

THE NEWS.

—Senator Poirier is building a shingle mill at Sackville, N.B.

—While working in Currie's saw-mill at Fredericton, N.B., Alex. Mersereau had his left hand cut off.

—John Whitesides is erecting a shingle mill at Huntsville, Ont., upon the site of his saw-mill burned some years ago.

—A team of horses belonging to the Hull Lumber Co. were drowned in the Ottawa river near the Chaudiere last month.

—The Hawkesbury Lumber Co. are making some improvements on the Colonge river, in preparation for next season's operations.

—William Barnes had his foot crushed by the machinery in Edwards & Co.'s mill at New Edinburgh, and amputation was found necessary.

—Mr. David Richard's saw mill and lumber yard, at Campbellton, N.B., was burned on July 18th. Loss, \$18,000; insurance, \$10,000.

S. A. McAuley, of Lower Millstream, N. B., has added some new machinery to his saw-mill. He now employs about twenty hands.

Argue & Son, whose saw-mill is at Otter Lake, have the contract for lumber to build the spool and bobbin factory at Parry Sound for Lemox & Kerr.

—Rupert Newcombe has started an industry at Clementsville, Annapolis County, N.S., for the manufacture of coiled hoops, hardwood staves and heads.

The Holland and Emery Lumber Company are constructing a new shingle mill and placing a new pony gang in connection with their band mills at Byng Inlet, Ont.

—The Dickson Company recently started their new saw-mill at Lakesfield. The mill is very complete in point of equipment, and will manufacture over 100,000 feet of lumber per day.

—Peter McArthur is putting in a mill at Lake Winnipegosis, Man., for cutting railway ties. The plant was furnished by the Watrous Engine Works Company, through their Winnipeg branch.

—Mayor Bingham, of Ottawa, has a number of men engaged in rafting square timber on the Gatineau river. It is stated that some very fine pine was last year cut on the Upper Gatineau by Gilmour & Hughson.

—Adam Beck, of London, Ont., has purchased the business of the late William Beck at Montreal, and has opened a cigar box factory there. Mr. Beck's factory at London will supply the trade west to the coast, and his Toronto and Montreal factories the eastern trade.

—W. Harris, of Day Mills, Ont., writing to the Toronto Globe, offers free water and site and a bonus to any person who will erect a wood-working factory there. He states that there is an abundance of good timber, including pine, spruce, hemlock, oak, ash, maple and birch.

D. A. McDonald, of Trout Creek, Ont., recently cut a birch tree, which is claimed to be the largest yet found in Canada. The log is 32 feet long, and the butt end girths 10 feet 8 inches. The top end girths 8 feet 9 inches. About 36 feet from the stump, the top separated into three branches, one measuring 24 inches in diameter and another 17 inches.

—Mitchell Bros., of Berkeley, Ont., and Liverpool, Eng., are negotiating for the exportation of maple blocks from New Brunswick to England. Large quantities of these blocks are exported from Ontario via St. John, N.B., in winter, and it is thought that the opportunity is favorable for the opening up of the market for the native hardwoods of New Brunswick.

—There has recently been constructed at Portland, Oregon, by Messrs. Inman, Poulsen & Co., an immense raft of lumber containing 5,000,000 feet. This raft will be towed from the Columbia river to San Francisco. Johann Poulsen invented and superintended the construction of the raft, which will be a floating island of lumber 330 feet long, 30 feet wide and drawing 20 feet of water. The cables for towing are laid well back to the centre of the raft, and emerge in the square bow just above the water line. The promoters express every confidence in the success of the undertaking.

PRACTICAL NOTES.

It has been noticed that the heavy chains used in the log haul-ups of saw mills after a time become crystallized and it is necessary to heat them. The heating changes the particles back to their original form, breaks up the crystallization and makes the chain practically as good as new, though it would have to be hammered to put it back exactly to a new chain.

Why does it cost less to run a condensing engine than a non-condensing one with the same machinery running in the factory? Simply because the former develops less total power than the latter. The area of the card will be the same, but the average height above the vacuum line will be less in the former case, and this is what determines the total power developed at a given speed.

Owing to the scarcity of black walnut and cherry, birch is largely taking the place of each. Black birch is much the same color as cherry, and is as easy to work as either cherry or walnut, and is as suitable for nearly all the purposes that those woods are used for. When properly stained, it is nearly impossible to distinguish it from either walnut or cherry. It is susceptible to a high and beautiful polish, is considered as good as many of the best furniture woods, and is now largely used by the leading furniture manufacturers.

A United States government report says heavy wood is harder than lighter wood; the wood of the butt is therefore harder than that of the top; the darker summer wood is harder than the lighter spring wood. Moisture softens, and seasoning, therefore, hardens wood. Wood is much harder when pressed longitudinally than when pressed transversely to the fibres, and it is somewhat stronger tangentially than radially. Though harder wood resists saw and chisel more than softer wood, the working quality is not always a safe criterion of its hardness.

