

HARDWARE AND METALS.

The St. Thomas Car Wheel Co. is in receipt of orders from England, France, Germany, Russia and Brazil.

The Canadian Master Plumbers' Association, confined at present to Ontario and Quebec, has decided to take in the St. John and Halifax associations.

James Watson & Co., Glasgow, Jan. 25th, report "the Scotch pig iron market flat during the week, having receded 6d. per ton. We have to report a dull demand all round."

About thirty men are employed in the erection of the Hamilton smelting works plant. Considerable machinery has arrived since the first of the year. The steel smoke stack has arrived and is 125 feet long and 14 feet in diameter at its base, and cost \$5,300. The steel roof for the cast house is expected next week.

The Montreal firm of H. R. Ives & Co. have lately completed successfully a noteworthy piece of foundry work. They made 440 large sections of pipe, 10 feet in diameter and five feet long, weighing between three and four tons each. Out of this large number there were only 17 defective ones from any cause whatever. These rings of pipe sections were used for culverts underneath the new Soulanges Canal, allowing two rivers to run beneath that canal.

Among the most recent and novel applications of wire, perhaps none has greater interest to the mechanical world than that presented by the new wire fly wheel lately erected at the Mannesmann Tube Company's Works in Germany. Heavy fly wheels driven at high velocities obviously present dangers of breaking asunder from the great centrifugal force developed. The wheel at the factory mentioned consists of a cast iron hub or boss, to which two steel-plate discs or checks, about 20 feet in diameter, are bolted. The peripheral space between the discs is filled in with some 70 tons of No. 5 steel wire, completely wound round the hub, and the tensile resistance thus obtained is far superior to any casting. This huge fly wheel is driven at a speed of 240 revolutions per minute, or a peripheral velocity of about 28 miles per minute, which is nearly three times the average speed of any express train in the world. The length of wire upon such a constructed fly wheel would be about 250 miles.

There have been many cases of the use of electric motors to drive lines of shafting or isolated parts of plants, which go to prove conclusively the remarkable increased efficiency obtained, especially where the conveyance of steam for a long distance was necessary. This has led to a more thorough study of the amount of power absorbed by the line shafting and countershafts. "The minimum loss that can be looked for, and this is obtained only in exceptional cases requiring constant vigilance, is 25 per cent. of the total power developed, and more frequently runs as high as 65 to 70 per cent. A safe average would be from 40 to 50 per cent., although the actual loss must be determined for each and every case. With the use of electric motors, when properly designed and proportioned for the work, as, indeed, is as necessary in electrical work as with any other problem of mechanics if the best results are desired, this percentage of loss can be materially reduced. An inefficient result must be expected with bad electric engineering just as with a poorly arranged case of millwrighting, but, the electrical proportions being once obtained, there will, within reasonable limits, be no decrease in efficiency from deterioration."—*W. E. Hall, in Cassier's Magazine.*

RETAILING DRY GOODS.

Mr. Cole, of Doon, was in Guelph last week seeking inducements for the removal of his shoddy mill to that city.

The Brantford *Courier* says that local capitalists are considering a plan to start a Brussels carpet factory in that city.

The dry goods store of Messrs. Bailey & Sutton, Brandon, Man., has been burned, with a loss of \$35,000, and insurance, \$26,000.

White goods should be kept in boxes, the covers of which can be easily opened. By this means the goods may be kept clean the season through. Now is the time to attend to it.

Flannagan (to Casey, who has fallen from an unfinished building)—"What's the matter wid ye, man?" Casey (feebly)—"Oh! Oi jist tuck a drap too much."—*Philadelphia Record.*

The Leamington council has offered Brown & Wigle, woolen manufacturers, Kingsville, exemption from taxation, free water and natural gas at 5 cents a thousand, if they will remove there.

There is some talk of the formation of a jobbers' association in connection with the London Board of Trade. The idea was suggested by a letter from Winnipeg, where an association exists and is doing good work in the disposal of bankrupt stocks.

