Spiræa Humboldtii*.
75. *Phormium tenax*.
76. *Biota aurea*.
77. *Cupressus Lawsoniana*.
78. *Pinus laricio*.
79. *California Privet*.
80. A line of spring bulbs alternating in clumps of about half-dozen each, *Winter Aconites*, *Snowdrops*, *Crocuses*, etc.
81. A carpets of *Euonymus radicans*, planted into a margin as shown, for flowers and foliage of such plants as *Scillas*, *Erythronium dens-canis*, *Muscari*, *Tulips* (hardy sorts), *Fritillaria*, bulbous *Anemones*, *Narcissus*, etc., to raise above.
82. *Delphinium elatum*.
83. *Helianthus Maximilianus*.



Key to Plan 9

upon the sense has its roots in the laws of perspective, light, and shade; these three elements in combination, sometimes one and sometimes another preponderating. The hundreds of combinations to be obtained from such an arrangement as now depicted will be apparent at a glance. The plan represents, roughly, an acre of ground on which the one side is planted with a view to hiding its boundary, but, at the same time, it also gives full scope to the display of the individual plant beauty.

In the selection of the plants to be employed, having regard to the requirements for successive effects, we have adopted the time arrangement (for explanation see pages 43 to 46 Part I),—the winter season is divided into three, and the summer into two. When the special effects of the growths of flowers and foliage for the whole year are considered, the arrangement will be found more complete than those usually adopted. To help forward the development of effect, we suppose a temperate part of America and an ordinary winter, but the system takes advantage of all weathers.

The following are the divisions of the month in selecting plants for permanent effects. December, January, and February have plants as follows: *Tussilago fragrans*, *Jasminum nudiflorum*, *Andromeda floribunda*, Winter Aconites, Snowdrops, *Helleborus niger*, *Arabis albida*, etc.

The months have to overlap each other, consequently the next period is February, March, and April; double flowering Peaches, *Berberis Darwini*, *Cydonia japonica*, *Forsythia*, *Daphne Mezereum* and the many spring bulbs.

In May and June we have the Hawthorns, *Philadelphus*, Lilacs, *Pæonies*, *Spiræas*, *Ericas*, *Lupinus*, Day Lilies, *Rhododendrons*, etc.

In July, August, and September we have *Hydrangeas*, *Spiræas*, *Clematis*, *Erica*, *Polygonums* of sorts, *Hollyhock* and summer flowers generally.

The division we now approach belongs to the first of the two winter divisions (October, November, and December). *Erica herbacea carnea*, *Tritoma Uvaria*, *Helianthus Maximilianus*. *Cedrus Libani* when established puts forth glorious masses of flowers in this period.

Hardy plants have almost a resting period in mid-summer, so, for this lull, we have introduced into the border circles formed by edging of *Euonymus radicans variegata*, which are to be planted with bright summer flowers. These beds, so surrounded with permanent plants, will appear attractive the whole year, whereas summer flowers under other arrangements are no better than a ploughed field one-half of the year.

The evergreens will be found to make a permanent ground, which will enhance the beauties of the summer plants, as well as form main features in the winter. The *Sequoia* develops into magnificent pyramids, and the Blue Spruce gives most satisfactory results. The rolling masses of *Rhododendrons*, the columns of *Thuja* and other plants have each their own style of effect.

It will be understood that this is not a complete list of plants, but a type of a system of selecting plants, so that a perpetual and successional effect may be produced, a few tender plants are to be used for summer effect.

From a distance, the whole planting shown in this plan would have the appearance of a shady mass, with broken high-running outline, due to the Limes placed on each side of the central walk and to the specimen *Sequoias*, etc., toward the boundary, each sub-division being a sub-center and giving its own character to the minor groups on a closer approach. The judicious mixture of evergreens and deciduous trees in permanent planting provides for effect at all times of the year. The isolation of the fine specimens, so that on a near approach their individual characteristics are apparent, is another matter which should receive the most careful consideration at all times. In the commencement of a plantation the correct thing is always to begin by placing the largest objects, since they will form the most prominent centres, and therefore should naturally have the prominent and largest places. After having done that work attention can be given to the shrubs and bushes, and so

on down to the smallest objects with which it is intended to clothe the soil at the junction with the grass tract in front. Evergreen plants should always be placed toward the outside, because they give forth their foliage effects in the winter as well as in the summer, and the brilliancy of the latter season is much enhanced by the proper use of permanent evergreens; they also tend to provide shelter from storm and wind for the smaller, perhaps rarer specimens, and this in a way that stone or brick walls cannot do. Shrubs can always be very usefully employed as means to direct the sight to view lines, and also at the same time to hide any defects. A good arrangement should include a shrub to meet the eye at every point. The service of the tree is in combination with the sky line.

Referring to the illustration, the large trees are not planted in rows, but alternately, every other specimen being brought forward from the background to assist the effect, of which we have already spoken, and at the same time this tree forms a starting point from which to develop a "run" of other trees, shrubs, and smaller plants, the arrangement being generally in threes. The whole arrangement, shows three group centres or promontories, and two recesses; the latter are composed of Yews and Thuyas planted to grow naturally. The boundary fence of California Privet, it will be observed, is planted with a varying outline, so that when it occasionally shows itself it will not appear a mere hedge. For further details see key plan and index.

In order to, as it were, unite the whole, which is a very necessary consideration, Rhododendrons are used throughout, and no plant is better adapted to this purpose, and independently of that they are particularly valuable on account of the gorgeous flower heads which they produce. In order to veil over the ground after the manner of Nature herself, some carpeting plant should be selected after the general planting is done. There are many plants that are suitable for this purpose, but perhaps none more so than the popular *Ampelopsis Veitchii* (Boston Ivy). These plants can be kept within bounds, and should a stray shoot swarm the trunk of a tree and develop its leafage high up in the air, festooning a branch or so of its support in the fall season, the color effect will be by no means a detraction.

GROUPING TREES

A true landscape effect owes its being to the grouping and harmonies of masses of light and shade, of form, and color; a characteristic view should be presented from any distance and from all points, ever varying, ever changing, season by season. Each constituent feature, every shrub or tree ought to present a due relation to its neighbors and have its proper place in the whole; to use Goethe's words: "We never see anything isolated in nature, but everything in connection with something else which is before it, beside it, under it, and over it."

Never set a plant in the ground without some purpose, and never use two plants to do what could be done by one such, remembering always to plant firstly for the future, and space enough will remain for obtaining immediate effects, for permanent planting requires space for its future development.

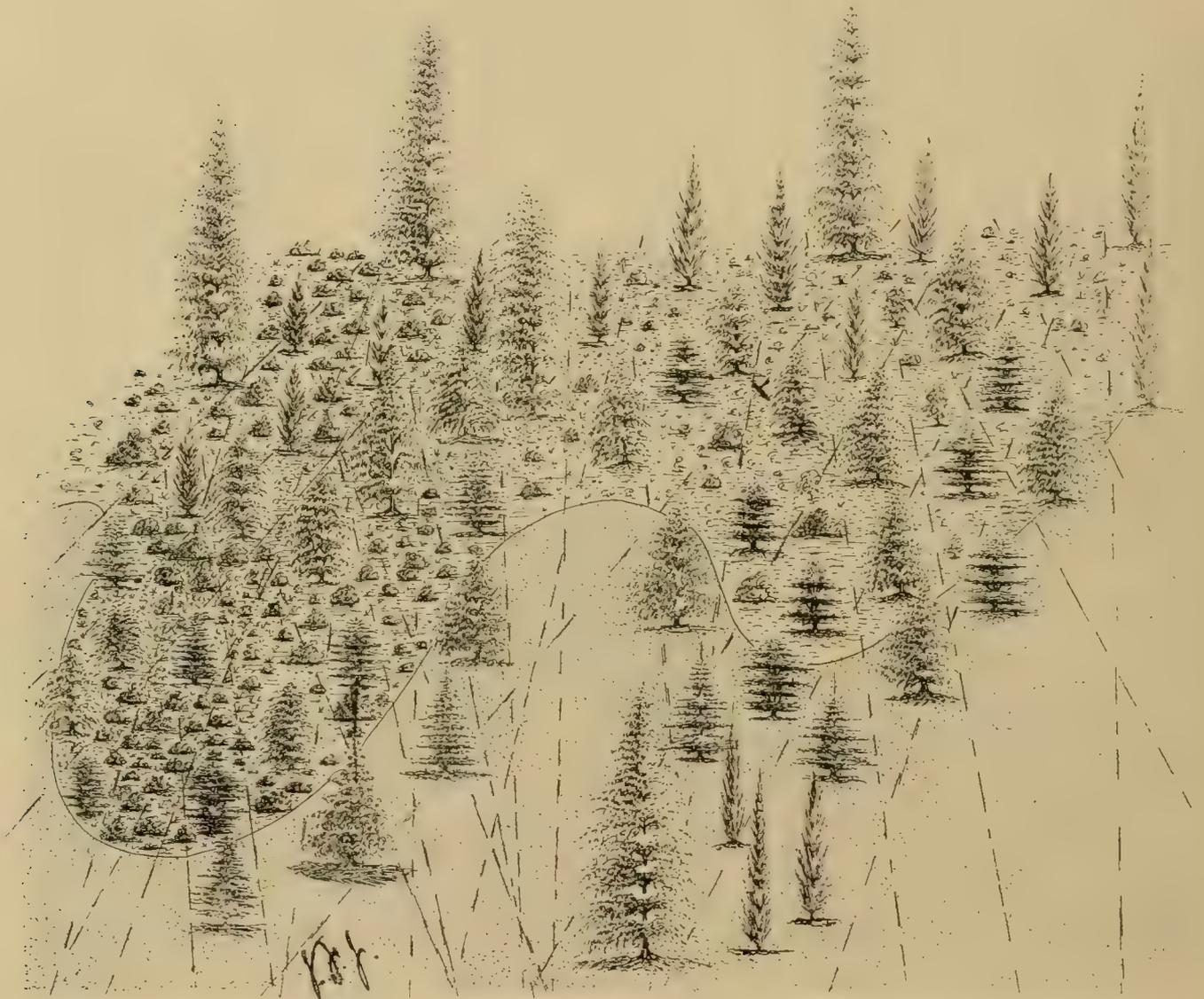
The illustration, Plan 10, now presented will serve to give some idea of the practical application of the principles which should underlay all planting operations; this plan is intended to show how to plant, not illustrating any one of the hundreds of effects such a piece of work will produce. The ground is 400 yards long and is but a small portion of any park land.

From a long distance view there would be two proportionate masses in the general landscape, together with the sky, whereas when nearer a new view would spring from every new point of observation, and the lines of sight marked reveal twenty-six leading views, each of which can have a particular value of its own and contain many variations.

Perfect trees produce masses infinitely superior to mere seed beds of sticks so often seen in park planting. A mass of trees cannot be seen except at a distance proportionate to the size of the mass;

thus trees 80 to 100 feet apart, properly arranged, will appear as a mass from the distance views.

Where there are objectionable features they should be judiciously planted out, and blinds—that is small plantings to serve this purpose, must be employed, but should not have the appearance of being



Plan 10—Grouping Various Trees Together in Planting

set in for that special purpose. Shrubs can thus be used and should be placed in the fore front of the sight line, displaying all their beauties to our gaze. It would be very wrong to plant trees because in a few years they will have attained a fair height, and there is an open view right underneath them, injuring other plants, perhaps, destroying the landscape effect, and necessitating a rather heavy expenditure to remedy.

SLOPING BANKS

Planting sloping banks and hill sides can easily be done by stepping the banks where the plants are wanted. This is done by cutting away a part of the bank and bringing the stones and

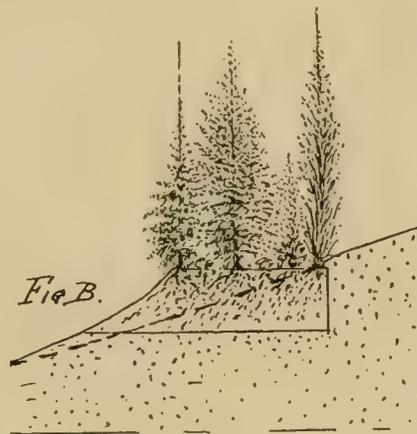
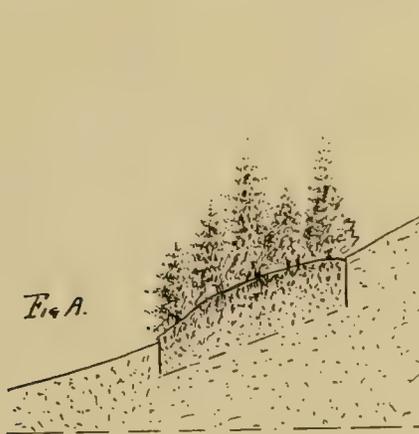


Planting on a Slope

soil to the front, building it up as is indicated herewith; this makes a much prettier and more showy ground than when they have been set right into the original slope. In further illustrations of this principle and applying the rules we have already laid down for planting trees, two representations of planting on slopes or hill sides are now given. The present figures merely show the correct and improper methods of forming the bed which is to receive the specimen. The whole question resting on the arrangement for the retention of water. The fact that the rounded top as shown at A is wrong and must give dissatisfaction cannot be too strongly urged.

If the bank be constructed as there shown, there will be too much drainage for the trees to become well established, as has been explained when referring to the shapes of the tops of beds, but if, on the other hand, the tops of the bank be shouldered as at B, a good roothold is easily gained

and the otherwise excessive drainage of surface waterings reduced to a minimum. The illustrations are so self-explanatory that further details are unnecessary. Sometimes a slope, when there is much ground above and behind it is not so dry as would at first sight appear, because of the leakage of water from the higher ground. This fact can be taken advantage of and very effective plantings made. In grouping on slopes, this system will be found very effective in results.



It will be well at this time, however, to point out also that the best effect of a planted bank is not to be obtained by the employment of one sized tree only, but that if a back row of trees, with a middle-distance of shrubs of lower growth be used, and then a grass slope in the front edging right down on to the walk, the pictorial effect is very greatly increased—and in all planting this should always be kept in view.

PLANTING BORDERS

In all things a proportion is necessary; in size as well as balance. When we look at parks and grounds of large extent we see narrow borders for hardy herbaceous plants on the roots of shrubs and

trees, about three feet wide, such as you would expect in a villa garden. We see at once that these borders are not in proportion to the ground, and that they have not space to adequately exhibit the beauties of hardy flowering plants.

Plan 11 is to show a suitable arrangement for hardy flowers in large grounds; say a border is supposed to be about twelve yards wide, so that you have space to show large noble herbaceous plants harmonizing with their surroundings. In commencing to lay out such an one its own effects should firstly be developed, namely, its long and broad views, as shown by lines on plan; these should be defined by planting permanent plants, generally shrubs of an evergreen character, then by watching the shrubs formed by the lines already named, a great number of effects to further develop will be seen. Every land, small or large, has these views of masses and extent, they are only the foundations for development, but without them what can stand? When you know the places for these pictures in lands it is possible to commence to place thereon the effects wanted.

THE HERBACEOUS GARDEN AND BORDERS

This is what may be called "the garden for the million," or "every man's garden." It is within the reach of almost everyone living in the country, and of many living in cities, to have a garden or at least a bed of this type. Some of the most beautiful examples of this kind of gardening are to be found among the poor cottagers in many parts of England.

The plants used in the herbaceous garden need no greenhouse to produce them, and no expensive outlay to retain them. They can nearly all be raised from seed sown in the open ground if given reasonable and intelligent care.

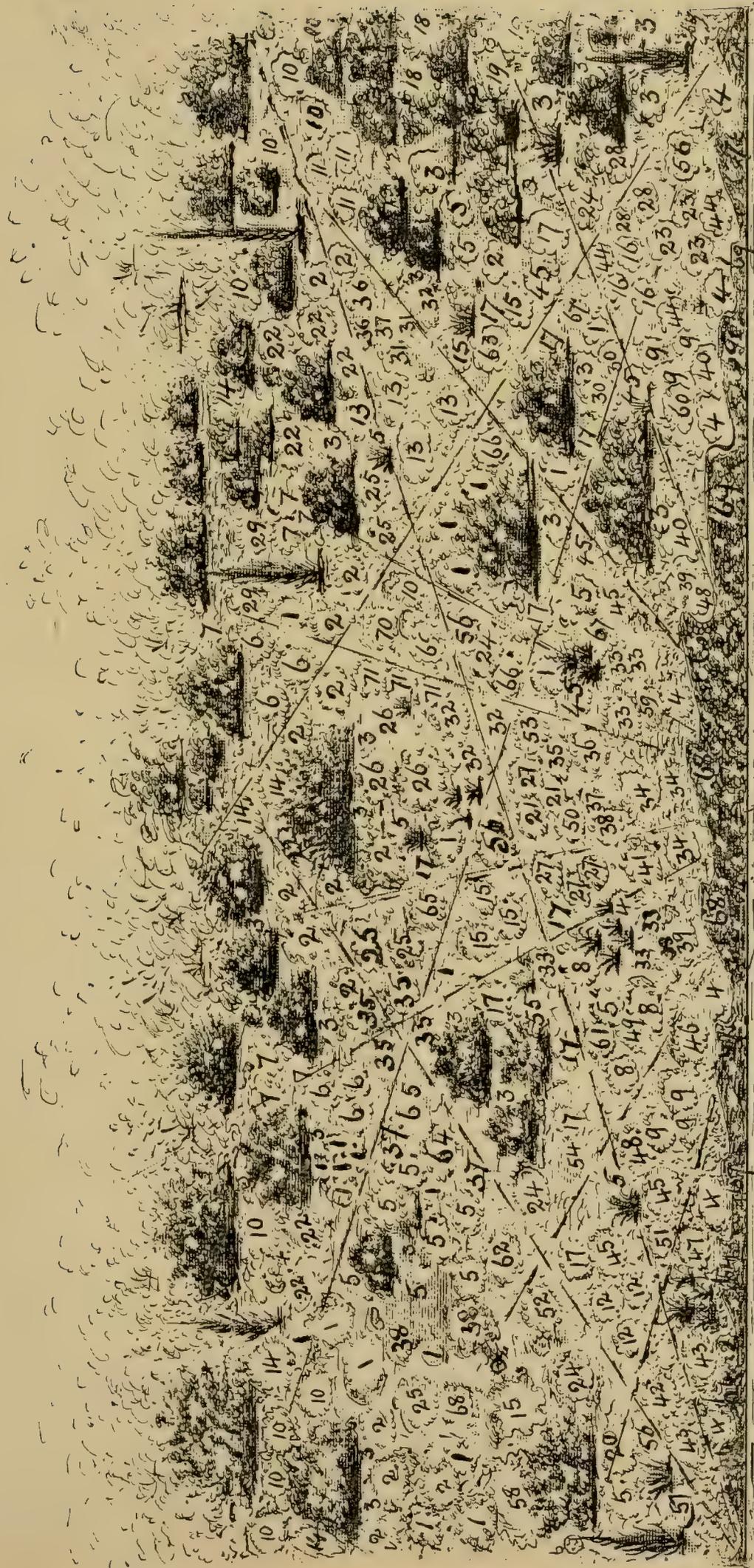
The first point to be considered is the location of your beds, borders or garden. In choosing a site for this purpose, select a place where the plants may be seen to good advantage. In the modest cottage garden a border may be made by the side of a fence or building, or it may merge into a clump of shrubs. If possible give your border a background, or else plant in the form of a bed.

The planting may be done either in the spring or the fall. If in the spring it should be done as soon as the frost is out of the ground; if in the fall the month of October is most suitable.

The mingling of herbaceous plants with flowering shrubs gives good effects. We submit a simple plan of an herbaceous border, showing how a succession of bloom may be kept up from early spring until frosts come in the fall. This system of planting may be extended indefinitely by using a large number of species, or it may be modified to suit the most unpretentious garden.

Instead of arranging the plants in the old-fashioned way, like the slope of a railway bank, we have planned to show their beauty and their charms in a natural way. We build no wall of shrubs for a background to the plants, but arrange them to present vistas, and then show the way to fill in with plants for effect. If the reader will locate any given number on the plan—for instance, *Delphinium elatum* (No. 1)—and then picture the length and continuity of view which this avenue of blue will present when in flower, he will all the more readily grasp the detail and appreciate the value of this plan. On the same principle the beauty and effectiveness of every form of flowering plant is revealed, each one in its season. It will be observed that this is accomplished by not allowing any tall plant to interfere with the massing and distant view lines.

