

ed from two 90 h. p. boilers and two 90 h. p. engines. Electric light is supplied by an engine and dynamo. Nearly all the machinery was supplied by the Wm. Hamilton Company, of Peterborough, Ont.

Situated twenty yards from the mill is a dry kiln 75x30 feet for drying the finer grades of lumber, all the rest of the output, which averages 50,000 feet per day, being piled in the yard and sheds.

Most of the output is marketed in the Slocan district, Northwest Territories, Manitoba and Ontario, the company's mouldings and rough and dressed lumber being in high favor in the districts enumerated. A very large trade is carried on with the C. P. R. and other companies in cedar and fir piles, telephone and telegraph poles, fence posts and ties for the railroad.

#### THE ROBSON MILL

Situated three miles above West Robson, on the Columbia, is almost an exact reproduction of the one already described, the capacity being 40,000 ft. per day.

#### THE CASCADE MILL

is situated one mile west of Cascade on the Kettle River. It possesses a capacity of 25,000 feet per day and does a large trade among the mines of the Boundary, besides shipping considerable stock to the Northwest.

#### THE NELSON MILL

was built last year, at a cost of \$30,000, right on the wharf where direct communication is obtained with the Crow's Nest Road. It is fitted up with all the requisites of a modern plant, the machinery being supplied by the Wm. Hamilton Company, Peterboro, and the Waterous Engine Works Company, Brantford.

Mr. Jos. Genelle was raised in Ontario and has for 30 years been engaged in the trade. He came to British Columbia in 1886 shortly after the completion of the C. P. R., and built mills at Shuswap Lake and Sprout's Landing on Columbia River, just lately disposing of these properties to the Columbia River Lumber Company. Mr. Genelle is widely known in the Kootenays as a man of sterling qualities both in business and socially, and it is through his enterprise that the business has grown to its present enormous dimensions. He is ably assisted by Mr. Billings, a young Ontario gentleman possessed of all the snap and energy usually associated with the Ontario people. Coming to British Columbia a few years back he at once entered the employ of Mr. Genelle as secretary, displaying such ability as to be soon sought by the various lumber companies around, finally being persuaded to join hands with the Columbia River Lumber Company. He stayed with them for a year or more, leaving them in 1901 to enter into partnership with the present company.

Any person who is interested in the lumber business or in western Canada's thriving industries will be amply repaid by a visit to any of the company's up-to-date establishments.

Mr. John Birdsall, of Niagara Falls, traveller for the Bradley Lumber Company, of Hamilton, died in the city hospital, Hamilton, a fortnight ago from typhoid fever, after two weeks' illness. He was 30 years of age.

#### THE SEASONING OF TIMBER.

The object of seasoning timber is either to expel or evaporate the sap remaining in it, which otherwise putrefies and induces decay.

One of the effects of seasoning is to materially reduce the weight at the time, and this reduction of weight is, to some extent, an indication of the success of the process. Tredgold calls timber seasoned when it has lost one-fifth of its weight, and says it is then fit for carpenters' work and general purposes. The same authority gives it as dry when it has lost one-third of its weight, when it is fit for joiners' work and framing. The exact loss of weight is dependent of course upon the nature of the timber and its state before seasoning. One method of facilitating seasoning and preventing checking of valuable timber in the log, is to have an auger hole through the centre of the log from end to end. Natural seasoning of the ordinary kinds of lumber is carried out by a system of stacking in such a way that the air can circulate freely around each piece, but it must be protected by some kind of roof from rain and sun. When logs are stacked for seasoning it is usual to keep the top ends slightly raised; this in reality is for convenience in taking out any particular piece required. Some authorities claim that timber will season much better and quicker by being stood up on end, but this is hardly practicable on account of the difficulty in raising and retaining such heavy masses of timber. According to some good authorities the time for seasoning thoroughly is about as follows, the material being protected from the weather by sheds:

	Months.	
	Oak.	Fir.
Square timber, 24 inch and up	26	13
" " 24 inch to 20	22	11
" " 20 inch to 16	18	9
" " 16 inch to 12	14	7
" " 12 inch to 8	10	5
" " 8 inch to 4	6	3

It is found that if the material is kept longer than the periods named the fine shakes which show upon the surface in seasoning will open deeper and wider, until they render the stick unfit for any fine class of work.

Experience shows that when the seasoning process is carried on under suitable cover the time required is about five-sevenths that of seasoning in the open.

Water seasoning consists in totally submerging the timber as soon as cut, it being chained down for some two weeks, during which time the greater part of the sap is driven out by the action of the water. It is then removed and exposed to the air, being carefully turned each day, till thoroughly dry; when seasoned in this way the timber is not so liable to warp and check, but as the presence of the sap in the stick increases its strength and elasticity, this process must necessarily weaken it for some purposes. Care has to be taken to see that the log is kept fully submerged, as in the event of a portion being exposed to the air the timber suffers along the water line. Another precaution is necessary where water seasoning is employed—the saturated timber must be allowed ample time in which to dry before being put to use, because if taken from the water straight to the saw and used wet dry rot will quickly appear in it.

Saturation in salt water has the effect of hardening the timber, also making it heavier and more durable, but is undesirable for ordinary building purposes, as it causes a tendency to attract moisture.

Boiling water, according to Tredgold, quickens the operation of seasoning and causes the timber to shrink less, but is expensive to use and reduces its strength and elasticity. The time required varies with the size and density of the material, and according to circumstances, one rule being to allow one hour for every inch in thickness.

Steaming has much the same effect upon timber as boiling, but is said to accelerate the drying process, and by some authorities is considered as a preventative to dry rot.

Hot air seasoning or dessication is effected by exposing the timber to a current of hot air in a kiln, by which means the sap is entirely dried up, this process taking only a comparatively short time, according to the sizes of the pieces; when the wood is very green the heat in the kiln must be turned in gradually, or the timber will be checked and injured. Britton gives the opinion that this form of seasoning is only useful for comparatively small sizes, as the expense of applying it to large timber is very great; moreover, as wood is one of the worst conductors of caloric, if this plan be applied to large logs the interior fibres still retain their original bulk, while those near the surface have a tendency to shrink, the consequence of which is to cause cracks and shakes to appear of more or less depth. Dessicated wood must not be exposed to any moisture before use. Laslett claims that during this process ordinary varieties of wood lose their strength and colored woods become pale and wanting in lustre.

McNeile's process, which consists of exposure to a moderate heat in a moist atmosphere charged with various gases, produced by the combustion of the fuel, has been in operation for some years; the material is placed in a brick chamber containing a large surface of water to produce evaporation, the timber is stacked in the usual way with free air space round each piece, calculating about one-third of the chamber space for air; under the chamber is the furnace, which circulates the products of the combustion (among which is carbonic acid gas) freely in a moist state around the contents. The time required varies with the nature of the wood. Oak, ash, mahogany and other hard wood planks, three inches thick, take about eight weeks; flooring boards and panelling about ten days or two weeks.

The greener the timber when first put into the kiln the better, and as a rule, if too great heat be not applied, not a single piece of sound timber is even split or warped or checked in any way. The wood is rendered harder, denser and tougher, and dry rot is entirely prevented. The wood will not absorb by subsequent exposure to the atmosphere nearly so much moisture as if dried by exposure in the ordinary way. Hence it is better than air dried wood for all purposes, and the process seems to have no injurious effects upon the appearance or strength of the timber. Northwest Contractor.