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Vol. 35.

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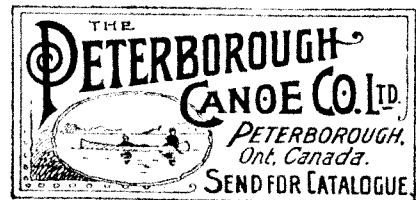


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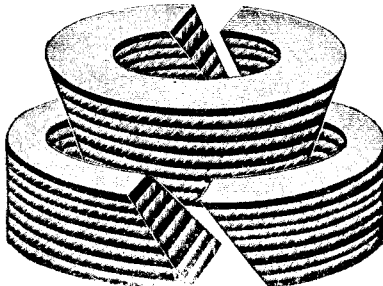
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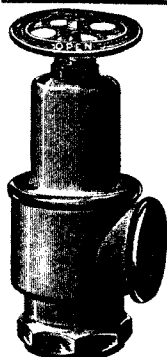


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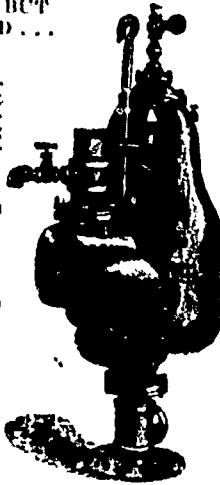
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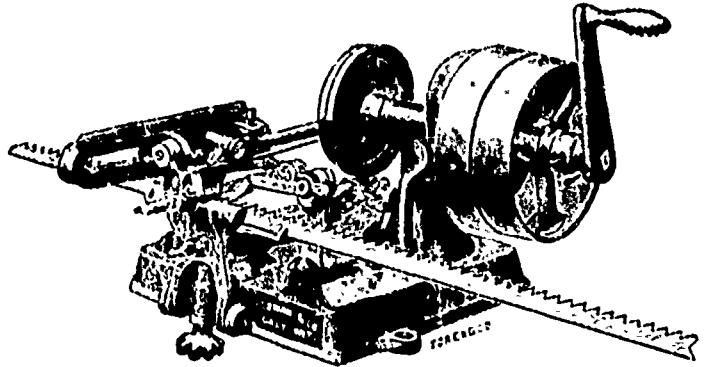
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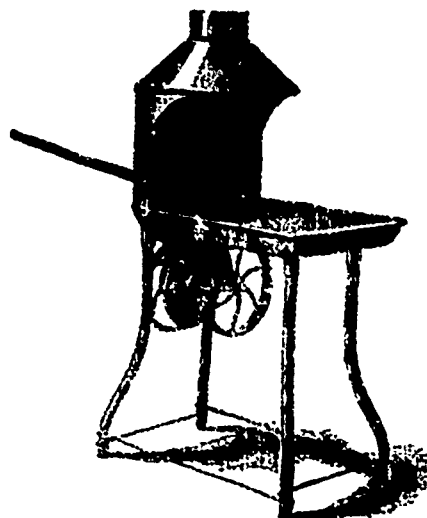
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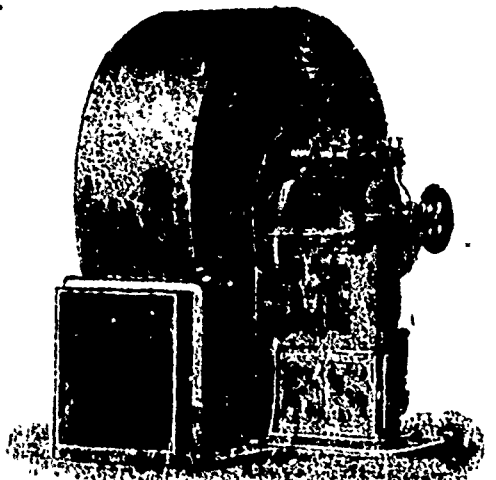
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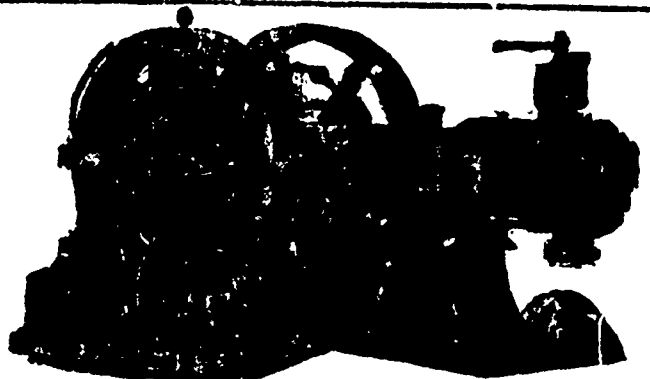
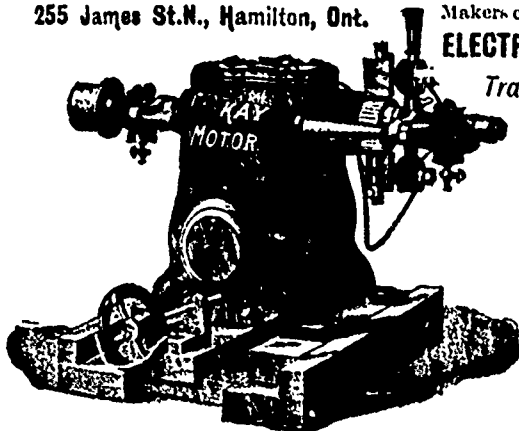
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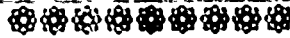


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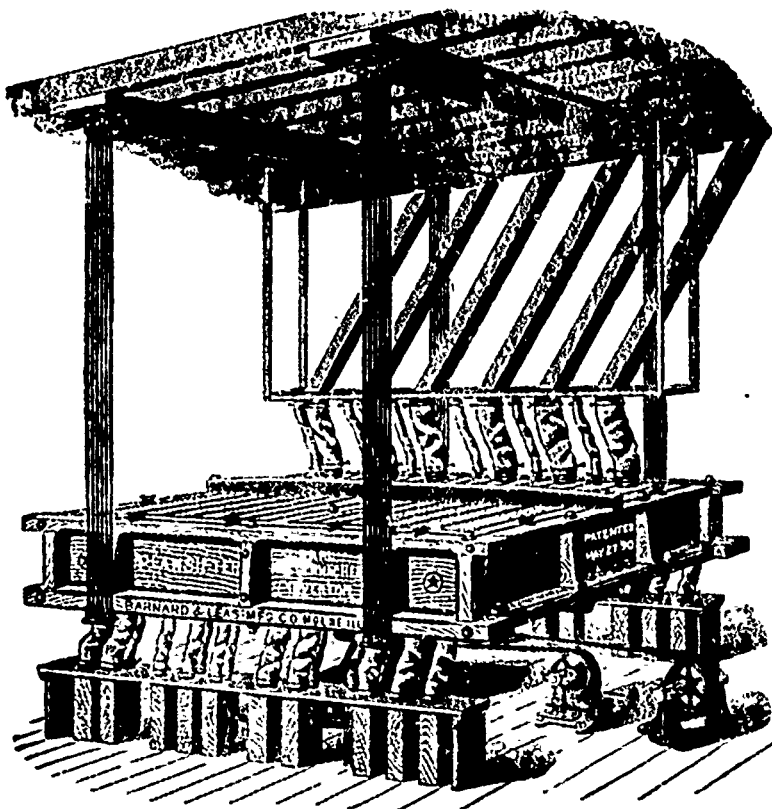
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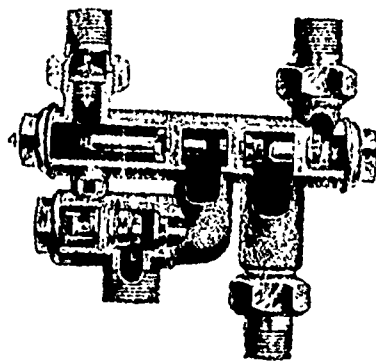
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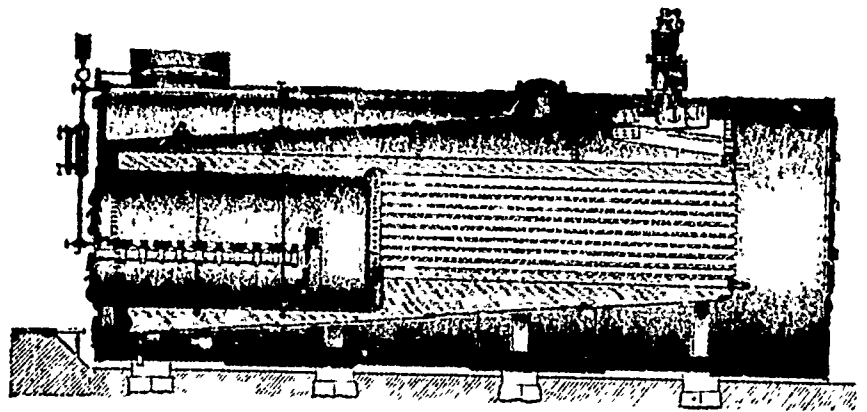
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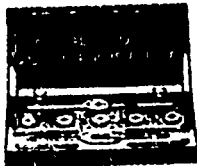
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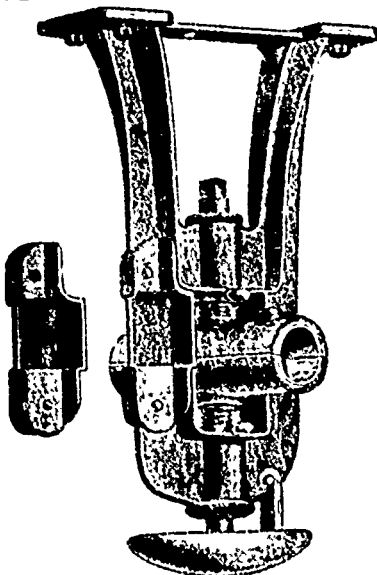
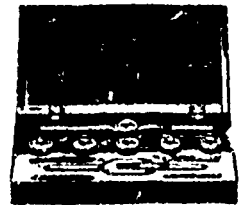
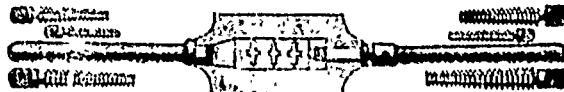
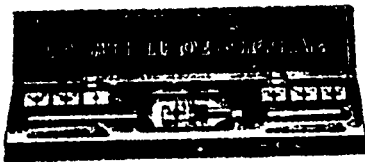


