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GREEY'S NEWLY IMPROVED DOUBLE ROLLER MILL.

THE revolution in the process of flour manufacture, from the old and long used millstone to its substitution by the chilled iron rolls, has, within the last eight years, attracted a very large amount of careful study and inventive genius to discover the best methods of mounting the rolls in frames, of feeding the material on which the rolls operate regularly to the rolls and in an even stream the full width of the roll surface, providing the most convenient, positive and durable adjustments, tempering each pair of rolls to its special work, keeping the surfaces of each pair of rolls true with each other, keeping the surfaces of the rolls clean, permitting hard substances to pass through the rolls without injury to rolls or frame, spreading the rolls apart to prevent injury while running empty or while starting or stopping, tightening the driving belts, etc. The devices that have been adopted, patented, experimented with, discarded, have been legion, while the number that have pushed themselves to the front as meritorious of success by their superiority and intrinsic worth have been few.

The machine herewith illustrated is the result of large experience, careful study of the weak points of roller mills, and the best means of overcoming them, together with the employment of the best obtainable talent. The manufacturers claim for it the following improvements and advantages:

The roll frame has been made higher, and the rolls more conveniently placed, so that all awkward stooping to examine them is avoided.

The celebrated Sperry feed—a vibratory feed—with some improvements, has been adopted in place of the roll feed. This feed perfectly and evenly distributes the stock the whole surface of the roll, is perfectly adjustable to the greatest nicety, and is automatic in operation.

The method of suspending the adjustable roll is an entirely new departure, it being overhung, instead of suspended below, doing away with the liability to jar and loose action, and at the same time gaining a large percentage of leverage for the hand wheel adjustments, enabling the hand wheels to be turned readily, no matter how great the pressure on the rolls may be. This leverage also admits of the springs being more sensitive. Any hard substance passing through the rolls does not cause rack and strain as formerly.

The tension of the adjustment is on the pull principle, as opposed to the thrust principle, which is liable to jar and rattle. In addition to the pull tension, the compression of the spring is peculiarly arranged so as to take up all lost motion, rendering loose working or jarring impossible.

The adjustment for setting the rolls is positive, and can be regulated to the ten-thousandth part of an inch. The adjustment for levelling the rolls is easy of access, simple and permanent.

The spreading of the rolls is accomplished by a lever, operating which the tension of the spring is not affected, and when the rolls are set together again they necessarily come exact to the former adjustment.

The pocket hand hole for examining the work of the rolls is dustless and convenient, and is covered by an automatic door.

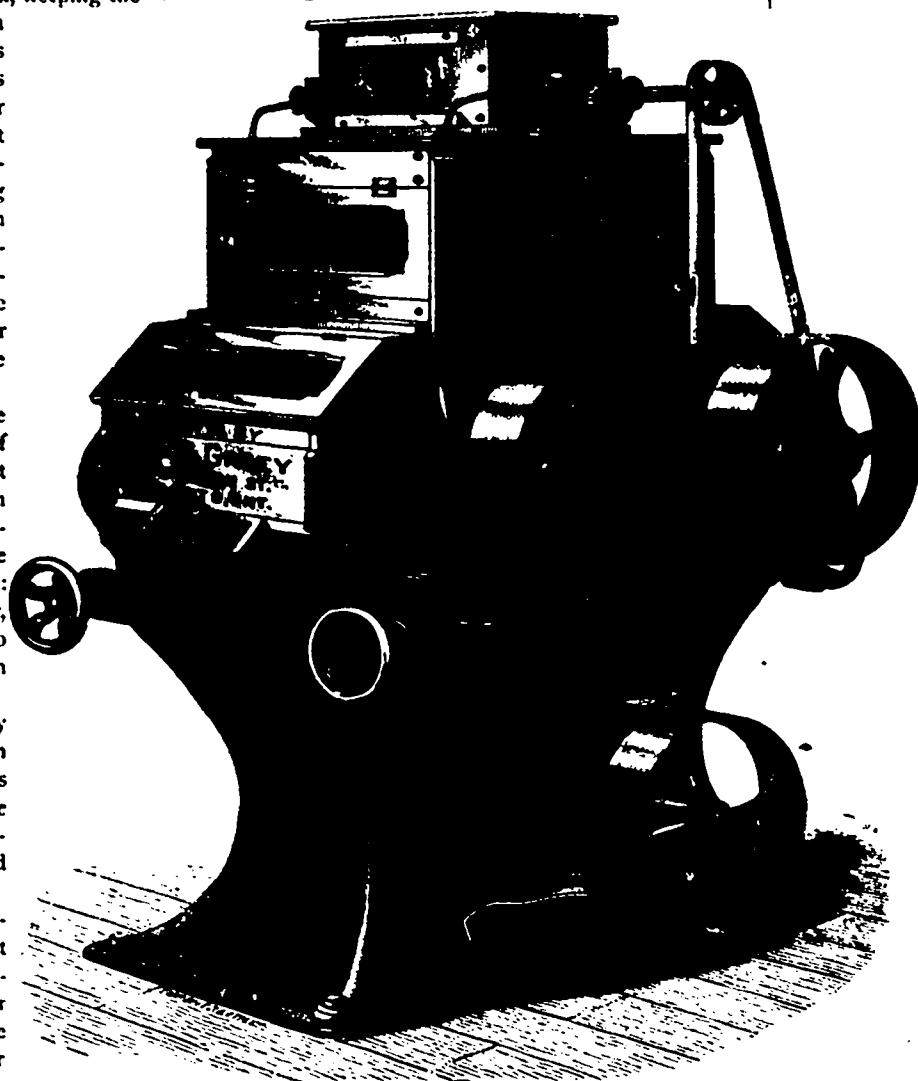
The method of applying the brushes and scrapers for keeping the rolls clean is new, is all on the outside, convenient of access, and the pressure is easily regulated.

