

all kinds of builder's and shelf hardware in brass, bronze and iron. Mr. Duffy's "Angels of Commerce," as Rev. Sam Jones calls commercial travellers, or drummers, spread their white wings in all directions, and their success in selling goods is most satisfactory. Sales are made only to the wholesale trade, and the general outlook for business is so encouraging that it will soon be necessary for Mr. Duffy to largely increase the number of his employes.

At a recent meeting of the Brantford city council, according to the *Courier*, the Manufacturers' Committee of the council reported—1. That in the event of Messrs. Moore & McGarvin, trunk manufacturers, Acton; G. R. Holden, featherbone manufacturer, St. Thomas, and C. Jarvis, establishing industries in the city of Brantford for the manufacture of their various wares, they be exempt from taxation on their various businesses for the period of ten years from the time of beginning. 2. In reference to the communication of Messrs. Simpson & Co., carriage manufacturers, asking exemption from taxation, that inasmuch as the City Solicitors advise that this Council cannot grant exemption as the business is not a new one—but the extension of one already established your committee cannot recommend the granting of the application.

THE new pumping machinery for the Montreal water works is said to be the largest pumping plant ever constructed in America. The whole consists of eight centrifugal pumps having the discs balanced by the suction connection on both sides of the case, which makes it very useful for moving sewage or water containing sand or any foreign matter whatever. Four of the pumps have 15-inch and four 24-inch deliveries. Each of the 15-inch pumps will discharge 7,000 gallons per minute, 420,000 gallons per hour. The total capacity of the four 15-inch pumps is 40,320,000 gallons in the twenty-four hours. Each of the four 24-inch pumps will discharge 18,000 gallons per minute, and the total capacity of the four combined is 108,680,000 gallons in the twenty-four hours. The total capacity of both the 15 and 24-inch pumps is 148,940,000 gallons in twenty-four hours.

The Collingwood Rock Well Co., Collingwood, Ont., have been incorporated as a joint stock company, and will proceed to make borings, or test wells for the purpose of discovering oil, gas, salt or other natural products in that vicinity. According to Prof. Ryan, the strata underlying the town of Collingwood is Utica shale and Trenton limestone similar to that which underlies the town of Furlong, Ohio, where great natural gas wells have recently been discovered. The promoters of the enterprise are confident that they will find natural gas also. Should they be successful, the vast mineral wealth, consisting of iron and copper ore, on the north shores of Lake Huron, may be turned to good advantage, as at present these mines are lying idle for lack of coal or other fuel to develop them, the cost of transportation of the raw material being too much to allow of any profit.

DID He Intend Coming?—THE CANADIAN MANUFACTURER of the 2nd inst. says: "We have been informed by Mr. Thomas McDonald, late senior partner of Messrs McDonald, Kemp & Co., Toronto, that he has taken over the extensive buildings on Sherbourne street, this city, recently occupied by the Toronto Electric Light Co., and is fitting them up for his new business. He is now placing machinery for the manufacture of galvanized iron range boilers ranging in capacity from 30 to 100 gallons, galvanized iron scuttles and buckets, patent stove pipe elbows, fruit cans, liquid paint tins, Walter's patent metallic shingles and a number of American specialties. The works will probably be in full operation by January, and new lines of products will be added from time to time." It looks very much as if Oshawa had been made a cat's-paw for the purpose of bringing some person to time in Toronto. The above appears as if the ruse had succeeded.—*Oshawa Indicator*.

THE Canadian Pacific Railway Company intend doubling the capacity of their freight rolling stock, and propose building during the coming year 4,000 box cars and 200 locomotives. They are at present turning out five cars a day at their shops at Perth, but they find that their present capacity is entirely inadequate for the freight which is offering. In order to meet this emergency they will erect additional large shops in Montreal, near their Hochelaga station, which will give them a capacity of ten cars per day there. Then they intend to move all their car business from the Colborne street shops, which will be enlarged and equipped with additional machinery and used entirely for the locomotive works. The capacity of these locomotive works is now one locomotive a week, and it is the intention of the company to double this. The erection of these shops will involve a large outlay of money, and when they are completed and the machinery in position they will give permanent employ to 2,500 men.

