

is contrary to the agreement. The Patterson Company on the other hand claim that under the agreement they are entitled to all the water they require. The courts will probably be asked to decide the matter.

In selecting iron don't depend upon the brand, except to ascertain that it was made by a reputable manufacturer, but require a certain tensile strength (T. S.) and proper percentage of ductility, and make sure that the sample piece cut from a sheet and properly tested comes up to the requirements.

The smallest circular saw in practical use is a tiny disk about the size of a British shilling, which is employed for cutting the slits in gold pens. These saws are about as thick as ordinary paper, and revolve some 4,000 times per minute. The high velocity keeps them rigid, notwithstanding their thinness.

A Washington dispatch says: Supervising Inspector Lublock, of San Francisco, having reported to the Treasury Department that petroleum is not safe fuel for large boilers, has been instructed by Secretary Fairchild to withdraw all permits heretofore given for its use, except in the case of small steam launches.

An application for incorporation will be made to Parliament by the Electric Construction and Power Company. The capital stock will be \$100,000. The names of applicants are Hon. J. J. C. Abbott, T. G. Shaughnessy, Robert Archer, J. A. Brewer, W. H. Kingston, John B. Abbott and Geo. A. Huayes, all of Montreal.

It is reported that a site for a rolling mill has been offered at the Humber by the Toronto Bolt Works Company to the Ontario Rolling Mill Company, of Hamilton, who recently purchased the rolling mill plant of Mr. Muir, London, and there is every reason to expect it will be removed from London to Toronto, and a suitable building erected.

Messrs. Stahlschmidt & Co., Preston, Ont., have paid back to the Preston corporation the amount of the loan made to them by that village, although it is not due for a long time yet. The interest was deducted from the amount and the company gave the Cornhill good security as to filling their contract regarding the number of hands to be kept at work during the next ten years.

A company is said to have been formed in Valencia, Spain, to establish an electrical plant, which is to furnish all the power required in the various manufacturing industries in and about the city. It is to be capable of producing 5,000 to 4,000 horse-power, and to transmit it to distances within the limit of 35 English miles. The plant is to be run by the water-power of the Turia river.

Mr. Hugh Scott, a well-known Toronto underwriter, who was summoned to give evidence regarding insurance matters before the Combines Committee, referred to the great destruction of property by fire every year, and urged that the Government should pass regulations for the prevention of fire in the same way as they have passed an act for fencing in of machinery to prevent accidents.

The Kingston & Pembroke Iron Mining Company last year mined about 28,040 tons. There is a demand for the ore because of its excellence in the manufacture of Bessemer steel. The management expects that it can sell all it can mine, as there is increased demand as quality of the ore becomes known among the iron men of the United States. The company have four mines in operation, with an output of 300 tons per day.

A company has been organized in the Southern States with a capital stock of \$1,000,000 to operate a new process of steel made from phosphorous iron ore. The process is the invention of the State Geologist of Georgia. A cheap and simple chemical preparation is injected into the blow pipes of a blast furnace and every trace of phosphorus is forced out with the slag and the iron is converted into Bessemer pig at an extra cost of only 20c per ton.

On opening a boiler much trouble is often experienced from the tearing of the manhole gaskets; this may be avoided by putting a little white lead on the face of the gasket that rests on the manhole plate, and by chalking heavily the other face of the gasket, as also the part of the manhole frame with which it comes into contact. On subsequently opening the boiler the gasket will generally be found to adhere firmly to the plate and to separate from the frame without tearing.

To cool a hot bearing, slack off the nuts on the cap, remove the oil cap, if there is one, and supply the journal freely with oil into which has been stirred the dust obtained by rubbing two bath bricks together. After some time you can set up a little on the nuts, and when they have been screwed gradually to nearly their former position, supply clear oil in considerable quantity; wash out the journal thoroughly. Then set up the nuts, and it will be a long while before that journal will give trouble.

