

TIMBER 1,000 YEARS OLD.

EXPERTS seem to be divided as to which of the two hardwoods—jarrah or karri—of Western Australia is the most durable. A scientific journal says that jarrah wood piles two feet two inches square, driven 33 years ago at the Large Bay pier, were found, on examination, to be as sound as the day they were put in. Some specimens of karri wood taken from a fence were recently sent to London, and, though the wood has been underground for 25 years, it was perfectly sound. A specimen of jarrah wood under similar circumstances showed serious decay.

Timber of tamarisk wood has been found perfectly sound in the ancient temples of Egypt in connection with the stone work, which is known to be at least 4,000 years old. In some tests made with small squares of various woods buried one inch in the ground, the following result has been obtained: Birch and aspen decayed in three years; willow and horse-chestnut in four years; maple and red beech in five years; elm, ash, hornbeam. Lom-larly poplar in seven years; oak, Scotch fir, Weymouth pine and silver fir decayed to the depth of half an inch in seven years, larch juniper and arbor vitae were uninjured at the expiration of the seven years.

The redwood of California has the quality of being nearly fireproof. The root of the brier is the only wood which does not burn when exposed to the fire. Cocus-wood is the hardest known wood; oak is the strongest. The heaviest British wood is that of the box-tree, which sinks in water. Hornbeam is the strongest and toughest wood for mechanical use. The strongest American wood is the nutmeg hickory; the most elastic, the Tamar oak; the heaviest, the blue wood of Texas.

In situations so free from moisture that we may practically call them dry the durability of timber is almost unlimited. The roof of Westminster Hall is more than 450 years old. In Stirling Castle are carvings of oak, well preserved, over 300 years of age. Scotch fir has been found in good condition after a known use of 300 years, and the trusses of the roof of the basilica of St. Paul's, Rome, were sound and good after 1,000 years' service.

Wood constantly wet in fresh water is equally as durable. Piles were dug from the foundations of the old Savoy palace in a perfectly sound state after having been down 650 years. The piles of old London bridge were found sound and perfect 800 years after they were driven.

A BIG BARREL.

THE biggest barrel in the world, made of staves of wood, is at Heidelberg, undoubtedly, but in Arizona there is a larger barrel carved by Nature and from solid stone. It is a peculiar rock formation, about 200 feet high, and the top of it is at least 2,000 feet above the valley. It can be seen for miles before the traveller gets to it, and its appearance is most deceiving. A large fissure on the side forms a lunghole. It does not look like a barrel unless seen from the plain. On all other sides it is simply a rugged rock. It is a soft granite formation of volcanic origin, and is crumbling to pieces. But it has had its present form for centuries.

FIVE THOUSAND SHINGLES AN HOUR.

AN attraction for lumbermen at the coming Toronto Industrial Exhibition will be the exhibit of shingle machinery to be made by F. J. Drake, of Belleville, Ont. Lumbermen say it is hard to beat the Drake shingle machines, and Mr. Drake is going to put the question to test by running his machines daily and will undertake to cut not less than 5,000 shingles in a given hour. A gang of men will be on the grounds throughout exhibition week for the purpose of showing these machines in operation.

HOW TO OBTAIN DRY STEAM.

WHEN putting up a steam pipe between boiler and engine, says the Stationary Engineer, it should be made to slope slightly toward the engine, so that all the water and condensed steam will be carried forward, as it cannot be made to run back against the flow of steam; for water once in the pipe must flow forward, and if no outlet is provided it must travel through the cylinder of the engine. The water can be kept from the engine by putting a separator or water catcher in the horizontal pipe near the last end before it reaches the engine. A small pipe will lead from this back to the boiler, trapping the water before it reaches the cylinder.

By the use of this simple arrangement, the steam supplied to the cylinder will be much dryer and give better results in doing the work; it will also remove the injury to the engine on account of entrained water. The pipe leading back to the boiler need not be larger than 3/4 or 1 inch for engines of 100-horse power or less. If a water glass forms a portion of the return pipe it will show that a surprising amount of water is returned from the steam pipe to the boiler, the water would otherwise have gone through the cylinder, requiring a greater amount of lubrication, assisting or causing leaks, and presenting a possibility of great danger to the engine. In boiler tests, the steam which is condensed in the pipe and the water carried off by priming, is often credited to the coal, when a large portion of it is due to priming effects.

The condensation of steam in the steam pipe is much greater than is generally supposed, and is always so much that great economy in fuel would be obtained if the pipes were covered with some good non-conducting substance. The different forms of separators employed in steam pipes serve an excellent purpose in providing dry steam only to the engine, but if the steam pipes were well covered, the work required of the separator would be reduced, in many cases, much more than one-half.

