

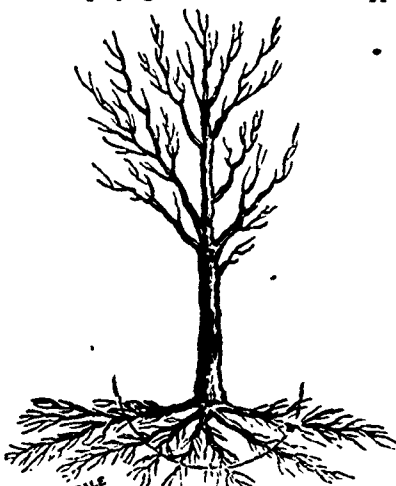
breaking up the subsoil, and manuring it as freely as it will bear. In the autumn he will sow it with grain and in the spring seed it down with clover, the large red clover. After harvest he will encourage the growth of the clover, and the next summer will cut a good mowing for his cattle. After having mowed it, he will allow it to grow undisturbed until about the first of September; then he will turn it under in season to have the sod well rotted before winter sets in. When spring opens, he will pulverize the soil, making it fine and mellow, plant out his trees, and cultivate the space between the trees with potatoes, beans, or some other hood crop. This sort of preparation is the best. The thorough summer-fallowing and sub-soil ploughing have put the ground in good condition for the red clover, the clover roots have penetrated the earth yet deeper than the sub-soil plough, and by their decay prepared the way for the roots of the fruit trees, while the mellow surface soil, in good tilth, is in just the right condition to receive the roots of the young trees and supply them with the food they require.

#### Selection of Trees.

The waste which marks the present age has seized also upon the planters of trees. They want them large, the larger the better; if they will bear fruit the same season that they are planted out, then they are just right. A tree is valued according to its size, and purchasers stipulate that they shall be so many feet long for a certain price. Nurserymen have conformed to the popular demand, and quote their trees accordingly. This demand for tall trees has compelled nurserymen to grow their young stock, so as to obtain the greatest height in the shortest time. In England, trees are valued according to the number of times they have been transplanted; that is, according to the supply of fine fibrous roots, for each transplanting increases the number of such roots. There they know that the subsequent growth and value of the trees, when removed to the orchard, depends upon the quantity of roots within the circumference, say, of a half-bushel measure. Hence the planter seeks to procure trees having, when dug up, a large supply of roots in proportion to the top, well knowing that having a large supply of roots, he can soon grow the top, but that if the supply of roots be small, he must wait until the tree can form roots before it can make branches.

Nurserymen in America transplant their young trees as seldom as possible, knowing that they will get no more for a tree that has been twice transplanted than for one that has never been transplanted at all, and that each transplanting increases very materially the cost of the tree to them. A large tree that has not been frequently transplanted will make long and strong roots, having their fibres at their extremities.

The accompanying cut will illustrate the appear-



ance of the roots of such a large tree. The fibres, small, thread like roots, are at the extremities of the

main roots. The larger the tree is the stronger will the main roots be, and the farther from the trunk of the tree will be the little fibres. These fibres are the roots that take up moisture and food from the soil for the nourishment and growth of the tree. It will at once be seen that in taking up a large tree, by putting in the spade at the dotted line in the illustration, all the fibrous roots will be left in the soil, and only the main roots, having their fibrous extremities cut off, will remain attached to the tree. The tree being thus deprived of those roots from which it mainly receives its supplies from the soil, must necessarily cease to make branches until such roots are again formed. This loss the tree will, on being again planted, at once endeavor to repair, and if meanwhile it do not perish, it will in time, longer or shorter, according to circumstances, throw out new fibres and establish anew its connection with the soil.

But if the tree be small the fibrous roots will not be so far removed from the trunk of the tree, nor will the main roots be so large, but the roots will have the appearance indicated in figure 2. If such a tree be dug up by inserting the spade at the place indicated by the line, nearly all the roots will be retained, and a large proportion of them will be the small feeding roots, so important to the growth and health of the tree. Hence it is to the interest of the purchaser to obtain young, healthy trees, from two to not exceeding our years of age.

It may be said that nurserymen might dig large trees more carefully, and so retain the fibrous roots. So they could, and doubtless they would, if the tree planting public were willing to pay for that care. Now and then there is one who is willing to pay for it, but nurserymen cannot regulate their business to suit the demands of an occasional individual. So long as the bulk of buyers are unwilling to pay for the requisite labor and care needed to secure trees grown and dug in the best manner, nurserymen will give only what is paid for by them. Hence it is necessary for those who value their trees, to buy them of that size and age that is most likely to be supplied with the proper proportion of fibrous roots. If these are smaller than he wishes to plant out in orchard form, he can set them out in rows in nursery form, grow them in this manner for a couple of years and then remove them to the orchard. In this way he can secure what the purchaser in England obtains when he buys twice-transplanted trees, can transplant them whenever he is ready to the orchard and that without the loss of a single tree. This, in this country, is, at present, the true method to pursue, and those who have the forethought and patience to adopt it, will find themselves most amply repaid in the uniform appearance, growth and vigor of their young orchards.