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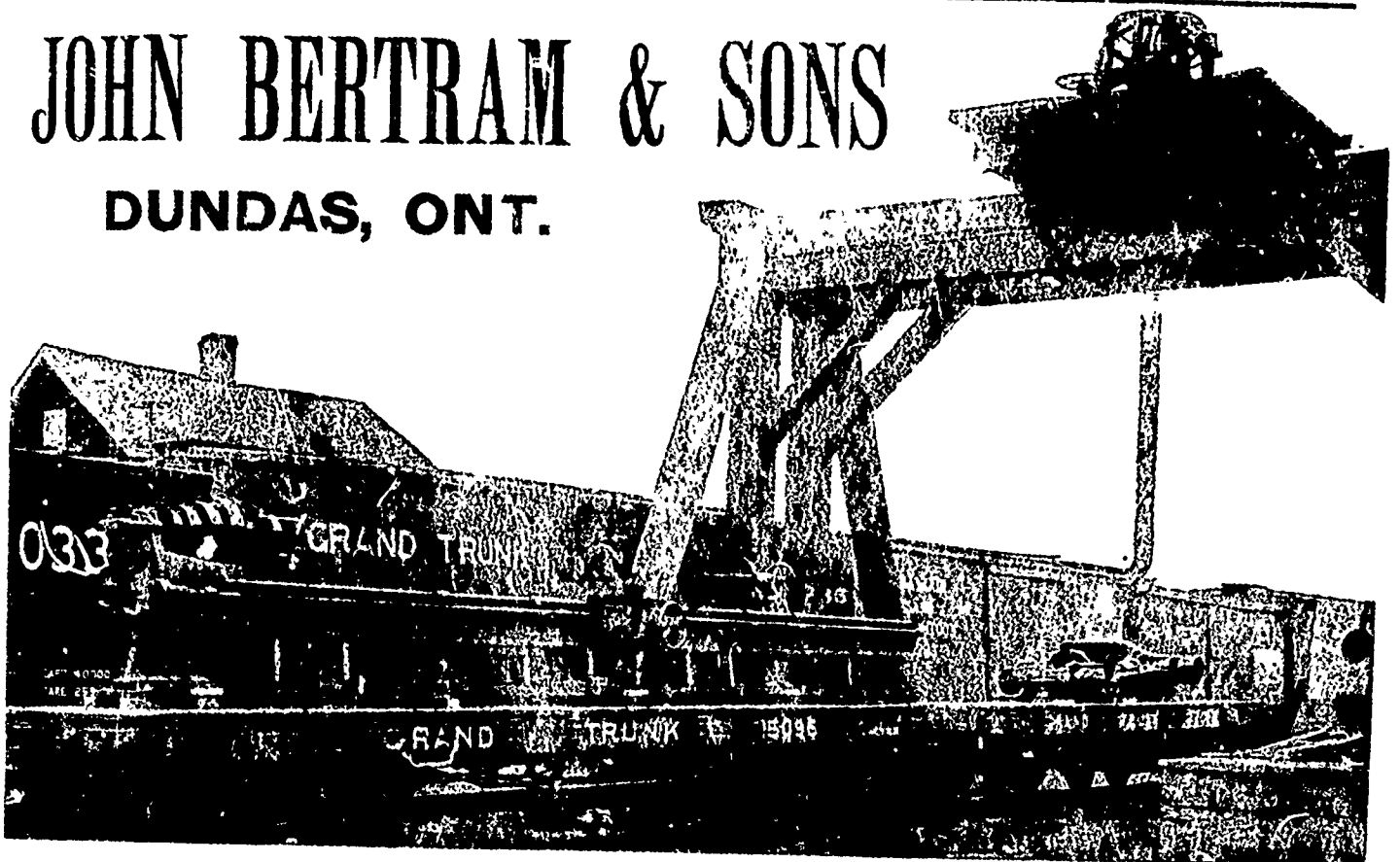
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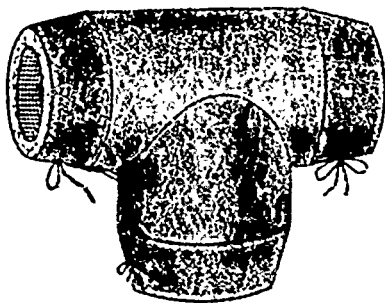
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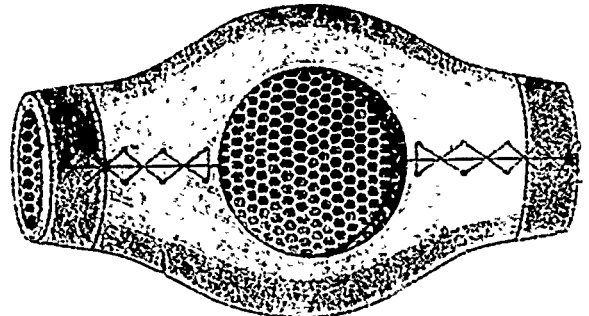
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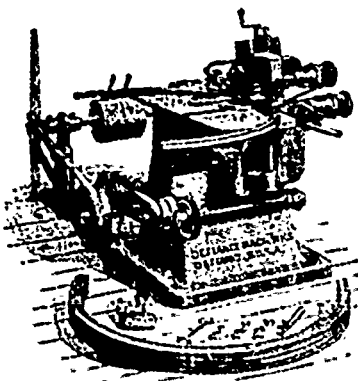
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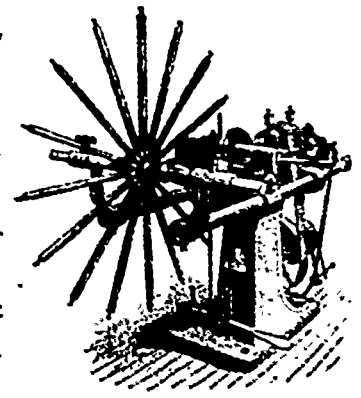
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J. J. CASSIDY, Editor.

Subscription, . . . \$1.00 Per Year.

ADVERTISING RATES:

\$12.00 Per Column inch per year; Thirty inches to Page.

The Canadian Manufacturer Publishing Company, Ltd.

McKinnon Building, Cor. Melinda and Jordan Sts., Toronto.

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A PROMISING OUTLOOK.

The general outlook for Canada at the beginning of this crop year is more promising than at this date for many years past. Notwithstanding the heavy fall of rain with which large sections of Ontario were lately visited, it now appears that the damage at first reported has not been nearly so great as was imagined, and, on the whole, there will be gathered a full average quantity of hay and all kinds of grain, with a very favorable prospect for root crops. From all the other provinces the crop reports are very encouraging, especially from Manitoba, where the wheat crop is expected to yield

from ten to fifteen million bushels more than in last season. Prices during the summer for cattle, hogs and cheese have been very satisfactory. Canada will have a large surplus of wheat for export, and everything indicates that good prices will be obtained. The large reserves of wheat which had accumulated from the bountiful wheat crops of the world in 1893 and 1894 have been gradually melting away, especially during the past twelve months, owing to failure of the usual supplies from Argentina, India and Australia. There can be no doubt that the world's reserves of wheat from former crops are smaller than they have been for several years. The position is something like that at the harvest season of 1891. In that year the United States and Canada had large wheat crops, although unfortunately for Manitoba, a large proportion of its crop was badly damaged by frost and wet weather. On the other hand, the two largest wheat-growing countries in Europe—France and Russia—had very deficient wheat crops; so much so, that France required to import, during 1891-22, 112,000,000 bushels of wheat, and Russia was compelled to prohibit exports during the greater part of the crop year. In that year Roumania, Bulgaria and Turkey in Europe, had fair average wheat crops. This year the wheat crops of Russia and France are again deficient, although not to the same extent as in 1891. Roumania, Bulgaria, and Turkey in Europe, and also Austria-Hungary, are all reported very deficient in their wheat crops. Even if all the wheat-growing countries in the southern hemisphere should realize full average crops, it appears almost a certainty that wheat will command very satisfactory prices during the current harvest year. This must prove of inestimable benefit, especially to Manitoba. For coarse grains, the prospects for prices are by no means favorable. Fortunately, the great bulk of these cereals now grown in Canada is raised for feeding purposes, not for sale, and at present prices for cattle and hogs, they should yield good returns. It must certainly be poor economy for Canada, with its surplus of hay and coarse grains, to allow so many of its young cattle and sheep to be exported to the United States, many of them to be fed and fattened there for the English market.

Owing to the general depression in agricultural interests during the past three or four years, there was not that increase in financial, commercial and manufacturing prosperity that might have been desired. Fortunately, however, there has been a very general spirit of caution and economy evinced. Stocks of all kinds have been reduced to very small compass, and matters are now in a good condition to take advantage of every favorable indication. Our existing railways are rapidly increasing their traffic and net earnings; large new railway mileage is under construction; heavy expenditures are being made on canal enlargement and other public works; valuable gold discoveries have been and are being made in many parts of the Dominion, so also of many other minerals; considerable foreign capital is being brought in and future large imports are expected. All these circumstances, combined with a large crop and good prices are well calculated to arouse that spirit of confidence and enterprise which has been dormant for so many years.