The electric light in mills and factories means unquestionably a decided reduction of fire risk, although it was argued a few years ago that electricity, generated for instance by a running belt, was a new fire hazard. There is, however, a certain minimum risk in connection with the electric light, which is put forth in a number of rules just issued in the Society of Telegraph Engineers and Electricians. The principal danger, says the *Miller's Gazette*, is, of course, from overheating of the wires, caused generally by defective joints, or corroded wires, which resist the current, and cause a rise in the temperature, or a concentration of heat at the defective points. Bad joints and bad insulators are therefore to be avoided, and such work should only be done by competent men. Arc lamps should be enclosed in order to catch any flying sparks. Falling glass, and, above all, dynamos should not be installed in rooms where there may be inflammable material, or where the air is charged with dust.

M. Gerboe, it is stated, has devised an apparatus by which an audible and visible signal is given to the engineer if any part of the machinery to which the apparatus is fitted should become unduly heated. In its simplest form, as applied to the crank pin of a steam engine, the device consists of a small cylinder fastened to and projecting from the crank pin, and containing a plug of easily fusible alloy, which is pressed against the end of the crank pin by a perforated piston and spring. The piston rod, by means of a lever, connects a catch arranged to give a signal if the plug melts.

over the apparatus. The gear of the bell, which is actuated by a spring power, is previously wound up by hand and locked by the catch. If the crank pin should become heated, the fusible plug melts, thus allowing the piston to descend, thereby releasing the catch and sounding the bell. In addition to this audible signal, a disk hidden underneath the bell is turned in such a position that a bright color is seen through two holes in the disk of the bell.



Jos. Dixon; Stanton, is changing his mill into a full roller mill, using the Geo. T. Smith machinery and plans.

The Geo. T. Smith Co. will make the necessary repairs to Hunt Bros' mill at London, recently damaged by fire.

Mr. A. Ellis, of Balsam, has just purchased and placed in his mill one of Wm. & J. G. Greey's improved flour dressers.

A large marine boiler is being built by Messrs. Inglis & Hunter, of this city, for Mr. Mark's tug "Mary Ann," of Port Arthur.

T. B. Bragg, Cumminville, is changing the Dacotah mill from stones to rolls, using the Geo. T. Smith machines and short system plans.

Mr. L. L. Sage, of Ayton, Ont., is putting in additional roller mill machinery, and has placed his order with Wm. & J. G. Greey, of Toronto.

The Shoal Lake Milling Company, of Winnipeg, Man., have bought one of the new style 3-roll feed grinders from Wm. & J. G. Greey, of Toronto.

Mr. F. W. Fowlds, of Hastings, Ont., has purchased two No. 2 Improved Bean's patent dust collectors from Wm. & J. G. Greey, of Toronto.

Sandy McVean, Dresden, has recently completed a 75 bbl. mill on the full roller and centrifugal system, built by the Geo. T. Smith, M. P. Co., Stratford.

Bickle & May, Petrolia, whose mill was burnt in April, have contracted with the Geo. T. Smith M. P. Co. for a 75 bbl. short system full centrifugal roller mill.

Way & Co., Pefferlaw, have contracted with the Geo. T. Smith M. P. Co. for one of their three break full centrifugal 100 bbl. mills, to be completed June 30th.

V. Denne, Newmarket, is changing his mill from stones to rolls. Will use the Cochrane rolls, the Geo. T. Smith Co. furnishing the other special machines and iron work.

Messrs. Inglis & Hunter are constructing two large boilers for the Massey Manufacturing Co. from newly designed plans by the Dominion Safety Boiler Co., Montreal.

Jos. Martin, Milton, has made contract with the Geo. T. Smith M. P. Co. to change his stone mill to rolls, using their three break full centrifugal system, 100 bbls. capacity.

Mr. D. McMillan, of Barrie, has purchased some additional rolls for his mill, intending to increase its capacity. Messrs. Wm. & J. G. Greey, of Toronto, have the order.

Messrs. Craig & Sons, Napanee, finding additional machinery necessary to compete with other mills, have ordered a double set of 9x15 rolls from Messrs. Wm. & J. G. Greey, of Toronto.

