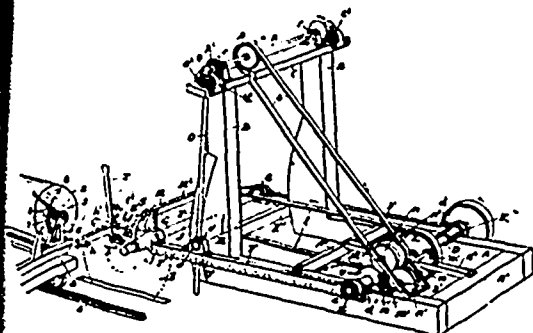


RECENT CANADIAN PATENTS.

THOMAS Bearman, of Owen Sound, Ont., has been granted a patent, No. 58,754, for a circular saw machine, as herewith illustrated. The claim is for a lumber sawing machine, in combination, a suitable frame, a swinging frame, a saw located at the outer end thereof on the end of a suitable shaft, suitable uprights supported on the frame having suitable bearings on the side bars of the swinging frame, slots in the bearings, screw spindles screwed through the trunnions, means for retaining the screw spindle, means for raising and lowering the outer end of the swinging frame, a supplemental swinging frame, pivoted on an extension of the frame and extending



CIRCULAR SAWING MACHINE.

on each side of the cutting edge of the saw, and means for adjusting and holding the supplemental frame in any desired position; also having bevel pinions at the upper ends of the screw spindles, a ball and socket bearing for the upper end of the screw spindles, a countershaft provided with bevel pinions meshing with the bevel pinions at the upper end of the screw spindles, the pulley on the countershaft, the pulley on the main shaft, the minor swinging frame having two spindles with abutting friction pulleys, a supplemental pulley on one of the spindles of the abutting friction pulleys, and a belt connecting such supplemental pulley to the pulley on the countershaft. The combination with the circular saw, suitably supported and driven, and means for adjusting the same above and below the centre of the log, of the carriage, the lathe points for supporting the log, the lever secured on the square end of the lathe point, and the quadrant with which the lever is designed to co-act, etc., etc.

A patent has been granted to Mr. John Sharp, of Gravenhurst, Ont., for a water wheel, as shown by the accompanying cut. The claim is for a wheel secured to a vertically journalled shaft, and a series of radial buckets inclined from the vertical at substantially an angle of forty-five degrees, and secured to the rim, in combination with a frame surrounding the buckets, a cover therefor provided with a series of openings, each extending over two or more buckets, and a curved conductor

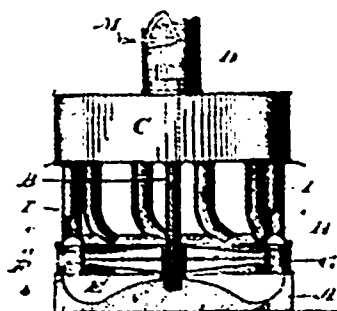


Fig. 1.



Fig. 2.

TURBINE WATER WHEEL.

connected with each of the said openings and with a source of water supply, the arms in the conductors being such as to discharge the water at substantially a right angle to the surfaces of the buckets; a curved conductor connected with each of above said openings, a tank with which the said conductors are connected, a flume connected with the tank, a cut-off valve in the said flume, and a cut-off valve for each conductor, substantially as set forth.

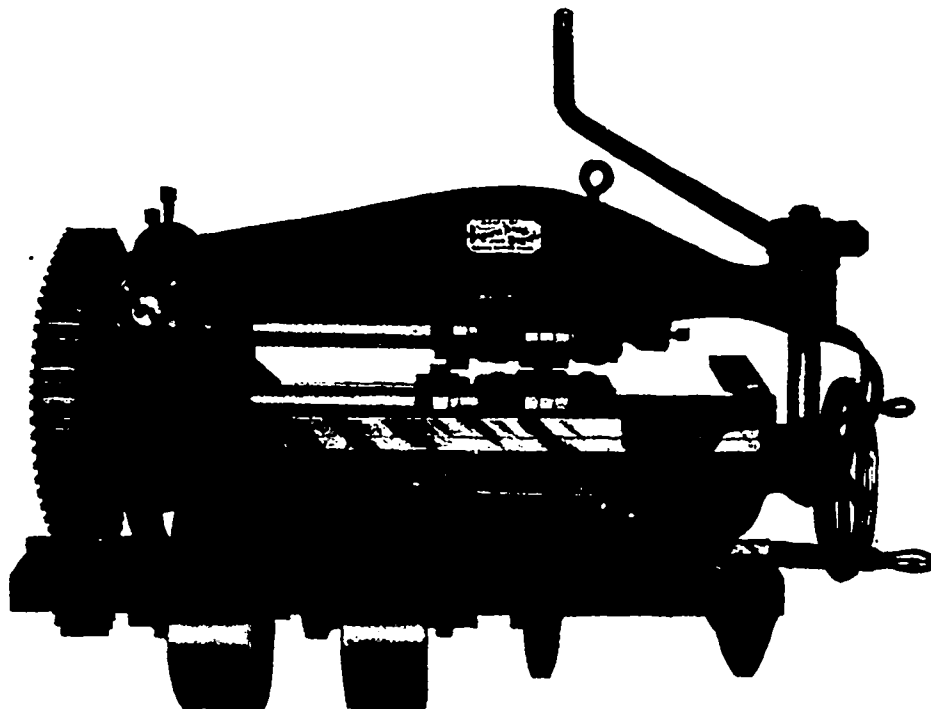
BOLTON COMBINATION MOVEABLE SAW STRETCHER AND SHEAR.

