

## CARE OF OAK LUMBER.

There are so many species of oak that even experienced lumbermen are frequently perplexed to correctly designate to which class a sample piece of wood belongs. It is a wood which requires a great deal of care in its manufacture. On this subject a writer says. Ordinarily in the yard trade but two kinds are known—white and red. Among ship builders, carriage makers, and machinists may be found live oak, a species of wood that is peculiarly adapted to purposes where immense strength is necessary. The average lumberman, when he talks about white oak or red oak, is influenced solely by the color of the wood when it becomes partially-seasoned. Again and again veterans in the wood-working business have been known to select red oak for white, and *vice versa*; from a dozen specimens of six different species of oak they have been unable to correctly name a single sample.

Oak is a wood which calls for an unusual and unceasing care in its manufacture. The tendency of oak, from the moment an axe is planted in the side of the tree, is to split, crack and play all sorts of mean tricks on the owner. Such tendencies can be held in hand, and almost absolutely obviated, by following certain rules. A thick coat of waterproof paint applied to the ends of the logs is a wise expenditure; it prevents the absorption of moisture. Oak, when piled, should have the ends protected so as to prevent absorption of rain and moisture, followed by the baking process of a hot sun. Alternate moisture and heat is the prime cause of checks and cracks, and when such defects begin in oak they are bound to increase and ruin otherwise perfect stock.

Oak should be stuck as fast as sawed. It is a mistake to permit it to lie in a dead pile even for a single day. It is a wood that contains a large amount of acid, which oozes to the surface as fast as the timber is sawed, and, if the stock is allowed to remain piled solid, it is apt even in a few hours, to cause stain on the surface. The lumber should be stuck in piles not over six feet in width. The bottom course should be raised two feet from the ground, and a space of five inches left between the pieces. It is advisable to follow this rule up to about the fifth course, when the space can be gradually diminished to two inches, and continued to the top of the pile. In this way air has free circulation through the pile, and the lumber will dry readily. The pile should cant towards the back so that rain will follow the inclination.

Board sticks not over three inches wide should be used, the front stick placed so as to project a half inch beyond the lumber. This plan permits moisture to gather in the stick, not the lumber. Other sticks should be placed not over four feet apart, and in building the pile the sticks should be exactly over one another. By this plan, warps, twists, and sags are avoided.

It is advisable to pile every length by itself. This rule permits more systematic piling, and, in shipping, consignments can be made of lengths precisely as wanted. Thicknesses in piling should never be mixed. Twisted stock is certain to be the result if this advice is ignored.

The sap should be placed downward. The draft is upward, and any practical lumberman can readily observe the advantages of this advice. Every pile should be well covered with sound culls, the covering so placed as to project beyond all sides of the pile; raise it a foot from the top course. The piles should not be nearer than 20 inches apart: 24 inches is better.

## A Land or Water Tug

The North Bay Times has been permitted to inspect a novelty in the shape of a steam tug constructed for towing rafts on French river. Owing to the fact that this river is rather a chain of lakes separated from each other by numerous rapids than a river in the ordinary sense of the word, it has been found difficult to float logs over its waters without great expense and delay. The tug we describe is intended to relieve these difficulties by taking a form which will enable it to proceed upon land as well as upon water. It is built in the form of a large scow and attached to the flat bottom are heavy oaken shoes faced with iron, something like a sleigh runner. It is furnished with a

large drum on which is coiled a wire cable half a mile long. These instruments are operated by the engine. When the tug is at work in the water it is supposed to be anchored. The wire cable is uncoiled and attached to a raft or boom of logs half a mile distant; the engine is set in motion and the revolutions of the drum coils the cable around its surface by which process the raft is drawn to the tug. The vessel being removed to another position the process is repeated until a lake is traversed, and a portage is reached, when the logs are released from the boom and shot through the rapids. In the meantime the captain of the tug advances his wire cable along a road which has been previously prepared on the land opposite the rapids, fastening it to a tree or other projection, sets his engine in motion when the wire cable is again coiled around the drum and the tug now moves forward upon the road like a huge sleigh, and the process is repeated until the water is reached at the other end of the portage. The tug is the invention of Mr. John West, of Simcoe, whence it was transported to North Bay by rail. It will be immediately placed on French river, if the device proves a success, it will be employed towing logs this season.

## Timber and Canals.

Governor Russel Alger, who was at Chicago recently on his way west, said that the Nicaraguan canal project would be, in a measure at least, the solution of the problem of the future lumber supply of the United States. "Very few people appreciate the extent and superiority of the Washington territory fir," he said, "and the only reason it is not now brought east is the necessarily high freight rates by rail. Some of it now finds its way to New York by vessel, but the voyage is a long one. For several years, appreciating the fact that Michigan and Wisconsin pine lands were being rapidly exhausted, I have had my eye open for new fields, and three years ago I visited the Washington region, making a personal examination of the field. I think I am a fair judge of timber, and I don't hesitate in pronouncing the product of those regions in every way superior to our northern pine, and other countries recognize the fact. While I was in Tacoma I saw nine vessels bound for England, Germany and China loading at the wharves. If the canal is ever built an enormous lumber traffic by water will surely spring up, and it will possibly come just at the time when we need it most."