The Inland Navigation Company, Charlottetown, P.E.I., is being incorporated with a capital stock of \$132,000, to build steamships and to carry on the business of a transportation company.

CANADA'S NATURAL MARKET.

It is astonishing to note the persistent tenacity with which writers for the Reform press and Grit politicians in Parliament and on the stump, in view of the facts established by the experience of the past few years, adhere to the theory that, because of its contiguity to Canada and its large population, the United States is the natural market for the agricultural products of this country. If it were the case that in the country of the larger population there was a deficiency in production of the principal products raised in the less populous country, the above theory might apply; but the contiguity itself implies that there must be a close similarity in production in the two countries. In nearly all the important articles both countries have a large surplus over what is required for home consumption, so that the one country cannot become a customer of the other to any great extent. Just so much as the larger population of the United States exceeds the smaller population of Canada, does this make the former the more dangerous rival and competitor of the latter in the foreign markets to which both of them have to resort. This journal has repeatedly quoted from United States reports showing the quantity and value of its exports of agricultural products. The monthly summary of Finance and Commerce of the United States for June last, supplies fresh information on this point. We subjoin the following extracts, showing the extent of that country's exports of the principal articles of agricultural produce common to both countries, for the year ending June 30, 1897:—

			To United Kingdom alone.
Cattle	Number	392,200	378,459
Horses	"	39,532	"
Sheep	"	244,120	180,304
All other animals and fowls	Value	\$68,771	"
Barley	Bushels	19,030,301	"
Bread and biscuit	Value	\$697,695	"
Buckwheat	Bushels	1,677,102	"
Indian corn	"	176,916,365	75,489,129
Corn meal	Barrels	475,263	"
Oats	Bushels	35,006,736	"
Oatmeal	Pounds	47,310,251	"
Rye	Bushels	8,560,271	"
Rye flour	Barrels	2,544	"
Wheat	Bushels	60,650,060	43,648,077
Wheat flour	Barrels	14,020,864	8,211,236
All other breadstuffs	Value	\$4,508,025	"
Eggs	Dozen	1,300,183	"
Fruits	Value	\$7,739,305	\$3,683,577
Hay	Tons	61,658	"
Hides and skins (other than furs)	Pounds	31,119,166	"
Hops	"	11,426,241	9,913,152
PROVISIONS, ETC.			
Corned beef	Pounds	54,019,772	54,714,439
Fresh beef	"	290,395,930	290,007,772
Salted beef	"	68,652,388	67,713,480
Tallow	"	75,108,834	24,517,265
Bacon	"	500,499,448	386,457,491
Ham	"	165,247,302	134,933,003
Pork	"	68,075,344	19,005,770
Lard	"	568,315,640	192,116,083
Lard compounds	"	16,261,991	"
Mutton	"	361,955	"
Oleo and oleomargarine and oleo butter	"	118,370,503	7,661,339
Poultry and game	Value	\$72,082	"
Other meat products	"	\$2,944,486	"
Butter	Pounds	31,345,224	20,022,410
Cheese	"	50,944,607	40,660,737

a. The destination of the exports of articles marked "a" in the second column is not given.

To United Kingdom alone.

Milk	Value	\$524,968	"
Seeds	"	\$6,028,432	\$2,966,905
Beans and peas	Bushels	900,219	"
Potatoes	"	926,646	"
Vegetables, canned	Value	\$408,840	"
Onions	Bushels	73,511	"
All other vegetables, including pickles and sauces	Value	\$243,542	"

With such figures as the above it is ridiculous to contend that the United States is the natural market or can become an actual market for the agricultural products of Canada. It may be argued that, if the prohibitory duties imposed by the United States on farm produce were done away with, the demand for Canadian products would be very large. No doubt there would be a more extensive sale to the United States, but, on the other hand, under free trade between the two countries, there would be an equal increase in the sales of American produce in Canada. Special claim is made that free trade would particularly benefit our market for horses, cattle, barley and oats. How could this result, when it is seen that the United States is a large exporter of all these articles? Are not the markets of Great Britain, etc., as open to the exporters of Canada as to those of the United States? If, as is the case, the value of the exports regulates the price of like articles sold for home consumption, then Canadian products of like quality and character are worth as much in Canada as those in the United States.

The above figures show to what a large extent the United States is dependent upon Great Britain for a market for its surplus products. It is not contiguity, but extent of requirements, that makes one country the natural and actual market of another. As Great Britain is the principal market for the United States, so it is for Canada; and as soon as our Government and Parliament recognize this true position they will be able to deal intelligently with the tariff, and with appropriations for such transportation improvements and facilities as will most economically and profitably influence our trade in the direction which our experience of late years has proved to be its natural and actual route.

OUR FOREIGN COMMERCE.

In the Trade and Navigation Returns for the fiscal year ended June 30, 1896, is a Table—No. 3—which purports to show the grand aggregate trade of Canada from 1868 to 1896, inclusive, on the basis of "Total Exports and Imports." We append the following extracts by way of comparison:—

	Total Exports.	Total Imports.	Grand Total Exports and Imports.
1868	\$ 57,667,888	\$ 73,459,644	\$131,027,532
1886	85,251,314	104,424,561	189,675,875
1896	121,013,852	118,011,508	239,025,360

On another page of the returns another Table—No. 11—gives a statement of the quantities and value of merchandise received from the United States for immediate transit through Canada and transhipped at the port of Montreal to the United States and other countries, during the fiscal year ending June 30, 1896. At the foot of this table the total values of the merchandise thus received and shipped, for the years 1886 to 1896 inclusive, are given; from which we give the figures for the first and last years:—

For fiscal year ending June 30, 1886	\$ 5,745,606
" " " " " "	14,197,628

On examining the items for the year 1895-96, it appeared evident to the writer that these amounts were not included in Table No. 3, which purports to give "total exports and imports." On referring to the Controller of Customs for information on this point, we were advised that "the value of goods in transit through Canada and transhipped at the port of Montreal for foreign countries, is not included in our table of total imports and exports to and from Canada. These goods simply pass through Canada to their places of destination, and, therefore, are not treated as imports and exports. Only such goods as are purchased for delivery or warehouse in Canada are considered imports. Our exports consist of articles of domestic origin or articles of foreign origin on which duty has been paid, or foreign goods ex-warehoused for exportation. I may add that this practice prevails both in Great Britain and the United States."

Although this question is merely of statistical importance, it is nevertheless of considerable interest in affecting the comparative rate of increase in our foreign commerce. It would appear that no record is kept of the "in transit" trade through Canada from the United States, except that which takes place at the port of Montreal. No doubt some trade of this kind is transacted at some other ports, say Quebec, Halifax, St. John's, etc. Of the \$14,191,628 of this class of imports and exports at the port of Montreal, \$1,563,556 consisted of merchandise passing from one point of the United States to another point of the same country. This is simply a matter of transportation, not of commerce. Probably, if the returns from other ports than Montreal were kept, the value of these would balance the \$1,563,556 of mere inter-state trade. If Table No. 11 contained a notification that the imports and exports therein mentioned were not included in Table No. 3, (although the latter is stated to be on the basis of "Total Exports and Imports,") this would make the position more clearly understood. A Table, No. 12, is given in the returns, with the note, "The undermentioned articles are included in General Statement No. 1, etc." Why should there not be a note to No. 11, showing that the articles therein contained are not included in Table No. 3? Perhaps it would be better still if the Table No. 3 were styled "General Exports" and Imports, and that table now No. 11 should be called No. 4, showing "Special" Imports and Exports. It must surely be conceded that all articles received in transit and exported to foreign countries are as really imports and exports as are those articles of merchandise which are warehoused. The article of flour of wheat is by far the most important of this "in transit" trade, the value being \$5,242,732. In the statement of General Imports, the quantity of foreign flour imported is 99,830 barrels, of which there was entered for consumption, 41,426 barrels; leaving 58,404 barrels to be accounted for. The statement of exports shows 57,574 barrels exported, which clearly corresponds with the last previously stated quantity. If this trade is said to be imports and exports, why not the in transit trade? All the difference between the two is that the former is entered for warehouse, but the latter is not. As THE MANUFACTURER understands the position, it is this:—A miller in the Western States ships, say 1,000 barrels of flour, direct to some foreign market, via Montreal, by lake or rail, and by Allan or Dominion or other line of steamers. This goes under the heading of "in transit for immediate

transshipment." He ships another 1,000 barrels of flour to Montreal, not knowing or designating its ultimate destination. The flour goes into the statement of general imports and exports. The only difference in the two shipments is in the nature of the customs entries, but the one transaction forms as actual a part of Canadian commerce as the other. When, as has been shown, this "in transit" trade has increased from \$5,745,606 in 1886, to \$14,191,628, and, as this trade is likely to increase very largely if the bonding system between the United States and Canada continues, it is of importance that it should be clearly understood that the large values of this class of imports and exports is in addition to those stated in Table No. 3. They form an important proportion of our foreign commerce, and when included with the General Imports and Exports show in a more favorable light the large increase in our foreign trade since Confederation, or even since 1896.

CANADA'S PREFERENTIAL TRADE.

