

Flowers large, fragrant, and white; fruit orange red; wood hard, like white thorn.

41. **WILD APPLE TREE** (*Pyrus coronaria*).—A small tree, 15 to 20 feet high, common in the western part of Upper Canada. Wood hard, like the thorn; flowers large, rose-coloured; fruit one inch in diameter, yellowish, hard, and sour, but esteemed for preserves.

42. **PEPPERIDGE** (*Nyssa multiflora*).—Found only in the western part of Upper Canada, and of an average height of 100 feet, of 60 feet to the first limb, and of 12 to 18 inches in diameter; scarce. The bark light grey, similar to that of the white oak, and broken into hexagons. The wood is white, fine-grained, soft, the texture consisting of interwoven fibres, rendering it very difficult to split. It is therefore, useful for beetles, naves of wheels, and for purposes requiring the toughest timber.

43. **DOGWOOD** (*Cornus florida*).—Common in Upper Canada, grows 20 to 30 feet high, and 8 inches in diameter. The wood is very hard and compact, and hence the name *Cornel*, from the Latin *Cornu*, a horn; used for mallets, and is well adapted for the same purposes as box-wood. It is so remarkably free from silex, that splinters of the wood are used by watchmakers for cleaning the pivot-holes of watches, and by the optician for removing the dust from small lenses. The bark is rough, extremely bitter, and used in medicine as a tonic. Specific gravity, 0.78; weight of cubic foot, 50 lbs.

44. **WHITE CEDAR** (*Thuja occidentalis*).—Found extensively over Canada on the rocky borders of streams and lakes, and in swamps. It grows to the height of 60 to 70 feet, rapidly diminishing in size, throwing out branches from base to summit. The wood is light, soft, coarse-grained, and very durable; much used in frame work of buildings and for the upper timbers of ships, as posts for fences, gates, &c. It is one of the most durable of Canadian woods; much esteemed also for making split laths, known as cyprus laths. Specific gravity, 0.45; weight of cubic foot, 26 lbs.

45. **RED CEDAR** (*Juniperus Virginiana*).—Grows in many parts of Canada in dry rocky situations. It sometimes attains the size of 24 inches in diameter, but mostly smaller. Leaves are dark green, the younger ones small, ovate, acute, scale-like, overlying each other. The wood is fine-grained, compact, of a reddish hue, very light and durable. It is used for fences, aqueducts, tubs and pails, and as cases for drawing pencils—hence called pencil cedar.

46. **HEMLOCK** (*Abies Canadensis*).—Common in the hilly, rocky lands of Canada, attaining the height of 80 feet, and 3 feet in diameter. The timber is soft, elastic, of a coarse, loose texture, not much used, but sometimes substituted for pine; resists well the effects of moisture, and for this reason is used for railway ties. The bark is extensively used in tanning. Specific gravity, 0.45.

47. **BLACK SPRUCE** (*A. nigra*).—This fine tree abounds in the higher and mountainous land of Canada, attains a height of 80 feet. The timber is light, strong, and elastic, and, though inferior to white pine, is still valuable. From the young twigs spruce beer is made.

48. **WHITE SPRUCE** (*A. Alba*).—A smaller tree than the black spruce, but attains a height of 50 feet. Trunk from 12 to 18 inches in diameter. Timber much the same as that of the black spruce.

49. **CANADA BALSAM. BALSAM FIR** (*Abies balsamea*).—Common in humid grounds in the cooler latitudes of Canada, and attains a height of 30 to 40 feet. The bark is smooth, abounding in reservoirs filled with a resin or balsam, which is considered valuable in medicine.

50. **BALSAM FIR** (*A. Fraseri*).—A smaller tree than the last. A highly ornamental shade tree.

51. **TAMARAC** (*Larix Americana*).—A tall, slender tree, rising to the height of 80 to 100 feet, abundant in Canada in low wet lands. The wood is considered very valuable, being heavy, strong, and durable. Called also American larch, and hackmatac. It has recently come into great demand for ship building and railway ties, for which latter purpose it is found to be well adapted, and very durable. The best oak is superior to it only for the outside work of a ship. For knees, bends, garlands, &c., of a ship, no wood is better. It is remarkably distinguished from the pines by its deciduous leaves, being bare nearly half the year. It is found up to a very high latitude, even in Hudson's Bay. Specific gravity, 0.6.

52. **SASSAFRAS** (*Sassafras officinale*).—Found only in the western part of Upper Canada; grows to the height of 50 to 60 feet, and 15 inches in diameter. The timber is of little value, but used for light ornamental purposes on account of the fragrant odour. Every part of the tree has a pleasant fragrance and an aromatic taste, strongest in the bark of the root, from which an essential oil is distilled, highly valued in medicine. Specific gravity, 0.6.

53. **SUMAC** (*Rhus typhina*).—Common on rocky, poor soils throughout Canada, and readily springs up on neglected lands after the primal forests are cleared off; attains a height of 20 feet, and 8 inches in diameter; the wood is soft, aromatic, of sulphur yellow, makes beautiful veneers, and is used in dyeing. The bark of this and the other varieties is also used in dyeing and tanning.—*Technologist*.

WOOL AND WOOLEN MANUFACTURE.

BY EDWARD T. STEVENS.

Although wool is but a modification of hair, yet under the microscope it exhibits well marked characteristics. Wool is defined by Professor Owen to be "a peculiar modification of hair characterised by fine transverse lines from 2,000 to 4,000 in the extent of an inch, indicative of a minutely imbricated scaly surface," upon this and upon its curved and twisted form depends its remarkable and valuable felting property.

Wool is not peculiar to the sheep, but it forms an under coat beneath the long hair in very many animals. Articles for clothing have been made from the wool of the musk ox (*Ovibos Moschatus*), from the wool of the skyn, or ibex, of Little Thibet, but in these and in other such instances they have been produced as objects of curiosity rather than for any commercial purpose. In the sheep, judicious management has in the course of years increased the growth of wool, and rendered the occurrence of hair unusual.