

It grows well from the seed, which must be scalded before sowing, as the integument is very hard. The wood of the coffee-tree is of a reddish colour, hard, with a fine grain, and is highly prized by the cabinet-maker. It is worth attention where it grows naturally, but is hardly fit for cultivation.

White, or Silver Maple.

This tree attains a height of fifty feet; its woolly seed pods five thousand of which weigh a pound, are three inches in length, and ripen in June, when they should be sown at once, and, therefore, if the seed must be bought, it should be bought immediately after the crop is ripe. Rapid is the growth of this maple, and, consequently, the wood is brittle, of little value, and the tree soon dies off. Damp soils suit it, and sugar can be made from the sap, though it is not so sacchariferous as the sap of the true sugar-maple.

Red Ash.

This ash, which delights in rich soils, seldom exceeds forty feet in height. The wood is inferior in quality, but is in request for baskets and barrel-hoops. For its cultivation, etc., see the other articles on the ash. Cut no. 22 shows the leaf of the red ash.



Fig. 24.

Fig. 25.

Beech.

Hating sands, this well known tree finds a pleasant abode in hilly, gravelly soil, where there is little depth of earth. The mast, which ripens, as all the world knows, in autumn, must be sown at once, as it soon loses its power of germination. It should be slightly covered, and will be found up in the spring. A pound of mast will contain fifteen hundred pickles. As it is by no means easy to raise the beech from seed, perhaps it would be wiser to take the young plants which spring in the underwood, and set them out in a nursery. The beech, like the hickory and butternut, requires the protection of more rapidly growing trees in its youth. It grows slowly, though quicker than the oak, and when full grown is sixty feet high. Though worth preserving, it is not worth taking much trouble about, for its wood is inferior even to the yellow-birch as a combustible, and for other purposes it is not much in demand. The mast, when crushed, furnishes a by no means despicable salad-oil. The eng. no. 23, depicts leaf of the beech; and no. 24, the mast.

Butternut.—Black Walnut.

The walnuts rejoice in rich soils. The seed should be set in autumn, immediately after it ripens, as it is very difficult to preserve it during winter. Still, kept in damp sand, in a cool, or rather, in a cold place, it will do well enough. Twenty five nuts weigh about a pound, and they should be sown where

they are to remain, as the tap root is very strong, which makes the plants impatient of removal. The observations on the oak and the hickory are applicable to these trees. Two inches is deep enough to bury the seed. The butternut grows rapidly, and at last attains a height of fifty feet. If sown in beds, it must be transplanted very young, as the tap-root would be broken off if the tree were allowed to stand too long without removal. It would be better to cut the tap-root in the bed, and to treat the plant as recommended for the hickory. The black walnut grows to a height of ninety feet, and furnishes the costly wood so highly esteemed by cabinet-makers. The butternut, less valuable than the black walnut on account of the inferiority of its colour, is used for the same purpose. The cultivation of the walnuts is, in general, precisely the same as that recommended for the oak and hickory, to which my readers may refer. Cut no. 25 represents the leaf and nut of the black-walnut.

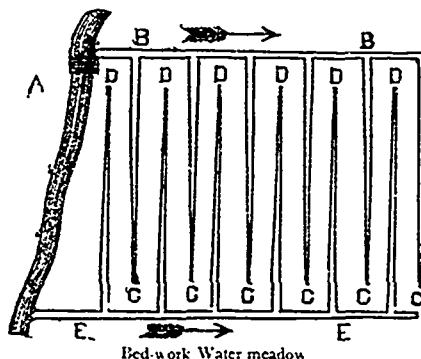
From the French.

J. C. CHAFAIS.

Irrigation.—Water-meadows.

A few weeks ago, a gentleman, the principal of one of our agricultural colleges, was talking to me about a certain stream which flows along one side of the college-farm, and inquiring my opinion as to the feasibility of using it for irrigation. I know the stream well, and have often studied its capacity and fall: it is admirably adapted to the purpose, and, without going to a great expense, several acres of meadow might be flooded when deemed desirable. A certain outlay must be made for gates—we call them *pen-stocks* in England; from *pen*, old British for the head, as *pen-coch*, red head—and carriers, but if the modern plan pursued in the West of England, particularly in Devonshire, be followed, the expenditure will be a trifle compared with the return. I will throw a few thoughts together on the general subject of irrigation, and try to make the principles and practice of this invaluable aid to stock-farming as clear as possible.

It may surprise some of my readers to hear that, in forming water-meadows, it is not the chief object to moisten them. Irrigation is carried on, mainly, in autumn and spring,



when the land is already damp. Yet a slight film of water trickling then over the surface—not stagnating, by any means—rouses the dormant vegetation, tinges it with a vivid green, and brings forward a luxuriant crop, just when it is wanted, while the dry meadows are bare and brown. In England, we let on the water at intervals during the whole winter, but in this climate we must be content to work during the fall and spring, bearing in mind that the water must never be let on or taken off during frost.

No one, who has seen our English water-meadows, can doubt the benefits derived from irrigation, but the mode of the water's action is still a mystery. It can't be the moistening of the roots of the grass—they are moist enough before the