The Industrial Journal, Bangor, Me., says the saw mill of William Engle & Co., at Orono, Me., is run by compressed air. The air compressor, located under the mill floor, is operated by a water wheel, forcing the air into a large storage tank, whence it is distributed, through pipes, to any part of the mill desired. The pressure in the tank is kept at 95 pounds. The machines directly dependent upon the compressed air for power are the carriage, nigger, log loader, log flipper, band log saw and two cut-off saws. This is claimed to be, and probably is, the only saw mill in the world operated in this manner.

Heretofore it was generally believed that the heating capacity of hardwood was greater than that of soft wood, but according to Staats Zeitung this is not so. The greatest heating power is possessed by one of the softest woods, viz., the linden. Taking its heating capacity per unit, the second best heater is also a soft wood—fir with 0.99 heating power; next follow the elm and the pine with 0.98; willow, chestnut, larch, with 0.97; maple and spruce fir with 0.96; black poplar with 0.95; alder and white birch with 0.94 only; then comes the hard oak with 0.92; the locust and the white beech with 0.91, and the red beech with 0.90. Hence hard wood heats the least.

CEMENT FOR LEATHER BELTING.—The importance of suitable cement for making joints in leather driving belts has led the Society of Chemical Industry to endorse the following formula: First, equal parts of good hide glue and American isinglass, softened in water for 10 hours, then boiled with pure tannin until the whole mass is sticky, the surface of the joints to be roughened and the cement applied hot; second, one kilogramme of finely shredded gutta percha digested over a water bath with 10 kilogrammes of benzol until quite dissolved, when two kilogrammes of linseed oil varnish are stirred in; third, one and a half kilogrammes of finely shredded india rubber are completely dissolved in 10 kilogrammes of carbon bisulphide by heating, and while hot one kilogramme of shellac and one of turpentine are added, and the solution heated until the two latter ingredients are also dissolved; fourth, one kilogramme of best glue is dissolved at a moderate heat in one and a half kilogrammes of water, and thickened to the consistency of syrup. One hundred grammes of thick turpentine and five grains of carbolic acid are carefully stirred in while hot; the mixture to be poured into flat tin pans and allowed to cool, then cut into pieces and dried in the air. The cement is made liquid with a little vinegar and applied to the point with a brush; this being done, the two ends of the joint are properly placed together and thoroughly pressed between two iron plates heated to a temperature of about 86 deg. Fah.

STEAM BOILERS AND FROST.

AMONG the enemies which threaten the destruction of steam boilers, says the Journal of the Bavarian Society for the Inspection of Steam Boilers, frost is by no means the least formidable. The following two examples go to show that even boilers built of heavy plate and tested at high pressure cannot be exposed to the rigors of cold weather with impunity.

The boiler was, because of the scarcity of orders during the winter months, fired only two or three times per month, each time for several days, and was the rest of the time allowed to stand idle, filled with water. One fine day when the boiler, which consisted of upper and lower boiler, was being emptied and put in readiness for an inspection of the interior, it was found that the manhole cover in the rear head of the lower boiler had been forced out, and the rim of the manhole badly rent and bent out of shape.

Further examination revealed a cone of ice behind the damaged boiler head. The water in the upper boiler, which was at the proper level, was covered with a crust of ice about one centimeter, 0.4 inches thick. There could be no doubt that the ice cone in question had caused the damage, the mass of ice, in freezing from the outside toward the interior, having found sufficient hold on the heads of the rivets and irregularities of the flue to cause the pressure developed by the final freezing of the core of the cone to act, instead of toward the free interior, upon the head of the boiler, until the latter gave way and became rent at its weakest point—the unfortified rim of the manhole. The process of destruction was favored by the fact that the door leading from the boiler-house into the open air was only a short distance from and directly opposite the unprotected boiler head.

Another boiler, which was used only once a week, was situated in a small stone building in the middle of the farmyard.

When on a certain winter day the boiler was to be heated, it was noticed that it was rent from the mud-hole of the cross-tube along the lengthwise seam to a point beyond the fourth rivet, but that no water flowed from the rent. On opening the man-hole over the crown of the fire-box it was found that the water between the shell and fire-box, as well as in the cross-tube, had frozen, and this at once explained the cause of the damage. The cylinder of ice which had formed in the cross-tube had pressed against the shell of the boiler and had caused it to burst along the seam—its weakest spot.

These two examples demonstrate that boilers which are little used and exposed to the cold must be protected in winter against freezing, and this is effected best by discharging the water or by maintaining on cold days a light fire under the boiler or in the boiler-room.

A saw-mill near Dumbarton Station, N. B., was destroyed by fire a fortnight ago. The mill was owned by Mr. Johnston.

Kelly's saw-mill at Buckingham, Que., was destroyed by fire on July 12th. It is probable that the mill, which was valued at \$5,000, will be rebuilt immediately.

The Willow Creek Gold Mining Co., of Bell City, Rainy River district, have purchased a shingle machine and planer from the Watrous Engine Works Co., Winnipeg, which is being added to the plant of the company at Bell City. Mr. E. Todd, of Brantford, is manager of this company.