Following is the text of the important despatch from the Right Hon. Joseph Chamberlain to the Governor-General giving the decision of the law officers of the Crown in the treaties appeal argued unsuccessfully in London by Sir Louis Davies:—

Law officers advise that the Crown is bound by the German and Belgian treaties in respect of trade between these countries and Canada; that the obligation in these treaties that the produce of Germany and Belgium shall not be subject to any higher or other duties than those which may be imposed upon similar articles of British origin is absolute and unqualified, and as the United Kingdom has been admitted to the benefit of the reciprocal tariff, Germany and Belgium are entitled to it also. Law officers advise also that on the admission of Germany and Belgium the benefit of the reciprocal tariff must be extended to all countries entitled in Canada by treaty to most-favored-nation treatment in tariff matters. Notice was given on July 30th to terminate the treaties, and in the meantime effect should at once be given, in accordance with the undertaking given by your Ministers to the law officers' decision and excess of duties levied repaid on demand.

Besides Germany and Belgium the full list of countries claiming in Canada by treaty most-favored-nation treatment in tariff matters are the following, viz:—Argentine Republic, Austria-Hungary, Belgium, Bolivia, Columbia, Corea, Costa Rica, Denmark, Dominica, France (Algeria and the French colonies), Germany (Zollverein), Liberia, Madagascar, Morocco, Muscat, Persia, Russia, Salvador, South African Republic, Spain, Sweden, Tonga, Tunis and Venezuela. The above is an official list. The law officers of the Crown in Great Britain having decided that Germany and Belgium are entitled under their treaties with Great Britain to the preferential schedule of the new Canadian tariff already extended to Great Britain, and that the excess of duty levied on German and Belgian goods since April 23rd last, the date the new tariff went into effect, must be refunded. The customs department to-day sent out the following circular:—"You are hereby instructed that the benefits of the reciprocal tariff of Canada under the Customs Tariff, 1897, extends to the following countries until August 1, 1898, viz:—Germany and Belgium. Until that date articles which are the growth, produce or manufacture of either of these countries when imported direct therefrom may be entered for duty or taken out of the warehouse for consumption in Canada at the reduced rates of duty provided in Schedule D of the Reciprocal Tariff, 1897, subject to the limitations and regulations. The excess of duty paid since the of April 22, 1897, on articles imported from these countries will be refunded if the claim therefor is accompanied with satisfactory proof of origin and value of such articles,

and if the direct importation is made in the usual form through the Collector of Customs at the port where such duty was paid.

THE BEET SUGAR INDUSTRY.

Sugar, London, June 15, 1897, gives the world's production of raw beet sugar for the campaign, 1895-96, as follows:—

	Tons of 2,204 lbs.
Germany.....	1,637,000
Austria.....	781,100
France.....	624,900
Russia.....	773,500
Belgium.....	200,000
Holland.....	102,000
Sweden.....	79,400
Other Countries.....	60,000

Total..... 4,257,900

Our contemporary advises that under a large bonus offered by the Government of Roumania on home-produced beet sugar, two factories have been started in that country, and that a British firm of sugar manufacturers has, during the present season, made overtures to the farmers of the Braila district of Roumania to induce them to adopt a scheme of sugar beet cultivation, the firm undertaking to purchase the crop on certain terms and conditions. It also shows that the production of beet root sugar in the United States has increased from 1,910 tons in 1888 to 40,000 tons in 1896. Quoting from the California Advocate, it gives a history of the industry in that country, and a list of the factories in operation in the different States, in addition to which there are a large number of indefinite propositions, many of which will undoubtedly be realized. The Advocate says:—"There is lately, outside of mining, no business in America which will return such large and steady profits. We import each year a hundred million dollars worth of sugar, we can make it all at home, and it will not be long before we do so."

Under the new United States tariff a very high rate of duty has been imposed on foreign sugar, avowedly for the express purpose of promoting the beet sugar industry in that country. In addition to this the legislatures of several of the States passed acts at their last sessions, granting State bonuses (generally \$1.00 per 100 pounds on all sugar manufactured from beets grown in the State).

It may be asked why, if the business is likely to prove successful, should it require so much protection and encouragement? The experience everywhere has been, that no matter how favorable the soil and climate of any country may be for sugar beet production, there is always a difficulty in obtaining a supply of beets of good average quality for some years after the establishment of the industry. Satisfactory results are never realized until farmers discover that the crop, when carefully cultivated, is so profitable that they are ready to produce it on a large scale, and equip themselves with all the special implements adapted to the best methods of cultivation. Beets containing fifteen per cent. of sugar are far better value to a factory at \$4.50 per ton than are roots containing twelve per cent. of sugar at \$3.00 per ton. After a few years of experience, when the best farmers and soils can be selected, when the seed best adapted to these soils has been ascertained, and the description and quantity of fertilizers required becomes known, then Canada, or at any rate Ontario, will be able to produce beet sugar of as good quality and at as low a cost as any country in the world.

A German firm, very prominently connected with the beet sugar industry not only in that Empire, but also in other countries, have in three different seasons, sent experts to this province to investigate the conditions existing here, as to yield and quality of sugar beets, and the price at which farmers can afford to produce them, also, as to price of labor at factory, cost of coal, coke, lime and other materials. One of these gentlemen was for seven years superintendent of one of the beet sugar factories in California. They made separate calculations and estimates, all showing that under skilful cultivation on the part of farmers, and intelligent management of the factories, this province should, after five years experience, be able to manufacture white granulated sugar at as low a cost as in the average run of first-class German factories. These gentlemen are all fully informed as to the disastrous results of the operation of the three beet sugar factories in the Province of Quebec; but the conditions in Ontario are so much more favorable than in Quebec that these disasters have not alarmed them; and the firm with which they are connected believe that under a moderate bonus for the first five years, foreign capital can be procured for establishing the industry here. They think that any factory to be erected should have a capacity for working at least 500 long tons of beets in every day of twenty-four hours, because the initial cost of construction and the expense of operating a large factory bear a much smaller proportion to capacity than in the case of a small factory.

In the Province of Quebec, none of the factories ever succeeded in obtaining a full supply of beets for the year's operation, except in one season, when the company paid \$5.00 per short ton for all qualities, good or bad. In Ontario a thorough canvass of some sections has shown that an ample supply for a 500 ton factory can be contracted for at the rate of \$4.00 per long ton, delivered at the factory. For a factory of this size, the season's beets would cost in Ontario, for 100 days, \$200,000; in Quebec, \$280,000. In Ontario farmers prefer the price of beets to be regulated by the quality, and are willing to accept fourteen per cent. sugar as the basis for \$4.00. Such beets would yield from two to three pounds more granulated sugar for 100 pounds of roots than was obtained from a season's operation in Quebec.

Several years of experiments in the cultivation of sugar beets at the Ontario College Farm at Guelph, and a large number of experiments in many sections of this province, carried on for three successive seasons, showed that an average yield of fifteen tons per acre of good average quality may be relied upon. Considerable more care and labor are required for this crop than for root crops generally. A large number of estimates of cost of production have been furnished by reliable farmers, including rent, taxes, manure, cultivating, harvesting and delivering at factory. Most of these estimates range between \$30 and \$35 per acre.

In every country where the best sugar industry has been established, Government has encouraged it by heavy duties on imported sugar, and by bounties, direct and indirect. One of the strongest reasons for this policy has been, that the labor required for an acre of sugar beets, is much greater than for an acre of grain crops. Further, it has been established beyond question that the thorough cultivation and weeding of a sugar-beet crop improves the land so much that succeeding

crops are greatly benefitted both in yield and quality. In many sections of France and Germany where beet cultivation has been followed for some years, it has been found that on the reduced acreage under grain etc., heavier crops have been obtained, and a larger number of cattle had been fed than were possible if none of the land had been appropriated to beets.

Mr. Geo. Essick, an expert in beet cultivation and manufacture, gives the following illustration of the working of this crop:—"In the northern part of France, arrondissement of Valenciennes, 35,000 hectolitres (about 1,012,000 bushels) was formerly the average wheat crop. After the beet industry was established the wheat output increased to 428,000 hectolitres (1,215,000 bushels) although the wheat acreage had been reduced 25 to 30 per cent. Still more striking, however was the increase of feed for stock. When, previous to the beet growing only 700 oxen were kept, there was afterwards plenty of food for 11,500 oxen." It would be difficult to find in connection with any branch of agriculture or any other industry, more convincing testimony than this. THE CANADIAN MANUFACTURER has for many years strongly advocated the propriety of granting all needed assistance for establishing the beet-sugar industry in Ontario. Not only would it prove of incalculable benefit to farmers, but it would give employment to thousands of people at the factories, would largely increase railway traffic, greatly aid implement manufacturers, and impart a valuable stimulus to all interests, financial, commercial and industrial.

The issue of Sugar, above, quoted gives the following details of the operation of the Demminer beet sugar factory in Pomerania for the year 1896-97:—61,611 tons of beets worked, at an average price of \$5.00 per long ton; from which 8,781 tons of raw sugar were produced, and 1,100 tons of molasses. The high percentage of sugar and the small percentage of molasses obtained show that the quality of the beets must have been very fine, and that the sugar from the molasses was extracted; in many factories the latter process is not employed owing to the present low price of sugar and cost of extraction. The average price obtained for raw sugar, Class 1, was 11s. 1½d. per 50 kilos (110½ lbs.) This was a high average and was realized through the sale in advance, in spring of 1896, of 4,500 tons sugar. The factory used 8,500 tons of English coal, and 600 tons of Westphalian coal. This is nearly fifteen per cent. of the weight of beets worked, and is about the average quantity estimated as required for manufacturing beet sugar. The factory employed 390 laborers, male and female, the wages of male laborers varying between 41½ cents and \$1.18, and of female laborers from 24½ to thirty-eight cents per day. The probable dividend to the shareholders estimated at eight per cent. The share capital is 750,000 marks, equal to \$178,500.