S. R. Stuart, Mitchell, is changing his mill to a full roller mill, throwing out his middlings and chop stones and substituting therefor the Geo. T. Smith roll frames and three high chop mill.

Campbell, Stevens & Co., Chatham, have made contract with the Geo. T. Smith Co. to change their St. Thomas mill from a six to a three break mill, increasing the capacity from 250 to 500 bbls.

Messrs. George Wright & Bro., of Wareham, Ont., have placed an order with Mr. E. P. Cave, of Thistleton, for a line of rolls and other machinery to be supplied by Wm. & J. G. Greey, of Toronto.

Mr. J. E. Sproule, of Colborne, Ont., is fitting up his mill with considerable new machinery. He has purchased his rolls and other supplies, consisting of belting, cups &c., from Wm. & J. G. Greey, of Toronto.

Messrs. Inglis & Hunter are increasing the size of the cylinder of the engine in Messrs. McLaughlin & Moore's flour mill, Toronto. When the change is made the capacity of the engine will be 200 instead of 200 h. p.

Messrs. Inglis & Hunter, of this city have just successfully completed compounding with independent condenser the cylinder of the engine of the Blind River and Georgian Bay Navigation Co.'s steamer "Belie Wilson."

Mr. David Elder, of Elder's Mills, is fitting up his mill with a full line of rolls from the shops of Wm. & J. G. Greey, Toronto. Mr. Elder will also use Greey's system, and Velocity middlings purifiers and centrifugal.

Messrs. Wm. & J. G. Greey have filled an order from the Toronto Street Railway Company for a run of 4 ft. millstones, as the company's facilities for grinding provender were not sufficient to meet the requirements of their increasing business.

Mr. W. H. Berkeley, of Canby, Ont., has placed an order with Wm. & J. G. Greey, of Toronto, for a line of 9x15 rolls with Greey's new connected rope drive, also flour dressers, purifier, scalpels, dusters, etc., for a full roller 50 bbl. mill.

We understand the Canadian Rubber Co., through their Toronto agent, J. H. Walker, have secured the contract to supply Messrs. Gooderham & Worts with all the belting necessary for their large elevator just nearing completion in this city.

The 75 bbl. mill of the Macfarlane Milling Co., Sherbrooke, Ont., built by the Geo. T. Smith M. P. Co. on their three break full centrifugal system, was successfully started on Saturday, May 27th, and is now running two weeks by high water in the river.

The Vulcan Iron Co., of Winnipeg, have added to their plant machinery for grinding and corrugating millers' rolls. Up to the present this work has been done in Ontario.

Messrs. Gould Bros. are changing the style of drive on the roller machines in their mill at Uxbridge, and are putting in Wm. & J. G. Greey's new system of rope drive and coupled rolls. It is expected a saving of one half in power will be effected by this change.

Messrs. W. C. Sylvester & Sons, of Vankleek Hill, Ont., have decided upon remodelling their stone mill to the roller process. Messrs. Inglis & Hunter, of this city, will make the changes, putting in the case system. The mill will have a capacity of 100 barrels.

We learn that some large rubber belt ranging from 20 to 48 inches, with five, six and seven ply, one of which weighs no less than 6 tons, have recently been supplied to elevators throughout the country by the Canadian Rubber Company, Montreal and Toronto.

The Ogilvie Milling Co., Winnipeg, have recently changed their bolting system, putting in ten No. 0 Geo. T. Smith centrifugals made at Stratford. They are also making extensive changes in their Glenora mill at Montreal, the Geo. T. Smith Co. furnishing the necessary supplies.

The Geo. T. Smith Middlings Purifier Company, of Jackson, Mich., will exhibit a model mill equipped with their machinery at the Millers' Convention in Buffalo, N. Y., in June. It will also be displayed at Cincinnati, Ohio, from July 4 to October 27, during the world's exposition. It will cost \$10,000 and can be transported on a single car.