The growth of the shrubs selected should be allowed to commence from the ground, and, in general, rise to a height of not less than five feet. The numerous varieties of the *Rhododendron* are the best for this purpose. A reference to the plan shows the long views to be composed of *Hollyhocks*, *Delphiniums*, etc.; the general massing lines of *Hydrangeas*, *Sunflowers*, etc. Special plants are grouped in quantity in the middle of the border, for instance, *Pæonies*. Near to the walk ample space is left for bulbous plants, such as *Crocus*, *Snowdrops*, *Winter Aconite*, *Dog's-tooth Violets*, etc.; these



for Foray the Johnsons

Plan 11.—The Herbaceous Border for Public Gardens and Parks

coming up through the edging amongst the beautiful Moss Pink (*Phlox subulata*) on the margin, while just beyond space has been reserved for the Narcissus tribe, Scillas, the beautiful old garden Tulip, *T. suaveolens*, etc.

After your ground is planted, it should be carpeted with *Artemisia Stelleriana*, or some similar carpeting plant, to keep away the weeds and veil the soil, and give a good general base effect. The plant named covers well and does not require much root food; it can also be pulled about a great deal without suffering any injury.

Reference to the figures on diagram will show the following arrangement of plants: 1. *Delphinium elatum*; 2. Hollyhocks (*Althæa rosea*); 3. *Rhododendron*; 4. *Yucca filamentosa*; 5. *Arundo donax*; 6. *Hydrangea paniculata grandiflora*; 7. *Aconitum autumnale* (Autumn Monk's Hood); 8. *Hemerocallis flava*; 9. *Achillea filipendula*; 10. *Heracleum pubescens* (grows 10 feet high); 11. Golden-rod (*Solidago canadensis*); 12. *Papaver orientale* (Oriental Poppy); 13. *Symphytum caucasicum* (Caucasian Comfrey); 14. Sunflower (Tall Annual); 15. *Helianthus multiflorus*; 16. *Pyrethrum roseum* and *Pyrethrum uliginosum*; 17. *Phlox decussata* (varieties); 18. *Clematis tubulosa*; 19. *Asclepias tuberosa*; 20. *Clematis Davidiana*; 21. *Eryngium amethystinum*; 22. *Borago orientalis*; 23. *Ranunculus aconitifolius*; 24. Asters (varieties); 25. *Pæonia* (varieties); 26. *Lupinus macrophyllus*; 27. Double Rockets (*Hesperis matronalis* fl. pl.); 28. *Mimulus cardinalis*; 29. *Verbascum Chaixii*; 30. Wallflowers (common); 31. *Rudbeckia californica*; 32. *Tritoma Uvaria*; 33. *Salvia patens*; 34. *Anemone fulgens*; 35. *Lilium speciosum*; 36. *Lilium longiflorum*; 37. *Lilium martagon*; 38. *Lilium auratum*; 39. *Acanthus mollis*; 40. *Spiræa palmata*; 41. *Aquilegia glandulosa*; 42. *Achillea* "The Pearl;" 43. *Heuchera sanguinea*; 44. *Campanula pyramidalis*; 45. *Anemone japonica alba*; 46. *Veronica prostrata*; 47. *Aquilegia chrysantha*; 48. German Iris; 49. Iris Kämpferi; 50. Iris siberica; 51. *Alyssum saxatile compactum*; 52. *Lobelia cardinalis*; 53. *Dielytra spectabilis*; 54. Iris florentina; 55. Forget-me-not (*Myosotis dissitiflora*); 56. *Pentstemon barbata*; 57. Hardy Pinks; 58. Cowslips; 59. *Gentiana acaulis*; 60. *Oenothera fruticosa*; 61. *Pentstemon humilis*; 62. Snap-dragon (*Antirrhinum majus*); 63. *Platycodon grandiflorum*; 64. Rose Champion (*Agrostemma coronaria*); 65. *Saxifraga cordifolia*; 66. *Plumbago Larpentæ*; 67. *Funkia Sieboldi alba marginata*; 68. *Funkia cœrulea*; 69. *Funkia japonica*; 70. *Funkia Sieboldi*; 71. *Genista prostrata*.

PERPETUAL EFFECT

UNION OF FORMAL AND NATURAL STYLES

Plan 12 shows an arrangement for hardy and summer plants, trees and shrubs and grassy glades. It has been specially prepared for the assistance of those having the grounds of private estates in charge, as well as those who desire to make their own places attractive all through the year.

In the design the exterior beds are intended for hardy subjects, while the central figure is intended for both hardy and tender plants. The planting of these figures can be done in many ways; no two gardens should ever be alike.

The low bushes shown irregularly scattered about are intended to be *Rhododendrons*; seven trees bounding the line of the beds are to be *Picea pungens*, or other tree of like habit; the smaller upright plants represent *Thujas* in such varieties as *Geo. Peabody*, *Vervæneana*, etc.

To make formal work, such as buildings, harmonize properly to natural effect, formal gardens have been used. The great objection to this scheme in late years has been the poor appearance presented during the greater part of the year, which arises from the use of tender plants alone—a method that has impelled some persons to characterize tender plant effects as proofs of bad taste—whereas the fact is if properly used they are proofs of good taste, giving brilliancy during a part of the year, and rendering hardy effects all the more enjoyable in the other seasons.

The central figure is intended to be so used as to secure this brilliant effect, without having the alternating dead effect generally seen. The spaces usually allotted to summer flowers are retained, but the usual little cuts of grass between the beds are used for plants that are permanently effective, and particularly during the winter period, late autumn, and spring.

The walks are divided from the central figure by a stone edging—of course a stone edging is the best, but a cheap one may be made with bricks. This may be easily made by a mason who should lay

a brick flat long ways around the figures, letting its top surface be two inches below the general level to act as a foundation for another brick set on its edge all the way round on the top of it. These require to be kept in the curves as perfectly as possible; then the mason will take his concrete made of cement and sand, and whirl the whole figure into perfect form.

All other lines are made by planting edgings of *Euonymus radicans variegata*. The tall plants are intended to be permanent, and to remove the levelness of formal gardening by utilizing such plants as *Yuccas*, Ornamental Grasses, Bamboos, or small light growing forms of *Cupressus*, *Retinospora*, etc.

It will be seen that this central figure has three divisions, central, intermediate, and outline. The small beds in this figure are destined to receive the most valued gems of small size—dwarf growing plants of such dimensions as in *Alternantheras*, tricolor *Geraniums*, etc. The central figure is for summer flowers and bedding plants, such as *Geraniums*, *Coleus*, etc., according to taste, with *Plumbago capensis* covering the ground, and scarlet and white *Verbenas* planted among it, say at two feet intervals, throwing up their charming flower heads and giving a gorgeous color effect with a minimum of formality.

The intermediate division between the central and the double line, represents space allotted for effective hardy plants dotted about the ground, each one to have room enough given so as to allow it to develop itself freely to its full extent. Such plants as a few *Daphne Mezereum*, *Erica herbacea carnea*, *Salvia patens*, *Stipa pennata*, *Spiræa filipendula*, and *Liliums*. Where it will grow, *Agapanthus umbellatus* is excellent for this border; so is *Arundo conspicua*, but only in the mild parts of America can these last be called hardy plants. After sufficient subjects are planted the ground may be carpeted with *Vinca minor alba*.

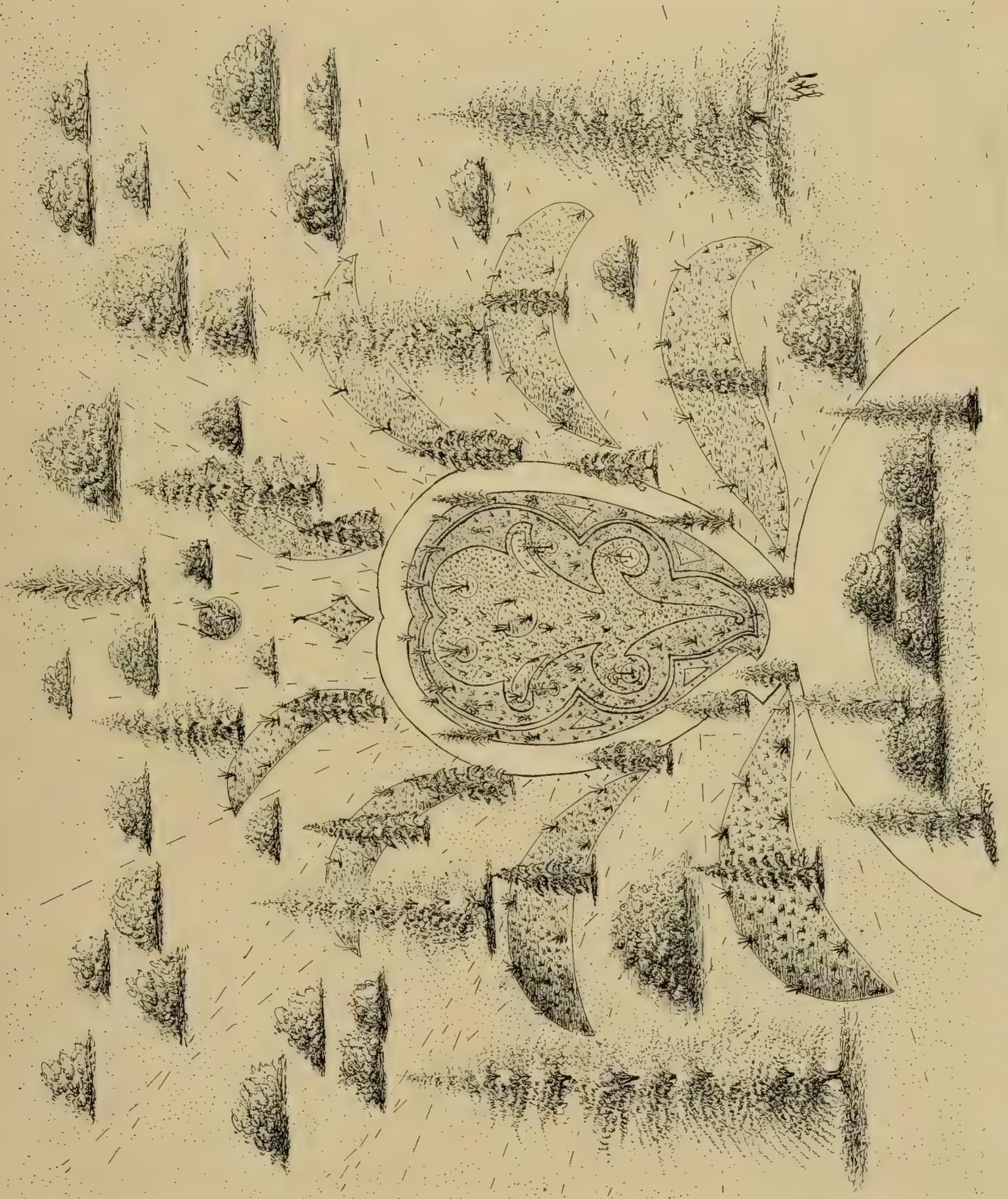
The outlines next to the walk should contain all the favorite spring bulbs, Winter *Aconites*, *Snowdrops*, *Crocuses*, *Scillas*, etc., also such plants as bulbous *Anemones*, *Aubrietia deltoidea*, *Gentiana acaulis*, *Erythronium dens-canis* (Dog's-tooth Violet), *Iberis*, *Linums*, etc., and the ground itself carpeted with *Euonymus radicans*.

Between the double line such a plant as *Pyracanthus* can be trained and kept in shape so that a line of white flowers or scarlet berries would appear in their respective season.

The dotted lines (of sight) shown between the shrubs and trees would include many beautiful effects of light and shade amongst these hardy beds of *Delphiniums*, *Phloxes*, *Hollyhocks*, *Roses*, etc.

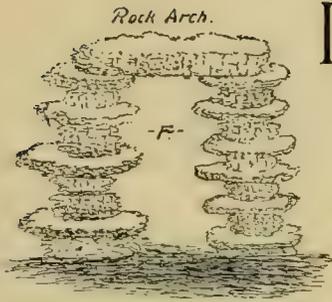
A plan like the one described can be developed in grounds less than an acre in extent.





Plan 12.—Showing Plant Arrangement for Perpetual Effect Combining Natural Forms and Styles

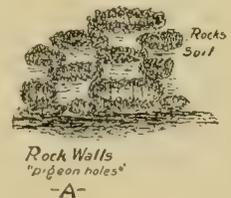
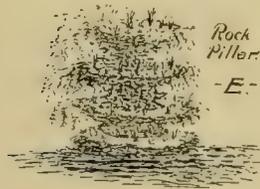
ROCKERIES



IN PREPARING a location for this form of garden, it should be borne in mind that there are well defined reasons for making it, and special purposes which it subserves. The principal reason is to give an effect that no other form of ornamental grounds will. The principal purpose to provide a more congenial home for many species of plants than the ordinary garden gives.

In selecting a location for the rock garden, choose a site that is at least apparently cut off from all other ornamental grounds.

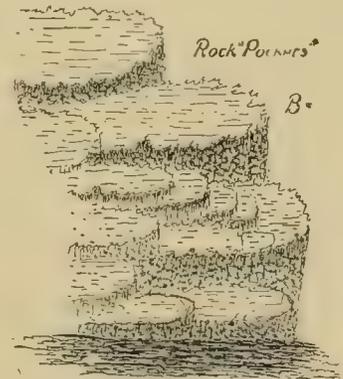
The rock garden itself, and all of its surroundings, must be entirely free from formality. Formality has a place in ornamental gardening, but the rock garden is certainly not the spot for it. If the ground is of a rocky and uneven form, so much the better. If not, it must be made so, to a certain extent. If a portion of the site is partially shaded it will be an advantage, as many alpines succeed best in partially shaded situations. A small streamlet rippling



over a rocky bed, will give the ideal effect to your garden, and its banks will afford a home for many moisture-loving alpines, Ferns, and bog plants.

In preparing the soil it must be worked to a depth of two feet or more, where the plants are to be placed. Nearly all alpine plants have long, slender roots, which they push deep down into the soil, or among the crevices in the rocks that have become filled with decayed leaves, and where moisture can always be found, no matter how dry the surface may be. From this fact will be seen the importance of having a deep, light, and porous soil, with thorough surface drainage. Leaf mold or bog muck, sand and broken stone added to the soil in which the plants are to be placed, will improve it, if it be of a stiff nature. Large boulders, or stone of any kind, naturally disposed, and half buried, will make a cool shelter for delicate little plants such as many of the Saxifragas, Androsaces, Anemone alpina, etc.

The garden should be surrounded by an irregular border of evergreens, with a few deciduous trees to break the monotonous effect. The Cedar of Lebanon is worthy of being extensively used where it is hardy. The care of the garden after it is planted, consists mainly in keeping it clear of weeds, having a general oversight of the more delicate and



valuable species. See that strong growing plants are placed so that they do not cover or destroy the more delicate forms. A coating of leaf mold (mulching) placed over the roots of plants, with judgment according to the growth of the specimens at the beginning of winter, will save many gems.

In addition to the species named in the plan there are many others that may be used to good effect, among which may be mentioned nearly all of the spring flowering bulbs, Narcissus, Scillas, Chionodoxa, Grape Hyacinths, Snowdrops, Anemone fulgens, Polygala paucifolia, Hardy Primroses, Auriculas, Blood root, Sempervivums, Houstonia cœrulea, Silenes, and Smilacina racemosa.

A rockery is one of the numerous possible forms of the natural garden. A rockery of any extent is formed generally into a sort of amphitheatre. When no assistance is given by the undulations of the land, the soil is thrown from the centre to raise beds around the outsides. In these grounds, water is almost absolutely necessary; it does not require more than two feet for general purposes, but a quick running water is the essence of rocky scenery. Water plants require their full portion of soil below this level, but they must be used sparingly so that the beauty of the water itself may be revealed with its floating masses of jewels, created by the lights and shades thrown by the surface as it ripples in the sunshine.

Rockeries are intended to display a host of plants in a little space; they are arranged to hold soil by suspending masses above masses, thus showing more life in given space than any other style of arrangement; producing natural hanging gardens. We show six simple diagrams used in rockery construction.

Rock walls are formed on the principles shown at C. Soil and plants are held on their surface by being built on what is called the "pigeon-hole" system (A); these vary in size and form, so that no two are alike when produced by skillful hands. Rock walls are built to hold "pockets," which are really miniature table lands. See B.

When earth is required to be held perpendicularly to a height of twenty feet, more or less, rock "binders" are used as shown in C. The "ties" shown are cemented together into the wall which prevents them from bulging out.

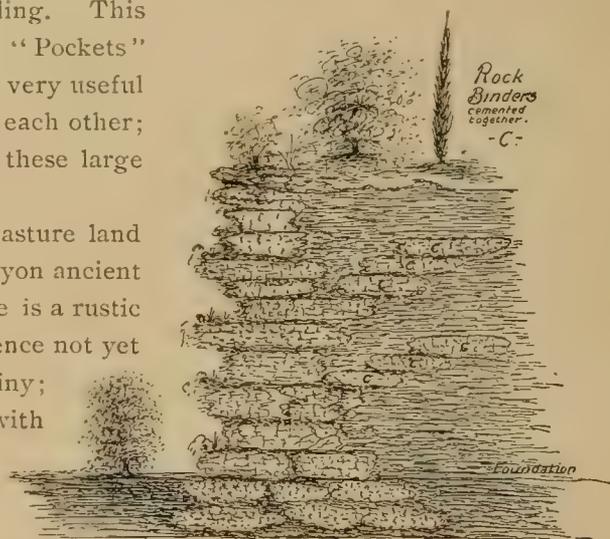
Rock tables (D) are used for specimen rock plants.

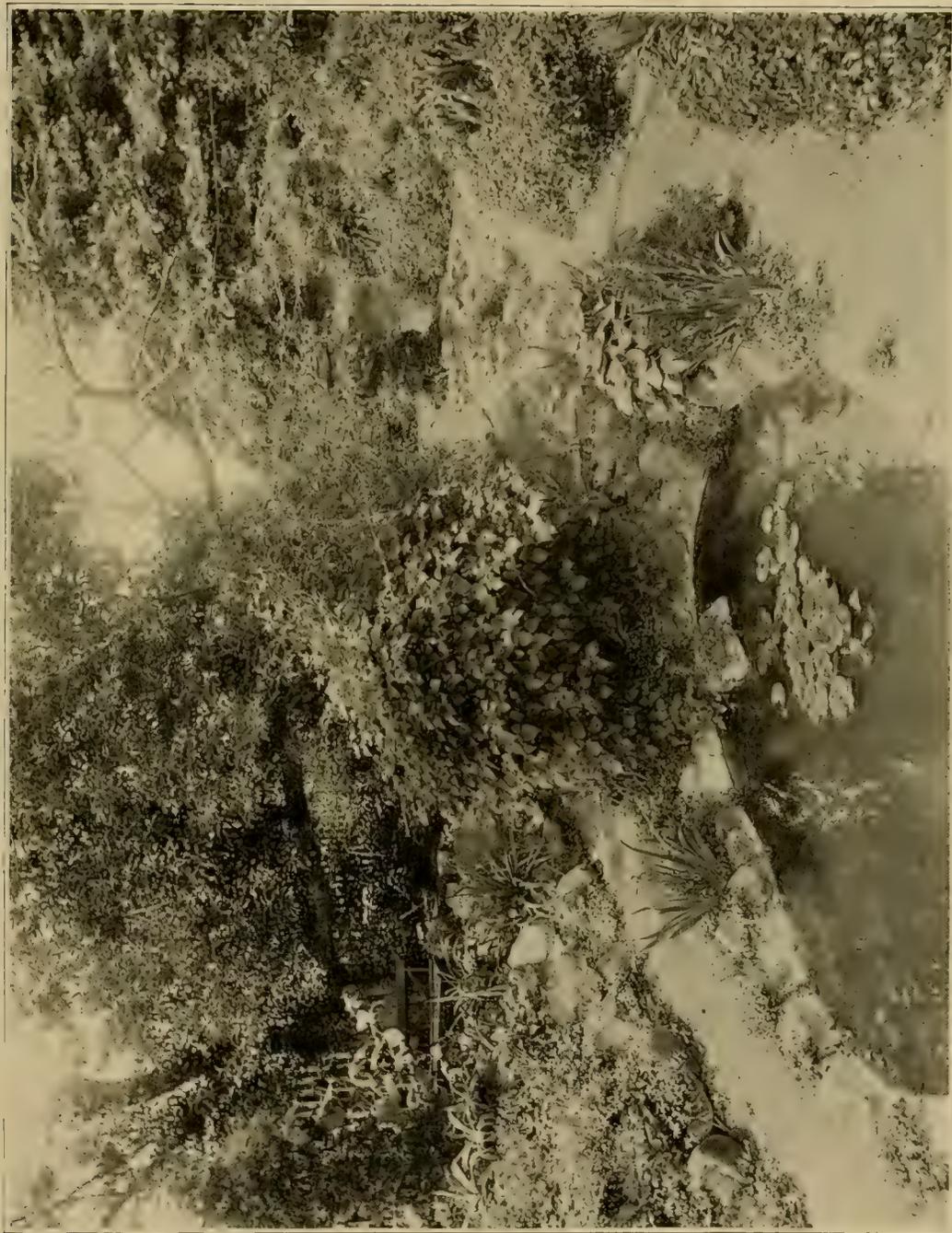
Rock pillars are built to show plants suspended above each other in profusion (F). Ferns are often very effectively used in these arrangements.

