

it contains about ten thousand pickles, which are slow to germinate. It would be as well to sow in autumn, though the seed can be kept in damp sand till spring. Eng. no. 11, represents the leaves of the horbeam, and p., its seed.

Chestnut.

Rich, silicious soils suit this tree best : it abhors wet clays. Its seed, the edible chesnut, three thousand to the pound, ripens in autumn, and may be preserved in damp sand till spring. It should be sown in its permanent locality, as its transplantation rarely succeeds. Of quick growth, its height at maturity is sixty feet. The wood of the chestnut is hard and durable, but coarse and porous. One of its chief ad-

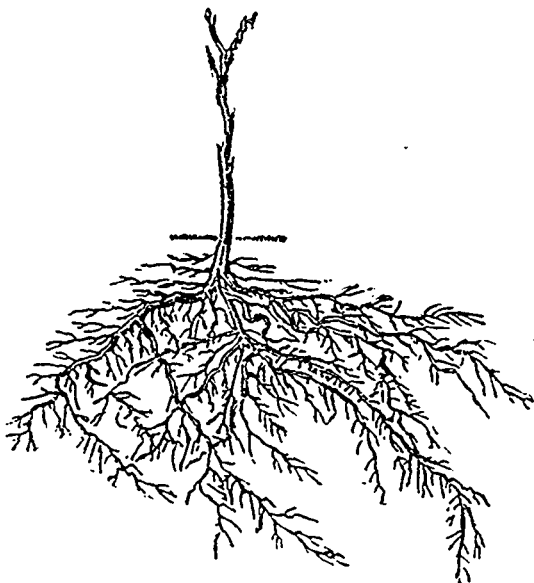


Fig. 14.

vantages is that after cutting it shoots freely from the stump. Good post for fencing, and fair firewood, though full of sparks, are yielded by the chestnut.

White oak—Chestnut oak—Quercitron oak—Scarlet oak—Post oak—Swamp Chestnut oak—Red oak.

The white oak rejoices in deep, heavy land, not too damp. In stony soil, the chestnut-oak does well. The quercitron-oak loves dry land ; the scarlet-oak, rich land ; the post-oak, loves an alluvial soil, and the scarlet has the same tastes as the



Fig. 15.



Fig. 16.



Fig. 17.



Fig. 22.



Fig. 23.

white oak, only it is less afraid of moisture. The seed, or acorns, of the quercitron, the scarlet, and the red sorts, takes two years to ripen ; but the others mature in the autumn of the first year. The seed, one hundred to the pound, may be sown in the fall, or preserved till spring in damp sand, kept cool. Sow exactly as advised for the hickory, and cut off the tap-root in the same way : the result of this treatment will be identical in both cases. To make this operation the clearer,

I offer an engraving no. 12, of a year-old oak with its tap-root, another, no. 13, the same without the tap-root ; and a third, no. 14, depicting it a year after the amputation. It will be seen, by the last out, that the excision of the tap-root has had the effect of causing it to throw out a great number of hairy rootlets, by means of which the plant has been able to assimilate a greater quantity of nourishment in a given time. In its youth, the oak, like the hickory, should be mixed with other species for shade and shelter. The seedling becomes about a foot high the first year, and may be transplanted a year from the excision of the tap-root. The ultimate height of the different oaks is as follows : the white oak, seventy feet by four ; the chestnut-oak, sixty feet ; the quercitron, eighty



Fig. 18.



Fig. 19.



Fig. 20.



Fig. 21.

feet ; the post oak, fifty feet, the swamp-chestnut-oak, one hundred feet ; and the red oak grows as big as the white, but not so high. Slow grower as is the white oak, it is said to reach, in twenty four years, a height of twenty five feet, with a diameter of two feet at twelve inches from the ground. Thus, in these few years it becomes of great value for bunding, and is worth sowing, even by those who look to reap a profit in their own life-time. The ship-builder, the plough-maker, the cooper, all value highly the timber of the oak, and it furnishes excellent firewood. The inner bark of the quercitron supplies the dyer with a yellow dye—hence

its trivial name—*Dyer's oak*. Eng. no. 15, represents the leaves of the white oak. Eng. no. 16 represent the leaf of the chestnut oak. Eng. no. 17, the leaf of the quercitron oak. Eng. no. 18, the leaf of the scarlet oak ; Eng. no. 19, the leaf of the swamp-chestnut-oak. Eng. 20, the leaf of the red oak, and no. 21, its acorn.

Coffee-tree

This tree, the singular name of which in French, *chicot*, is derived from the appearance of the end of its boughs in winter, grows to fifty feet high by fifteen inches in diameter.