Three buyers making purchases through Messrs. Heron, Dickson

& Co., Glasgow, have arrived [in Manchester] from Canada, namely, Messrs. John Murphy (Messrs. John Murphy & Co., Montreal), Thomas Ritchie, Belleville, Ont., and E. K. Spenny, Yarmouth, N.S. A large number of small Ontario retailers operate in this way.—*Drapers' Record, Jan 19th.*

FOR GROCERS AND PROVISION DEALERS.

J. H. Harris will, we are told, open up a wholesale establishment in Moncton, N.B.

The oatmeal mill at Pilot Mound recently shipped a carload of oatmeal to a firm in Australia.

Ottawa bakers have raised the price of bread, charging nine cents instead of eight for a four pound loaf.

A substantial cold storage warehouse is being erected at New Westminster, B.C., and will be completed about April 1st.

A Porto Rico letter of Jan. 16th says cod had dropped from \$7 to \$6.50 on heavy receipts from Halifax, Lunenburg and Yarmouth.

A London cable says that English merchants are unanimous in the opinion that Manitoba wheats are this year of a finer quality than they have been for a number of years past.

Hamilton wholesale butchers on the market talk of a petition asking for a covered shelter for their meat. In winter they are subjected to cold, snow and storm, and in summer to heat and rain.

Grocers in New Westminster, B.C., are discussing the adoption of an early closing system, and are apparently not of one mind as to its advisability. The authorities are strictly enforcing the early closing by-law recently passed in that city.

Returns received at the Canadian Department of Trade and Commerce show that during 1894 there was shipped to England 23,711 tons of Canadian hay. Shipments the preceding year, a period of fodder famine in England, amounted to 63,175 tons.

At the first annual meeting of the Georgian Bay Fish Co. at Collingwood, directors for 1895 were elected as follows: Messrs. Jas. Scott, Jas. Playfair, J. L. Burton, M. Burton, C. E. Stephens, C. S. Davis, W. A. Clark, T. J. Sheppard and H. Y. Telfer. At a meeting of the directors Jas. Playfair was elected president; J. L. Burton, vice-president, and W. A. Clark, manager.

A comparative statement of wheat (including flour) exported from Manitoba for the last nine years is as follows:

	Bushels.
The crop of 1886 was	4,000,000
" 1887 "	10,500,000
" 1888 "	4,000,000
" 1889 "	4,500,000
" 1890 "	11,500,000
" 1891 "	14,000,000
" 1892 "	14,000,000
" 1893 "	12,000,000
" 1894 " estimated	15,000,000

INSURANCE ITEMS.

Mr. William John Hammond has been appointed district manager at Glasgow, Scotland, for the Sun Life Assurance Company of Canada.

In our statement of losses by the second Toronto fire we put down the Norwich Union for \$22,000 loss. We are pleased to learn now from Mr. Dixon that "the total loss of that company on that occasion was \$7,600, every dollar of which was paid the day the claims were presented."

The boiler inspector of Montreal, Mr. Champagne, has made his report for 1894. In that year he inspected 1,412 boilers, hydraulic proofs being made in 1,327 cases. Thirteen boilers were condemned, and 119 found to be defective. Ten per cent. defective out of all examined is a very sufficient justification for his office.

Mr. Colin McLeod Robertson, who has for some time held the position of chief inspector at the Glasgow branch of the Standard Insurance Company, has been appointed by the directors of the British Empire Mutual Life Assurance Company their resident secretary at Glasgow, to supply the vacancy occasioned by the resignation of Mr. J. F. Lamont.

There is published annually, at price 50 cents per copy, "The Michigan Insurance Directory," containing a list of insurance agents and their companies in the larger cities and towns of the State, with names and addresses of all the companies authorized to transact business in the State, their officers, and the names and addresses of State or special agents in charge of Michigan, besides a quantity of other information, such as population of cities, description of fire department, anti-rebate law. The publisher is Edward J. Wohlgenuth, Detroit.

Sketch states that Miss C. Rogers has the honor of being the first female insurance agent in the United Kingdom. She started her enter-