## Systematic Planting.

The *Forest and Stream* is publishing a series of practical papers on forest restoration. It concludes the last by saying. Systematic planting on a nautical scale must wait, and will be sure to wait, until the little remnant of our forests shall be administered economically, and at such a profit on costs of exportation as will justify the outlay to cover the costs of replanting, but meanwhile, millions of acres of denuded forest land may be preserved from the destruction of its soil by fire, or its erosion by water, for the trifling cost of collecting and scattering the seed over their surface. The winds and the birds annually redeem thousands of acres in this way and we need only open our eyes to the importance of their labours to realize how much may be done in the same way by systematic, intelligent effort.

## The Filer Dethroned.

The rapid pace of progress in sawmill machinery has brought more changes than one. Among others, says a Wisconsin mill man, is the dethronement of the filer from his exalted position as supreme dictator in the sawmill. Until up to a comparatively recent date he was grand mogul. Everybody else had to make reverence to his lordship, he practically dictated his own terms, and on his work depended the running or stopping of the mill. His reign is ended. With improved sawmill appliances the same degree of skill is not requisite. The man of ordinary gumption with a reasonable degree of familiarity with the mill appliances can do the job successfully in less than half the time formerly required and at considerably less than half the expense. Peace to the memory of the dethroned monarch.

## BRITISH COLUMBIA SAW AND SHINGLE MILLS.

We have compiled for the benefit of our patrons the following list of saw and shingle mills in the Province of British Columbia. There may be some omissions but it is as near complete as we could possibly get at the present time.

	Daily Capacity
Moodyville Saw Mill Co.	Burrard Inlet, N.W. 105,000
Hastings Saw Mill Co.	Vancouver 65,000
Royal City Planing Mill	New Westminster
" Company	(2 mills) 110,000
" " "	Vancouver 30,000
Leamey & Kyle	Vancouver 50,000
W. R. Sayward	Victoria
Wm. Sutton	Cowichan 35,000
Haslam & Lees	Nanaimo 70,000
Croft & Angus	Chemainus 50,000
Shuswap Milling Co.	Yale District (2 Mills) 32,000
Muir Bros.	Sooke 12,000
Brunette Saw Mill Co.	New Westminster 30,000
Fader Brothers	Vancouver 75,000
Port Moody Saw Mill Co.	Port Moody 15,000
W. A. Johnston	Quesnelle (Cariboo Dis.) 20,000
J. B. Nason	Bakerville " 7,000
Indians (Church Mission)	Alert Bay 5,000
Cunningham Company	Port Essington 8,000
G. Williscraft	Georgetown 12,000
N. Hanson	Kootenay District 10,000
Indians (Kincolith)	Naas River 3,000
Vancouver Lumber Co.	Vancouver 60,000
The Columbia River	
Lumber Company	Beaver 80,000
W. C. Wells	Palliser 20,000
A. J. Borral	Langley 15,000
Knight Bros.	Popcum
G. F. Slater	Vancouver
Geo. Cassady	Vancouver
J. Valentine & Co.	Revelstoke
Victoria Lumber & Manu-	
facturing Co.	Victoria
Fred Robinson	Beaver Mills
Wm. Pinchbeck	157 Mile House
Pioneer Lumber Co.	Port Moody
R. Cunningham	Skeena
G. O. Buchanan	Twin Butte
W. S. Chambers	Victoria
Robert Grant & Co.	Wellington
Hugh Burr	Ladner's Landing
J. McDonald	Craigellachie
S. McKay	Griffin Lake

## IN CONTEMPLATION.

John Frederickson, Oyster Harbor, Vancouver Island, Shingle Mill.  
Captain Armstrong, Oliver's Landing, Columbia River, Saw Mill.

## IN COURSE OF CONSTRUCTION.

G. A. Buchanan Nelson, Saw Mill.

## AMERICAN NOTES.

—Ten million feet of lumber in the yards of the Empire Lumber Company, at Hannibal, Maine, were burned last month by a fire started by sparks from a locomotive. Loss \$100,000.

—The Methudy & Meyer Lumber Co., St. Louis, Missouri, recently assigned, with assets at \$172,280.33 and liabilities at \$224,619.33, has made a proposition to the creditors for a compromise at sixty cents on the dollar.

—Geo. H. Holmes, of Ogdensburg, N. Y., has obtained a patent for a band saw for cutting wood, having an annealed back and the rest of the blade and cutting edge tempered with the ordinary temper of wood saws, the back of the blade being thin and the rest of it of even thickness, making a saw designed to work smoothly without being liable to crack or break.

—The big raft that is to float from Puget Sound down to San Francisco will be made of longer logs than were ever put into a raft on Atlantic waters. It will have but 5000 logs, as against the 25,000 in the big Joggins raft of last year, but none will be less than 100 feet long, and the great size of the sticks, it is thought, will bring the amount of lumber up to the big eastern raft.

—The Manufacturer's Record, of Baltimore, in its quarterly report published in April, gives the name, location and character of business of 1,259 new industrial enterprises that have been organized since the first of January. The amount of capital and capital stock represented by this list of new enterprises and the enlargement of old plants during the last three months is \$58,227,000, as compared with \$38,668,000 in the same time last year. The stream of humanity and wealth that for many years has flowed so steadily westward has found a new outlet, and in the wonderful resources of the southern states both capital and enterprise will find an almost limitless field of endeavor and abundant reward for achievement.