HOW CIRCULAR SAWS ARE MADE.

THESE saws are now made of cast steel specially manufactured for the purpose. An ingot heated to the requisite temperature is reduced to the proper thickness in powerful rolls. The plate is then centered and a circle inscribed upon it, after which it is passed to the shearer, who reduces it to a circular form. The centre hole, says Work, is then bored. It is then handed to the toother, who punches out the teeth round the edge, after which they are rough filed, or ground on an emery wheel, to take off the burr left by punching.

The rough saw is now again heated in a large furnace until it is of a bright red color. It is then plunged in a bath of sperm oil, which makes it hard and brittle. The oil is then partly cleaned off, and the rest burnt off in the furnace to give the saw the required temper. When cold the saw is hammered on a steel-faced anvil until it is straight.

It is next ground between vertical grind stones revolving in opposite directions, and then polished with emery on a large revolving disc. Once more the hammer-men take it, and strike it with smooth-faced hammers on an anvil, as before, until it is absolutely straight and true and has acquired the proper tension which allows for expansion while the saw is revolving at work. The teeth are now set, alternately right and left, to allow for clearance when sawing timber. They are then sharpened by being filed on the fronts and tops of the teeth, which operation completes the manufacture.

WHAT GIVES OUT.

THE arms of pulleys as they are usually constructed have but little to do with the centrifugal strain upon the rim, and so far as observation may go, it is quite evident that when a pulley is thus broken the rim is the part that first gives, and but few cases have come under observation where it was otherwise.

WANTED AND FOR SALE

Advertisements will be inserted in this department at the rate of 15 cents per line each insertion. When four or more consecutive insertions are ordered a discount of 25 per cent. will be allowed. This notice shows the width of the line and is set in Nonpareil type. Advertisements must be received not later than the 27th of each month to insure insertion in the following issue.

WE WANT ALL KINDS OF HARDWOODS. Will pay cash. ROBERT THOMSON & CO., 103 Bay Street, Toronto.

FOR HEMLOCK, DIMENSION LUMBER, hardwood flooring, cedar shingles, piles, sawdust, etc., write J. E. MURPHY, lumberman, Hepworth station, Ont.

WANTED—A SITUATION AS FILER IN A sawmill. Have had nine years' experience with gang and round saws. Address "H," 3 Maitland St., Halifax, N.S.

WANTED—BY YOUNG MAN—SITUATION as book-keeper, cashier or correspondent; rapid worker; energetic, and thoroughly reliable and experienced; competent to take charge of manufacturer's office. Address: "Accountant," care CANADA LUMBERMAN, Toronto.

WANTED

BASSWOOD LUMBER, BY CAR OR CARGO. Offers invited. Address "Basswood," care of CANADA LUMBERMAN.

COMMISSIONS

THE ADVERTISER CAN SECURE HIGH prices for black ash, basswood, elm and maple in New York and surrounding markets, best of references given. Send lists of stock on hand. No shipment on consignment. Bona fide orders sent you before shipment. Address "Commissions," care of CANADA LUMBERMAN.

SAWYER WANTED.

ONE used to cutting Dimension Timber. Must be used to Automatic Saw Sharpener. Mill runs summer and winter. Apply with references to SHEARER & BROWN, Montreal, Que.

BRITISH COLUMBIA

STEAM, SAW AND PLANING MILL FOR sale at a bargain. Inland country business. Capacity ten thousand feet per day. Machinery all in good order and new in 1889, by Gish & McCulloch and McGregor & Gourlay, Galt. The whole, including 4 acres, mill, dwelling and boarding houses, smith shop, and over \$2,000 worth of stock, tools, etc., for sale for \$25,000, being far less than value. For particulars apply to

A. J. BORILL, Langley Prairie, B.C.

LUMBERMEN

EXPERIENCED SHIPPER OPEN FOR ENGAGEMENT. Good bookkeeper and correspondent. Competent to take charge of mill. References furnished. Address "Inspector," care CANADA LUMBERMAN, Toronto.

RAILS FOR TRAMWAYS

NEW AND SECOND-HAND STEEL AND iron rails for tramways and logging lines, from 12 lbs. per yard and upwards; estimates given for complete outfit.

JOHN J. GARTSHORE, 49 Front St. West, Toronto.

TO EASTERN STATES LUMBERMEN.

AN EXTENSIVE HANDLER OF PULP wood, fir, spruce, canoe birch and poplar, is desirous of finding a market for same in the Eastern States—New York or Boston preferred. Is prepared to ship any size required per schooner from Quebec. Parties handling same should communicate with I.C.I., care CANADA LUMBERMAN, Toronto.

