

LIST OF PATENTS.

The following list of patents upon improvements in wood-working machinery, granted by the United States Patent office, Feb. 20, 1884, is specially reported to the CANADA LUMBERMAN by Franklin H. Hough, solicitor of American and foreign patents, No. 617 Seventh St., N. W., Washington, D. C.:

- 294,236.—Chuck latho—D. E. & L. C. Whiton, West Stratford, Conn.
 294,067.—Cutter head for wood-working machines—S. Osburn, Davenport, Iowa.
 294,097.—Mortise cleaner—S. Van Aiken, Oswego, N. Y.
 294,001.—Planing machine (wood)—L. Denham, South Evanston, Ill.
 294,096.—Saw (drag)—G. Valentine, Monticello, Ill.
 294,161.—Saw handle—M. L. True, Batavia, N. Y.
 294,221.—Saw mill (circular)—J. B. Correll & J. Miller, La Otto, Ind.
 294,208.—Saw mill feed, mechanism—S. Dickson, Marey, Ohio.
 294,073.—Saw mill refuse conveyor—W. J. Perkins, Grand Rapids, Mich.
 294,251.—Saw sawage—J. M. La Otto, Ind.
 294,255.—Screw (wood)—S. Montgomery, New York, N. Y.

BOARD OF TRADE RETURNS.

The following are the returns issued by the Board of Trade, for the month of Jan, 1884.
 MONTH ENDING 31ST JAN., 1884.

Timber (Heaven).	Quantity. Loads.	Value. £.
Russia	2,208	5,100
Sweden and Norway	18,031	29,731
Or many	6,453	14,453
United States	0,773	30,300
British India	2,070	30,081
British North America	3,670	17,050
Other Countries	42,709	40,082
Total	81,783	174,822
Timber (Sawn or Split, Planed or Dressed).		
Russia	7,858	13,264
Sweden and Norway	27,900	62,005
British North America	8,629	10,803
Other Countries	12,000	44,557
Total	50,157	130,729
Staves, (all sizes)	5,007	23,860
Mahogany (tons)	6,622	58,857
Total of Hewn and Sawn	137,911	314,041

THE MANAGEMENT OF BAND-SAWS.

Mr. M. Powis Bale, author of "Saw Mills, Their Arrangement and Management," thus writes to the *Timber Trades Journal* on the subject of band saws:—

"I quite agree with the remark of your correspondent 'Subscriber,' that band saws with gullet teeth are less liable to break than saws with the roots running to an angle, as the fracture in the blade is found almost invariably to commence at the point of this angle. Owing, however, to small gullet teeth being more troublesome to sharpen, the angle teeth are, perhaps, more generally employed.

I have had many hundreds of band saws brazed after the following plan, with very satisfactory results:—Take each end of the blade and file down a taper on the opposite sides of the saw of about three teeth points, so that when the two ends of the saw are made to overlap each other the joint, when cleaned off, will be of the same thickness as the rest of the blade. Secure the overlapping ends of the saw well together by small hand vices, and tie them with fine iron wire. Over this bind tightly with brass wire the full length of the overlap; moisten the joint with water, and cover it with powdered borax. Either take a large pair of tongs and make them red hot, or place the saw in a small forge fire made of charcoal, and keep it there till the brass is well melted; let the saw cool gradually, and file the joint to the same gauge as the rest of the blade, and finish it with emery cloth. If this operation is well performed the joint will be scarcely distinguishable. Care must be taken that when brazed the overlapping ends of the saw press well together.

To secure the steady and even working of the saw blade, it is very important that the brazing is neatly done; after a little practice there

should, however, not be much difficulty about this.

As regards the number of teeth points to the inch on hard and fast runs can be laid down; for soft wood a few teeth will be sufficient, but for sawing hardwood the teeth should be made shorter, more upright, and with at least one third more points to the inch than for soft. For woods of a woolly fibre, such as English poplar, the teeth of the saw should be deeper than usual, and of coarse space and set, to effect a clearance and overcome its clinging properties. To prevent breakages and produce good sawing, care should be taken that the gauge, width, toothing, sharpening, and setting of the saw are uniform throughout.

Employing Boys Under 16 in Factories.

A bill is now before the senate at Albany to prevent the employment of boys in factories under 16 years of age. Among the provisions of the bill is one making it a misdemeanor for any person having the custody or employment of minors to permit their lives or health to be endangered, or morals to become depraved.

The senators opposed to the bill—Messrs Titus, Fassett, Eddy, Thatcher, and McCarthy—held that the bill was unwieldy and impracticable; that it would prevent the employment of boys in all factories, and would cause a great deal of misery among a number of families throughout the State. Then to hold owners of factories responsible for the accidents physically or morally to which boys are liable was thought an unreasonable doctrine. Senator Fassett asked whether the owner of a factory who was away at home, leaving his factory in charge of a superintendent could be held responsible for what might happen to a boy there employed? Senator Gilbert admitted that in his absence the owner was not responsible. Where he held owners responsible was when they wilfully caused or permitted the minor's life or limb to be endangered.

Senator Gilbert has a queer idea of the internal workings of a factory. He evidently thinks that a mill owner would take delight in hiring small boys and placing them in some dangerous place to be chewed up by a machine. If the senator is much exercised about the factory boys' morals, let him introduce a bill to abolish some of the dime novel publishing houses in New York city, and every superintendent in the land will thank him sincerely. The bright small boy in a modern factory of to-day is one of the most independent and happy members of the manufacturing fraternity, and is in little danger of being hurt either physically or morally.—*Cotton, Wool and Iron.*

At the last annual meeting of the Western Canadian Loan and Saving Company, the portion of the report referring to the Winnipeg business, after eulogising the local manager, Mr. F. B. Ross, for the able conduct of the company's affairs here, concludes with the statement: "I may further add that the directors have every reason to feel satisfied with the business done in the Prairie Province." Such statements are strong proofs of the advantages offered in Manitoba for investing capitalists.—*Winnipeg Commercial.*

AMERICA, Ga., Recorder: A remarkable cedar-tree is reported as growing in the negro cemetery. From appearance it was planted in a large pitcher at the head of a negro's grave about ten years ago. It burst the bottom out of the pitcher and rooted into the earth. The pitcher still encircles the bottom of the cedar, and is without a crack. The tree fills the pitcher completely, and is about eight or ten feet high. It must have grown from within the pitcher, as it could never have got there otherwise.

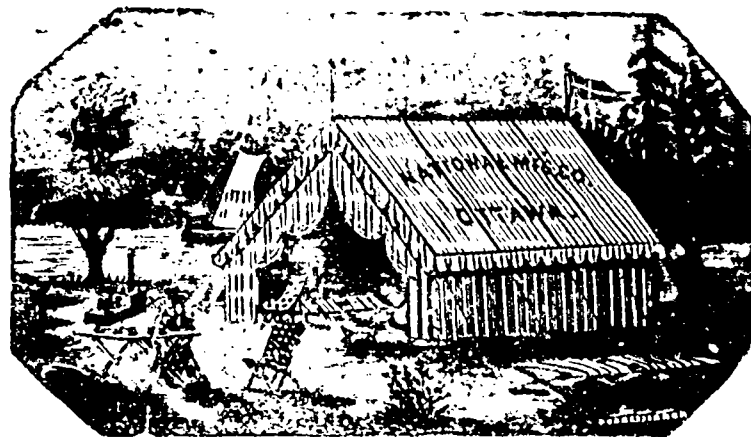
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