

CORUNDUM WHEELS.

MOST saw users are familiar with corundum wheels as used on automatic saw sharpeners, and for similar purposes in planing mills and other wood-working establishments. It may interest them to know something about this material.

Corundum is a mineral found in a crystalline or granular state. The most familiar example is emery, so commonly used for grinding and polishing purposes, which is the granular form mixed with a large proportion of oxide of iron in its natural state, and which is found in more sections and in larger quantities than any other form of the mineral.

What is known as corundum is the other, or crystalline form, and is limited in quantity in most of the depositories. It includes in its most perfect and higher varieties such gems as the sapphire, the oriental ruby and the amethyst. Adamantine spar is the brown variety which is used in the mechanic arts, and which is seen in the form of wheels and whetstones. These are made by mixing the fine sharp crystals with an adhesive composition, which is pressed into moulds, where it hardens.

Next to the diamond, corundum is the hardest known mineral, and is the most effective material for cutting away or polishing hard metallic substances. For a long time it was found only in small quantities in "pockets," in various places, and scarcely a ton of it was ever on the market at once. But about a dozen years ago a vein of it was discovered in Macon county, North Carolina, about seven miles from the town of Franklin. This has been developed until the mine now practically supplies the world with the mineral; the output being in the neighborhood of 400 tons per year, and the demand is increasing. Owing to its exceeding hardness, this form of the mineral has largely superseded emery, except for fine polishing. There are many deposits of it in the region about this mine, but as the demand is limited and the one mine can easily supply it, there is no object in opening up others at present.

A PHENOMENAL RIVER.

THE St. Lawrence is a phenomenon among rivers. No other river is fed by such gigantic lakes; no other river is so independent of the elements. It despises alike rain, snow and sunshine. Ice and wind may be said to be the only things that affect its mighty flow. Sometimes almost as phenomenal as the St. Lawrence itself is the fact that there is so little generally known about it. Among all the great rivers of the world the St. Lawrence is the only absolutely floodless one. The St. Lawrence despises rain and sunshine. Its greatest variation caused by a drought or rain hardly ever exceeds a foot or fourteen inches. The cause of this almost everlasting sameness of volume is easily understood. The St. Lawrence is fed by the mightiest bodies of fresh water on earth. Vast as is the volume of water it pours into the ocean, anyone who has traversed all the immense lakes that feed it, and for the surplus waters of which it is the only channel to the sea, wonder that it is not even more gigantic than it is. Not one drop of the water of the five great lakes finds its way to the ocean save through this gigantic, extraordinary and wondrously beautiful river. No wonder that it should despise the rain and defy the sunshine.

WHAT THE PEOPLE SAY.

FEW subscriptions reach the LUMBERMAN office that are not accompanied with words of appreciation from our readers. Many thanks, kind friends. Our constant aim shall be to deserve the success that is so cordially attributed to this journal. We cull a few extracts from letters on our desk at this writing:—

A first-class paper.—John M. Meyers, East Oro, Ont.
Second to no paper in the Dominion.—W. J. Mather & Co., Neepawa, Man.
Well pleased with your paper both as regards the make-up and contents. Harlow & Kempton, Milton, N.S.

I don't intend to take the LUMBERMAN this year, but don't know how we can do without it. Enclosed find \$1.00 for renewal.—George M. Babiner, West La Hare Ferry, N.S.

To our minds the CANADA LUMBERMAN is the best trade journal that we receive. While some of the large American lumber journals are little else than market reports and advertising mediums, we always expect from the CANADA LUMBERMAN a few hours of interesting reading upon subjects of interest, instruction and entertainment to lumbermen, and we are not disappointed. While machinery, dollars and dry kilns are good in their places, we hope we appreciate and are pleased to be able to convey to your good opinion of your successful efforts to make your literary columns constructive and, we hope, beneficial to more than lumbermen.—J. T. Schell (Macpherson & Schell), Alexandria, Ont.

KIND WORDS FOR "THE LUMBERMAN."

WE have to thank the press of our own country and the United States for the many nice things they have said of the CANADA LUMBERMAN on the occasion of entering upon its thirteenth year of publication. Out of a multitude of kind words we select the following:—

The publisher recognizes the importance of capable editorial management, as much as he does the typographical and mechanical. Globe.

A creditable representative of the large commercial interests for which it speaks. Empire.

From a journalistic view tells of careful and competent editorial management.—Mail.

Always taken a front position as a well-conducted exponent of trade interests.—World.

A first-class paper in its special line.—Trade Review, Montreal.

Decidedly one of the handsomest trade journals which come to our table.—Canadian Manufacturer.

From first page to the last a credit to the publisher. Patent Record, Ottawa.

A very handsomely printed paper. Commercial, Winnipeg, Man.

Without doubt one of the best trade papers on our exchange list. Commercial Journal, Vancouver, B.C.

No better craft paper in the Dominion. Colonist, Winnipeg, Man.

One of the most esteemed and influential journals in the lumber trade. Am. Paper Trade, New York.

Able and industriously edited. Southern Lumberman, Nashville, Tenn.

An able representative of the lumber interests of Canada.—Wood and Iron, San Francisco, Cal.

Evidently annexation is not necessary to make a success of the CANADA LUMBERMAN.—Sawmill Gazette, New York.

In both typographical appearance and editorial management perfection has been secured. Watchman, Tiverton, Ont.

Should be in the hands of every wood-worker, manufacturer and millman.—Free Press, Shelburne, Ont.

At one dollar a year is one of the cheapest journals in America. Review, Streetsville.

A faithful guardian of the lumberman's interests. Herald Port Arthur, Ont.

Most beautifully printed paper in the Dominion. Examiner, Peterborough.