#### Best Evergreens for Windbreaks.

The best evergreens with which to form windbreaks or screens in Canada are the Norway spruce, white spruce, Austrian pine, and white pine. These are all perfectly hardy and may be easily obtained. The Norway can be supplied in large quantities by all our nurserymen at about one cent for every inch in height. The white spruce and white pine are native trees, and may be obtained from our nurserymen or, if preferred, from the forest.

#### The Peach Crop Prospect.

A correspondent of the *Western Rural*, says: Having just returned from a trip to southern Illinois, where I examined many peach orchards, I would report that so far as I could see and learn from others, there are no live peach buds as far south as Cobden. The wood of all the peach trees seems injured; of course, of the old trees most. Many of the most experienced orchardists are heading their peach trees back to within a few feet of the trunk. From my own experience in 1864 I think this a wise measure, especially with old trees. Very soon a fine new head will be obtained, and good fruit is the result.

So far as I could see, the apple and other hardy trees were in good condition. Grapes in some localities are certainly injured.

#### Miscellaneous.

**GRAVENSTEIN APPLE.**—This variety, commonly used as an autumn apple, is rated by F. R. Elliot, of Cleveland, to keep till February and March in his cellar.

**NEW FRUITS.**—An Indiana correspondent of the *Horticulturist* says that Souvenir du Congrès and Assumption are as good as the Bartlett, a few days earlier, and larger in size. Worthy of trial.

**THE SWEET PEAR.** according to a correspondent of the *Gardener's Monthly*, at Suspension Bridge, N. Y., is "wonderfully improved" by applying ashes, lime and bones, in autumn, and pruning and thinning out the thick branches early in spring.

**TRIUMPH DE JODOIGNE PEAR.**—P. Parry informs the *Rural Home* that this pear, which he thinks has been too much neglected of late, will keep in good condition till the end of December, and that on the 11th of last December, he received from J. M. Davis, of Fishkill, N. Y., very fine specimens, with high commendation of their value.

#### THE GREENHOUSE.

##### The Stephanotis.

There is no more beautiful greenhouse climber than the stephanotis floribunda. This plant is a comparatively recent introduction into this country, as it is not fifty years since it was first found in Madagascar of which island it is a native. It is usually grown in the stove-house, being particularly fond of a moist heat. The stephanotis belongs to the milkweed family, of which we have quite a number of representatives. Some species of milkweed or asclepias are very handsome, and all are interesting from the curious structure of their flowers. As usually grown in our moist stoves it is trained upon the rafters, but owing to the scanty foliage it seldom makes much show except when in flower. The best way is to train it upon a balloon-frame trellis. To those who do not know the meaning of this term we will say that this trellis is made of wire or pliable sticks of willow, of any desired length, from five to ten in number, according to the size of the plant. These sticks are thrust firmly into the soil at the rim of the pot, and the upper ends tied close together, making a trellis in form somewhat resembling a balloon. A circle of wire in the middle of the trellis will keep the sticks more firmly in place, and tend to preserve a regular shape. When trained in this way the plant can be easily removed to the dwelling-house when in flower. The flowers of the stephanotis are white and very fragrant, and have a waxy look, something like those of the *hoya carnosa*. Large quantities of them are sold in London markets for wedding bouquets. This plant is usually grown only in the greenhouse, but it would undoubtedly do well as a house-plant, if sufficient moisture and heat were supplied. The soil in which it thrives best is a rich loam, with at least one-third peat or leaf-mould and sand. Cuttings root readily in a warm greenhouse. The name stephanotis means "cared crown," and was given for the reason that the staminal crown has auricles or ear-like appendages.—*V. in The Farmer.*

**COLD WATER AND FROSTED PLANTS.**—The value of cold water on tender plants that have been nipped with frost is not so well known as it ought to be, especially amongst our amateur friends. A few days since I had some nice plants of Chinese Primulas standing on a shelf close to the glass in a cold house. One night the frost got in, and the next morning the leaves were stiff and looked quite black. I at once removed them from the shelf, set them on the floor, commenced to sprinkle them with cold water, and continued the operation every few minutes for nearly half an hour, until the frost was entirely removed, now they are looking as fresh and healthy as those that were not touched with frost.—*The Gardener's Magazine.*

**CABBAGE FROM BUDS.**—The *Pacific Rural Press* says: "Take a large head of cabbage, strip off the outer leaves, and slip off the buds found at the base of the leaves. Take these buds and simply set them in rich earth. The result will be a fine growth of cabbage plants, with heads larger and sounder than can be raised in the ordinary way."

**THE EUMELAN GRAPE.**—Peter M. Gideon, a well known cultivator of fruit in Minnesota, states that the Eumelan grape has done well with him for two years, and he finds it the earliest black grape, best for table, first in market, very saleable, great bearer, and with a lardy vine, bearing better than the Concord, and never dropping its berries.