Rock arches (F) show how plants are arranged to stand over pathways surrounding the visitor.

Rocks for plant growth should be of a soft (tuffa) nature for roots to cling to; large rocks mixed with medium sized stones are convenient for building. This will be observed by looking at the formation of "Pockets" and "Pigeon-holes." The large flat stones are often very useful to help hold the soil and plants in suspension above each other; small stones are occasionally used around the edges of these large stones to hold the soil, as is shown in the Rock Table.

The Rock Garden shown opposite was merely pasture land devoid of all but grass, save for the one exception of yon ancient Apple tree, in its last dying years. Around its base is a rustic seat. Just behind it can be seen a trace of the fence not yet covered by the "trellised vine" which is its destiny; nearer to the front Polygonum sachalinense is used with good results. Between the fence and the walk shown, and on top of the bank is yet another walk. Right behind the water stands a vigorous





A NOOK IN THE GARDENS OF HENRY A. PAGE, ESQ., MONTROSE, SOUTH ORANGE, N. J.
This view is included in a space of 40 x 30 feet, and is one of many features in a 500 ft. boundary, where the main purpose was to obliterate the fence line. The general effect is massiveness and infinity.

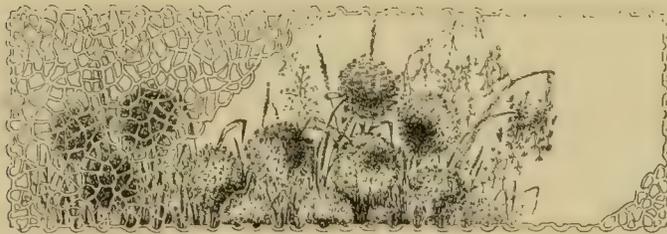
clump of the Japanese Wineberry, whose bright, golden red fruits shed the foliage with a surprising richness of color which seems to be reflected in the scales of the golden denizens of the pool which it overshadows.

The treatment of the margin of this small water deserves a mention; the breaking up of the dead monotony of the slope by the introduction of a few rocks and pockets for the reception of plants is a small matter perhaps, but by no means without effect in pulling together the entire picture—nature has been followed, the flower has been introduced into the “crannied rock;” Funkias and Irises are the conspicuous border plants.

It is not within the scope of these present notes to enumerate even a tithe of the subjects which may be met with in this garden:

“ Where order in variety we see,
And where, though all things differ, all agree.”

Sedums, with Bamboos, Yuccas, Tigridias, Junipers in variety, Lycium, *Coreopsis grandiflora* abound, and from the fields *Rudbeckias*, *Linarias*, and others are introduced with much effect. *Daphne cneorum* peeps up in unsuspected spots, filling the air with fragrance; the lovely, intense blue of *Salvia patens* attracts notice. Ferns galore revel in luxurious growth, and among them a variegated *Athyrium* is conspicuous; *Euonymus radicans*, with *Ampelopsis Veitchii* are employed as carpets and nowhere does the bare soil intrude on the view. *Andromedas*, *japonica* and *arborea*, are noticed, and small *Artemisias* clothe the rock in places; all these and a hundred and one other things equally worthy of note. Each season of the year, nay, each month or week, has its own feature here.



AQUATIC AND BOG GARDEN

THIS part of the garden or ornamental grounds has not received the attention that it deserves in this country, the home of a large percentage of the plants that contribute to its beauty.

The best location is where Nature has already done her part, and a valley with a never failing stream running through it is the most desirable spot. But such advantages are open to few who desire to avail themselves of this form of garden, and any piece of land which has the advantage of a supply of water can be utilized, water being the prime essential to the success of the garden. Provision must be made to carry away heavy rainfalls, by constructing drains in the usual manner without entering the Lily pond; this will protect the plants from injury and the pond from becoming a mud hole.

In preparing the basin or pond, it should be excavated to a depth of at least three and one-half feet. This will allow for two feet of good soil and 18 inches of water. If the surface soil is of good quality it should be deposited near at hand where it may be returned to the pond after the subsoil has been removed. It would be well to add a quantity of bone, both coarse and fine, and some manure to the soil after it has been returned to the pond or basin. The soil for the garden should be ploughed and worked fairly smooth, and it should also have some bone meal and fine manure worked into it. Having located the beds, they should be worked to a depth of two feet at least, according to the character of the soil and the subsoil. The beds that are to be planted with Rhododendrons, etc., should have thorough drainage, and should have considerable sand and decayed forest leaves incorporated with them. If the beds can be all bog soil they will be still better. They should be worked to a depth of two feet or more. If the soil for both the beds and the basin could be prepared in the autumn and left exposed to the frost and snow, so much the better.

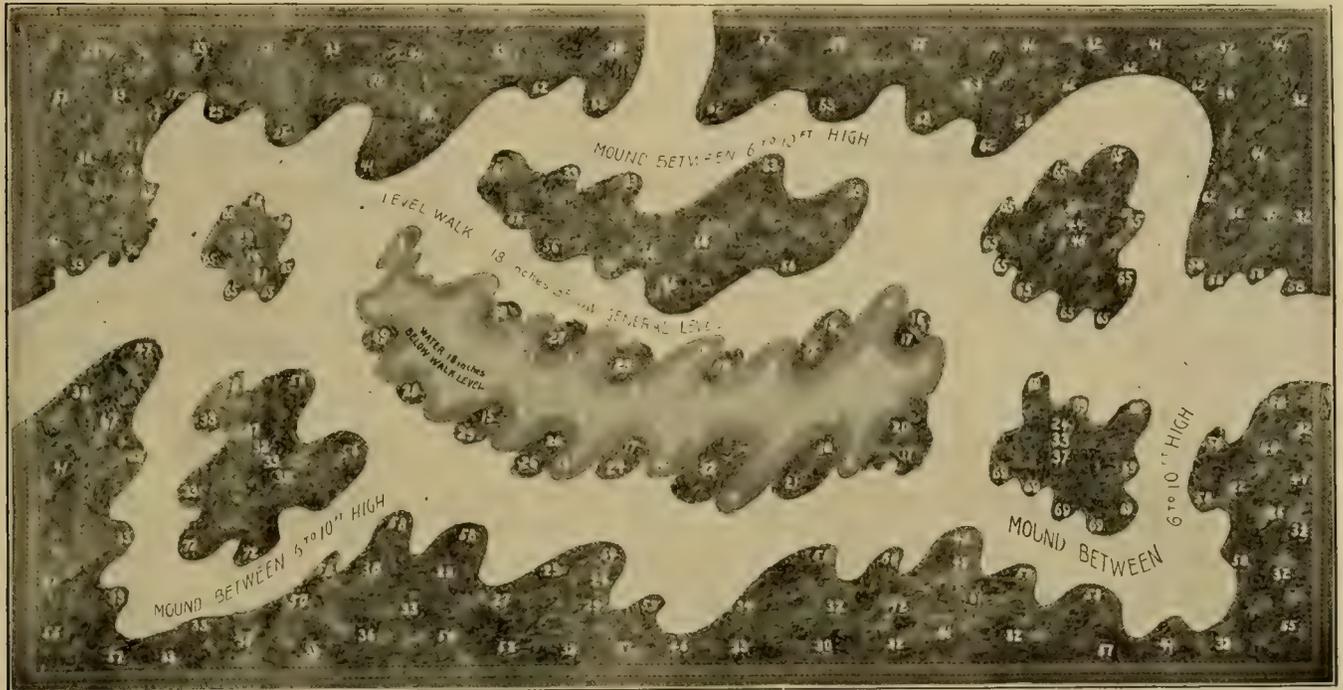
PLANTING

This may be done either in the spring or fall, except the water plants, which should be planted in the spring. Of the species named in the plan all are hardy, except at the extreme north, if planted deep enough to prevent the water from freezing down to the soil. In addition there may be mentioned for the pond, *Nymphaea odorata sulphurea*, *N. odorata minor*, *N. tuberosa*, *N. Marliacea albida*, *N. Marliacea carnea*, *N. Marliacea rosea*, *N. alba*, *N. pygmæa*, *N. Helvola*, *N. Laydekeri rosea*, *N. odorata gigantea* and *Sagittaria variabilis*. *Nelumbium speciosum roseum*, *N. Kermesinum*, *N. album grandiflorum*, *N. album striatum*. For the beds may be mentioned *Houstonia cœrulea*, *Erythronium americanum*, *Thalictrum anemonoides*, May Apple, *Aconites* in variety, *Smilacina racemosa*, Solomon's Seal, hardy English and American Violets, *Hibiscus militaris*, *Cardamine pratensis*, *Spiræa salicifolia*, *S. gigantea*, *S. aruncus*, *S. palmata*, *Scirpus tabernæmontana zebrina* (Japanese Porcupine plant); *Helonias bullata*, *Menyanthes trifoliata*, *Orontium aquaticum*, *Panicum virgatum*, *Erianthus Ravennæ*, *Phalaris arundinacea* var., and *Elymus glaucus*.

TENDER AQUATICS

These may be added to the water garden by those who are fortunate enough to have proper facilities for handling them. They will not succeed if planted in ordinary ponds at the north. A

pond or tank twenty inches to two feet in depth should be built of brick and plastered with Portland cement. To give the best results, this tank should be heated. If this is not convenient the plants must be started into growth in tubs in the greenhouse and not planted in the tank until warm weather is assured and the water has become thoroughly warmed by the sun. The species best suited to this purpose are *Nymphaea Devonensis*, *N. dentata*, *N. alba candidissima*, *N. caerulea*, *N. rubra*, *N. gigantea*, *N. zanzibarensis* and its varieties, *rosea* and *azurea*, and any of the hardy varieties, besides a number of newer varieties, that have been introduced during the past year or so, but with which we are as yet unacquainted. Other tender plants that may be used in the tanks or ponds are the Parrot's Feather, Water Hyacinth, Water Snowflake, Egyptian Paper Plant, *Cyperus alternifolius*, etc. All of these plants may be kept in a cool house during the winter and treated as ordinary greenhouse plants.



Plan 13.—An Aquatic and Bog Garden. Length, 300 feet; width, 150 feet

EXPLANATION OF NUMBERS ON PLAN 13

1. *Nelumbium speciosum*; 2. *Nymphaea Marliacea rosea*; 3. *Nymphaea alba candidissima*; 4. *Nelumbium luteum*
 5. *Nymphaea odorata*; 6. *Nymphaea Marliacea chromatella*; 7. *Nymphaea mexicana*; 8. *Nymphaea Marliacea rosea*; 9.
Limncharis Humboldtii (Water Poppy); 10. *Limnanthemum trachyspermum* (Fairy Lily); 11. *Aponogeton distachyon*
 (Cape Pond Weed); 12. *Hibiscus moscheutos* (Swamp Rose Mallow); 13. *Caltha palustris* (Marsh Marigold); 14. *Pontederia*
cordata (Pickerel Weed); 15. *Lobelia cardinalis*; 16. *Arethusa bulbosa*; 17. *Myosotis palustris* (Forget-me-not); 18. *Typha*
latifolia (Cat-tail); 19. *Iris versicolor* (Large Blue Flag); 20. *Sarracenia purpurea* (Side Saddle Flower); 21. *Eulalia*
gracillima univittata; 22. *Iris Kämpferi*; 23. *Iris sibirica*; 24. *Arisæma triphyllum* (Jack-in-the-Pulpit); 25. *Arundo donax*
variegata; 26. *Osmunda regalis* (Royal Fern); 27. *Hemerocallis flava* (Day Lily); 28. *Orchis spectabilis*; 29. *Cypripedium*
spectabile; 30. *Clethra alnifolia*; 31. *Iris virginica* (Small Blue Flag); 32. *Rhododendron maximum*; 33. *Rhododendron*
catawbiense; 34. *Andromeda floribunda*; 35. *Epigæa repens* (Trailing Arbutus); 36. *Azalea viscosa* (White Swamp Honey-
 suckle); 37. *Azalea nudiflora*; 38. *Vaccinium Oxycoccus*; 39. *Vaccinium macrocarpon*; 40. Lily of the Valley; 41. *Magnolia*
glauca (Swamp Laurel); 42. *Potentilla fruticosa*; 43. *Aconitum uncinatum*; 44. *Arundo donax*; 45. *Eulalia japonica*, *Eulalia*
j. zebrina, *Eulalia j. variegata*; 46. *Salix babylonica* (Weeping Willow); 47. *Adiantum pedatum*; 48. *Trillium erectum*;
 49. *Trillium grandiflorum*; 50. *Lilium canadense* and *canadense rubrum*; 51. *Lilium superbum*; 52. *Thalictrum cornuti*; 53
Anemone pennsylvanica; 54. *Spiræa japonica*; 55. *Abies nobilis*; 56. *Thuja occidentalis* var. *Geo. Peabody*; 57. *Abies*
canadensis (Hemlock); 58. *Taxus baccata*, var. *elegantissima*; 59. *Juniperus prostrata*; 60. *Biota aurea*; 61. *Arundinaria*
falcata; 62. *Cannas*; 63. *Salix caprea*, var. *pendula* (Kilmarnock Weeping Willow); 64. *Betula fastigiata*; 65. *Bambusa*
Metake; 66. *Juniperus squamata*; 67. *Funkia Sieboldi*; 68. *Nymphaea caroliniana*; 69. Select gray plants to edge the water
 beds—*Cerastium tomentosum*, or some other suitable to your locality; 70. *Nymphaea odorata rosea*; 71. *N. alba*
candidissima; 72. *Betula alba* (Silver Birch).

THE WATER GARDEN

MARGINED WITH HEMLOCKS

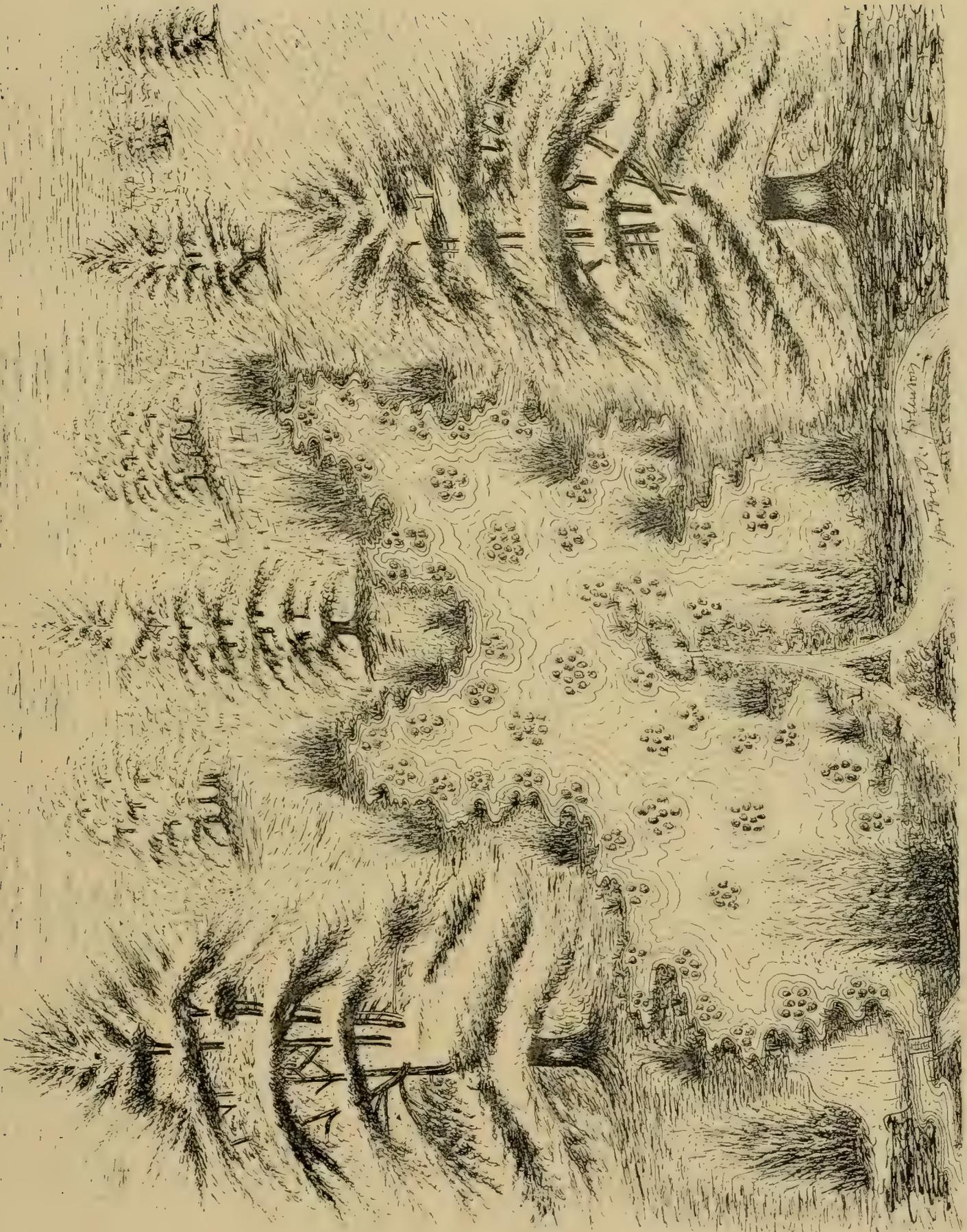
WHEN preparing ponds and lakes for the reception of plant life, the margins are to be laid out to conform to the surroundings, and every advantage taken of rising ground and trees; if the environments are not harmonious they must be made so through the development of lights and shades as shown on plan No. 14. The outlines of the water can be arranged into almost any form desired, but these variations should individually exhibit some reason for their existence. In the present plan, it will be observed that four Hemlocks are made the salient points, imparting light and shade; the trees are not taken near the water's edge, as the intention of our plan is to show the full beauty of water lilies and for these all possible sunshine should be retained.

No mere description can portray the possible beauties of a water margin, for they can be developed to great extent and minuteness, weaving all sorts and conditions of plant life into multitudes of variations of mysterious impressions, the children of a luxurious growth on the margins of the water and the reflection of their beauty therein.

Water lilies should be surrounded by water, the pureness of their character will then appear to spring as if from nothing. When a pond is allowed to become a mass of foliage it produces a mere swamp effect; to avoid this our plan shows the various forms, separate each from the other, and the plants again are so arranged that long views of clear water are retained. To obtain complete gratification from the observation of the glories of aquatics they require to be as carefully arranged and selected by groups in the water as are plants for the lawn in front of the house.

Plan No. 14 is supposed to be one hundred feet in length.





Plan 14.-The Water Garden, Margined with Hemlocks

THE NATURAL GARDEN

THIS is a very excellent plan (No. 15) for a natural garden, to display the beauties of plants, and when properly planted and fully established it would not require much labor to keep in order.

