and ferry-boats ; and in all these situations has been found to be very durable. The author has seen part of a ferry-boat twenty-three years old, which remained very sound, and the iron nails driven into it as perfect as when they first came from the forge. This perhaps was occasioned by their being constantly covered with an insoluble varnish (the Venice turpentine of the shops), with which the larch abounds. The duke of Atholl has recently built a vessel of 170 tons w holly of larch, the necessary knees and crooks being formed from the roots of the trees; the lower masts and boats are also of that wood, the topmasts and yards of spruce firs grown upon his estates. One of the qualities of larch for building merchant-ships, is its great lightness, a cubic foot weighing, when seasoned (which it does rapidly), only thirty-four pounds. Although it is not so strong as many sorts of wood, it has great resilience. Cabinet-work of great beauty has been made from larch ; it polishes well, and when seasoned is not found to warp or shrink. In addition to its other properties, it is slow of combustion, and is said to let shot through without splin­tering. A most important fact in agriculture has arisen from planting larch trees on rocky ground ; the vegetable compost formed thereon by the falling of the leaves has been the cause of producing herbage for feeding cattle, and made that land which on the average did not formerly bring more than 8d. or 9d. per acre, now to be worth from 12s. to 14s. per acre annually.”

Larch timber, although so generally planted, and so ge­nerally thriving, requires considcrable attention in the se­lection of proper soil for it. It is very subject to a heart­rot, which seizes on the roots, and rapidly proceeds up the centre of the stem of the plant, which swells considerably for several feet above the surface of the ground. Larch cannot bear a cold, damp soil, or any stagnation of water, or even the moisture of the rich vegetable moulds. Nor will it thrive in the light sandy soils ; for although it dislikes marshy stagnant waters, its roots require to be pre­served from the droughts of summer. Sandy and gravelly soils, if situated so as to receive from declivities the mois­ture percolating through them, will produce excellent larch timber ; as will also the sides of rocky hills and moun­tains, in which no moisture can stagnate, and into the fissures and clefts of which the roots easily penetrate, and find ample nourishment. Larch trees attain to a very great height. In some of the public buildings of Venice, there are said to be single-pieced beams of larch which are 120 feet in length. It must be very durable, for it is almost the only wood which was used in the palaces and public buildings of that city. Larch is imported from Canada un­der two names, hackmatack and tamarack; at least the timbers bearing those names have every appearance of be­ing identical with the Scotish larch.

*On the Measurement of Timber.*

Timber is bought and sold by solid measure, according to the number of cubic feet in the tree or log. The mea­surement of timber is therefore the operation by which these cubic contents are determined ; that is, the multiply­ing together the three dimensions, or the mean length, the breadth, and the depth of each log. If the log should vary much in size in different parts, then the length, breadth, and depth of each of these parts must be multiplied toge­ther, and the contents of the log will be the sum of the products. When the log tapers, a mean breadth or depth is taken ; the object in every case being to attain the most correct approximation to the contents of the log. In mea­suring rough logs, it is however usual to gird the log at the measuring place with a string, and then, folding the

string into four equal parts, to assume this fourth part of the girth to be one side of the square area at the measuring place ; which area, when multiplied by the length, will give the solid contents of the log. The arithmetical operation, sim­ple as it is, is universally superseded by the more simple and far more correct plan of referring to published tables of contents, calculated for every foot in length of a log, and every quarter of an inch in the side of the square. Those most generally used for this purpose are in Hoppus's Prac­tical Measurer.

In measuring standing timber, the length is taken as high as the tree will measure twenty-four inches in circumfe­rence, less than which measurement is not considered as timber. At half this height, the measurement for the mean girth of the timber in the stem of the tree is taken ; one fourth of this girth is assumed to be the side of the equiva­lent square area. The buyer has in general the option of choosing any spot between the but-end and the half-height of the stem as the girding place. All branches, as far as they measure twenty-four inches in girth, are measured in with the tree as timber. An allowance, which varies ac­cording to circumstances, is generally deducted for the bark. In oak it is from about one tenth to one twelfth of the circumference at the girding place ; in other sorts of timber it is less. In all, however, this allowance depends much upon special agreement.

It is usual to speak of timber by the load, which means fifty cubic feet of squared timber, or forty cubic feet of rough timber. A load of plank is dependent upon its thickness. Thus it will require 200 square feet of three- inch plank to make the load of fifty cubic feet; therefore the load of plank is the number of square feet of its re­spective thickness, which is necessary to make the load of fifty cubic feet. Deals are measured, according to their thickness and lengths, by the hundred, reckoning 120 to the hundred.

The practice of receiving and measuring timber for the use of the royal navy is more specific and strict in its de­tail than that which has been described ; and as the cus­toms of the public service in this branch of commerce must greatly influence the timber market, we shall proceed to give an outline of them.

Rough oak timber must be so hewn or squared, that at each measuring place the width of the surface or square shall not be less than one fourth the diameter of the piece at the place where the measurement is to be taken. The lengths for measurement are regulated by the several stops or joggles. Each piece of timber is measured for contents, by calliper measurements, as far as the spine@@1 will hold twelve inches in diameter; and no tops are received excepting the spire and one other limb, remaining on the piece, and admitting of being converted with it. These limbs are only measured as far as they will hold twelve inches in dia­meter, unless the timber will convert as compass timber, in which case it is measured as far as it will hold nine inches in diameter.

Rough elm timber is measured in the same manner as the oak, excepting that the piece is measured as far as it will hold nine inches in diameter.

Sided timber, which may be defined as the rough log with two and opposite slabs sawn from it, is measured ac­cording to the following conditions. The term “ siding” is synonymous with thickness, and the term “ moulding” with breadth. It must measure at least twelve inches in parallel thickness. The moulding at the but-end must not exceed the siding by more than one half. The moulding at the middle of the length must not exceed the siding by more than one fourth, nor by less than one eighth ; and the moulding at the top-end must not exceed the siding by

@@@1 Spine is the technical term used to designate the perfect wood.