There are several ways in which the beet sugar industry may be established in Ontario. The Montreal sugar refiners might establish factories for manufacturing raw sugar, at points on the River St. Lawrence, Bay of Quinte, or Lake Ontario. With barges bringing Nova Scotia coal to the factory, the return freight on the raw sugar should not exceed \$1.00 per ton. If British sugar refiners contemplate manufacturing raw beet sugar in Roumania to be brought to Britain and refined there, it should surely be a more profitable business for Montreal refiners to manufacture raw beet

sugar in Ontario, and transport the same to their factories for refining, or factories may be erected in Ontario adapted to the manufacture of first class white granulated sugar.

It is sincerely to be hoped that at next session of Parliament such liberal legislation will be passed as will induce capitalists to invest largely in beet sugar enterprise. We entertain the most implicit belief that with a moderate bonus, extending over a sufficient term of years, this industry will prove profitable to investors, and of immense advantage to farmers and many other interests.

A FREE TRADE DODGE.

In framing the new Canadian tariff the Government announced that the Schedule D, or reciprocal feature of it would apply only to imports from Great Britain and perhaps New South Wales. The tariff is in operation, and the British Government have informed the Canadian Government that the schedule must apply not only to British goods but also to the goods of all countries coming under the "favored nations" treaties. Following is a list of British colonies and possessions that are excluded from Canadian tariff favor:—Ascension, Bahamas, Bermudas, Basutoland, British Bechuanaland, British Honduras, British Guiana, British New Guinea, Borneo, Cape of Good Hope, Ceylon, Cyprus, Falkland Islands, Fiji, Gambia, Gibraltar, Gold Coast, Hong Kong, India, Jamaica, Leeward Islands, Lagos, Mauritius, Malta, Newfoundland, Natal, New Zealand, Niger Protectorate, Queensland, South Australia, Straits Settlements, Sierra Leone, Tasmania, Victoria, Western Australia, Windward Islands, Zululand.

Following is a list of foreign countries that are entitled to the enjoyment of the favor extended in Schedule D:—Algeria, Argentina, Austria-Hungary, Belgium, Bolivia, Chili, Colombia, Corea, Costa Rica, Denmark, Dominica, France, Germany, Liberia, Madagascar, Morocco, Muscat, Persia, Russia, Salvador, Spain, Switzerland, South African Republic, Sweden-Norway, Tonga, Tunis, Uruguay, Venezuela.

A contemporary points out that some of these discriminations are ridiculous. For example, Newfoundland takes a good deal of our produce—flour, potatoes, cattle and so on; but Norway and Sweden take nothing, and, as a matter of fact, come into serious competition with us on the British market. Our Government lays a discriminatory duty upon Newfoundland products, and gives Norway and Sweden a preference. France is carrying on a war against Newfoundland fish in the interests of St. Pierre and Miquelon. We discriminate against Newfoundland and give St. Pierre and Miquelon, as colonies of France, better terms than we accord to our fellow-subjects. Newfoundland is already agitating for the ratification of the Bond-Blaine treaty, which gives the United States a tariff preference over us in the markets of that colony. This is not a matter for surprise under the circumstances. Venezuela, the republic that made the anti-British demonstration on the boundary question and nearly precipitated a war between Great Britain and the United States, gets a tariff preference from us; but British Guiana, next door, has to pay the high duties. Oom Paul, in the Transvaal, is also entitled to a preference if he sends us anything; but Natal and the Cape Colony have to pay the high rates. We will, it seems, take anything Argentina has

to sell at the lower duties; but when it comes to the Australian colonies we promptly discriminate. A number of the British possessions are sugar-producing countries—the West Indies, for instance. Mr. Fielding has taken good care that they shall not come in on reciprocal terms under any circumstances; for his tariff declares that there shall be no low or reciprocal rate for sugar. We decline to take British sugar at a lower figure than the sugar of the Spanish colonies. As a matter of fact, we give Spain and her colonies a tariff preference on everything but sugar, as, for example, fruits, but the same articles coming from British possessions must pay the heavier duty. It will be observed that our discriminations take the form of low duties to foreign countries that will send in manufactured articles to compete with and to injure our industries, and of high duties to British countries, which export natural products such as we do not grow, and which, but for these high duties, would send us their products and take from us ours in exchange.

HOSTILE LEGISLATION AND ITS ANTIDOTE.

It may be true that Hon. John Sherman, Secretary of State of the United States, has lost his wits or has softening of the brain or something of the sort, demonstrated by some of his recent antics, but it is difficult to see at this distance much difference between the capers of a crazy or imbecile Secretary of State and those of the Cabinet to which he belongs, and of which he seems to be such an exemplary representative. Of course it lies entirely and without challenge in the discretion of the United States Government whether that country shall shut itself up like a clam to the exclusion of the whole world, as far as it is able to do so, and whether it shall by its acts array itself in a hostile manner against the rest of the world; but it surely cannot imagine that its hostility can forever go unchallenged, and that no other country will ever act upon the conclusion that some measure of retaliation would be about the proper medicine for the occasion. In our opinion there is a very large and influential element in the United States that is not in accord with what seems to be at this time the prevailing sentiment regarding Great Britain and everything that is British, and Canada and everything that is Canadian; but large as this element undoubtedly is, it is not large enough to influence the legislation of that country, or to have any tangible effect upon the guidance of its legislation. Therefore, seeing that we are confronting a condition that is most palpably hostile to Canada and to the mother country, it is the part of wisdom and dignity to be prepared to show such resentment as may call a halt in this Sherman-like madness, and lead to a better feeling than now exists.

Mr. John Torrance, a prominent merchant of Montreal, largely interested in our maritime interests, thinks that Great Britain might help us by imposing a duty on United States breadstuffs. A ten per cent. discriminatory duty imposed by Great Britain against United States wheat and corn would soon bring the latter to their senses. The United States, he says, is displaying its increasing hostility to Canada, not because Canada is an independent country, but because it forms a portion of the British Empire, and, as far as the United States is concerned, a somewhat embarrassing portion. The British Government and people should be given to understand that the hostile fusillade that is being constantly kept up by

the United States against Canada is really directed against Great Britain and the Empire. This is the line of policy adopted by the United States to force Canada into annexation. The attitude of the United States towards Canada is an Imperial question, and it should be viewed in that light. In addition to this, Great Britain itself will soon experience the disastrous effect of the Dingley tariff on British industries. Why should not the Empire use the very powerful weapons it has at its disposal for bringing the United Statesians to their senses? A preferential duty in favor of colonial produce would stimulate production to such an extent that within a few years Great Britain would be entirely independent of the United States and other foreign nations for her food supplies. It is statesmanship to direct the possibilities of the Empire along the proper channels. What Canada alone could do under slight encouragement towards feeding Great Britain may be surmised from the success she has already obtained in supplying wheat, hay, cheese, butter, bacon and other products. Our harvest this year is larger than ever, and our exports will be the largest in the history of the country. The farm lands of Manitoba and the territories are being taken up better this year than for many years back. Manitoba has been tried and proved as a wheat country. Canada can easily grow all the wheat required by Great Britain and she can supply it as cheaply as the United States. A ten per cent. discriminatory duty against the United States would benefit Canada, Great Britain and the whole Empire, and it would at the same time teach the United States a much-needed lesson.

EDITORIAL NOTES.

The business of the Canadian Department of the Customs consists chiefly of the collection and refunding of duties. The refunding is done by order of Mr. Joseph Chamberlain.

Owing to pressure of work THE CANADIAN MANUFACTURER was obliged to decline an invitation to attend the 19th Annual Rhode Island Clam Dinner tendered to the electrical fraternity by Mr. Eugene F. Phillips, President of the American Electrical Works, of Providence, R.I. on August 21st.

Sir Wilfrid received the gold medal of the Colden Club because he had reduced by twenty five per cent the protection accorded to the Canadian workman. Then, seeing that the same "British preference" goes to France, he was awarded the Legion of Honor. Spain ought now to contribute the Golden Fleece, and Sweden the Order of the Seraphim, while Germany and Belgium should come forward liberally with their titles or medals. It is an ungrateful country that does not appreciate the concessions Sir Wilfrid has made at other people's expense.—Mail and Empire.

With the tariff arrangements now existing in both countries, each is master of its own home market. With reciprocity, it is quite likely that the advantage would rest sometimes with Canadian millers and sometimes with the millers this side of the line, according to crop conditions. As transportation between the countries is beyond the jurisdiction of local law, shipments of flour could be made by either party cheaper for a given distance than if made wholly within either

country. We imagine that both Canadian and American millers will ponder the question before advocating unrestricted trade in flour between the two countries. Many of our millers would undoubtedly favor it; but there are others, especially in the East, who would prefer the present status.—American Miller.

The United States Congress adjourned on July 24th. It was called in extraordinary session by President McKinley two days after his inauguration, and met on March 15th. The tariff matter was the all absorbing question. The Dingley bill was reported to the House three days after Congress met. The House passed it on March 31st. It was reported to the Senate on May 4th, and on July 7th was passed with 872 amendments. On July 17th the conference report was agreed upon, by which the Senate receded from 118 amendments and the House from 511. The others, 243 in number, were compromised. The conference report was adopted by the House on July 19th. The report was taken up in the Senate on July 20th and adopted on July 24th. That is a brief history of the Yankee tariff measure.

William Harper, chief of the Bureau of Information of the Philadelphia Museums, who recently returned from a trip abroad, reports having met with great success in his endeavor to extend the scope of the Museums. Mr. Harper's mission was to enlist the cooperation of boards of trade in India, South Africa, Australia, Japan and China. The idea, Mr. Harper explained, was to find out how trade relations with the United States could be fostered, and in every way he declares he met with assurances that the various governments would give the matter careful consideration. As a result of Mr. Harper's efforts a communication was received yesterday from the Chamber of Commerce of Melbourne, Victoria, sending the names of the president and secretary as members to the advisory board of the Museums. The other chambers of commerce which have taken similar action are Colombia, Ceylon, Calcutta and Brisbane, Queensland.