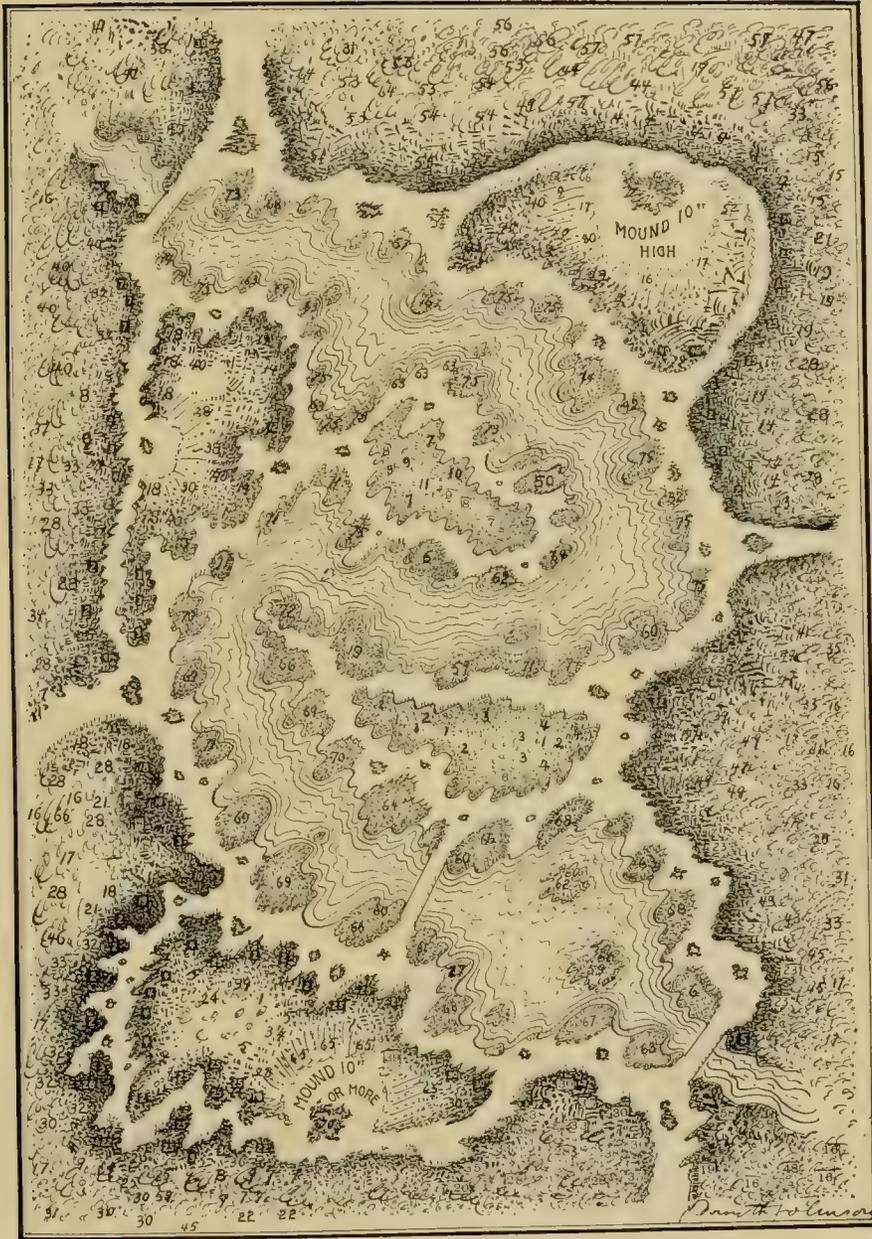
These gardens are very easily made, even on level ground, by excavating the centre to a suitable level for water and a walk immediately surrounding it. Before commencing, a general plan should be formed to show the pictures of the ground, its masses and distances in the same way as the one shown in this design; then you can remove the soil from the centre to the various positions as necessary. Of course the bad soil will go under the high mounds, and the good soil will be placed where wanted, and the amount taken from the water and walks will be pretty abundant in ordinary grounds to give opportunity to make deep soil where wanted. A design so comprehensive as this will require space not less than 400 feet by 300 feet, and a good water supply. These gardens can be made with small amount of water or none, nevertheless it will always be the best feature for the embellishment of the centres of these grounds, for it gives depth and height to everything, besides yielding the numerous beauties which belong to itself. The formation of such grounds as here designed, give great adaptability for all sorts and conditions of plants as you can make positions and soil suitable for any plant that will stand the temperature of the location.

On the Rocky Mountains of America there are such glorious forms of plant life that they gain the admiration of the whole world, but to see these plants away from their habitats one has to go to Europe. Where can you in the East see specimens of these plants of any reasonable size, such as can be met with in the environments of an English residence—the *Abies*, *Piceas*, *Sequoias* and plants that grow in a temperate zone? And why is this so? Because our European brethren are not afraid of giving a plant a few cartfuls of soil and space enough for its branches to expand. For instance, at Dropmore, near Maidenhead, not far from the Hon. W. W. Astor's domain, Clevedon, Buckinghamshire, England, the grounds were planted by the late Lady Granville and contain many American gems above one hundred feet high, and other hardy plants; the finest *Araucaria imbricata* in Europe is there, and why? Soil! soil! is the answer. There was originally an old gravel pit whence large quantities of gravel have been taken out to make the roads for the domain, this was filled with soil from cutting the road edges which is usually done in these places once a year to keep their lines in perfect curvature. On this earth was placed a mound as we have indicated for planting in this work, and altogether in this (exceptional) instance we may say this plant has soil to the depth of forty feet. When the *Araucaria* first appeared in the English market, Frost, the gardener, bought this plant, if I remember correctly, for five pounds, we may say approximately twenty-five dollars, from Messrs. Veitch, and carried it home in his pocket and planted it. Now see the results, people go from all parts of Europe to see it and other hardy trees.

I have heard a leading public man in gardening in this country state that six inches of soil was enough for a plant to flourish in. Of course, we are often glad to have six inches in large spaces of land and to make the most of it, but this cannot develop plant growth to its most noble characters.

EXPLANATION OF NUMBERS ON PLAN 15

1. *Aquilegia cœrulea* (Rocky Mountain Columbine); 2. *Phlox subulata* (Nivalis, White Moss Pink); 3. *Campanula carpathica*; 4. *Daphne cneorum*; 5. *Clematis integrifolia*; 6. *Gentiana acaulis*; 7. *Arabis alpina*; 8. *Alyssum saxatile compactum*; 9. *Aquilegia canadensis*; 10. *Campanula carpathica alba*; 11. *Aquilegia canadensis flaviflora*; 12. *Armeria maritima*; 13. *Asclepias tuberosa*; 14. *Erica herbacea carnea*; 15. *Genista tinctoria*. 16. *Abies canadense* (Hemlock Spruce); 17. Cedar of Lebanon; 18. *Hepatica triloba*; 19. *Adonis vernalis*; 20. *Mitchella repens*; 21. *Opuntia Rafinesquii*; 22. *Sedum album*, 23. *Phlox subulata* (Moss Pink); 24. *Saponaria ocymoides*; 25. *Sedum acre*; 26. *Saxifraga aizoon*; 27. *Myosotis dissitiflora*; 28. *Rhododendron catawbiensis*; 29. *Polypodium vulgare*; 30. *Juniperus sabina*; 31. *Abies pungens* (Colorado Blue Spruce); 32. *Papaver orientale* (Oriental Poppy); 33. *Kalmia latifolia*; 34. *Abies concolor*; 35. *Cypripedium acaule*; 36. *Papaver nudicaule* (Iceland Poppy); 37. *Epigæa repens*; 38. Golden Japanese Juniper; 39. *Clematis Virginiana*; 40. *Yucca filamentosa*; 41. *Aubrieta deltoidea*; 42. *Iberis semperflorens*; 43. *Tunica saxifraga*; 44. *Helianthemum canadense*; 45. *Acer saccharinum*. 46. *Fagus pendula* (Weeping Beech); 47. *Cornus florida*; 48. *Veronica repens*; 49. *Saxifraga cordifolia*; 50. *Saxifraga crassifolia*; 51. *Linaria alpina*; 52. *Leontopodium alpinum* (Edelweiss); 53. *Rosa blanda*; 54. *Rosa Wichuraiana*; 55. *Phlox repens*; 56. Western Golden Arbor Vitæ; 57. *Rhododendron roseum elegans*; 58. *Rhododendron maximum*; 59. *Trillium grandiflorum*; 60. *Osmunda regalis*. 61. *Osmunda cinnemonea*; 62. *Trillium erectum*; 63. *Myosotis palustris*; 64. *Lobelia cardinalis*; 65. *Ajuga genevensis*; 66. *Anemone pennsylvanica*; 67. *Anemone nemorosa*; 68. *Hemerocallis flava*; 69. *Spiræa salicifolia*; 70. *Adiantum pedatum*, 71. Hardy English and American Violets; 72. *Orchis spectabilis*; 73. *Gentiana crinita*; 74. *Tritoma Uvaria grandiflora*; 75. *Spiræa* (*Astilbe*) *japonica*; 76. *Sarracenia purpurea*.



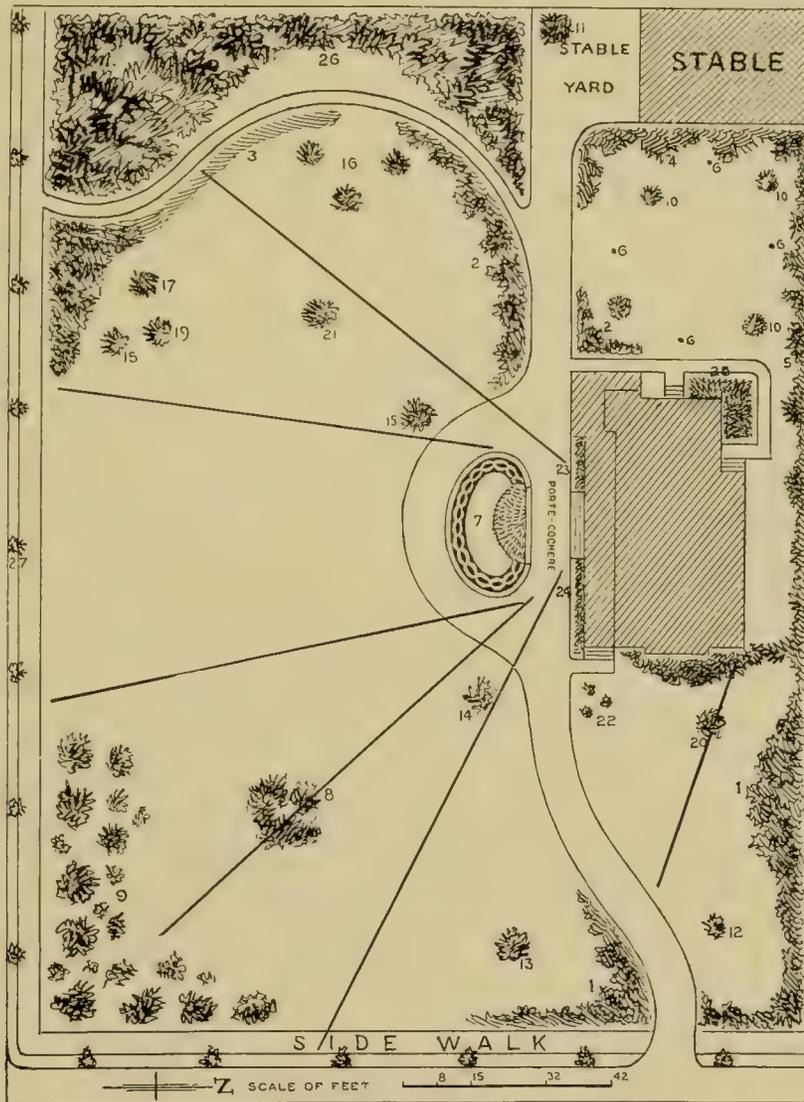
Plan 15—The Natural Garden

PART III

VILLA GARDENS AND PUBLIC GROUNDS

SMALL GROUNDS

IN APPROACHING the subject of the landscape treatment of small areas, it will be as well to point out that the principles of development are the same as for larger areas—the truth does not vary—and for the better understanding of what follows it is advisable for the student to study



Plan 16.—Bad Arrangement, Corner Lots

what has already been given in the foregoing pages. The intelligent reader will find therein numerous passages which will assist him materially in dealing with a given small area.

The first essential in laying out a garden is to realize the view lines, that is to say, to determine in what directions the particular spot under treatment has its best and most effective lines of sight, and, when found, to keep them open. The second essential is to take note of any existing prominent features which are to be worked into the picture and displayed to best advantage. Such may be some old tree, a piece of water, a rock, a near-by house, or even the windows of the residence to which the garden belongs. Thirdly, and this is very important, to note what objectionable or incongruous features there are which must be hidden, including the elimination of the actual boundary line by suitable grouping and massing.

These constitute the tripod on which to rear the landscape development of your garden, and on which may be carried into effect any ideas that the space will allow.

Let us illustrate: In Plan 16 it will be seen that a fundamental principle has been violated at the outset and the entrance to the residence is mistaken for the most salient feature. The whole place is thus spoiled, like many others, by would-be designers trying to make an exhibition of the entrance door as though it were a mere ten cent show.

The private driveway leading up to the house should be laid out to afford all possible convenience, and should pass the house at a point which will not interfere with the more private portions of it, such as the drawing room, library, or study. This driveway should also lead from the house to the stable by the most direct route. See Plan 17, and compare with the previous one.

We have planted the grounds always consulting the natural view lines the land gives. (See A, B, and K). Other material than that named can be used to produce totally different impressions, but you cannot alter the position of the views, for they are not only the largest to be obtained on the property, but they go over the road obliquely and give indefinite terminations instead of limitations; these advantages could not be obtained in an attempt to develop the D and F views, for instance, therefore we stop them off by trees in one instance and shrubs in the other.

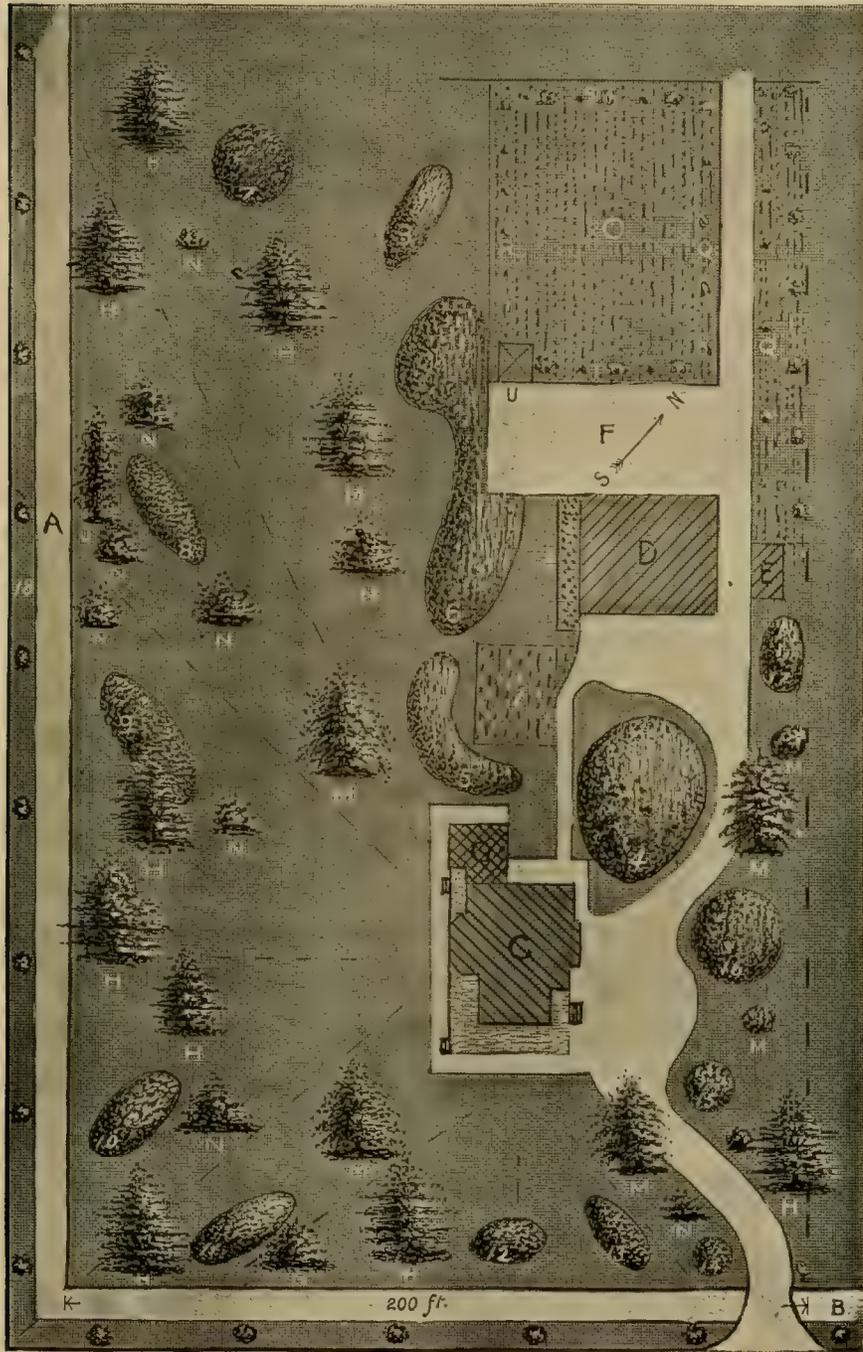
To serve as a picture frame around the house we recommend the Post Oak (*Quercus stellata*), a tree growing from Massachusetts south and west, which, although a little meagre in its early stages, gives a picturesque beauty after a few years that is worth waiting for. We recommend for the outlines the Cedar of Lebanon, a tree possessing a majesty above all others. (See H).

In group planting be particular to give every plant ample space in which to develop its own outlines. The general planting of all the groups is Rhododendrons; these, with the plants on the grass, will form the leading features. They are set out thinly and merely indicate the pictures which are to be filled in with shrubs and groups of flowers for special effect. In the foreground of the beds, and near the grass, Crocus and Snowdrops should go around each, also plant the margins with a good, hardy gray plant that will keep away weeds, and form a permanent bright aspect; *Artemisia Stelleriana* would be suitable. In boundary beds, 7, 8, 9, 10, 11, 13, and 16 might be planted one Hemlock each, to give an immediate effect until supplanted by the Cedars.

The planting of the general groups is on the principle given in figs. 2 and 3, page 55, Part II. All prominent shrubs on grass or in groups require to be mainly of evergreens.

The blinds, 4, 5, and 6, should have a fair sprinkling of *Rhododendron catawbiense*, California Privet, and Hemlocks. If plants are properly alternated in the formation of blinds, such can be completed without destroying the natural growth of plants. *Vinca minor* should carpet the bare soil.

The fruit garden is placed behind the stables, where we also allow room for chopping wood, staking hay, etc. Two necessities of a suburban home are a drying yard and space for growing flowers for cutting purposes; 1 shows the drying yard; 2, a border for early spring and autumn flowers; 3, for summer flowers. Beds or borders used for cutting from should be kept away from the house so as not to spoil the views by revealing decapitated stems.



Plan 17.—Good Arrangement of Corner Lots

REFERENCES TO PLAN 17

- | | | |
|---|---------------------------------|------------------------|
| A B encloses the square of "Home Acre." | H.—Cedars of Lebanon. | Q.—Two rows of grapes. |
| C.—House. | J.—Pinus Cembra. | R.—Peach trees. |
| D.—Barn and stable | M.—Quercus stellata (Post Oak). | S.—Apples. |
| E.—Woodhouse. | N.—Evergreen shrubs. | T.—Plum trees. |
| F.—Hay and wood yard. | O.—Small fruit and vegetables. | U.—Windmill. |
| G.—Conservatory. | P.—Pears. | |

VARIATION OF GROUPS

4. Varied with *Thuja Vervæneana*, and Snowballs in varieties; *Spiræa bullata*, *S. Japonica Bumalda*, *S. Van Houtteii*, *S. prunifolia rosea*.

5. Varied with *Taxus fastigiata*.

6. Varied with *Rhus Cotinus*, *Magnolia stellata*, and Lilacs in varieties, *Sambucus nigra aurea*, etc.

7. Round bed to be varied with *Hydrangea paniculata grandiflora*, and weeping Silver Birches, *Cornus mascula* (a variety of Dogwood) for the benefit of its red branches in winter, etc. This bed may be carpeted with *Mahonia aquifolia*.

