THE CANADA LUMBERMAN

AND MILLERS' MANUFACTURER AND MINERS GAZETTE.

PUBLISHED SEMI-MONTHLY. | *The only Newspaper devoted to the Lumber and Timber Industries published in Canada.* | SUBSCRIPTION $2.00 PER ANNUM.

VOL. 1. PETERBOROUGH, ONT., DECEMBER 1, 1881. NO. 27.

FAST SAWING.

Last winter Messrs. Irwin & Boyd determined to take out their old circular in the Nassau Mills, near Peterborough, and replace it with an A No. 1, which for good fast cutting and convenience should be ahead of anything in this lumbering district of Ontario. The contract was awarded to Mr. Wm. Hamilton, of this town, and in due time the job was placed in position, and is a decided success. But as this success was not obtained without encountering some of the difficulties incidental to high speed, and not without furnishing bits of experience worth recording, we shall note a few points that may be of interest to our patrons.

GENERAL DESCRIPTION.

The mill is of a style that is heavy and strong throughout; it is also well fitted, but is not showy. The iron husk, or frame, is 9×5½ feet; saw mandrel, 4½ in. diameter; mandrel pulley, 33 in. diameter by 22 in. face; carriage shaft, 3½ in. diameter; other shafts, 3 in.; feed and gig friction pulleys, 12 in. face; belt for feed cones, 6 in.; gig belt, 10 in. The main driving belt is 18 in., of heavy leather, double and made up endless at the factory in Montreal, ready to be put on, and runs with perfect smoothness, though at the unprecedented rate of 8,000 feet per minute. The feed and gig movement of the carriage was effected primarily by a 1¼ in. manilla rope, but as this had been broken several times, it was taken off and a chain used; this has also been frequently broken, but is quickly repaired. The carriage has three head blocks, one being on a detachable portion which is used only for long logs. The dogs of the other two are connected, and are operated by one convenient lever, which is weighted for the double purpose of holding the dogs in either position, and assisting in dogging. On the first head block there is a tapering attachment for setting the log either in or out. There is a friction pulley underneath the carriage which is made to operate against the back track timber while gigging, for the purpose of withdrawing the knees. The set works are on the principle of the frictional bite, and, like the British bull-dog, always bites and never slips; with new retractile stop pins for stock lumber, and new adjustable scale for siding down to stock or any given dimensions; we think this makes the most exact and convenient set works we have ever seen; one man on the carriage dogs and undogs, reverses and sets without any appreciable loss of time. The journal boxes for feed and gig shafts are balanced, and each is suspended by a heavy bolt by which they can be adjusted in a moment for the wear of friction pulleys. The mandrel boxes are cast solid on the frame with large chambers underneath and around them, which provides a good circulation of air to the portions likely to become heated, or, if required, the lower apertures can be closed and the chamber filled with water. The alignment of the saw with the carriage is made by slightly turning the whole frame, for which a ready means is provided. The true relation of all the parts to each other is thereby retained, and the pivot is so placed that the cutting side of the saw is always the same distance from the carriage. The caps of these mandrel boxes are a sham in the ordinary sense of a close fitting cap, which would serve to keep a journal warm rather than cool. These caps are much like Paddy's beaver, which had the crown hinged to one side, and had also a few convaynient holes jist to kape his head cool. Certainly the whole arrangement serves its purpose admirably, as the journals never rise above blood heat.

STYLE OF WORKING.

The motive power of this mill is furnished by a 66 in. Leffel wheel, working under a head of from 10 to 11 feet, so that this, in common with all water mills, is under two particular disadvantages when compared with mills driven by steam. The motion of water mills varies greatly, particularly when the power is derived, as in this case, from one wheel, and no one seems to come forward with a suitable governor, whereas, steam is easily governed. Besides, steam mills can use the steam feed, which is the most marked of modern improvements in sawing lumber. The rate of feed depending entirely upon the condition of each particular cut, the sawyers can always make the most of them; logs can be fairly shot each way, or go at a snail's pace. With the water mill you must be always content with a good average feed. This mill was calculated for a six foot saw to run at 750 revolutions per minute; it was expected not to rise higher than 800, nor to fall at any time much below 600. On trial, however, with a five foot saw, it ran as high as 950, and fell, in cuting a large log, to less than half that speed. This was an awkward condition of things; she was both fast and slow,—at times fully at the dangerous point, and yet no good turn out of work, besides no saw could cut well under such changed conditions, and casualities were common. By a change of gearing the speed was reduced fully to the original calculation, with satisfactory results,—greater steadiness of motion and a large amount of good sawing. But as the mill was being worked from week to week, and all the bearings came to a more perfect face, with also a slight change in regard to head of water, the speed was found again to rise, the speed indicator showing 825. The six foot saw was required and put on, but not being hammered to so high a speed, it refused to do duty. The saw-maker was brought on the scene, and he advised a further reduction, which was made, bringing the speed to the neighbourhood of 700, resulting in greatly improved steadiness, less wear and tear, and good account of lumber. She would drop readily ten boards per minute. We saw this being done in the course of ordinary work. This, for a water mill, is hard to beat. It is only the few steam mills, having steam feed, that can make a better showing; they are said to make, on special trial, as much as sixteen 16 ft. boards in one minute. A small, but by no means trifling, matter was demonstrated in regard to paper friction pulleys for feeding and gigging, that is, that their circumferential speed cannot go much beyond 2,000 feet per minute without causing excessive heat, and of course excessive wear.