United States Consul Muth, of Madgeburg, Germany, has sent a report to the State Department concerning sites for beet-sugar factories. The report is considered especially interesting at this time on account of the prospects of increased beet-sugar production in that country. The consul says: "Factories should be erected only in localities where it has been demonstrated beyond doubt that sugar beets can be grown successfully. Experience has shown that the sugar-beet grows in almost any soil, provided the proper fertilizer is applied. A rich, deep soil with a porous well drained subsoil should be selected. It is not necessary to plant large areas; small patches here and there will answer for experimental purposes, and in this way a large district can be covered without obtaining an accumulation of beets. The factory must be easily accessible to the farmers, and should, therefore, be situated in the heart of the district from which it draws its beets. All material needed in the manufacture should either be close at hand or easily procurable. Besides beets, the principal materials needed to run a sugar factory are water, fuel, and limestone water to wash the beets, and limestone for the purification of the beet juices. In Germany beet-sugar fac-

ories principally manufacture raw sugar to be sold to the refineries. From the nature of the sugar industry in the United States, the beet-sugar factories probably will find it more advantageous to manufacture granulated sugar and sell it for direct consumption.

There is reason to believe that the Ontario Government have under consideration a very important movement in the interests of labor, and that new timber regulations are being considered, which provide that timber license holders shall not in future employ in or about cutting pine timber on the lands of the Crown non-resident labor, or in other words, that laborers whose homes are outside of Canada shall not be employed by American or Canadian lumbermen to work in the lumber camps or in and about the cutting, hauling or handling of timber on the lands of the Crown. As many American and some Canadian lumbermen have heretofore employed large numbers of men from the other side, this new regulation, if brought into force, will effect a considerable change from past conditions.

Following is a list of foreign countries to which Mr. Fielding's "British preferential tariff" applies. It is alphabetically arranged and is handy for reference:—

Algeria.	Madagascar.
Argentina.	Morocco.
Austria-Hungary.	Muscot.
Belgium.	Persia.
Bolivia.	Russia.
Chili.	Salvador.
Colombia.	Spain.
Corea.	Switzerland.
Costa Rica.	South African Republic.
Denmark.	Sweden and Norway.
Dominica.	Tonga.
France.	Tunis.
Germany.	Uruguay.
Liberia.	Venezuela.

We shall have to refund Germany, Belgium, France, and the rest of the favored nations 12-1-2 per cent. of the duty collected on the goods imported from them during almost the whole of the last four months. In the fiscal year ended 30th June, 1896, the Customs duties collected on articles imported from Germany, Belgium, Austria-Hungary, France, Denmark, Spain and its possessions, amounted to \$3,200,000. The duty paid on the goods of all the favored nations would not be far short of \$4,000,000. For four months, therefore, the duty would be easily a million and a quarter. Twelve and a half per cent. of this would be \$156,250. As during the third of a year since the 22nd of April our imports have been unusually large—having been held back for months previously in order to get the benefit of the new tariff, and being increased as a direct consequence of the lower duties—the Customs receipts from the countries in question for that period will amount to much more than for the corresponding one of two years ago. Also since April German and Belgian competition on this market has been keener than ever before, as shippers in these countries foresaw that they could not be prevented from getting the benefit of the preference. Hence, instead of \$50,000, the total refund will probably be quite four times that amount. This will be bonusing foreign competitors of Canadian industry with a vengeance.—Mail and Empire.

Articles of incorporation of the Alaska Telegraph and Telephone Company were filed a few days ago by San Francisco capitalists. The plan is to run a telegraph line from Juneau to Dawson City over the trail by way of Chilcoot Pass. A cable containing both telegraph and telephone lines will be laid, which will rest on the surface of the ground, no poles being used. Stations are to be established every fifty miles.

Section twenty two of the United States tariff reads as follows :

"That a discriminating duty of ten per centum ad valorem, in addition to the duties imposed by law, shall be levied, collected and paid on all goods, wares or merchandise which shall be imported in vessels not of the United States, or which, being the production or manufacture of any foreign country not contiguous to the United States, shall come into the United States from such contiguous country, but this discriminating duty shall not apply to goods, wares or merchandise, which shall be imported in vessels not of the United States, entitled at the time of such importation by treaty or convention to be entered in the ports of the United States on the payment of the same duties as shall then be payable on goods, wares and merchandise imported in vessels of the United States, nor to such foreign products or manufactures as shall be imported from such contiguous countries in the usual course of strictly retail trade."

Under this clause the Collector of Customs at Chicago is adding ten per cent. to the regular tariff schedule on goods imported into that city via Canada. If the ruling is sustained a serious blow will be dealt to the St. Lawrence steamship business, as well as that of the Grand Trunk and Canadian Pacific Railways. A very considerable business is done between Europe and the Western States via the St. Lawrence route, and the C.P.R. has built up a profitable trade between China and Japan and various United States centres. The handicapping of this business by the imposition of an additional ten per cent. on the duty will virtually kill it all. The wording of the clause is such that the United States law officers can easily decide against Canada's contention if they see fit. The Canadian railways had better prepare themselves for the blow which is coming. The Americans will never rest satisfied until the bonding privileges between the two countries have been abrogated.

According to the American Economist the quick work done by Congress on the Dingley tariff is hardly appreciated as it should be. Congress was called together in extraordinary session on March 15. In four months and nine days the bill had passed both the United States Senate and the House of Representatives, was acted upon in conference, finally passed by the Senate and signed by the President. This covered a period of 131 days. In 1890 the McKinley bill, reported on April 16, passed the House on May 21, but was delayed in the Senate till September, and again still further delayed in conference, not being signed by the President till October 1, 1890. It was in all 168 days before Congress. When the Democratic party was in control, the Mills bill dragged along in 1888 and 1889 for nearly 300 days, and then failed to pass. The Gorman-Wilson bill was reported to the House by the Ways and Means Committee on December 19 1893, and reported to the Senate on February 20, 1894. It did not become law till August 28, 1894, and was then such a

"ragbag production" of "perfidy and dishonor" that even the Democratic President refused to sign it. The difference between Republicans and Democrats in enacting tariff legislation in Congress is very marked. The Republicans passed the McKinley bill in 168 days, and the Dingley bill in 131 days, each bill receiving the signature of the Republican President. The Democrats, on the other hand, wasted some 300 days over the Mills bill, which never became a law, and they wasted 252 days over the Gorman-Wilson bill, which proved to be such an abortion that even President Cleveland refused to sign it.

The Ladies' Home Journal for August presents a number of short stories by the best known writers, that will pleasantly employ the leisure of midsummer days. Of special interest among these are the opening chapters of Hamlin Garland's latest serial, "The Spirit of Sweetwater," and "The Two Mrs. Chesters," by Mrs. A. D. T. Whitney. Arthur Willis Colton contributes a sketch, "The Flowers on Tim Rae's Grave," and Annie Steger Winston narrates a rustic courtship in "The Jilting of Mary Ellen." Ellen Dale Runcie, in "Sergeant Matty" gives one a view of the heroism of a Salvation Army girl and her steadfast devotion to the cause in which she labors. "Indoor Window Gardening," needlework, games and pastimes for rainy days, with the various departments pertaining to the household and the home, make the August Journal's offering exceptionally complete.

The August number of Scribner's magazine is marked by the beginning of what has been called the most original magazine idea for many years—"The Workers—an Experiment in Reality." In these fascinating papers A. Wyckoff, a young university graduate and student of social problems, will tell his actual experiences while earning his living for two years as an unskilled laborer. There is no professional philanthropy in this narrative. Mr. Wyckoff was met and received by the workmen as one of themselves—for in every sense he was one—and he asked no odds of fate. For the first time the American workman appears in literature, as neither an economic unit nor a sensational problem, but a human being very much like other people. The narrative has all the simplicity and charm of a real piece of literature.

The Methodist Magazine and Review has aspecial scientific flavor in harmony with the meeting of the British Association, which is to take place in Toronto during this month. The first article is one on "Glaciers, their Formation and Phenomena," with many striking and beautiful illustrations. Another article of special interest is a character-study of Lord Kelvin (Sir William Thomson), one of Canada's distinguished guests, and one of the most eminent scientists living. Miss Brock writes a very interesting paper on "The Curiosities of the Microphone." An article with four illustrations describes the new horseless carriage, and the Editor pays a tribute to the discoverer of chloroform.

MAKING WORKMEN COMFORTABLE.

A manufacturer, in gossiping about the best way of handling workmen, says that the nature of the floor of the shop has a great deal to do with the amount of work that is got out of the operative staff. He was once struck by the difference in the apparent activity of two sets of men working on similar jobs at the vise in two rooms of a large shop. One was in an old building and the other was in one of recent construction. In the former, the men stood easily and naturally at their work, and showed no symptoms of a hankering for a seat on the bench, while in the latter the men were shifting their weight from one foot to the other, throwing one leg upon the bench at every opportunity, and showing every evidence of foot fatigue. The superintendent guessed that the difference was due to the floor upon which the two gangs of men were standing. In the old shop the floor was of wood, springy to a certain extent, and a poor conductor of heat. In the new shop it was of the most beautiful concrete, an excellent conductor of heat from the feet of the workmen, and as unyielding as granite rock. So the benches in the new shop were raised a couple of inches, and each man was given a platform of wood that rested on two cross pieces at the end and had a slight spring to it. The foot weariness disappeared almost at once, and no further trouble was experienced. Which shows that the prettiest floor is not always the best for the workmen.—Industrial World.

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THE DINGLEY TARIFF.