8, 11, and 13 show the beautiful variations of Japanese Maples and Roses; add a few *Juniperus hibernica*, and carpet with *Juniperus prostrata*.

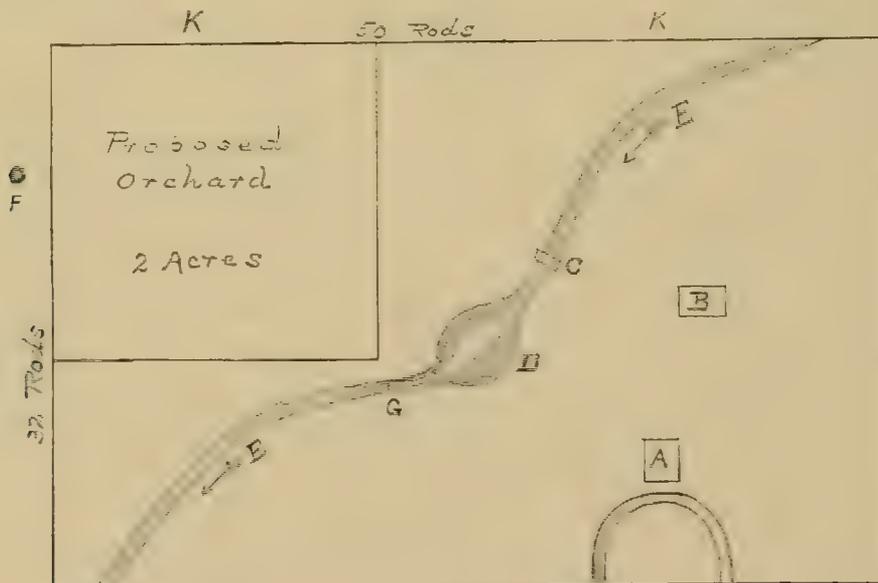
9, 10, vary with Japanese Weeping Cherries and *Retinospora plumosa*; to be carpeted with *Juniperus communis squamata*.

12. Varied with Roses.

14, 15. Rhododendrons and Lilies alone, carpeted with *Juniperus sabina tamariscifolia*.

In the spare grounds (or foreground, properly speaking) of these groups, plants such as *Delphinium elatum*, etc., Dog's-tooth Violets, and *Epilobium angustifolium* (the French Willow) could be used; this latter is the most effective plant we know of for the middle of summer for shrubby beds, as the shade will not injure it. We might also add Funkias in variety, *Arabis aquilegia glandulosa*, double white Rockets, Day Lilies, Red-hot Pokers. The best Evergreens for grass are Rhododendrons, but occasionally *Andromeda floribunda*, *Kalmia latifolia*, and *Buxus sempervirens* might be used.

A piece of land may easily be ruined from a landscape point of view by the selection of an improper site for one feature. This is illustrated by Plan 18, and the accompanying rough sketch submitted for development.



Rough outline and prominent features of proposed 10-acre park or park-like private grounds. (See Plan 18.)
 A—Home. B—Barn. C—Proposed bridges. D—Expansion in creek or lake. E—Creek.
 F—Spring. G—Waterfall and dam. H—Proposed orchard.

We changed the position of the orchard, which gave several advantages, among them the enlargement of the landscape view, the greater privacy of the grounds, and also kept the tone and character of the place in harmony.

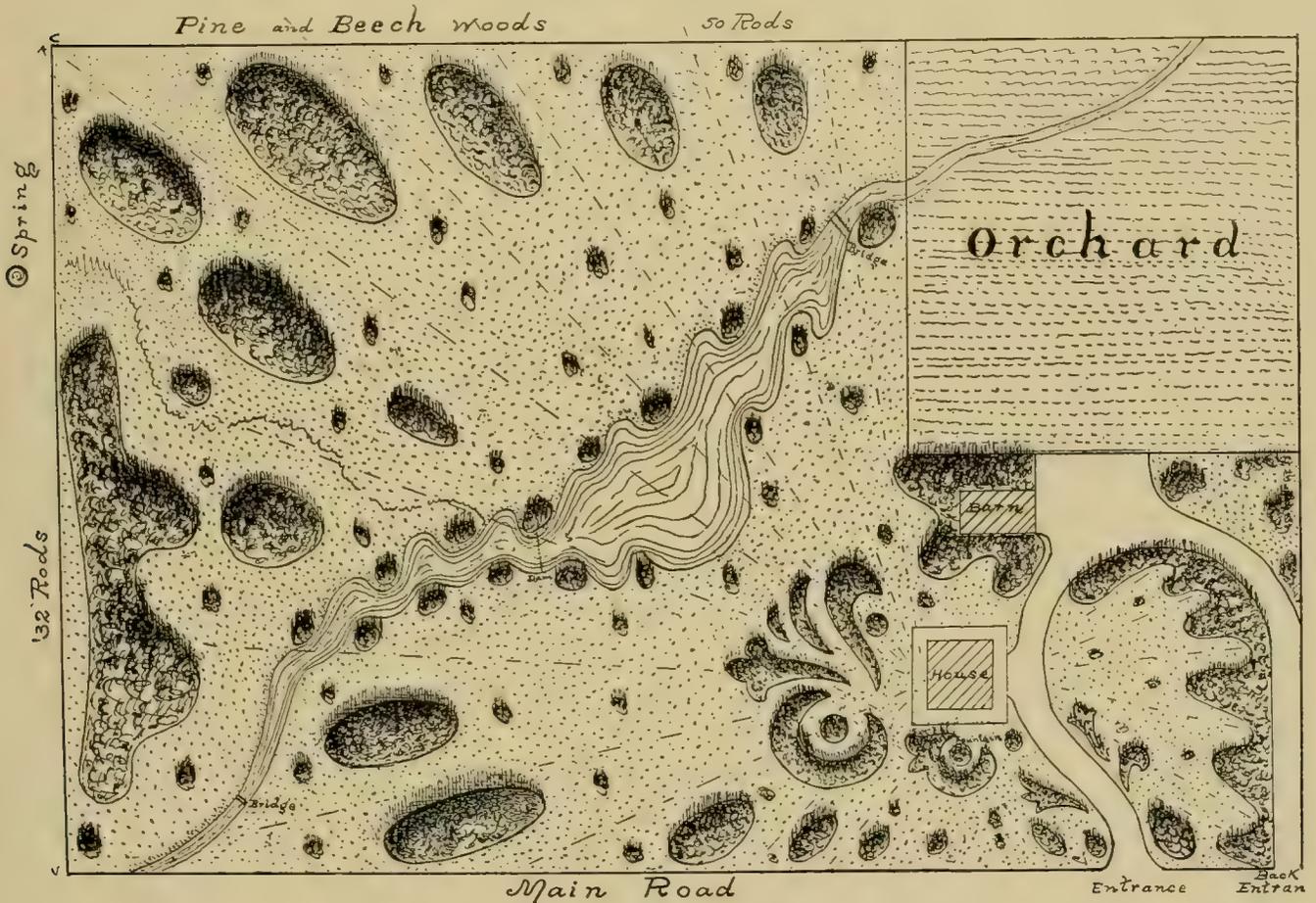
The placing of the orchard in the corner originally proposed would necessitate crossing through

the whole of the park in order to get to the orchard, besides spoiling the views of that pleasure ground. The adoption of the plan we are showing (No. 18) obviates all this and affords every opportunity for the proper development of the ground.

We also changed the entrance to the house, two roads leading thereto not being necessary.

A house in the country has at least four fronts, and one is sufficient for a main entrance, one for the back entrance or servants, and there remain two to form the principal effect of the house; for however beautiful the entrance may be, it can never overcome the disadvantage of belonging partly to the public; the other two fronts should belong absolutely to the owners of the house.

It is unnecessary to make more walks than we have shown on the plan, for walks, unless they



Plan 18.—Park and Water Effect

are well made and kept in proper condition, become unsightly. Walks of themselves do not enhance the beauty of the grounds, but they form observation points from which to see the beauties of the domain, and afford convenience for transit, and, where skilled labor is scarce, we should allow the grass to stand without making more walks than shown.

In small park lots it is usual to cut away the undergrowth of the trees to a height of eight feet. This is absolutely wrong, and the lower branches should be allowed to remain on the trees and spread out over the ground, unless it be required for a driveway, or it is necessary to see through for some special object; therefore, we make groups for the purpose of covering the ground, planting bushes and trees combined.

The shrub effects could commence with plenty of evergreen *Kalmia latifolia*; working among them the various deciduous effects that are so pleasing, such as created by the *Azalea*, *Berberis*, *Cydonia*, *Weigelia*, *Deutzia*, *Virburnum*, *Daphne Mezereum*, etc.

Large growing shade trees must be planted thinly, never, as a rule, nearer than 30 feet, generally 50 to 60 feet apart. It is a common mistake that three trees are planted where there should be only one.

As the flower beds ought to be made in proportion to the size of the property, a few large beds are preferable to a great number of meaningless small ones, therefore we have followed out that idea. We have also left sufficient ground around the house for a gravel foundation.

Around the house, as a shade tree, we recommend the Sycamore Maple; along the boundaries the trees should consist of the common Hemlock, *Abies canadensis*, with about three specimen Tulip Trees (*Liriodendron tulipifera*). In the centre of the land we would group the Linden; for the prominent points we would recommend some specimens of the handsome *Abies nobilis*, *Abies Douglasii*, and the common *A. excelsa* or Norway Spruce in the most exposed places.

Having produced an umbrageous effect for the land, we now proceed to give a different aspect to the water. Along its edge should be planted pendulous and upright trees, such as some hardy Junipers, American Arbor Vitæ, pendulous Cherries, and Kilmarnock Willow, but avoid filling up the whole water effect with *Salix babylonica*, because that has a very depressing effect.

The spring on the margin can be made effective by uniting it to the lake as shown. The smallest rivulet of pure water is beautiful and in such a situation as here shown, a shallow preparation with little rocks forming a water way, can be concreted together so as to expose the water to full view, thus giving sparkling brightness to the scenes from the house and elsewhere.

The banks of the creek should slope gradually down to the water, say at an angle of 30 degrees, and where a wash occurs, that is, the meeting of the water and ground, a little gravel and rocks, according to the desired effect, will prevent it from doing much damage. One of the sweetest combinations of land and water is where green grass and water meet, and where the harmonious blending is almost imperceptible.

We have shown two bridges so that a circular walk can be taken around the property, and the full beauty of the park realized.

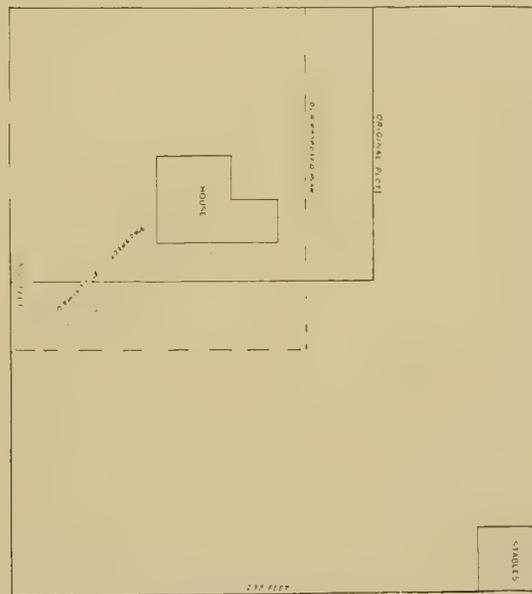


A SOUTHERN GARDEN

ANOTHER illustration of development is given in Plan 19, and the planting details of which are specially designed for the south.

Our home surroundings should charm us both winter and summer. In northern latitudes this requires skill in the mid-distances (shrubs), in forming the undulations of the land, and arranging the general planting to gain protection from cutting winds and extreme changes. In the climate of Texas, for which this plan was prepared, there is no difficulty to provide charming effects all through the year.

Ample provision is made for grass spaces, and we have located a fountain in an appropriate spot,



Original Proposal for Plan 19

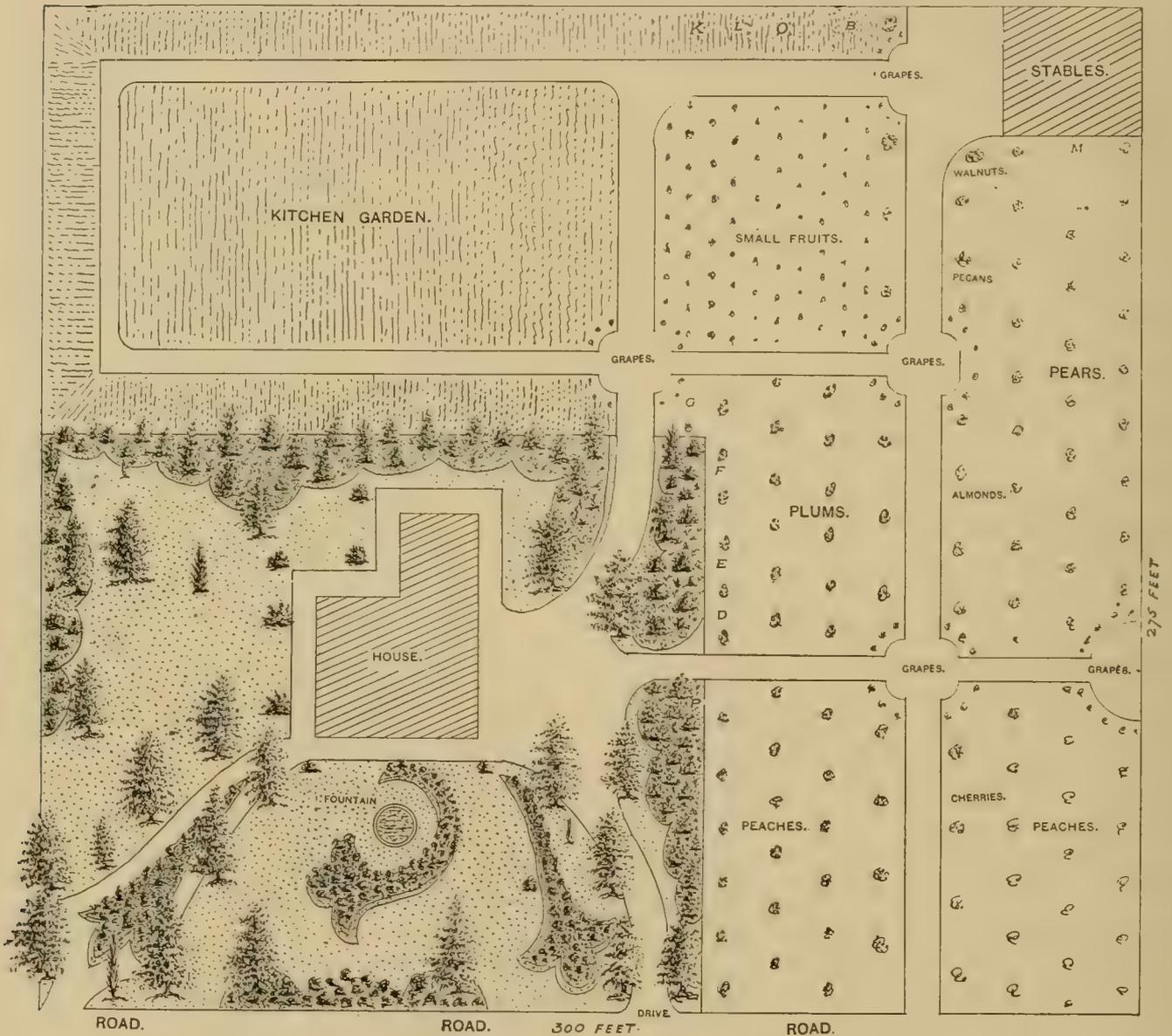
and Bamboos should be placed all around the bed which surrounds it. The water basin should be level with the ground, the water to fill the basin to within three inches of the top.

The division of space around the house, as shown in the original proposal submitted, was not in proportion to the views which were open, and we reclaimed it by taking some 35 feet of space from the back of the house and adding it to the side, but have used altogether only the area allowed us.

In grounds of limited area the large trees should be confined to few species. When a number of trees of very different character are set out together in small space you gain the beauty of none. To shade the land, Spanish Chestnuts and the small-leaved Elm would be effective. For winter plant

Magnolia grandiflora in quantity in the boundary masses, set 20 to 30 feet apart. In the mass that hides the kitchen garden from the pleasure grounds the Magnolia may be planted thickly, so as to form a bank to hide it from the house, but keep plenty of room in the foreground for other plants. The boundary border in front of the house may be filled with Lilies in variety.

The Crape Myrtle is ever a delightful plant for your gardens. The Gardenia Fortuneii is another sweet plant with its dark rich leafage and heavily scented flowers.



Plan 19.—A Southern Garden

In a climate where they do well, no garden can be complete without an abundance of Roses of the China blood. They give perpetual flowers and delightful perfume almost the whole year round. We would advise planting them in every outside border. To gain full success see that they have two feet deep of good loamy soil, and in the autumn of each year give them a good top dressing of manure;

don't prune them too much and they will enliven the beauty of your grounds for many a year. These same boundary borders should have a good supply of spring bulbous plants, Crocus, Snowdrops, etc., planted near the grass edges so that they will not interfere with other planting.

In the boundaries the following plants may be utilized in groups of three or five of one sort together to give expression to your garden:—

Epilobium angustifolium (French Willow).

Coronilla emerus.

Clerodendron fragrans.

Olea fragrans (Tea Olive).

Lonicera Periclymenum Belgica, or Dutch honeysuckle. Creepers around the veranda:—

Ardisia crenata. *Camellia japonica*.

Laurus nobilis (Bay Laurel).

Common Myrtle. *Nerium*, in varieties.

Pittosporum Tobira.

Small plants on grass:—

Phormium tenax.

Pampas Grass.

Cupressus sempervirens pyramidalis.

Abutilon vexillarium.

Rhyncospermum jasminoides.

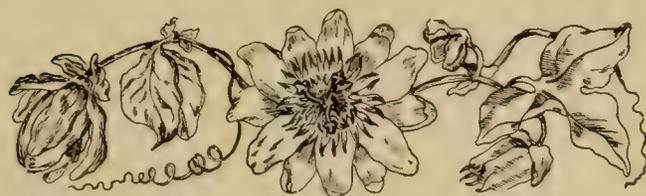
Passifloras in variety.

A grand collection of fruits can be grown. Starting from the public road, the centre orchard drive is shaded as follows: Eight cherry trees (four on each side) to the first grape arbor; then six almonds (three on each side) to the second grape arbor, and four pecans (two on each side) following. On the three lower corners of the stable yard three walnuts, one in each corner.

The hardy lemon, *Citrus trifoliata*, possesses a suitable beauty for effective grouping and therefore it is placed in the pleasure ground in the entrance border marked P, where half a dozen may be planted with advantage.

In the square allotted for plums, two of the marked rows may contain varieties suitable to your climate. A, is for medlars; D, two mulberries; F, two olives, and the corner of the bottom of this row can be given to the red filbert. The next row may contain two trees each, respectively, of Japanese persimmons, quinces, and apricots.

Other suggestions are: B—*Eriobotrya Japonica* (Japan Medlar or Loquat). O—Pommegranate. L—*Pyrus Maulei*, a variety of Japan Quince. M—Figs.