The Vulcan Iron Works, Montreal, are building a steel steamer for the Ottawa River Navigation Company, the size of which is 160x25x8. The firm are also building two large boilers and four large tanks and coolers for Dams & Co., of Lachine, and are cutting the steamer Algonquin in two and will connect her again at Ogdensburg. An addition of 4090 feet will shortly be added to the present works.

Mr. J. H. Dracass, of Streetsville, Ont., has ordered a line of 9x24 rolls from Messrs. Wm. & J. G. Greey. These rolls are to be fitted up on the new system introduced by the above firm, which is reported to be giving satisfactory results at Port Hope, Holland Centre, Kirkfield and Blytheswood. The bolting machinery will consist of 8 new style flour dressers and two centrifugals, also built by the Messrs. Greey.

Messrs. J. & R. Kidd, of Tilbury Centre, are preparing to enlarge and improve their roller mill. The building will be raised 10 feet, and a new roof put on to accommodate the new plant. Messrs. Wm. & J. G. Greey have the order for a line of 9x18 and 27 rolls with their new connected rope drive, also for the additional flour dressers, scalpels, etc., it being the intention to make one of the most complete mills in Western Ontario.

Mr. Robt. McGowan, who is building the new roller mill at Durham, Ont., has contracted with Mr. E. P. Cave, of Thistleton, to fit up the machinery and supply the same. Messrs. Wm. & J. G. Greey, of Toronto, will supply the entire outfit, and a line of their new style connected rolls with rope drive will be one of the main features. Mr. McGowan is owner and builder of the mill at Priceville, which was also built by Mr. Cave and furnished by Wm. & J. G. Greey.

We are in receipt of a copy of the new illustrated and descriptive circular, issued by Messrs. John Gillies & Co., Carleton Place, Ont., manufacturers of Shipman and Acme Engines, and builders of steam launches. The size, weight, construction, durability, cost of running the Acme engines, etc., are fully explained, and every page contains valuable information. Copies of this circular may be obtained on application to John Gillies & Co., Carleton Place.

Messrs. Robin & Sadler, the well-known leather belting manufacturers, of Montreal, lately shipped to the Lake of the Woods Milling Co., Keewatin, Ont., about 7,000 feet of belting, ranging from two inches to two feet in width and weighing about 5,000 pounds. One double leather driving belt alone weighed 1,400 pounds, being 360 feet long and 24 inches wide. This is said to be the largest order for belting ever filled by a Canadian manufacturer, and its satisfactory execution reflects credit on the enterprising firm who did the work.

The firm of E. Leonard & Sons, of London, Ont., have, through their Montreal branch house, where they are represented by H. E. Plant, placed a number of their Leonard Ball Automatic Engines in Montreal, and they are becoming better known and more appreciated every day, for their economical and general efficiency and perfect regulation. A 60 h. p. engine has recently been placed in the drag mill of Messrs. Lyman, Sons & Co., and a 100 h. p. in the extensive planing mills of Y. Lefontaine. This firm's business now extends to all parts of Canada.

Placing a negative on paper prepared in the ordinary way for blue prints, then exposing them to sunlight in a manner similar to the exposure of a tracing and paper in a blue printing frame, and washing the paper in the same way as any ordinary blue prints, will produce an exceedingly pleasing impression or picture, which will be precisely similar to that of a photograph from the same negative. A picture thus produced will be of a bluish tint on white ground. Many manufacturers of machinery or specialties use this method to advantage for the purpose of illustrating their productions. *American Mechanic.*

Private advices from the West and Canada, says the *New York Lumber Trade Journal*, show that there is a great scarcity of box lumber. The large and rapidly growing West is a large consumer of this grade, and the visible supply from all sources this year will be greatly below the demand. Already our box makers are looking to other woods, such as spruce and North Carolina pine, for a substitute, but, notwithstanding this deflection, the demand is still enormous, and we predict that before the season is over there will be a good big jump upward in price. Box lumber at ruling prices is a good thing to hold.