Upon the whole Messrs. Irwin & Boyd may be congratulated on getting what they bargained for. They certainly have the speediest, most exact and convenient mill in this region.

TERRIBLE EXPLOSION.

EIGHT BOILERS TORN TO SHREDS AT EAST SAGINAW—FOUR CANADIANS KILLED.

East Saginaw, Mich., Nov. 13.—At fifteen minutes before five o'clock this morning a battery of ten boilers in the brick boiler house attached to the saw mill and salt block of Hamilton, McClure & Co., six miles below this city, exploded with an earthquake force, scattering the buildings like chaff, and causing immense destruction. Eight of the boilers were torn into shreds, and the pieces flew in every direction, one boiler-head dropping 900 feet away. Not a brick of the boiler-house was left standing upon the other, and the large brick chimney, 100 feet high, was completely levelled to the ground. The west end of the large steam mill was torn to pieces, and the entire structure wrecked and demoralized. The large steam dome was lifted high in the air and came down on the opposite side of the mill, and bricks, pieces of iron, and timbers were thrown hundreds of feet away. Bricks and timbers were found half a mile from the mill. The salt block was badly wrecked by the explosion, timbers and iron being driven through it, and a salt drill house two hundred feet distant received a piece of boiler that shattered the tower, and another smashed in one side of the roof. It is impossible to give an idea of the tremendous force of the explosion and the destruction that followed. The boilers were fired at night to supply steam for the saw mill, and the firemen at work were all killed, not one escaping to tell the story. Michael Lebeau, head fireman, who had charge of the boiler-house, was covered in the *debris*, and the body was dug out an hour after the explosion occurred. Both legs were broken below the knee and the body was badly bruised. Joseph Lebeau, brother of the first mentioned, was found thirty feet distant with his right arm and shoulder broken, his abdomen crushed in, and his clothing torn off. These men were thirty eight and twenty-three years old respectively, and resided at Zilwaukee. They came from Montreal years ago, and have relatives in Canada. Frank Blanchard was blown into the bay 200 feet distant, and his body was not recovered until this afternoon. The body was badly mangled. He was a single man, twenty-five years old, and belonged to St. Onesime, Quebec. Charles Carpenter was found only a few feet from Joe Lebeau, his clothing torn off, and his body badly scalded and burned. He was a single man, twenty-seven years old, and came from Quebec. The damage by the explosion will reach $25,000. Low water is given as the cause of the disaster.

CLASSIFICATION OF PROVINCIAL LANDS.

The CANADA LUMBERMAN in an article on "A Forest Department," in its issue of October 1st, while remarking on the antagonism which exists between the lumberman and settler, observes as follows:—Surely it would not be difficult to decide what lands should be opened for settlement, and what might be more advantageously maintained permanently as forest. Where the soil is better fitted for forest growth than agriculture, the settler should be excluded altogether, and a proper system should be adopted for perpetuating the timber growth. Thus our resources—our capital—would be ... ized in the most fitting and economical manner. It is certain that mixing up settlement and lumbering has proved a failure." These remarks apply quite as well to New Brunswick as to Ontario. We have not only allowed settlers to locate themselves upon some of our best spruce and hemlock lands, but we have paid them for doing so. We entertain the view, that for the benefit of the settler himself as well as for that of the lumberman, no settlement should be made before the locality has been examined by a fit and competent officer of the Government who shall have reported on the character of the land and the kind and quantity of the timber standing upon it, since if settlers be allowed to locate themselves on spruce or hemlock lands they will be worse off at the end of a few years than when they first settled upon them.

We are sadly at a loss to know where our really good farming lands are situated, as well as regarding our spruce and hemlock lands. Since the information which the country requires regarding this matter can only be obtained by the actual examination by competent persons, we would suggest that the Crown Lands Department take the matter in hand and furnish the public with the information at the very earliest date, and also that they withhold from settlement such tracts of land as may be deemed better adapted to the uses of the lumberman than for those of the farmer. This course would, we believe, be justified both by public opinion and experience, as long as we have in the Province such a vast quantity of good agricultural land still in the wilderness state.—*St. John, N.B., Sun.*