

amara, but eatable in the other sorts, ripens in autumn. Some people recommend sowing it at once, but, if kept in damp sand, it will retain its power of germinating until spring. There are from fifty to a hundred nuts in a pound-weight—the number differ according to the size of the various sorts. There are two ways of sowing: in the place where the plantation is intended to be permanent, or in beds, for subsequent setting out in the nursery. Two inches of

the willow, etc.. The shade derived from the vigorous shoots and leaves of such, will prevent the weeds from taking possession of the land. When they have done their work, the inferior trees can be cut, and the ground left to the hickories alone.

No firewood is to be compared with the hickory; and for



Fig. 8.

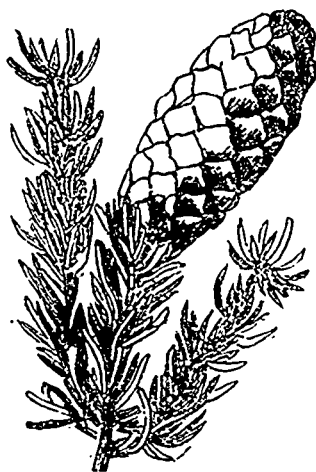


Fig. 9.

earth will sufficiently cover the seed. Sowing in the permanent plantation has been recommended for a long time, because the plant having a long tap-root, if this is broken in transplantation the tree takes a long time to recover from the injury. Still, the foresters in Europe have sown it in beds for many years. At a year old, with a very sharp spade, they cut the tap-root about eight inches below the surface, thrusting in the spade, very obliquely, under the plant in spring or autumn, when the sap is quiescent. Treated thus, the young tree shoots

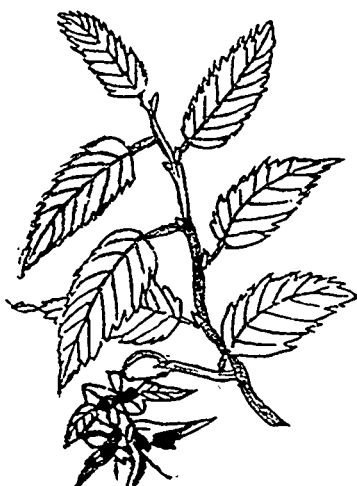


Fig. 11.



Fig. 10.

out numerous lateral rootlets, and, a year after the operation, it is transplanted into its permanent abode, where it is sure to take, and grows as rapidly as the sugar-maple. The hickory not putting out its leaves until the spring is far advanced, demands protection from the smothering effects of weeds. Hence, it would be well to sow at the same time, when the permanent location planting is practised, some of the quicker growing trees, such as the red maple, the poplar,

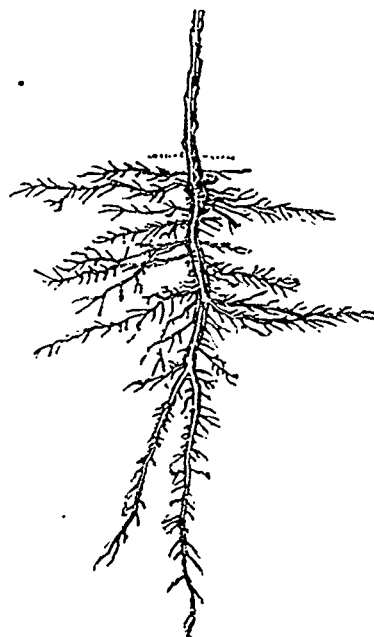


Fig. 12.

all purposes requiring great resisting power it is most excellent. The small-fruit hickory grows to a height of seventy feet by two feet in diameter; the bitter-hickory to fifty feet; and the shell bark to sixty feet. The wood of the last wrongly named *noyer tendre* (soft walnut), is very hard, and is much sought after on that account. Of all woods it is the best for firing. The pig-nut is also of good quality, and attains a height of seventy feet, while the white-heart does not exceed fifty. The latter's kernel is contained in a very hard shell.

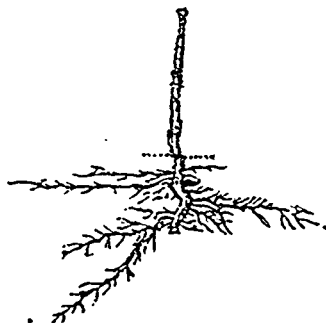


Fig. 13.

Hornbeam.

A tree of slow growth, and one that hardly ever exceeds twenty feet in height; so, I do not recommend its cultivation. Still it is worth mentioning here, as the fine and close grain of the wood makes it useful in certain mechanical constructions, such as the teeth of cogwheels, and for firing, if there is enough of it. For these reasons, it should be preserved with care, and its growth assisted. The hornbeam delights in rich soils; the seed is dry, hard, and winged, and a pound of