An exact compendium of all matters of interest to lumbermen; worth double the amount of subscription. Mercury, Walkerton, Ont.

No industry in Canada is represented by such a well-conducted exponent.—Tribune, Deseronto, Ont.

A magazine of practical usefulness to all interested in the lumber business.—News, St. John, N.B.

Lumbermen of the Dominion may well feel proud of it.—Puget Sound Lumberman.

AN ANCIENT ROADWAY.

AN ancient roadway has been discovered at Marseilles, Illinois. It is from four to six feet below the surface, and constructed of stone underlaid by pounded sandstone and gravel. Each slab is about twelve feet long, from one to three feet wide, and about two inches thick. It proves that civilization had its hold here long before the advent of the Indians.

SHEEP RAISING IN DAKOTA

is a financial success, as is evidenced by the statements made by prominent Dakotians in a pamphlet just issued by the Chicago, Milwaukee and St. Paul Railway, copy of which will be sent free upon application to J. H. Hiland, General Freight Agent, Chicago, Ill., or to A. J. Taylor, Canadian Passenger Agent, 4 Palmer House Block, Toronto, Ont.

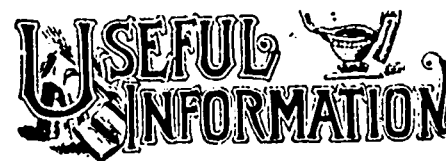
TRADE NOTES.

The Dodge Wood Split Pulley Co., of Toronto, have found it necessary to increase their output by fifty per cent. Their large works at Toronto Junction are now running to fullest capacity ten hours per day, and the company reports a large increase in sales and demand from every quarter. This company also calls the attention of millmen interested in rope-driving to a letter from one of their patrons, which appears in their advertisement on another page, and which speaks for itself.

The celebrated Grip Pulleys of the Waterous Co., of Brantford, Ont., are finding a large sale in all parts of the Dominion. Electricians are strong in their recommendation from the fact that "Grips always remain motionless when out of clutch." Another important feature is the ability to place these pulleys in pairs, saving one foot space on the line shaft to each pair of pulley. They possess special value in driving main circular, edger and special machines in sawmills. During the month the Waterous Co. have shipped to C. B. Wright & Co., of Hull, Que., three pairs of bevel gear "30x7" face wood and iron teeth fitted with grip attachments for throwing in and out of gear without disengaging cogs.

NEW FACTS ABOUT THE DAKOTAS

is the title of the latest illustrated pamphlet issued by the Chicago, Milwaukee & St. Paul R'y regarding those growing States, whose wonderful crops the past season have attracted the attention of the whole country. It is full of facts of special interest for all not satisfied with their present location. Send to A. J. Taylor, Canadian Passenger Agent, No. 4 Palmer House Block, Toronto, Ont., for a copy free of expense.



Many good devices for self-oiling pulleys have been introduced, with different results. The trouble with self-oiling devices is that if a pulley will run successfully for one month without re-oiling, it is liable to be neglected for three, or until the oil is all worn out, then stick fast to the shaft or become badly cut, then condemned as worthless. In this manner many of the good intentions of the manufacturers are defeated by the neglect and carelessness of the operator.

When power is transmitted from a central engine by shafting, seldom more than 50 per cent. of the power created reaches the machines, so great is the friction of the best shafting that can be made, having the best care and with the best lubrication. For small places and short transmission this may be reduced to 15 per cent., but when extended to a greater distance it eventually comes to 50 per cent. loss, and as the establishment becomes larger the efficiency of transmission diminishes more and more. A line of shafting two miles long could not, it is estimated, be turned from one end; it would twist itself off before you could turn it.

It stands to reason that if we have an engine fairly well made, with all its parts in line and the valves properly set, it will do its work without a sign, save the sign of the exhaust and the "creep" of the belt parting from the back side of the drum. More frequently we meet with engines whose "chug, chug," as they laboriously pound away at their work, seems to be emulating pile-drivers. The influence steam admission has upon the action of an engine, as regards its noise, is well shown at times in some variable cut-off engines. Within a certain range it works noiselessly, but when additional load is put on and the cut-off changes, the engine pounds furiously. A popular remedy for pounding is keying up the connections all round, screwing down the binders on the shaft bearings, or settling up the shocks in the sides of them. In most cases this only makes a bad matter worse; for when an engine pounds from being out of line, the tighter the connections are the harder they bind, and the stiffer they are. Pounding costs money, for it is power thrown away. It is expensive to have a noisy engine, and disagreeable as well. What is easily cured should not be endured.

A sawmill boiler house recently caught fire and had the roof completely consumed. A number of boilers were under steam at the time the fire started, but were saved by the prompt action of the firemen, who pulled nearly all of the fire out of the furnace before they were obliged to leave the building. There were three gauges of water in the boilers when the firemen left. Two of the boilers had cords attached to the safety-valves, by which each valve could be raised from its seat. The remaining boiler had a chain attached to its valve. All three of the valves were opened and fastened in that position before the building was abandoned. The valves to which the cords were attached soon closed, owing to the cords burning away, but the chain held the other valve open. Probably the escape of the steam did considerable to save the boilers by deadening the fire immediately over them. After it was again possible to leave the building, there was nearly one gauge of water left in each of the boilers. They were in good shape and unharmed, although the fitting and steam connections were badly deranged. Every boiler should have a chain fitted to its valve for use in case of fire, but a much better way is to make the roof of the fire room fire-proof by building it of brick arches instead of wood. A few tons of channel iron and a sufficient quantity of iron rods combined with brick and mortar will form a roof which will not burn off.

W. N. McEACHREN & CO.

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