

tanning and in medicine. The timber is largely exported to England and the West Indies, and can be furnished in the remotest parts of Upper Canada at 40 $\frac{1}{2}$ sterling per 1,000 cubic feet; freight to Quebec about 11 $\frac{1}{2}$ sterling per 1,000 cubic feet. Specific gravity, 0.84; weight of cubic foot fully seasoned, 50 lbs. Potash obtained from outer wood, 13.41, and from heart wood, 9.68 per cent.; value for heating purposes 81 (shell-bark hickory being 100).

5. BLACK OAK (*Quercus tinctoria*).—One of the largest trees of our forest, 100 to 130 feet in height, and 4, 5, and 6 feet in diameter. Not so common or so valuable as white oak. The bark used in tanning, and for obtaining *quercitron*, used in dyeing.

6. RED OAK (*Quercus rubra*).—Grows extensively throughout Canada, is a lofty, wide-spreading tree, of an average height of 130 feet, and of 70 feet to the first limb, and common at 30 inches in diameter. Makes best casks for oils and molasses. Too little sought after, because of the great abundance and greater value of white oak. Can be furnished in the remote parts of Western Canada at 35 $\frac{1}{2}$ sterling per 1,000 cubic feet; freight to Quebec about 10 $\frac{1}{2}$ sterling; specific gravity, 0.675; weight of cubic foot, 40 lbs.; value for heating purposes, 69; outside wood yields 20.5 per cent., and the inside 14.79 per cent. of potash.

7. SWAMP OAK (*Q. prinus*, var. *discolor*).—A beautiful tree, widely diffused, attaining the height of 70 to 90 feet. Grows in swampy alluvial grounds; timber preferred to that of the red oak, resembling more the white oak, and called also swamp white oak. The specific name *discolor* or *bicolor* is derived from its rich and luxuriant foliage. Specific gravity, 0.675; weight of cubic foot, 40 lbs.; value for heating purposes, 68.

8. CHESNUT (*Castanea vesca*).—Grows only in the western parts of Upper Canada, and on rocky or hilly lands; a large tree, 80 to 100 feet in height and 36 inches in diameter. The timber is coarse grained, strong, elastic, light, and very durable; posts of chesnut have been known to stand in the ground for forty years. The young wood is very elastic, and is used for rings of ship masts, hoops for tubs, &c. Chesnut is distinguishable from oak in having no large transverse septa, though in every other respect the two woods are remarkably similar in texture and colour. The nuts are much esteemed, and sweeter than those of the European variety (the Spanish chesnuts). Outside wood contains 4.56 per cent. of potash; inside 2.73 per cent. Specific gravity, 0.5; weight of cubic foot, 32 lbs.; value for heating purposes, 52.

9. BLACK WALNUT (*Juglans nigra*).—Grows abundantly on the rich soils of the western and south-western parts of Upper Canada, of an average height of 120 feet, 70 feet to the first limbs, and 36 inches in diameter. Sections of the wood 6 feet in diameter are not uncommon. The wood is compact, strong and tough, of a deep violet colour, surrounded by a white alburnum. It is used extensively for building, for furniture, and in the form of veneers. It can be furnished along the line of the Great Western Railway, or at the lake ports, for 60 $\frac{1}{2}$ sterling per 1,000 cubic feet; freight thence to Quebec, about 11 $\frac{1}{2}$ per 1,000

cubic feet. Specific gravity, 0.5; weight of cubic foot, 30 lbs., well seasoned; value for heating purposes, 65.

10. BUTTERNUT (*Juglans cinerea*).—A large forest tree of an average height of 100 feet, 65 feet to the first limb, and 24 to 30 inches in diameter; found over extensive areas in Canada on elevated river banks, and on cold, uneven rocky soils. The wood is of a reddish hue, lighter than the black walnut, shrinks but little, and is used in panneling, in ornamental work, and for furniture. The bark is used in dyeing, and from it is extracted an excellent cathartic. Specific gravity, 0.426; weight of cubic foot, 26 lbs.; outside wood contains 4.42 per cent. potash; inside, 1.42 per cent.

11. SHELL-BARK HICKORY (*Carya alba*).—A tall and slender forest tree, of an average height of 110 feet, 50 feet to the first limb, and 18 inches in diameter. The fruit is covered with a very thick epicarp, separating into four parts, and containing a thin-shelled, highly-flavoured kernel. The tree is covered with shaggy bark, consisting of long, narrow plates loosely adhering by the middle; hence called shell or shaggy-bark hickory. It is also called walnut in parts of the country where the black walnut does not grow. It is the heaviest of all Canadian woods, strong, compact, and elastic, and much used where these qualities are required, as for the handles of all kinds of tools, and spokes of carriage wheels, shafts and poles of carriages, hoops, whip stalks, hand-spikes, &c. From the bark is extracted a yellow dye. Specific gravity, 0.929; weight of cubic foot, 58 lbs.; value for heating purposes, 100* (the best of all Canadian woods); inside wood contains 20 per cent. of potash; outside, 7.5 per cent.

12. SMOOTH-BARK HICKORY (*Carya glabra*).—Nearly all the remarks made in reference to the shell-bark hickory apply to this species, and the wood is used for the same purposes, although it is not quite so highly esteemed. The bark of the tree is smooth, and the kernel of the nut very bitter in contrast with the other or sweet nut hickory.

13 and 14. SUGAR OR HARD MAPLE AND BIRD'S-EYE MAPLE (*Acer saccharinum*) AND RED OR SWAMP MAPLE (*A. rubrum*).—Found abundantly throughout Canada in all rich soils, and attains a height of 130 feet and 12 feet in circumference. From its beauty and abundance in Canada, the leaf of the maple has been adopted as the national emblem. The timber is very beautiful, and is distinguished as bird's-eye maple and mottled or curly maple (*Acer rubrum*), and is much used for picture frames and in furniture; the less ornamental portions of the timber are much used for house carpentry and furniture. When well seasoned it is one of the hardest kinds of wood; carriage and waggon-makers prize it highly for axles and for purposes where great strength and the least deflection are required. Its value for heating purposes is unsurpassed. It is from this maple that so much sugar is made. This and the soft maple (*Acer dasycarpum*) are most planted for ornamental and shade trees in lawns and gardens. The wood can be furnished at Quebec at about 45 $\frac{1}{2}$ sterling per 1,000 cubic feet.

* In estimating the value of the several kinds of woods for fuel, the shell bark hickory is made the standard, and called 100.