In many respects the United States Tariff possesses as much importance to Canada as does our own tariff, and a brief history of that concentration and embodiment of McKinleyism cannot but be interesting to our readers. We find a very succinct review of that measure in *The Bulletin*, prepared by Mr. James M. Swank, from which we make liberal extracts as follows:

The Presidential and Congressional campaign of 1896 was prosecuted by the Republicans from beginning to end upon the two supreme issues of protection to home industry and the maintenance of all the money of the country upon a gold basis, every silver dollar and paper dollar issued by the Government or upon its authority to be maintained at par with a gold dollar. Because of the issue last mentioned the Republican candidates for the Presidency and Vice Presidency received the support of many sound money Democrats, and it is probably true that, without their direct or indirect support, these candidates could not have been elected. But it is also absolutely true that, if the restoration of the protective policy had not been the leading issue of the campaign, the Republican voters themselves could not have been kept in line for McKinley and Hobart, but would have very largely deserted to the support of Bryanism, which it is now clearly seen was an expression of discontent with existing social and industrial conditions far more than it was the manifestation of a desire to substitute a silver standard for a gold standard. With protection to home industry playing the part of a side issue only, instead of being what it really was, the leading issue of the campaign, Mr. Bryan would have been elected.

It was, therefore, a proper mark of appreciation by Republican leaders of the obligations of the campaign, as well as an act of good faith, to inaugurate the work of revising the tariff on protectionist lines immediately after the election of McKinley and Hobart was assured. The very success of these candidates accomplished all that could have reasonably been expected in behalf of the sound money issue. During the Presidential incumbency of Mr. McKinley there could be no departure from the gold standard, no debasement of any form of the national currency. It was not necessary, therefore, that any step, immediate or remote, should be taken to secure the enactment of any new currency legislation. But it was vitally essential to the future success of the Republican party and to the restoration of that industrial prosperity which everybody so greatly desired that the Wilson tariff, which had been so prominent a factor in producing the hard times of the last few years, should be repealed at the earliest possible moment.

Without any distinct authorization, but in harmony with the counsels of Republican leaders and in accord with the wishes of the President-elect, the able and patriotic Chairman of the Ways and Means Committee of the House of Representatives, ex-Governor Nelson Dingley, Jr., of Maine, early in December last, just one month after the election of Mr. McKinley, and immediately after the meeting of the second session of the Fifty-fourth Congress, invited the co-operation of his colleagues of the committee in the preparation of a bill providing for the enactment of an entirely new tariff, which would provide revenue for the Government and encourage all the industries of the country. The work of gathering information preliminary to the framing of the bill was at once undertaken. Treasury experts were set to work, and the industrial and commercial interests were invited to give testimony on stated days, through their representatives, or to file written or printed statements, which would aid the committee in reaching accurate and just conclusions. This work of collecting information and analyzing it, separating the chaff from the wheat, and giving form and expression to the conclusions of the committee continued throughout December, January, and February, the committee holding both daily and nightly sessions.

On March 4 President McKinley was inaugurated and on the 6th he issued a proclamation convening the fifty-fifth Congress in special session on the 15th. On the day last mentioned Congress met, and on the same day Mr. Reed was elected Speaker of the House, and he at once appointed the Ways and Means Committee, with ex-Governor Dingley again as Chairman. On March 19 Mr. Dingley reported a new tariff bill to the House, and on the 31st it passed that body by a vote of 205 yeas to 122 nays. On April 1 it was received by the Senate and at once referred to the Committee on Finance, which committee reported it back to the Senate on May 4, with a large number of proposed amendments. On July 7

the bill passed the Senate, with 871 actual amendments, by a vote of thirty-eight yeas to twenty-eight nays, and it was at once referred to a committee of conference. On July 19 it was reported back to the House from this committee, and on the 20th the report of the conference committee was adopted by a vote of 186 yeas to 115 nays. On the 24th the report was adopted by the Senate by a vote of forty yeas to thirty nays. The bill was at once signed by the President and became a law, displacing entirely the Wilson tariff. It went into effect the same day.

It will be observed that over three months elapsed between the passage of the Dingley bill by the House and its passage by the Senate, from March 31 to July 7. This delay was very unfortunate, and much of it could have been avoided if the Ways and Means Committee and the Committee on Finance had acted together as one body last winter, constituting themselves for the time being a real tariff commission. But this course was not followed, and as one result of the long delay in the Senate after the House had acted upon the bill with all the expedition that was possible the country has been flooded with importations of free wool and of woollen goods, raw sugar, and other articles at lower rates of duty under the Wilson tariff than would be imposed by the Dingley bill when it would become a law. Thus many domestic industries can not for many months, and perhaps for a whole year, receive the full benefit of the protective features of the new tariff, while the Treasury has lost millions of revenue that it was intended it should receive. However, the delay has not been without its compensations. In the Senate amendments to the House bill which have been retained in the perfected bill we notice some that are real improvements, verifying again the Scriptural saying that "in the multitude of counsellors there is safety."

The new tariff is a thoroughly protective measure. It keeps the campaign promise of 1896 to the letter. There are errors and omissions, of course, as there always have been and always will be in so comprehensive a measure as the general revision of tariff schedules, but in the main, and probably with fewer errors and omissions than usual, the Dingley tariff will be found to be amply protective of American industries. Whether it will yield abundant revenue for the support of the Government and to pay the interest on its debts remains to be determined, but we think that it will, for the reason that it will tend to make the country prosperous, and when the people of this country are fully employed at good wages, and when all its energies are in active operation, it has been found by experience that more of the luxuries and special products of other countries are consumed and yield a revenue at the custom-house than in bad times. The new sugar duties and the new wool duties will of themselves yield a large revenue. But the revenue-producing character of the new tariff can not be fully tested during the first year of its existence, because of the large anticipatory importations already referred to. We will frankly add, however, that we would feel greater confidence in the ultimate revenue-raising possibilities of the new tariff if it had been supplemented by an increase in the beer tax or even by a small tax on tea or coffee. An additional tax on beer would have been felt only by the brewers, not by the consumers, and a small tax on tea or coffee would have added but a trifle to the expense of maintaining a family. Make the people prosperous and they will care very little about a trifling addition to the cost of any of the necessities of life. During the last four years of most serious business depression the necessities of life have been, almost without exception, cheaper than they were ever before known, but the ability of millions to purchase them has not been commensurate with this cheapness. The people who have been employed only a part of the time and at low wages have suffered greatly in the midst of cheapness.

Will the new tariff restore prosperity to the country? Will it assure steady employment to all who are willing to work and bring back the old wages of 1892, before Mr. Cleveland's last election? It will certainly aid greatly in producing these much desired results; all its tendencies will be in the direction of better times. But there are unfavorable industrial conditions and social and economic evils in this country to-day which no tariff legislation can wholly cure. We have a greater capacity in almost all lines of productive industry than can be steadily employed, and in the struggle for business prices will be kept down, and low prices do not insure high wages. We have also a glutted labor market, made so by unnecessary importations of unskilled Europeans, and with an excess of laborers, even if this excess is but temporary, wages must follow the general law of supply and demand. The new tariff, as we have said, will help to bring back the prosperity of other years, but it should be supplemented as speedily as possible by more stringent legislation concerning immigration than is now on the statute books. That, and not currency tinkering, is the legislation that this country most needs next to the wise tariff legislation that has just been enacted.

CAPTAINS OF INDUSTRY.

The following items of information, which are classified under the title "Captains of Industry," relate to matters that are of special interest to every advertiser in these pages, and to every concern in Canada interested in any manufacturing industry whatever, this interest extending to supply houses also.

If a new manufacturing enterprise of any kind is being started, or an electric lighting plant instituted, or an electric railroad, or a telephone, or a telegraph line is being constructed; or a saw mill, a woolen, cotton, or knitting mill; or if any industrial establishment has been destroyed by fire with a probability of its being rebuilt, our friends should understand that possibly there may be something in the event for them. Do you catch on to the idea?

The starting of any such concern means a demand for some sort of machines, machinery, or supplies, such as steam engines and boilers, shafting, pulleys, belting, lubricants, machinery supplies, wood or iron working machinery, ventilating and drying apparatus; pumps, valves, packing, dynamos, motors, wire, arc and incandescent lamps, and an infinite variety of electrical supplies, chemicals, acids, alkalies, etc. It is well worth the while of every reader of the Canadian Manufacturer to closely inspect all items under the head of Captains of Industry.

The Jenckes Machine Co., Sherbrooke, Que., have installed at the new works of the Boston Rubber Company at St. Jerome, Que., one of their fifty-five inch Crocker turbines, with wheel case, and 300 feet of feeder pipe.

The Canadian Calcium Carbide Company, Montreal, is being incorporated with a capital stock of \$10,000,000, to manufacture calcium carbide. The names in full, and the address and calling of each of the applicants are as follow:—Honorable Andrew George Blair, Minister of Railways and Canals; and David Russell, manufacturer, both of the City of St. John, N.B.; Herbert Samuel Holt, president of the Montreal Gas Company; William Wainwright, railway manager; William Barclay Stephens, manager for the Western Loan and Trust Company; William Strachan, manufacturer; and Anthony Haig Sims, manufacturer, all of the City of Montreal; William Farwell, manager of the Eastern Townships Bank, of the City of Sherbrooke, Que.; Rufus Henry Pope, manufacturer and Member of Parliament, of the Village of Cookshire, Que.; John Joyce, president of the Empire Brewing Company; John Edward Aldred, vice-president of the Puritan Trust Company; and Ferdinand Adolphus Wyman, attorney-at-law, all of the City of Boston, Mass.; and Edwin Ruthven Whitney, manufacturer of electrical instruments, of the City of Manchester, N.H.; and William Mitchell, railway manager, of the Town of Drummondville, Que.; and of

whom the said Honorable Andrew George Blair, David Russell, Herbert Samuel Holt, William Wainwright, William Strahan, Rufus Henry Pope, John Joyce, John Edward Aldred, Ferdinand Adolphus Wyman and Edwin Ruthven Whitney are to be the provisional directors of the said company.