FOR SALE

A HANDLE LATHE FOR MAKING FORK and rake handles. Inch squares are cut out of slabs, piled one on top of the other in the machine, and it automatically takes the lowest, runs it between the knives and produces the handle without any more attention. Contracts can be secured for all the handles that can be produced with the machine. WATERLOO, BRANTFORD, CAN.

FOR SALE

A STEAM CIRCULAR SAWMILL WITH DOUBLE EDGER AND BUTTING

saw, capacity 15 to 20 M feet per day; 40 horse power boiler and engine, lumber and wood cars, steel rails on lumber track, horses, wagons, harness, sleighs, blankets, boom chains, driving plant; blacksmith's anvil, forge, bellows, vice, with all necessary tools for repairs. Everything in good order and as good as new. Also 100 acres of good land, with dwelling and boarding house, office, stables, sheds, etc. This property is situated on a good navigable stream, with an almost unlimited supply of black ash, basswood, soft elm, red birch, maple, hemlock, pine, etc., and is a rare chance, there being no opposition in buying stock, present stock being run low. For full particulars apply to M. C. H.

CANADA LUMBERMAN, Toronto, Ont.

WANTED FOR CASH.

ASH AND SOFT ELM DIMENSION STOCK cut to exact sizes. Apply for specification. Prices, etc., to

P.O. Box 2144,

NEW YORK.

WANTED FOR CASH

Ash and Soft Elm

MOSTLY ONE-INCH, SOME ONE-AND-A- quarter and one-and-a-half inch, strictly first and second; also commons. Furthermore, Ash and Oak squares from one-and-a-half to four inches thick. Red Birch Lumber, 1 and 11, all thickness; also Red Birch Squares 5 x 5 and 6 x 6, ten feet and over long. Address all particulars as to dryness, quality, quantity on hand and price, to P.O. Box 2144, New York, N.Y.

AUCTION SALE

— OF —

CANADA

PINE TIMBER LIMITS

IN ORDER TO WIND UP THE AFFAIRS OF "The Georgian Bay Consolidated Lumber Company," the following Timber Berths will be sold by public auction in the City of Toronto, during the early part of August next.

Berths Nos. 44, 45, 60 and 61, each containing 9 square miles, more or less, tributary to the Wabigoon River.

Berths (south halves of 41 and 49), each containing 12 square miles, more or less, situated on Lake Wabigoon.

These Limits are in the District of Nipissing, on the North Shore of the Georgian Bay. The waters of Lake and River Wabigoon empty south into the French River, thence into the Georgian Bay. The licensees give the right to cut all kinds of timber. The ground rent is \$2.00 per square mile, and the Crown dues are \$1.00 per thousand feet b. m. for pine saw logs.

Notice will be given later on of the time of sale, and the terms and conditions will be made known on the day of sale.

THE GEORGIAN BAY CONSOLIDATED LUMBER CO.,

24 King Street West, Toronto, April 2nd, 1893. Toronto, Canada.

CANADA

(PROVINCE OF NEW BRUNSWICK)

SALE OF TIMBER LICENSES

Covering a large portion of the Crown Lands of the Province.

THE RIGHT OF LICENSE TO CUT AND carry away all classes of timber or lumber from the principal timber lands of New Brunswick, will be offered for sale at the Crown Land Office, Fredericton, N.B., on

Tuesday, August 29th, 1893

and following days.

The timber licenses to be sold will cover an area of about 4,000 square miles (or 2,500,000 acres) of Crown Lands.

These Licenses will be for one year, with the right of renewal for a term of 25 years from the 1st day of August, 1894, on fulfillment of all conditions of License.

Licenses will be offered at an upset price of \$2.00 per square mile, and conditions being complied with, may be renewed from year to year during the term, on payment of \$4.00 per square mile; this mileage being in addition to stumpage dues.

The stumpage payable on lumber to be cut has been fixed for the present at the following rates:

On Spruce, Pine and Hardwood Saw	per M.
Logs.....	20.00
Cedar Logs.....	10.00
Hemlocks.....	10.00
Other lumber as per regulations.	

Copies of the regulations to govern this sale, and any further information required, may be had on application to

L. J. TWEEDIE, Surveyor General,

or W. P. FLEWELLING, Lumber Agent, Crown Land Office, Fredericton, New Brunswick, 14th July, 1893.

FOR SALE

50,000 Acres well-selected Timber Limits

IN COAST DISTRICT OF BRITISH COLUMBIA, close to tide water, together with a complete Saw Mill Plant. This valuable property can be bought at a bargain and on easy terms.

For information apply to or correspond with H. H. SPICER, Vancouver, B.C.