The driving belts on both fast and slow rolls are tightened by simply turning a handle, and without leaving the side of the rolls.

We are informed by the manufacturers, Messrs. Wm. & J. G. Greey, 2 Church St., Toronto, that they have received orders for about 150 double pairs of these rolls during the last three months. Our readers who may desire further information concerning this machine, can obtain full particulars by addressing the manufacturers.

ENGINEERING CONVENIENCES.

Some engineers seem to be determined to have as



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hard a time of it as possible, and are always engaged in a futile effort to catch up with themselves, while other engineers, with just as much to do take care of the matters entrusted to them just as well, and appear to have plenty of leisure time upon their hands. Of course this is in a large measure due to the different capacities of the men. In engineering, as in other matters, the capacity of different men for accomplishing work varies, and while one man will go quietly about utilizing his time and effort to the best advantage, and get ready to sit down and read his paper, another, with infinitely more hurry and bustle, will accomplish a great deal less and always have a half dozen odd jobs ahead to be done "when he gets around to it."

Many men, too, have an ingenious faculty of fixing up things to suit their own convenience, and in case of emergency will have tools at hand in proper condition for use instead of having to hunt the establishment over, go out and borrow, or put up with a make-shift, so that an occurrence which would be a simple inconvenience to them would mean an hour of hunting up tools and material, and a loss of patience and temper which would unfit the other man for doing the job in a workmanlike manner. Some little effort and even money can often

be laid out advantageously by the engineer in the direction of his own convenience. Most men have an idea that the "boss" ought to pay for everything required, even to an arm chair for them to sit in, and will spite themselves by sitting on an uncomfortable box rather than to buy a comfortable chair for themselves. There is no doubt but that a concern should furnish its engineer a clock to run by; but there is no doubt, either, that the man who bought himself one rather than walk through the cellar, climb a ladder into the back yard and half way across the next lot, to see how near shutting down time it was by the town clock, got the worth of his money in his own personal enjoyment of his purchase.

Another man, whose pump was in the dark boiler room out of sight from the engine room, spent a couple of evenings in rigging up a tell-tale which kept a pendulum in the engine room in motion while the pump was running. He could then tell the speed of the pump, or if anything had happened to stop it, without frequent excursions to the boiler room, and there was no chance for it to cheat because the pendulum could not go unless the pump did. He also had a cord and pulley attachment to an overhead valve, which enabled him to open and close it without the use of the poker, which by springing the stem kept it constantly leaking.

Still another man reduced the process of filling the sight-feed cylinder oil cup on a hotel job, where everything was kept especially bright and clean to extraordinary neatness and simplicity, by putting a bracket on his steam pipe above the oil cup, on which he secured a coffee urn kept filled with oil.

THE SEASONING OF TIMBER.

Timber when freshly cut contains from 37 to 48 per cent. of water, the kind, the age and the season of vegetation governing the percentage. Older wood is generally heavier than young wood, and the weight of wood in the active season is greater than that of wood cut in the dormant season. Water in wood is not chemically combined with the fiber, and when exposed to the atmosphere the moisture evaporates. The wood becomes lighter until a certain point is reached in the drying-out

process, after which it gains or loses in weight according to the variations in the moisture and temperature of the atmosphere. Following is a table showing the percentage in weight of water in round woods from young trees at different lengths of time after cutting:

Kind of wood.	6 mos.	12 mos.	18 mos.	24 mos.
Beech.	30.44	23.46	18.60	19.95
Oak.	32.71	26.74	23.35	20.28
Hornbeam.	27.19	23.08	20.60	18.59
Birch.	38.72	29.01	22.73	19.51
Poplar.	40.45	26.22	17.77	17.92
Fir.	33.78	16.37	15.21	18.00
Pine.	41.70	18.67	15.63	17.42

According to these figures, taken from actual trials, there is nothing gained by keeping wood longer than 18 months, so far as drying or seasoning is concerned. In the woods mentioned there appears to be an actual loss in some and only a slow gain in others after that length of time. The pine, fir and beech gained moisture, and the others in the list lost only very slightly after the 18 months passed.—*The Lumber World.*

A new shake-feed has been invented and patented by Mr. W. H. Barnard, of Galt, which it is said materially increases the yield of flour.