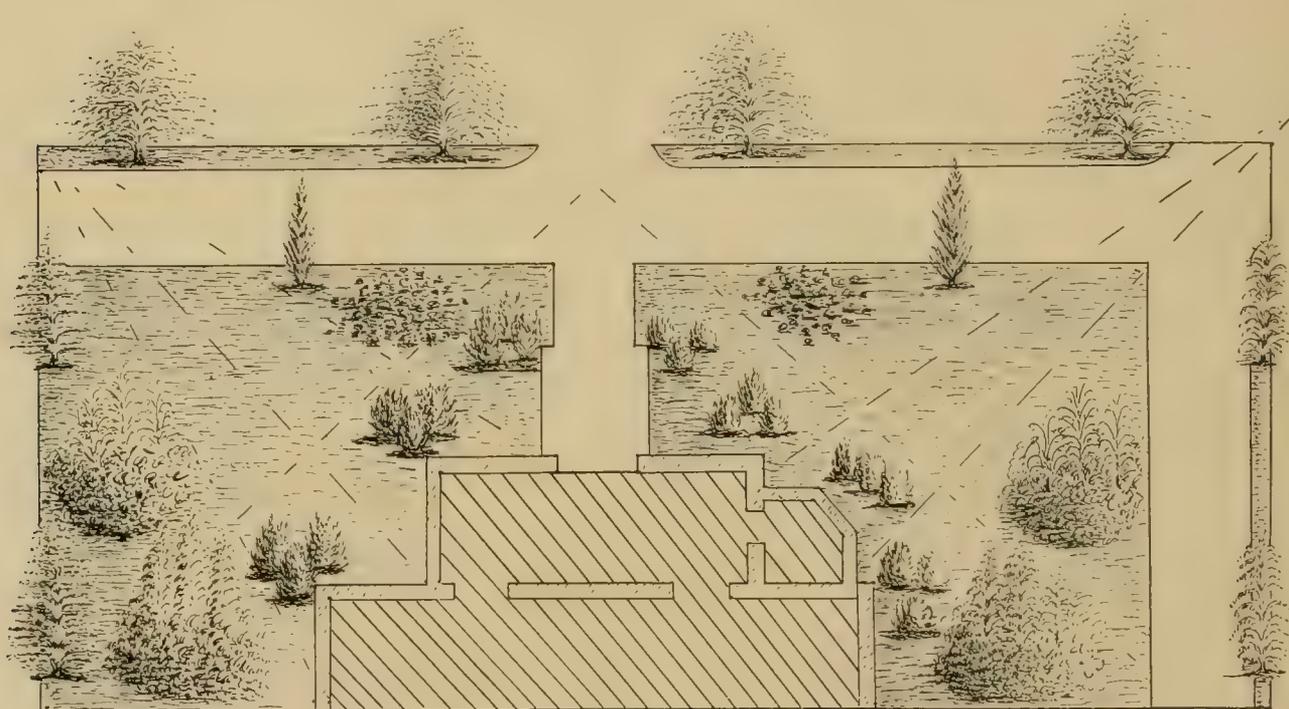


PLANTING A CHURCH FRONT

THE plan No. 20 illustrates a simple yet effective method of ornamenting the front of the entrance to a church or hall. Only a very small portion of the building is shown.

The situation is on the corner of a block, and a pathway runs inside the boundary along the street fronts. The four trees along the front are red Oaks and will afford a grand spectacle of color in the fall. The two trees on the right of plan are Larches; used because of the necessity of employing a tree of somewhat narrow growth; the branches would not spread over the pathway. The companion trees on the other side may be Norway Spruce.

The four large groups, two on each side of the building, are as follows; those near the bottom of the plan are for two groups of Hemlocks and Pines. About twelve Pines and three Hemlocks to each group. The Pines are to be low creepers. They produce a beautiful, low, dark carpet, rising two or three feet from the ground, from which the Hemlocks would rise very effectively.



Plan 20.—Ornamental Planting of a Church or Hall Front

The other two are similar in style, but for variety of color effect, Cut-leaf Silver Birch and *Rhododendron catawbiense* may be utilized with much advantage.

The seven groups of three plants each are to be *Taxus stricta*, a very fine hardy Yew, and its rich deep green evergreen foliage would always give a fine effect. The two groups of low plants, one on each side of the central walk, are arranged to be of the creeping Juniper, planted in a mass, and the remaining two trees are *Thuja George Peabody*, the rich golden yellow of which will harmonize with and be admirably displayed by the greens of the other shrubs, and the color combinations of the Oaks and Birches will yield rich effects.

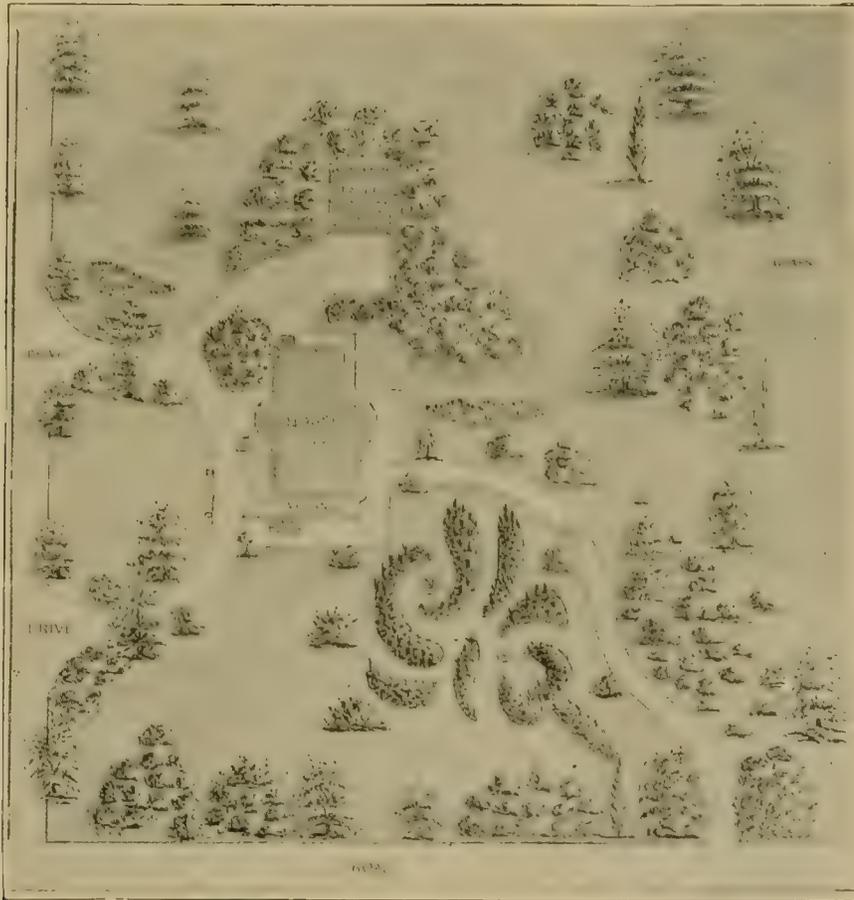
If it be desired to further enliven the ground at various periods of the year, there is plenty of space for the planting of bulbs or other flowering plants.

The lines drawn across the plan from various points indicate the principal views which it is necessary to keep free from obstruction.

LOCATING ENTRANCE ROADWAYS

IT IS not generally advisable to have more than one roadway entrance to any but a very large estate, but sometimes circumstances will necessitate another course, and the design now presented (Plan 21) instances such an one. The road running direct from the highway is required for an approach to the old residence, which is beyond the limits of the plan as shown, which is a reproduction of an actuality.

The narrow pathway is intended to be kept private by a catch-lock, so that one front of the house, at least, may be kept quite private and free from interruption from outsiders or from persons passing from



Plan 21.—Plan for Home Grounds, Illustrating Location of Roadways

the old house. The gravel round the house would act as a walk, and by going up to the foundations, as shown, it will keep the house clean and give it an appearance of greater elevation. Climbers, of course, can be planted on the house side, soil for the purpose being placed under the gravel. As to the planting of the grounds; we show where to plant and where not to plant, when to plant trees and when to plant shrubs; also show a flower garden, and the designs for the beds there should be free from the usual repetition of rectangular and circular forms.

We have placed the stables at a convenient distance from the house, still quite near, and the mass of shrubs near the house corner would hide from the sight of visitors both the stables and kitchen, and other offices.

A VILLA PLOT

THE general arrangement of the plot (shown in Plan 22) is gravel around the house, and the beds set in the gravel will require permanent edgings. We recommend it made to show a stone work; this may be easily done by a bricklayer, who should lay bricks flat long ways around the figures, letting the top be two inches below the general level to act as a foundation for other bricks set on edge all the way around. These require to be kept in the curve as perfectly as possible. Then the bricklayer will take his concrete, made of cement and sand, and work the whole figure into a perfect form.

The three trees in the gravel on the right hand side of the house must have plenty of good soil provided for their roots, to be covered with a light coating of gravel, not over two inches deep, so as to carry out the plan.

The usually vacant ground along the side of the house can thus be turned into a perfect charm for both the house and road prospects.

Our plan shows a perpetual garden on a plot of land 100x50 feet, and by adopting the natural arrangements you may imagine yourself taking fifty different views over it; you will never see two alike, and more than this, you will always find each one in harmony, in repose, in character, and possessing no objectionable features.

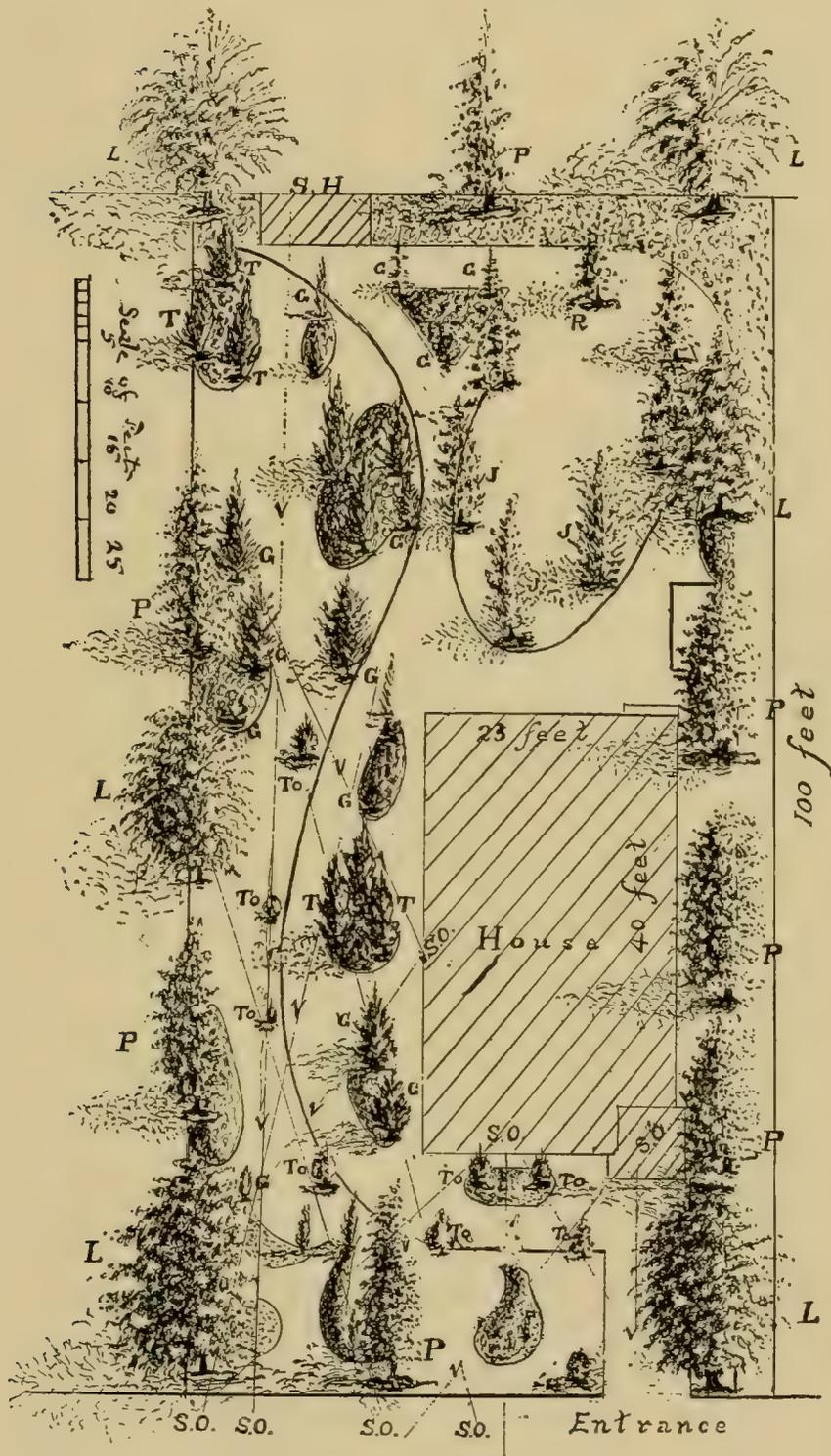
Narrow views are weak points, we show none; but instead direct the eye upon every occasion to the length of the ground by the formation of groups as shown on the plan. Harmony is retained by the *Arbor Vitæ* in mid-distance; repose is acquired by uniting the ground line, mid-distance, and sky line together.

The plants we recommend are not intended to limit the reader to those named, but to demonstrate that results are attained only by following character. We have selected the Western *Arbor Vitæ* for the shrub effects, and do not allow anything to interfere with its prerogatives in its views, but in adding more variety to the garden we select suitable forms for the development of its particular character. This genus of plants is suitable to the colder parts of America; the *Biotas* can be used in the Southern States.

The shade trees for our plot are *Tilia europea*, the Linden or Lime, trees that give dense shade; when in flower they fill the air with delicate perfume, and they should be in more general cultivation.

Pinus laricio, the Corsican pine, is well known by its erect habit, which makes it particularly suitable for small places. The oval space behind the house show three silver Irish Junipers (*Juniperus communis hibernica*). Back of this oval is planted *Salisburia adiantifolia*, the Maiden Hair Tree or Gingko, one of the remarkable trees of Japan, a plant combining quick growth with a curious light effect.

The five beds in front of the house are for summer flowers; the nine oval groups shown on plan are to be planted with suitable herbaceous plants according to the owner's requirements. In addition to the shrubs already named, the three figures on the left hand boundary should have a dozen Hollyhocks distributed, four in a bed; then generally over all the groups, herbaceous plants, phloxes, double rockets (*Hesperis matronalis*), *Pentstemon*, not forgetting the sweet smelling common Wallflower. The beds will then be ready for their final carpet, so that the whole will be completely planted and cover the intervals of soil between the plants we have named; for this we recommend *Ampelopsis Veitchii* (Japan Ivy), which carpets the ground as well as walls when the opportunity is given it. The border in the rear of plot may be used for vegetables.



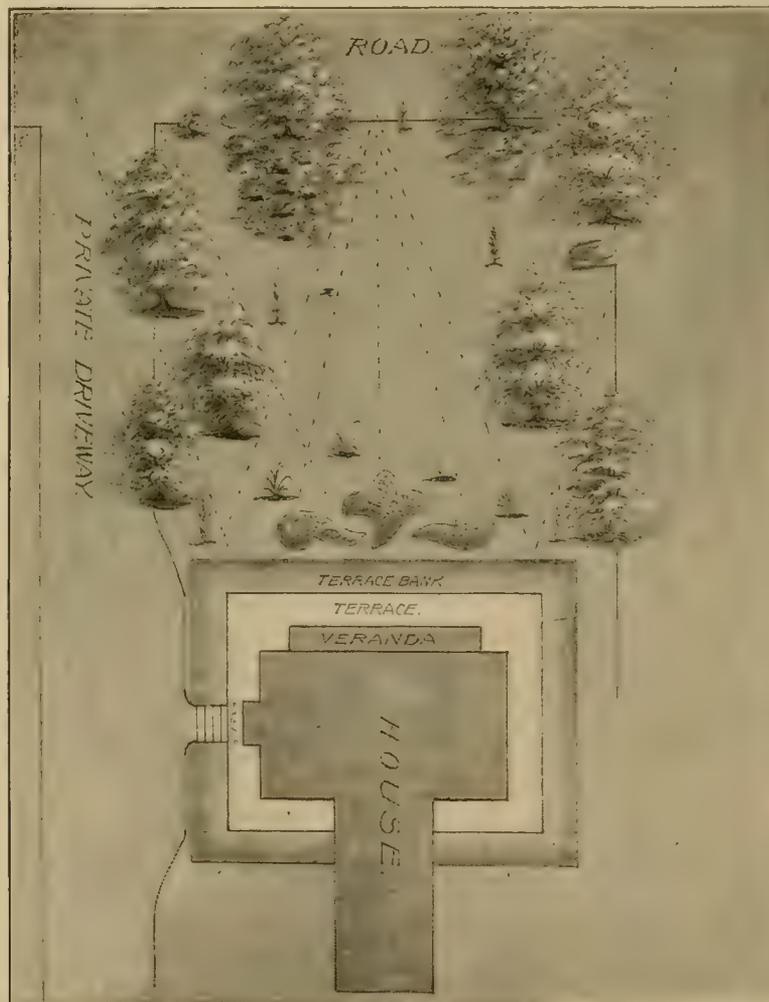
Plan 22.—A Villa Plot

REFERENCES TO PLAN

- | | | |
|---|-------------------------------------|--------------------------|
| J— <i>Juniperus communis hibernica</i> . | L— <i>Tilia europaea</i> . | SO—Sites of observation. |
| T— <i>Thuja occidentalis Vervæneana</i> . | P— <i>Pinus laricio</i> . | V—Lines of sight. |
| G— <i>Thuja occidentalis George Peabody</i> . | R— <i>Salisburia adiantifolia</i> . | H—House. |
| T— <i>Thuja occidentalis Tom Thumb</i> . | SH—Summer house. | E—Entrance. |

THE TERRACE EFFECT

IN THE plan No. 23 the house is located eighty-feet back from the turnpike and stands on ground which is four feet higher than at the turnpike. The width of the lawn is sixty feet, and the owner desires to grade and plant same so as to secure the best results.

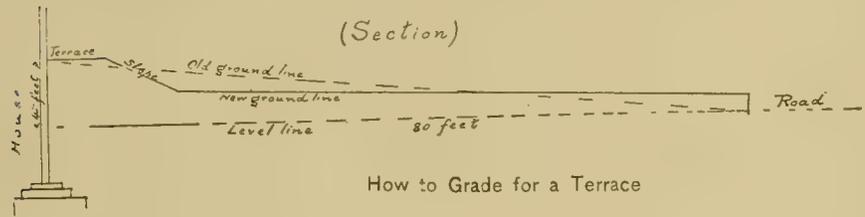


Plan 23.—The Terrace Effect

Our advice is to carry a terrace six feet wide around the house; the banks of which shall rise two feet above the ground in a slope rising one foot in two; of the two feet remaining (out of the four) we retain one foot to take the water from the lawn, and raise the ground one foot at the turnpike. See sectional view in which we show how this grading may be accomplished successfully, and with least expense.

A well-kept terrace has always been recognized as the most artistic development and the most useful arrangement for the enjoyment of the occupant of a residence.

The difficulties of a terrace formation are in giving it the correct proportion to the lines



How to Grade for a Terrace

of the house and in due relation to the local circumstances of the land; when this is accomplished the house unites to the ground, sits naturally in its surroundings, and harmonizes the natural with the

formal (formal house, natural ground.) Good taste and an artistic eye are the two great necessities to secure perfect results.

On flat ground, a terrace requires to be wider than on hilly ground, where it should be proportionately narrower; in each case it must conform to the character of its surroundings.

We have avoided cutting up the lawn with walks, as the terrace renders this unnecessary, and we are better enabled to give an air of calm repose and elegance to the front of the house, which could not be obtained if so small a lawn, already surrounded by pikes and carriage roads, was to be further cut up.



PLANTING A VERY SMALL GARDEN

IN THE plan presented herewith (No. 24) is shown how a very small area of ground may be effectively developed along natural lines.

The fixed points which had to be considered were: the house was already constructed, the clothes-reel was placed, and the grape arbor planted. The house is on a bank some few feet above the road-way, hence the two entrances are not connected; if such communication be desired, steps should be made on the south of the piazza. The lot adjoining the house on the south is reserved for future building, and so was not available in developing the land; it is for the present to be used as a vegetable garden in the rear, the front is put to grass and affords a pleasing prospect from the windows of the house; the detail can, of course, be altered to suit circumstances. The nine bushes shown here are intended to be Rhododendrons, which can be easily moved, no matter what their size, when the new building goes up.

It is well in spaces of small area not to put a collection of different species, as can be done on a larger place. The same impression cannot be made by a host of miscellaneous shrubs as can be by using a sufficient quantity of one suitable thing. Some degree of grandeur will thus be had instead of the spottiness often seen.