THE fine tensioning of band saws being so essential to the best results in their operation, it stands to reason that a good machine for this purpose is indispensable. The Bolton 12-inch combination movable saw stretcher and shear, No. 5, herewith illustrated, is manufactured by Messrs. Baldwin, Tuthill & Bolton, of Grand Rapids, Mich., and is claimed to be the finest thing on the market for tensioning band saws. A few of the features of advantage claimed by the makers are enumerated below.

The Bolton stretcher No. 5 has geared rolls for tensioning, and a pair of shearing disks adapted to shear either the back or toothed edge of a band or gang saw. It is equipped with reverse motion to drive the rolls instantly in either direction. The entire machine is mounted on a heavy bed plate, with two V tracks, over which the machine is moveable laterally by hand wheel to adapt the rolls to act on any part of the width of the saw. Pressure of rolls is obtained by lever and coarse lead screw, and maximum pressure of rolls is obtained by less than one-quarter turn of the lever. This affords quick application or removal of pressure, advantages that will be apparent to every saw filer.

The shear feature is a very useful one, especially in mills that have to contend with gravel or iron in the logs. The shears feed the saw through the machine at the regular speed of rolls when run in tensioning, and make a

This stretcher is the heaviest and most powerful machine in the market. It will tension or act on the hardest spots in the heaviest gauged saws with absolute certainty of affording desired results. The rolls are made up of solid steel, ground mathematically true on the most approved segments, that never fail to please. In the makeup and grind of the rolls, which are vital elements to the success of a machine, this stretcher has given the best of satisfaction. It renders the use of hammers largely unnecessary, prevents crystallized spots with the resultant cracking and brazing of saws, makes no hammer marks, prolongs the life of the saws, economizes saw bills, saves the saw filer both time and labor, affects all parts of the blade uniformly according to pressure exerted, restores quickly and uniformly the tension lost by strain of too rapid feed, affords straight running saws that cut to a line, soon pays for itself by increased quantity and improved quality of output, makes possible the use of the thinnest blades, thus saving saw kerf and money, and does not require a skilled filer to operate it, but enables the unskilled filer to greatly improve his saws. The requisites of a good machine are a heavy body, shafts that will not spring, perfect alignment and tracking of the rolls, rolls ground on proper segments, and abundant power with short leverage. Given a machine as above described, the make and grind of the rolls are the vital parts. It is in this respect that some machines are defective. The rolls may not travel together, may not track



BOLTON 12-INCH COMBINATION MOVEABLE SAW STRETCHER AND SHEAR, NO. 5.

straight, clean, smooth cut of any width. Three minutes, or less, are usually sufficient to shear a 50-foot saw. There is no mill that will not at times find this shear an invaluable device for use either in shearing a saw from which the teeth have been stripped or one with edge cracks, or for cutting a strip to proper width to braze in. When the shears are not required for use, they may be set to one side out of the way by use of the spanner wrench furnished with machine. The machine is equipped with guide for back or face of saw for use when shearing, a gauge for use when tensioning, elliptic springs for raising upper roll when pressure is diminished, very heavy, powerful cut gears, and two grip clutch pulleys for motion.

The movable feature, which gives the entire machine a 12-inch lateral movement across the bed plate or track, and so adapts the rolls instantly to act on any part of the width of saw, is a convenience of especial advantage on wide, heavy log band saws, because the filer has no occasion to move or change the position of the saw laterally, which is necessarily heavy and unhandy to move. It is manifest that this system of moving the entire machine bodily across the saw is vastly better than a lateral movement of only the shafts carrying the rolls. By this system we have absolute power, no possible lost motion, no change in the roll shaft bearings with respect to the rolls, while the rolls cannot fail to track perfectly, travel together, with the shafts always parallel and so heavy that they will not spring.

together, may be of different diameters and may not be properly crowned. This machine is free from such defects, the rolls being made up solid of the best imported steel by special process and ground on a grinding lathe built expressly for this work, by means of which they are ground absolutely perfect.

Further information may be obtained from the makers, Messrs. Baldwin, Tuthill & Bolton, Grand Rapids, Mich. Our readers are asked to write for their new 200-page catalogue, containing a valuable treatise on the fitting of all classes of saws, and "Economics for Millmen," which they will mail free to all saw filers and millmen.

Mr. N. D. Seaman, Owen Sound, Ont., in remitting for an advertisement in the WEEKLY LUMBERMAN, writes:—"I am well pleased with the returns for the investment. The returns for this 'ad' far exceeded my expectations." To lumber manufacturers and dealers having stock to dispose of, the moral is plain.

In the saw mills of Canada many different methods are employed for doing similar work, each one, perhaps, possessing certain points of merit. Superintendents, sawyers, filers, etc., are respectfully asked to contribute to this journal their views as to the best method of doing certain mechanical work, such as lining and setting up shafting, setting up rotary and other circular saws, rules for finding out and marking off the shape of circular saw teeth for guidance in grinding and filing.