A STATEMENT of the cost of building locomotives in the shops of the Canadian Pacific Railway Company, indicate that such work is done a good deal cheaper in Canada than in this country. The mechanical superintendent of the Canadian Pacific states that the cost of building an eight wheel road engine, American type, cylinders 17x24, drivers 62 inch, weight of engine in working order 87,000 pounds, at \$5,740, 10 per cent. being added to both material and labor. The superintendent of machinery of one of the principal Chicago roads furnishes us with the following figures as the result of his experience in recent locomotive building: A fifty ton Mogul engine cost, with 10 per cent. added, \$8,967; four eight wheel passenger engines, cylinders 17x24, driver 5 feet in diameter, weighing 42 tons, cost \$7,420 each; ten Mogul freight engines, cylinders 18x24, drivers 4 feet 8 inches, weighing 47 tons, cost \$7,349 each. Here is a remarkable difference in cost in favor of the Canadian road. It would be interesting to know why it exists.—*Railway Ig.*

WM. F. COCHRANE, whom the millers are not likely to forget as the central figure of the biggest patent litigation that has ever vexed the milling world, has again come to the surface as an inventor of mill machinery. If the reports of the Canadian papers (extracts from which are published elsewhere in this issue) are anywhere near correct, Mr. Cochrane ought to have a big thing. The *Hamilton Times* publishes a two column article descriptive of Mr. Cochrane's reduction machine and biographical of Mr. Cochrane himself. If the *Times* is even approximately correct, Mr. Cochrane will be able to recoup himself for the failure of his former venture in the domain of milling; but we fear the paper in question is a little too sanguine, too much like Col. Sellers. For instance, it estimates the number of double sets of roller mills now running at 500,000! It also figures out that these roller mills require 6,000,000 pulleys and 50,000,000 feet of belting, whereas, the Cochrane machines would do the work with 142,856 pulleys and 4,287,780 feet of belting. An invention need not be near so good a thing as that to realize a fortune for its inventor.—*American Miller*.

DURING the past six years the value of the products of the forest shipped to the United States out of Wallaceburg, Ont., was for fire wood, \$808,698; stove bolts, \$520,370; saw logs, \$636,633; pine lumber, \$205,098; oak lumber, \$20,483; railroad ties, \$63,201, and other products, such as hoops, staves, axe handles, etc., \$226,368, aggregating a grand total of exports from the Sydenham Valley of \$2,480,824. The local mills there furnish the cooperage stock for nearly the whole Dominion, and at least \$100,000 should be added to this, which would make the aggregate sum larger and place the yearly average about half a million dollars, or sufficient to buy 25,000 acres of timbered lands at the going price of \$20 per acre. This rate of depletion, while a source of money making for the present, is regarded with a jealous eye by those who see in the near future a complete dearth. Attempts have been made to check it by asking Parliament for the imposition of an export duty on elm logs. One thing is evident, that so long as the forests last, the farmers have a large source of income, in addition to their usual crops of wheat, oats, pork, fruit, etc., and the question suggests itself, Why not preserve it as far as possible, and reproduce it by systematic planting?

THE Dodge Wood Split Pulley Company, Toronto, have recently placed quite a number of very fine rope transmissions of power in some of the largest manufacturing establishments in this city and vicinity. Among these are three large drives for a 70 horse-power transmission for the new addition to the works of the Massey Manufacturing Company; an 80 h.p. for Mr. Joseph Simpson's knitting mills; a 60 h.p. for Mr. James Lochrie's rope works; a 50 h.p. for Messrs. J. P. Wagner & Co.'s new factory; eight drives aggregating 87 h.p. for the Barber & Ellis Co.; and a 35 h.p. for Messrs. T. Tushingham & Son, all of Toronto; a 50 h.p. for Messrs. Forbes & Co.'s woolen mills, Hespeler, Ont.; a 10 h.p. for the Auburn woolen mills, Peterboro', Ont., the shafting being at a right angle with the engine, three drives—one 80, one 50, and one 40 h.p. for Mr. George Easterbrook's saw and grist mills at Tweed, Ont.; one 30 h.p. for Messrs. Broadfoot & Box's furniture factory at Seaforth, Ont.; one 12 h.p. for the Polson Iron Works Company; and one 40 h.p. for the cracker factory of Messrs. Christie, Brown & Co., both of Toronto. By this it will be seen that the Dodge system of transmitting power by Manila ropes and grooved wood pulleys is becoming very popular.

ONE of the oldest if not the oldest glove manufacturer in Ontario was Mr. W. E. Parmenter, who retired from the business some years ago, disgusted with the treatment he received as a manufacturer. Mr. Parmenter started in Dundas between 1863 and 1864, and introduced the first sheepskin splitting machine used in the trade in Canada. The first two or three years of Mr. Parmenter's