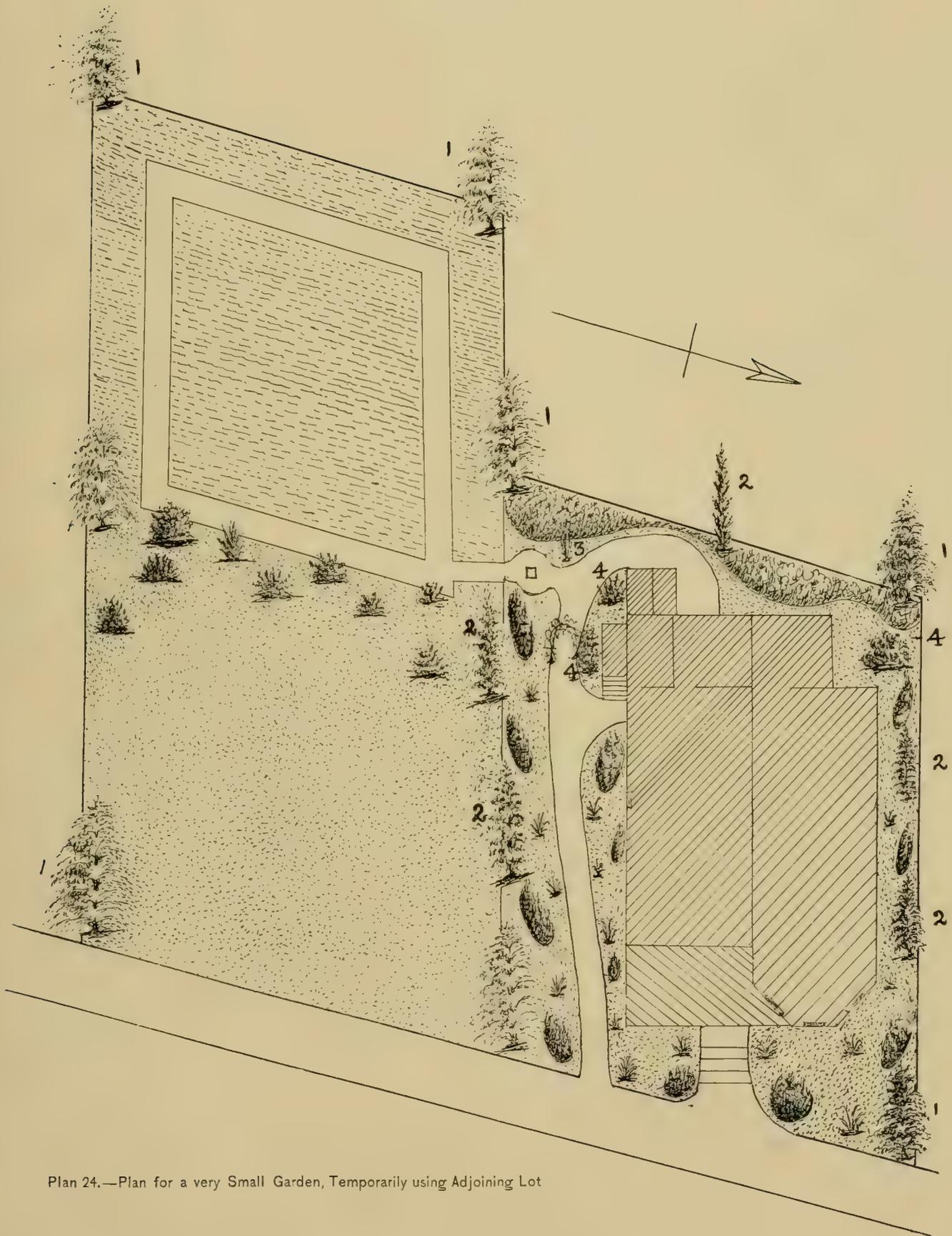
The chief difficulty presented in this lot is the placing of the shade trees which are an artistic adjunct to any house. Here they must be put on the extreme lines of the ground, eight Limes being suggested as shown (1). The smaller trees (2) are *Pinus laricio* to give an evergreen effect, this species is selected as most suitable to the place, because its habit is not spreading, but narrow. The terminus of the view on the south side is made by a Silver Cut-leaf Birch; this, being of a white color, will add distance to the view, a feature much to be desired. (3)

The general planting of the ground is to be done by hardy plants, so that once done it is done forever, and beyond a little annual care and attention nothing is needed.

The back border could be very effective if made of *Rosa rugosa* (red and white varieties) mixed with Sweetbrier. A few rough growing herbaceous plants, such as Sunflowers, could be interspersed to give color to late summer and fall. The bushes marked 4 could be *Deutzia crenata*, tall growing plants, very valuable to block out the rear of the building; they will grow almost anywhere.

The three beds on the south side and close to the house are in a warm situation; they can well be devoted to China Roses, which will afford flower throughout the entire summer, and can easily be given a slight protection in winter.

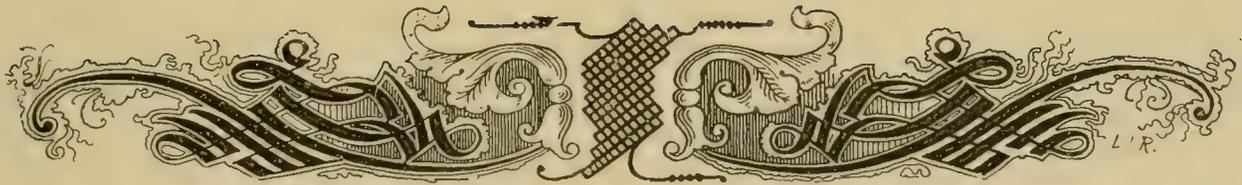
On the other side of the walk are four beds; that at the back can be put to hybrid perpetual Roses, as when out of flower the bushes would not here be obtrusive; the two middle beds here are one each for Lilies and Perennial Phlox; the bed to the front should be put to evergreens to give a continuous effect; creeping or dwarf Juniper could be used. Somewhat similar treatment should be afforded to each of the two beds in the front of the house; these should have a certain tone and distinctness, such as could be obtained by planting Golden Creeping Juniper, two feet apart, in a carpet or *Daphne cneorum* over all the bed. This effect would be very striking and original.



Plan 24.—Plan for a very Small Garden, Temporarily using Adjoining Lot

On the north side the three beds shown could be allotted to Ferns, and two specimen Ferns could be utilized on the grass. The six specimens on the front plot of grass could be *Yucca filamentosa*, evergreen, and very striking when in flower; moreover, they give no trouble in cultivation. The seven specimen plants on the long view must be all one thing, *Eulalia gracillima* suggesting itself as pre-eminently suitable. The space at command is not large enough for a mixed planting.

For spring effect all the beds should be edged with *Crocus*, one color to each bed; *Scilla siberica*, however, to be planted on the evergreen beds, it is so very graceful. Snowdrops, too, should be lavishly planted in every bed.



MAKING THE MOST OF THE BACK

IT FREQUENTLY happens that in a restricted residential area the artistic effect of the back garden is utterly destroyed by the obtrusion of the kitchen and other offices usually to be found at the rear of a house. The piece of ground dealt with in the accompanying design (Plan 25) presents somewhat peculiar features, insomuch as the land immediately behind the house is very narrow, while beyond is an area capable of excellent development. The principal problem was to cut off the offices from the garden, yet save the latter to the house. This was accomplished by constructing a conservatory (B). This is connected with the house at G and also forms a boundary to a court (D) in connection with the back of the house. If the greenhouse be placed as shown it will impart privacy to the courtyard, and also enable the owner of the house to acquire the greatest benefits from the land. We have attached the greenhouse to the veranda (C) and our plan shows it taken forward far enough to allow space for an entrance into the courtyard from the veranda at H, and also an entrance into the greenhouse itself (G), which is thus made a beautiful adjunct to the dwelling.

To overcome six feet of decline on the north side of the house, we construct a terrace in front of the conservatory (marked K). From this terrace the beauties of the place will be in full view, and by building short walls at its two ends, a view of the carriage drive (400 feet long) can be had from one end (E), and of the private passageway on the other side.

Large fruits, faced by ornamental trees and shrubs, will increase the intensity of the plant impressions as viewed from the terrace and other parts of the pleasure ground; hence the placing of the fruit garden. In the fruit garden we show three rows of large fruits, such as pears, peaches, and apples, and leave ample room for small fruits. The kitchen garden is placed out of the way, and the stable manure for which we show a place (L), can be conveniently utilized. For the carriage drive a width of nine feet is sufficient, as turning room is provided in front of the house, at the stables, and in the courtyard. We show a 20-foot entrance, and allow plenty of room for a small side gate for foot passengers (I).

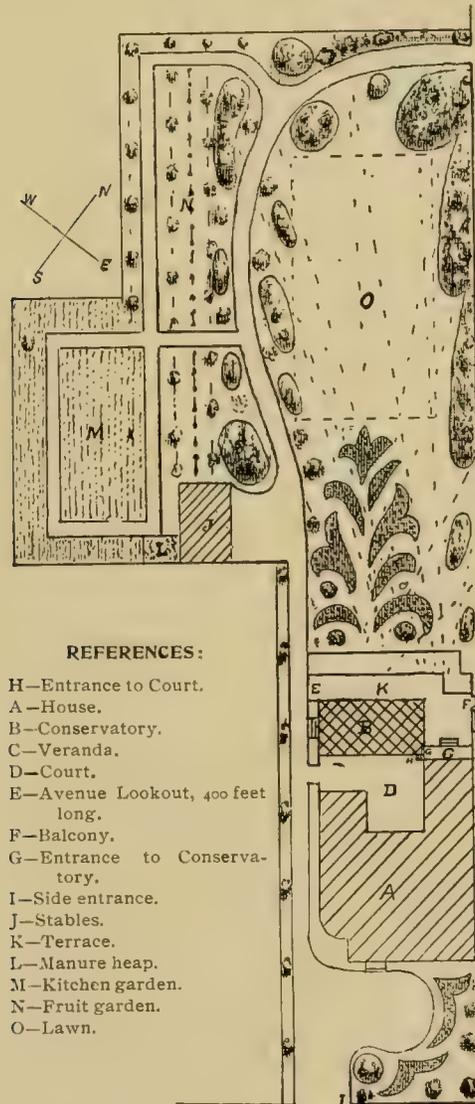
The avenue through the length of the grounds may be planted with Lindens (*Tilia europæa*), the round dots along the driveway indicate where to plant them. The oval groups are for shrubbery beds; these should have as their leading picture a dozen Hemlocks (*Abies canadensis*) distributed along the boundary and other beds to give a winter effect to the sky line, as deciduous changes are supplied in plenty on the streets.

Develop your lawn as our plan indicates, and its present boundaries of limitation will vanish; in other words, the oval beds of planting shown on plan, and the lines of sight shown between them, will produce to your eye a series of natural undulations of plant life, instead of the square boundaries. This is accomplished by adding in the mid-distance additional evergreen shrubs to the trees already named in the first instance. A very few plants will be sufficient to complete all the leading features of these undulations.

The evergreen shrubs should be such as will develop into a bush, filling space from the ground

up to six feet high; for instance, *Kalmia latifolia*, *Rhododendron catawbiense*, and *R. maximum*. The beds can then be filled to supply the flowers for the various periods of the year, according to taste.

We have allotted ample space to the lawn (100 by 60 feet), for without it no effect is perfect, and the finer it is kept the more complete will be the enjoyment.



Plan 25.—Making the Most of the Back

The general plan of the flower beds is arranged with perspective outlines; they are cut in the grass in a manner that will give impressions which appear much larger than a garden made on the common repetition system.

A TOWN SQUARE

DEVELOPMENT OF ADJACENT BUILDING SITES

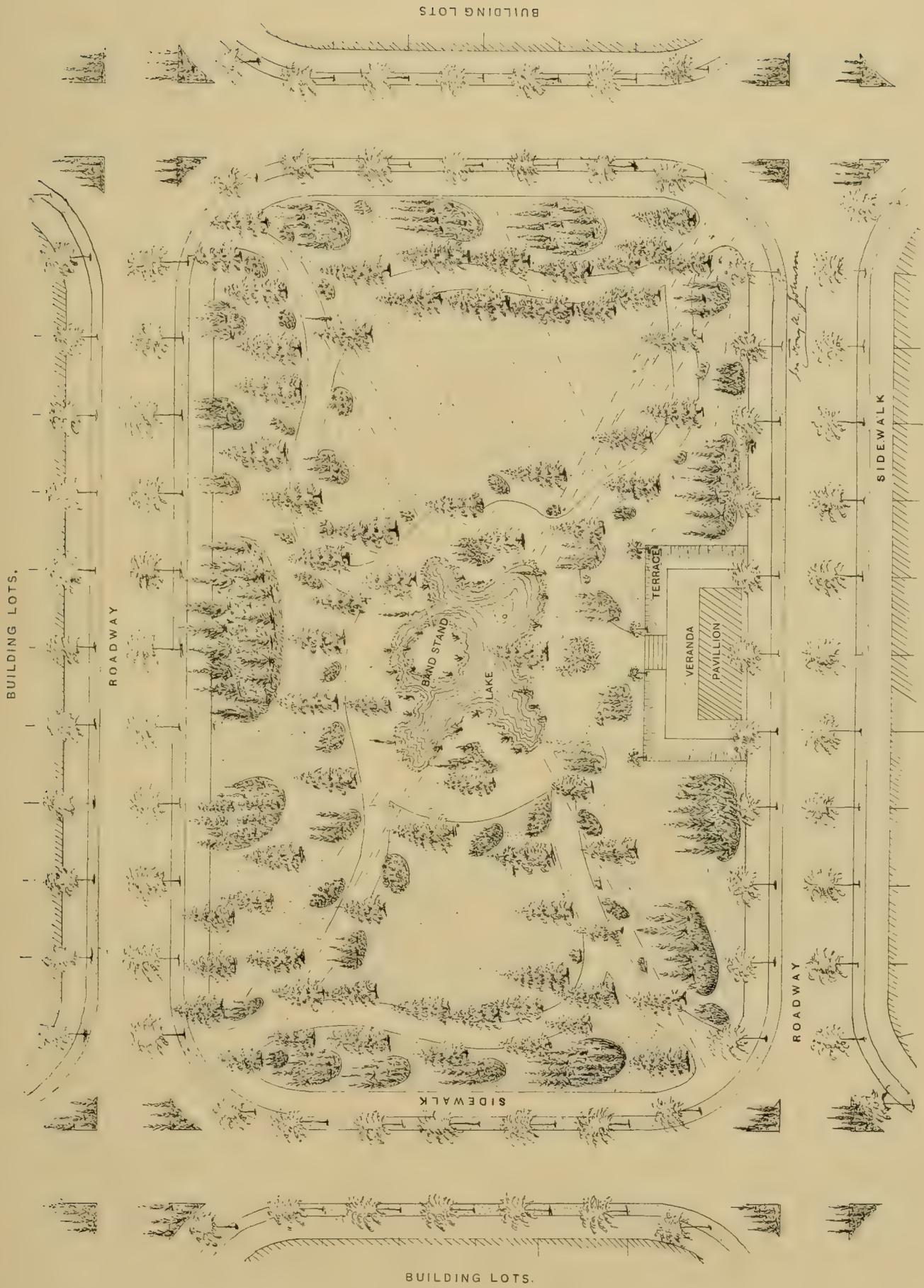
BEFORE entering into a discussion of the development of the square itself, let us first look to the surrounding features. It will be noticed that the corners of the adjoining blocks are shown rounded; this is a suggestion which deserves attention in all places, and is incidentally alluded to here. By following the curve as shown, there are made five or three "corner" lots according to the sweep of the curve. Experience has proved that this treatment greatly enhances the value of the lots for residential purposes—as an instance at Inman Park, Atlanta, Ga., where the ground was thus laid out these "corner" lots realized 25 per cent. above that of the other lots, although the actual area was smaller; it is the frontage and improved prospect that tell.

The important feature of the rounded corners was made because in planning building grounds on the square system the lots on the side streets are some 25 to 50 per cent. below the value of those on the main streets; the cause of this in the square setting out of street corners is that the corner house facing the main street always, more or less distinctly, has its back exposed to the side streets, and this forms a bad introduction to it. By the adoption of rounded corners as here suggested, the side streets are made nearly as desirable as the main streets. Moreover the five corner lots make a gradual transition and each successive side on the curve is but a trifle below its neighbor in importance and value.

The rounding of the corners as above leaves ample space for the four small triangular plots in the roadway; these can be utilized to very great effect and serve as a link, harmonizing the streets with the garden effect of the square. The transition is not abrupt, which effect is also materially aided if the streets be lined with shade trees as indicated. It is important that the trees used in the triangular areas be as shown, narrow, not spreading; they are not shade trees being used merely for effect, and preferably let them be evergreens—the common so-called Cedars, for instance. The shade trees, it will be observed, are arranged so as not to interfere with the view from the houses, that is to say, they are planted opposite the divisional line. If the situation be in a business centre, of course the buildings will be brought as near to the road as possible, but in a residential quarter the park-like area can be almost doubled by placing the houses at some distance from the road, even to 40 feet.

The trees (*Acer pseudo-platanus*) lining the streets are shown on a prepared ground. This is done merely to indicate the imperative necessity of making proper preparations for their reception—a tree to do well must have good soil, and plenty of it. Make a bed of good mellow loam, five feet wide and three feet deep. It may be well here to caution some of our improvement societies against too deep planting, for that will be fatal. The surface of the prepared soil may be used for grass, or be paved over (except five feet square right around the tree) as necessity demands.

The design is for a public square, not a private garden, and care has been taken that as such its vistas are taken from the surrounding streets. Public squares, gardens, and parks in cities should always display their beauties to the public from the streets. The banking out of these views from the public which pays for them is not to be defended on any ground whatsoever. In arranging for a private



Plan 26.-A Town Square, showing Development of Building Plans
 Good Frontage, instead of Waste Land at the Rear, is the Secret of Successful Land Development

garden other considerations arise as can be seen by a reference to the plan already given (Plan 5, Part I). The broken lines drawn across the plan in various directions show some of the principal views of the square.

The entrances are placed at the corners as affording the greatest convenience here, and also providing long views, each different, and indeed, no two views are alike on the whole ground. The curves of the walks are so taken as to lead pedestrians along them, offering no excuse for their crossing the grass. Around the water and band stand ample provision is made to accommodate those who come to linger, the promenade is wide, and offers many opportunities for the artistic placing of seats. It will be observed that no large trees are to be planted on the island devoted to the band; this is because their presence is destructive to the best results from the efforts of the musicians. The piece of water is of necessity small, therefore no large growing weeping trees are to be used around it, and the surface of the water should be but two inches below the level of the walk, the margin being kept at the level of the walk except where plants on rockery are shown. The raising of a bank around a Lily pond or any ornamental water is against all principles of natural and artistic effects, the water should appear as part of the ground.

The walks are lined with shade trees—Linden, Beech, or Maple—one walk to one tree; thus we will have the Beech walk, the Lime walk, etc., using heavy shade trees inside the area and on the surrounding streets the English Sycamore is suitable, or in a smoky atmosphere the Plane.

As regards the other plantings shown, there is scope for much individual taste, but care is advised that the balance between high and low-growing subjects be maintained as is shown in the plan. Our present suggestions are general, not detailed; any special information on that may be had by a reference to the previously issued plan alluded to above. *Hydrangea paniculata* is a valuable shrub, and opportunity for its use is frequent. For evergreen effect some of the beds should be planted to Box, or Yew, and others again to Rhododendrons, taking care to make each subject a distinctive feature and not mixing them all up together in a confused mass. Aim to give local features in the planting. Use *Deutzia crenata* in some beds, and where they are in a shaded location the *Loniceras* will give satisfaction.

Care should be exercised to secure perpetual effect, thus for instance, a bed of *Deutzia crenata* would have a weak appearance in the fall, and some rough growing autumn flowering perennial such as *Helianthus Maximilianus* should be introduced to bridge over the otherwise dull time. In this connection we would also add emphatically that every border or bed in any grounds should burst into life with the first flush of spring's warmth, which end is best obtained by planting near to the margins, so as not to interfere with the characteristics, the hardy permanent bulbs—Snowdrops, Scillas, etc. In the shrubberies fair masses of *Narcissi* give very valuable effects. It is imperative that a public garden should present a pleasing appearance at any and all seasons of the year; thus the evergreens are to be placed so that they have their special effects in the winter season and act as a frame to the colors lent by the blossoms of other plants in their particular seasons. The art of landscape gardening is to have a reason for the placing of every individual plant.

