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### THE MANUFACTURE OF CIRCULAR SAWS.

Not long since, in one of our exchanges, we came across the following little bit of history:—"In a lonely, secluded spot in the north-west corner of the cemetery, near the ever-beautiful little village of Richmond, Kalamazoo County, Mich., the reader can find, on a pure white marble slab, nearly concealed from view by a large cluster of lilac bushes, engraved the simple inscription—'Benjamin Cummings, born 1772, died A.D. 1843.' And who was Benjamin Cummings? He was the inventor of the *Circular Saws* now in use in this country and in Europe. Nearly sixty years ago, at Burtonville, New York, and Amsterdam, this man hammered out, at his own blacksmith's anvil, the first Circular known to mankind."

Thus it will be seen that it is more than half a century since the first circular saw was given to the world, but to-day the main principle of the invention remains the same, with such improvements as inserted teeth, &c., which have from time to time been introduced.

But what a revolution has it wrought in the manufacture of lumber? Just imagine for one moment the old-fashioned upright saw in a gate, jogging monotonously up and down, and cutting perhaps a thousand feet of lumber in a day, then turn to a modern circular saw-mill with steam feed, double edgers, shingle, butting, lath, and other accessory machines fitted with circulars, in the mill of to-day. What a vast difference the two pictures present. By the former method, with its clumsy mechanical appliances, the boards drop off the log slowly one by one, the sawyer sitting down leisurely between each cut—by the latter, however, there is no sitting down for the sawyer, but, on the contrary, every sense has to be on the alert; the saw goes whizzing through the log, and the instant the board drops, a touch on the lever is given, and the carriage operated by steam feed flies swiftly back, and before the onlooker has time to realize what is taking place, a second cut is half completed.

The *Northwestern Lumberman* aptly says: "The modern

saw-mill is indeed full of improvements, down to the last device for sorting by machinery. The production in one day, by one saw, of more lumber than was accounted the work of a year in former times, is not only the result of the genius of invention such as marks the spirit of the age, but has rendered possible the remarkable development of the youngest in the sisterhood of nations, forming no unimportant factor in the influence of this country among the people of the earth. All hail to the modern saw-mill and the wise intelligence of nearly every man who is connected with it, either in the production of logs from the forest or the manufacture and sale of lumber, for each progressive step in the march of improvement has reduced

the cost of manufacturing lumber, keeping pace with the inevitable increase in the cost of timber, due to the gradual decadence of the forests."

But if the Circular has added so much to the economical production of lumber, the manufacture of the saw itself has undergone as complete a change, as that we have described as existing between the two mills. As we have said, the first made by the inventor was laboriously fashioned

on an anvil in a blacksmith shop, and must necessarily have been but imperfect. How different now. The most improved machinery is used in its manufacture, the teeth are lined and cut out with mathematical exactness, the greatest care is given to it whilst undergoing the important process of tempering, and the finished saw, after passing through a variety of processes and almost as many hands, is at last turned out perfect in every particular.

We lately had the pleasure of a visit to the large Saw Works of Messrs. JAS. ROBERTSON & Co., King-st., Toronto,

and were kindly allowed to inspect the process of manufacturing in all its stages, and the sight was both entertaining and instructive. Messrs ROBERTSON & Co. have recently greatly increased their facilities, both with new machinery and by adding to their works, which is now, as will be seen from the engraving above, a handsome building, and it is completely fitted up in every way suitable for the industry in which