When we approach the beds in the vicinity of the water the effect of the latter may be enhanced by a graduation as it were of the vegetation which surrounds it; for this purpose the plants to be put on the beds in the grass area should be *Arundo donax*, *Eulalia gracillima*, and such like, and the beds on the promenade itself it is suggested to plant with *Cannas* or some such subject each season.

It will be observed that no formal bedding has been arranged for; this is on account of economy, but should such be desired the grass about the pavilion affords ample and suitable space for such work; and it may here be added that Lilies can very effectively be planted in the shrubberies in all parts of the square. The large bed on the side opposite to the pavilion should be planted so as to have a centre

height of fifteen feet. *Euonymus alatus* would be effective so used, its red leaf in the fall and its bright berries would give a welcome show of color.

In order to get an "established" effect as quickly as possible, it is always desirable to use a number of quick growing, cheap plants which are to act as nurses to the permanent subjects, and which are to be cut out and destroyed as becomes necessary. For this purpose the Willows and *Populus monilifera* are well adapted, and a variety of color can be had very easily by the use of Castor Bean, tall Sunflowers and such like for the first year or two.

ERRATUM

The caption for plan No. 12 (page 71) should read: "Arrangement for perpetual effect, *combining natural and formal styles.*"

INDEX

- Abelia floribunda*, 45
Abies canadensis, 21
Abies nobilis 21
 Acacia, 46
Acer pseudo-platanus, 21
Aconitum, 45
Agapanthus, 70
 Age improves some plants, 39
 Alpine plants, 18
 Alterations are not always improve-
 ments, 10
Althæa, 24, 44
Amelanchier, 24
Ampelopsis Veitchii, 23, 32, 63
Amygdalus, 42
 Androsace, 73
Andromeda, 46
Andromeda floribunda, 22, 45, 62
Anemone, 42, 46
Anemone alpina, 73
Antennaria dioica A. d. *minima*, and
 rosea, 2
Antennaria margaretacea, 45
Antennaria tomentosá, 23
 Approach to a residence, 20
 Aquatic and bog garden, 78
 Aquatics, 78
Aquilegia, 45, 92
Arabis, 32, 46, 62, 92
Araucaria imbricata, 83
Arbor-vitæ, 24
 Architectural features united to land-
 scape, 34
Arenaria, 32
Armeria, 32
Artemisia Stelleriana, 69, 90
 Art in arrangement, 57
Arum, 45
Arundo, 70
 Association destroys perception of
 beauty, 33
 Autumn effect, 44
 Avenues become tiresome, 34
Azalea, 46
Azalea, Ghent, 44
Azaleas of sorts, 24
- Back, making most of, 108
 Background, 39
 Bad arrangement, 16
Bamboos, 24, 95, 70
- Banks, sloping, 65
 Banks and margins, 80
 Banks of lakes, etc., 94, 113,
 Base of residence, 14
 Bases in Nature, 42
 Beauty and goodness, 41
 Beauty inspires, 33
 Beauties of plants, 37
 Beds, location of, 66
 Beds, surface of, 65
 Bedding plants, 70
 Beeches, impression of, 37
 Belt planting, 57
Berberis, 41
 Berry bearing plants, 45
Betula alba, 45
Betula Youngi, 24
 Birch, 21, 23
 Birch, weeping silver, 24, 92
 Blinds, 55, 64, 90
 Bog garden, 78
 Borders, herbaceous, 66, 90
 Borders, planting, 65
 Boundaries, 11, 94, 96
 Boundaries, plants for, 27
 Boundaries planting, 16, 23
 Boundaries, natural grouping in, 57
 Boundaries of scenes, obscuring, 38
 Botanical divisions not æsthetic, 37
 Bottom land, 49
 Bottom soil not fertile, 49
 Brick edging, how to make, 70
Buddleia, 46
 Buildings often too low, 14
 Building sites, development for, 110
 Bulbs, 41, 90
 Bulbs in edgings, 32
- Carex pendula*, 42
 Carpeting, 63
 Carpet plants, 11, 23, 24, 32, 38, 92,
 104
 Carpet plants defined, 41
 Carpet plants should harmonize with
 other subjects, 32
 Carpet plants, table of, 44
 Carriage entrances, 17, 18, 19, 20
Ceanothus, 46
Cedrus Libani, 31, 37, 38, 39, 41, 90
Centaurea montana, 45
 Character effects, various, 20 to 24
- Cheiranthus alpinus*, 46
Cherry pendulous, 24, 32
Chrysanthemum, 45
 Church front, 98
Clematis, 24, 46
 Climbers and gravel, 99
 Clump planting, 50, 58
Coleus, 22
 Collar for stake, 51
 Color contrast, 21
 Color, satiety of, 37
 Colors, grouping of, 38
 Colored mineral, 41
 Columnar trees and shrubs, 11, 21, 24
 Conservatories should be near house,
 16, 18
 Continuous blooming plants, 32
 Continuous effect with economy, 31
 Contrast, 37
 Corner lots, arrangements for, 89
 Corner lots, increased value of
 rounded, 110
Cornus mascula, 92
Cotoneaster, 38
 Country residence, suggestions for,
 14, 15
 Covering the ground, 58
Crape Myrtle, 96
Cratægus, 46
Crocus, 42, 46
 Crowding, 94
 Cultivation not always artistic, 33
Cupressus Lawsoniana, 24, 70
Cydonia japonica, 46
Cytisus, 46
- Deciduous trees, places for, 38
 Deep planting fatal, 50
 Deep soil necessary, 49
Delphinium, 23, 32
Delphinium elatum, 66, 92
 Depressed centre advisable, 31
 Depth to plough, 49
Deutzia crenata, fl. pl., 45
 Development, essentials of, 49
Daphne, 24, 42, 45
Daphne cneorum, 32, 77
Daphne Mezereum, 70
 Dark impression, 37
Dianthus, 32
 Digging up trees, 53

- Distant views, 31, 34
 Dogwood, 24, 45
 Drainage, 50
 Drainage on slopes, 65
 Driveway in relation to house, 90
 Dwelling house, model, 20
- Edging, 70
 Edging, how to make, 32
 Edging, plants for, 23
 Edgings should be permanent, 32
 Effect, general, in nature, 42
 Effect, perpetual, 69
 Effect, perpetual and successional, plants for, 62
 Effects of certain plants, 22
 Elevation increased by planting, 10
 Entrances to public gardens, 113
 Entrance to residence, a subordinate feature, 90
 English park style, 34
Epigaea repens, 23
Epilobium angustifolium, 92
Eranthis, 45, 62
Erica, 38
Erica herbacea, 70
Erythronium dens-canis, 46
 Established effect, how obtained, 114
Eucalyptus globulus, 49
Euonymus radicans, 23, 38, 62
 Evergreen, hardiest, 32
 Evergreens, 92.
 Evergreens for general effect, 37
 Evergreens for prominent points, 32
 Evergreens, places for, 10, 38
 Evergreens, use of, 41
 Evergreens, value of, 40
 Every man's garden, 66
 Excavating for a garden, 83
 Exposed places, 94
- Ferns, hardy, 18
 Fence line, eliminating, 15
Ferula, 45
Festuca ovina, 42
 Field, plants from the, 77
 First principles, 90
 Flower-beds, 70
 Flower-garden, 22
 Flowers for cutting, 90
 Flowers should abound, 22
 Flowers, woodland, 55
 Foreground, 39
 Formal buildings and gardens, 69
Forsythia suspensa, 46
Forsythia viridissima, 45
 Fountains, iron, to be avoided, 32
 Foxgloves, 55
 Fronts of a house, 93
 Fruit garden, 90, 96
 Funkias, 92
 Future effect, 39
- Gardenia*, 96
Gaultheria, 22, 38
- Genista*, 32
Gentiana acaulis, 46
Geranium, 22
Grass, 40
 Grass edging troublesome, 32
 Grass plot, 38
 Grass, purpose of, 34
 Grounds should be in keeping with residence, 9
 Groups, plantings for, 22, 92
 Grouping, 63
 Growth of one season, 49
Gynerium argenteum, 42
- Ha-ha, use of, 15, 34
 Hardy herbaceous border, 66
 Herbaceous plants for cut flower, 22
 Herbaceous plants, effective, 23
 Hardy plants, importance of, 40
 Hardy plants most satisfactory, 31
 Hall front, 98
 Harmonizing trees with buildings, 31
 Hawthorn, 24, 40
Helleborus, 45, 62
Helianthus, 32
Helianthus Maximilianus, 62
 Hemlock, 90
 Hemlock, American, 21
Hepatica, 42, 46
 High grounds to be planted, 28
 High land, 38
 Holly, 24, 50
 Hollyhocks, 23
 Home ground, model, 20
 Home scenery, 10, 11
 Honeysuckle, Golden, 23, 24
 Horse Chestnuts, 46
 House, situation for, 10
 Houses too much alike, 9
 How to plant, 38, 50
Hydrangea, 24, 92
- Ilex*, 41
Ilex crenata, hardness of, 32
 Impressions, characteristic, 37
 Infinite effect, 34
Iris reticulata, 46
 Ivy, 38
- Japan plants, 49
Jasminum, 46
Jasminum nudiflorum, 23, 45, 62
 Joining the near and distant, 11
Juniper, 32, 38, 92
Juniper, creeping, 32
Juniperus chinensis, 55
Juniperus communis hibernica, 11, 23
Juniperus prostrata, 55
Juniperus virginiana, 24
- Kalmia*, 22, 46, 55
Kerria, 24
- Laburnum*, 24
- Land, pictures of the, 38, 49
 Land, preparing for planting, 49
 Landscape gardening, antiquity of, 9
 Landscape gardening, influence of, 9
 Landscape gardening, what is, 9
 Lake margins, 32
 Leaf mold, 53
 Level ground desirable about the house, 10
 Life, moving, value of for comparison of size, 15
 Light impression, 37
Lilac, 23, 92
Lilium, 24, 92, 96
Limnocharis, 24
 Linden, European, 21
 Lines of sight (see view), 11
Linum, 32
 Locating various features, 50
Lonicera, 46
Lonicera brachypoda aureo-retic. 23
Lupinus, 45
Lychnis, 32
- Magnolia*, 23, 96
Magnolia stellata, 92
Mahonia aquifolia, 23, 92
 Maple, 44
 Maple, dwarf Japan, 24
 Maple, Grecian, 21
 Maple, red, 31
 Maple, Sycamore, 31
 Margins, 90
 Mass planting, natural, 55
 Masses, 38
Mespilus, 45
 Mixed planting requires space, 107
 Modifying the natural surface, 10
 Mulching, 51
 Mulching in rockery, 74
Myosotis, 46
- Narrow views, 100
 Natural effects cheap, 9
 Natural garden, the, 83
 Natural gardens, illustrated, 17, 18, 26, 75, 79, 85
 Natural grouping satisfies, 34
 Natural perpetual garden, 31
 Natural planting, multiplicity of views in, 17, 58, 66
 Natural and unnatural plantings compared, 56
 Nature's effect vs. technical art, 42
Nelumbiums, 24
 New plantations, 11
 North entrance best, 20
Nymphaeas selected, 24, 78
- Oak*, 44
Oak, white, 37
 Objectionable features, hiding, 11
 Offices, where to place, 14, 20, 34
Omphalodes verna, 46

- One plant in one elevation, 31
 Orchard, position for, 92
 Outline, 38
 Outlines, 38
 Outlines, styles of, 57
 Overcrowding, 58
- Pæonies, 45
 Park effect, 28, 31, 33, 93
 Park homes, 31, 33
 Park, life in, 15
 Particular effects, how obtained, 32
 Pathways give soil, 31
 Pendulous plants, 24
 Pennisetum, 42
 Permanency the aim, 38
 Permanent effect, 22
 Permanent plants, 39
 Perpetual effect, 113
 Persica, 45
 Philadelphus, 46
 Phlox, 23, 32, 38, 46
 Picea, 37
 Picea concolor, 31
 Picea pungens, 31
 Pictures on the land, 49
 Pines, 37
 Pinus excelsior, 11
 Plan for aquatic and bog garden, 79
 Plan for backyard development, 109
 Plan for church or hall grounds, 98
 Plans for corner lots, 18, 89, 91, 99
 Plans for five to forty acres, 16, 17, 18
 Plan for grouping various forms into harmony, 59
 Plan for grouping trees in planting, 64
 Plan for herbaceous border, 67
 Plan for model home ground, 28
 Plan for homestead in woodlands, 29
 Plans for long views development, 18
 Plan for narrow view development, 18
 Plan for the natural garden, 85
 Plan for natural mass planting, 55
 Plan for park and water effect, 93
 Plan for park home No. I., facing page 32
 Plan for park home No II., 35
 Plan for perpetual effect combining natural and formal styles, 71
 Plans for rockeries, details of, 73, 74
 Plans for roadways, illustrating location, 99
 Plan for small garden using adjoining lot, 105
 Plan for southern garden, 96
 Plan for terrace effect, 102
 Plan for town square, 111
 Plans for villa plot, 101, 102, 105, 109
 Plan for water garden, 79, 81
 Plan for waterside property, 19
 Plans made in office unsatisfactory, 14
 Plant for the future, 63
 Plants for a bog garden, 78
 Plants for flower beds, 70
- Plants should harmonize with surroundings, 11
 Plants for natural garden, 83
 Plants in nature, 42
 Plants for various seasons, 62
 Planting, good and bad, illustrated, 51
 Planting, illustrated, 50
 Planting like painting, 55
 Planting, preliminaries for, 49
 Planting public gardens, 110
 Planting, season for, 66
 Planting a slope, 65
 Planting street trees, 110
 Ploughing, depth for, 49
 Ploughing land, 49
 Plumbago capensis, 22, 70
 Polyanthus, 46
 Polygonum sachalinense, 74
 Pond, making a, 78
 Poplar, pendulous, 24
 Populus grandidentata pendula, 24
 Populus, Parasol de St. Julien, 24
 Prepared ground, importance of, 49
 Primrose, 40, 46
 Principles of arrangement, 37
 Privet, 90
 Proportion, 12, 34, 38, 66, 94, 95
 Protecting plants, 45
 Pruning destroys natural beauty, 33
 Pruning when transplanting, 51
 Prunus, 45
 Purple flowers, place for, 38
 Pyracanthus, 70
 Pyrethrums, 32
 Pyrus Aucuparia, 24
- Quercus Robur, 39
 Quercus stellata, 90
 Quick results, 49
- Raising the ground, 11
 Rare effects, 42
 Replanting, 53
 Repose, 38
 Repton quoted, 11
 Residence, base of, 14
 Residence, first view of, 20
 Residential site, 13
 Retinosporas, 23, 70
 Rhododendrons, 18, 21, 23, 24, 32, 40, 55, 63, 78, 90
 Rhus Cotinus, 24, 92
 Rising ground, value of, 10
 Roads laying out, 49
 Roadways, 99
 Roadways, few necessary, 93
 Roadways, raising, 14
 Robinias, 24
 Rock arch, 73
 Rock binders, 74
 Rock pillar, 73
 Rock pockets, 73
 Rock table, 73
 Rock walls, 73
- Rocks for plants, 74
 Rockery, 23
 Rockery should be informal, 73
 Rockery, making, 74
 Rockery, plants for, 74
 Rockery, site for, 73
 Rockery, uses of, 73
 Rockeries, 73
 Rockeries, care of, 73
 Room wanted by trees, 28
 Roots of Alpines, 73
 Roots in planting, 52
 Roots, pruning for planting, 50
 Roots in transplanting, care of, 53
 Roses, 96
 Rose garden, place for, 18
 Rose, monthly, 45
 Rose, wild, 40
 Rosary, 23
 Ruin easy, 92
- Salvia patens, 70, 77
 Sambucus, 46
 Sambucus nigra aurea, 92
 Sand in transplanting, 53
 Saxifraga, 38, 73
 Scabiosas, 32
 Sciadopitys verticillata, 23
 Scillas, 23, 42, 46
 Seasons, features of the, 40
 Sedum, 38
 Self-planting lengthy, 49
 Sequence of planting, 58
 Sequoia, 62
 Settlement of soil, allowance for, 23
 Shade trees, 95, 100, 110
 Shrub effects, 94
 Shrubs near dwelling, 11
 Shrubs, flowering, 62
 Shrubs, purposes for 63
 Shrubs for special effect, table of, 43
 Site, points to be considered, 10
 Sites, scale of value for, 13
 Sky line, 21
 Sloping banks, 65
 Small garden, 104
 Small grounds, 89
 Snowball, 92
 Snowdrop, 42, 46
 Soil for aquatics, 78
 Soil, deep, necessary, 23
 Soil, excavated, utilizing, 14
 Soil, good, importance of, 51
 Soil, importance of, 83
 Soil, removing expensive, 10
 Soil for rockeries, 73
 Soil, surface, 49, 52
 Southern garden, a, 94
 Space, ample, desirable, 58
 Special effects of trees and shrubs, 43
 Specimen plants, rarely seen, 58
 Spiræa, 32, 46, 92
 Spiræa Lindleyana, 24
 Spring effect, 45, 107

- Spruce, 21
 Spruce, blue, 62
 Stems, colored, 45
Stipa pennata, 42
 Stone edging, 69
 Stone edgings to be covered, 32
 Street tree planting, 110
 Succession 33, 39, 42
 Summer effect, place for, 39, 62
 Summer flowers, 100
 Sunflowers, 38
 Sunlight, importance of, 10
Syringa, 46

 Table for record of plant characters,
 to face page 40
 Tank for tender aquatics, 79
Taxus baccata, 22, 39
Taxus fastigiata, 92
Taxus stricta, 22, 32
 Tender plants, use few, 40
 Tennis ground margin, 22
 Terrace, the, 102
 Terrace making, 103
 Terrace, value of, 14
 Terrace, width of, 103
 Terracing, 14
 Thinning, 39
 Thinning, preparatory, 49
 Thinning out becomes necessary, 11
 Thinning out woodlands, 28
 Thorn, 40
 Three points for attention, the, 39
Thuja, 92
 Thyme, 32
Tilia europæa, 21, 55

 Time effect, 37
 Time effects, tables of, 43, 44
 Town square, a, 110
 Transition from formal to natural, 9
 Transplanting large trees, 53
 Treatment to conform with surround-
 ings, 10
 Trees, cutting lower branches of, 93
 Trees, distance to plant, 94
 Trees, large, desirable, 53
 Trees, limitation of, 95
 Trees form natural protection, 34
 Trees for special effects, table of, 43
 Trees in woodland, how to retain, 28
 Trenching, 49
 Tripod of landscaping, 90
Tritoma Uvaria, 45
 Tulips, 46
 Tulip tree, see *Liriodendron*. 21
 Tussilago, 62
 Tying, 50

 Undulations, 38
 Undulation developed by planting, 11
 Undulation an essential of beauty, 10
 Union of formal and natural styles, 69

Vaccinium vitis idæa, 22
 Valleys to be avoided, 10
 Valleys reserved for grass, 28
 Verbenas, 22
 Viburnums, 24
 View in Mr. Page's Rockery, 75
 View lines, 58, 90
 View lines and shrubs, 63
 Views, broad, development by, 17

 Views long, development by, 18
 Views, waterside, 19
 Villa plot, a, 100
Vinca minor, 32, 38, 42, 90
 Violet, 40, 42

 Walks, 93
 Water effects, 18, 113
 Water garden, the, 80
 Water in the garden, 32
 Water in the view line, 28
 Water plants, soil for, 74
 Water, treatment of, 92, 94, 95
 Watering, 51
 Watering, newly set plants, 51
 Water lilies, 24
 Water lilies, treatment for, 80
 Waterside grounds, how to plant, 19
 Waterside planting, 24
 Wind, newly planted trees and, 51
 Wine berry, Japanese, 77
 Willow, 45
 Willow, white, 21
 Willow, pendulous, 24
 Winter effect, 45
 Winter effect neglected, 41
 Winter effect, place for, 39
 Winter, flowers for, 45
 Wire fence protection for trees, 22
 Woodlands, thinning out, 28

 Yard, 90
 Yew, 22, 23, 41
 Yew, English, 32
 Yew, pendulous, 22
 Yuccas, 70





LIBRARY OF CONGRESS



00009991190