The main building and machinery of the Hamilton and Toronto Sewer Pipe Works were destroyed by fire August 19th. Loss about \$13,000.

The Toronto Junction Foundry Company, Toronto Junction, are increasing their capital. This they found necessary on account of the rapid growth of their business, and the necessity of increasing their works. They are building another steel furnace, and adding machinery which will about double their capacity.

The city of St. Hyacinthe, Que., has just closed a contract with the Jenckes Machine Company, of Sherbrooke, Que., for two pressure filters, with a capacity of 750,000 gallons in twenty-four hours.

The Defiance Machine Works, Defiance, Ohio, a few days ago shipped a large twelve-inch automatic bending machine and other wheel making machinery to the Japanese Government.

The Guelph Linseed Oil Company, Guelph, Ont., a new industry, will manufacture linseed oil, oil cake, flax meal, etc.

The Jenckes Machine Company, of Sherbrooke, Que., have just completed the balance of the sawmill machinery built by them for the Montague Paper Co., Lake Megantic, Que., who expect to start their new mills at once.

The Sherbrooke, Que., Street Railway Company have closed a contract with the Jenckes Machine Company, of that place, for one of their forty-five inch Crocker turbines, with tubing and wheel cases complete, horizontal setting, for direct connection to an electric generator, which is being furnished by the General Electric Company.

The Dardanelles Mining Company, at Kaslo, B.C., have placed an order with the Rossland branch of the Jenckes Machine Company, of Sherbrooke, Que., for a complete mining plant for operating their extensive properties in that district.

A well attended meeting of lumbermen took place at the Board of Trade Building, Toronto, on August 19th, at which all the great lumbering districts of Ontario were well represented. The following resolution was carried:—"That, whereas the Government of the United States has imposed an import duty of \$2 per thousand feet on sawn lumber, has made special provision in the tariff that a still higher import duty may in a certain event be imposed on sawn lumber, that Government has not imposed an import duty on sawlogs; and, whereas by the present Canadian tariff sawn lumber is admitted into Canada free of duty, and the said Canadian tariff permits the export of sawlogs free of duty, the effect of such tariff arrangements is highly injurious to the true interests of the owners of sawmills in Canada, the Canadian workmen and Canadians generally, as tending to transfer the sawing of lumber from Canada to the United States; be it therefore "Resolved, That in the opinion of this meeting the exportation of sawlogs should be restricted, and, with that object in view, the Government of the Province of Ontario be requested to so amend the pine timber regulations that all pine timber cut under license in the Province of Ontario shall be manufactured in Canada"

The Dominion Coal Co., has added two additional steamers to their fleet of colliers plying between gulf ports and Sidney, C.B.

The Chicoutimi Pulp Company are making rapid progress in the construction of its mill at Lotbiniere Falls, Que. From 250 to 300 men are employed.

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Crop reports from Manitoba and the North west indicate a largely increased yield over any previous year. The storage capacity is being increased at interior points by fully 1,000,000 bushels. Forty new elevators having either been completed, or are under construction, and will be ready for this year's crop.

Messrs. Hamelin & Ayers, Lachute Mills, Que., have just started a new set of powerful suction pumps in their pulp mill. The pumps were designed and built by McQuat & Mc Rae, Lachute, Que., and have proved a success.

McQuat & McRae, Lachute, Que., are building a new machine for saw grinding for the Ottawa Saw Works. The work is done on an entirely new principle and bids fair to be a success.

The Kootenay Electric Company, of Kaslo, B.C., who have a large water-power near the town, and purpose using the same for power and lighting, have placed their order with the Royal Electric Company for a 75 K.W. "S.K.C." generator, and the necessary transformers and motors.

Mr Pamphile Boivin, of Baie St. Paul, Que., has received a franchise from the corporation of that town for electric lighting, and the Royal Electric Company is now installing for him an electric lighting plant, consisting of a 500 light "S.K.C." dynamo with the necessary transformers and material. It is expected that the plant will be in operation about the first of September.

The contract for constructing the water works and sewerage system of Renfrew, Ont., has been awarded to the Three Rivers Iron Works Company, Three Rivers, Que., to cost \$51,874.

Dr. J. A. McLeay, of Watford, Ont., has purchased from the Royal Electric Company a 500-light alternator, and the necessary transformers, and is installing an incandescent plant in the town of Watford.

It would be a great assistance to designers of steam plants if manufacturers of pipe-fittings, valves, pressure regulators, pump-governors, injectors, and all the various devices which make a part of or must be provided for in laying out a line of piping, would include in their catalogues the overall dimensions and the length between flanges, couplings or screw joints so that a draftsman could locate them properly in his piping scheme. A designer of our acquaintance was laying out recently a job of piping in which was included with other fittings in a constricted space a three-inch valve of a specified make. How much room would that valve occupy in the length of the pipe? Nothing at hand would show, the catalogues of the maker did not tell, the maker's agent, appealed to by telephone, was unable to say, and the dimensions were found only by hunting up a supply house where the valves were kept in stock and measuring one. The manufacturer who publishes such information is likely to have his goods specified in preference to those of the manufacturer who neglects to make it convenient to specify his. The general practice of publishing such information might call attention to the incongruous sizes which exist and lead to some uniformity in practice which would be a boon to users as well as designers and draftsmen. The valve mentioned above, for example, measured seven and nine-sixteenths inches. It might as well have been made an even seven and one-half or eight.—Power.

The first train of the Great Northern railway crossed the Shawanogon River bridge on Friday last. This bridge is a very fine steel structure, ninety five feet in height, and is one of the most remarkable pieces of engineering work so far erected in this province by the Dominion Bridge Company. Paquet and Fortin, the energetic contractors who are building this section of the road, are pushing on their work very fast, and already have three miles of track laid beyond the Shawanogon River. This takes them to a point where a very costly steel trestle viaduct is being built over a tributary of this river. For all who take an interest in engineering, this section of the line offers some very remarkable features. About six hundred men are now employed on the works, including the new siding, a mile in length, which is being built into the pulp and paper mills of the Laurentide Pulp Company at Grand Mere. The Pulp Company have also a large force of men at work on the buildings for their new paper mills, the magnitude of which may be judged from the fact that over three million bricks will be used in their construction. Grand Mere promises to become quite a town. A number of new buildings are being erected, amongst others a first-class hotel with sixty rooms.—Quebec Gazette.

A despatch from Niagara Falls, Ont., states that the Niagara Falls Park and River Railway Company have agreed to supply 500 electrical horse-power to the Pittsburg Reduction Company, who will open a branch of their works on the Canadian side.

The Scotia Steamship Company, Halifax, N.S., is being incorporated with a capital stock of \$25,000.

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The contract for building the bridge across the St. Lawrence River at Cornwall, Ont., for the Ottawa and New York Company has been awarded to the Phenix Bridge Company, Phenixville, Pa.

J. Hillock & Company's planing mill at Toronto was damaged by fire a few days ago to the extent of about \$2,500.

The Canadian Canoe Company, Peterborough, Ont., are now working on an order for canoes to be used in reaching the Klondike district in the far North-West. The canoes are all large sizes, and of extra depth and width, so as to have large carrying capacity. Shipment will be made to the company's agent at Edmonton, N.W.T., where they will be delivered to customers. The right kind of canoes is a scarce article in the territories, and in lively demand for prospectors' use.

As a depilatory agency sulphide of sodium has of late received considerable attention, and Messrs. F. E. Atteaux & Co., 174 to 176 Purchase street, Boston, Mass., selling agents for the Trembley brand, have issued a pamphlet in which they set forth the use and mis-use of sulphide of sodium. The pamphlet should be in the hands of all tanners who desire to learn something about the process of depilating hides and skins. The pamphlet will be sent to any tanner who will send his address to F. E. Atteaux & Co., mentioning this journal.

The prediction that within ten years 600 foot vessels will be built on the lakes is made by the Detroit Free Press. It says that it is thought that in the next ten years the present length of 440 feet will be exceeded by 150 or more feet. Experiments are be-

ing made with a central arch of steel running fore and aft, as it is in the length not width, that weakness is shown in a seaway. Then it is thought that girders will be so changed in position and composition as to give greater strength, and that strakes will not only be made stronger but better fastened as the method improves with experiment. The limit as to depth is certainly reached now, though fifty-five feet and even a little greater, may be attained in width. Therefore it would be necessary to introduce the arch and other means of strengthening. Not only the seas but the action of the engine gives the long hull the snake-like motion that is plainly perceptible if one stands at the after end and look towards the bow. A steel arch, running amidships the length of the vessel, and well braced, would so strengthen the modern steel vessel hull as to allow of the 550-foot length and greater and at the same time not handicap the vessel with dead weight, giving it great draught when with light cargo. - Industrial World.

Contracts have been awarded to both the Ingersoll and Rand companies for temporary machinery for the excavation of rock at the middle falls of the Kootenay river for the big electric power plant to be put in there by Sir Charles Ross and his associates. James D. Sword, of the Ingersoll company, and Frank Mendenhall, of the Rand company, have been here and furnished bids and estimates. They were so close together that the contract was divided between them. - British Columbia Colonist.

The Knowles, Ham & Nott Company, Brantford, Ont., manufacturers of refrigerators, house furnishings, etc., will build additions to their factory.

The Ashcroft Water Works Company, Ashcroft, B.C., has been incorporated with a capital stock of \$25,000, to construct and operate a water-works system for the locality of Ashcroft, B.C.

The McEachern Heating and Ventilating Company, Galt, Ont., recently received an order for a lumber dry kiln from John Zimmerman, Tavistock, Ont., and another from C. S. Kellar, Stratford, Ont., for a kiln for brick drying.

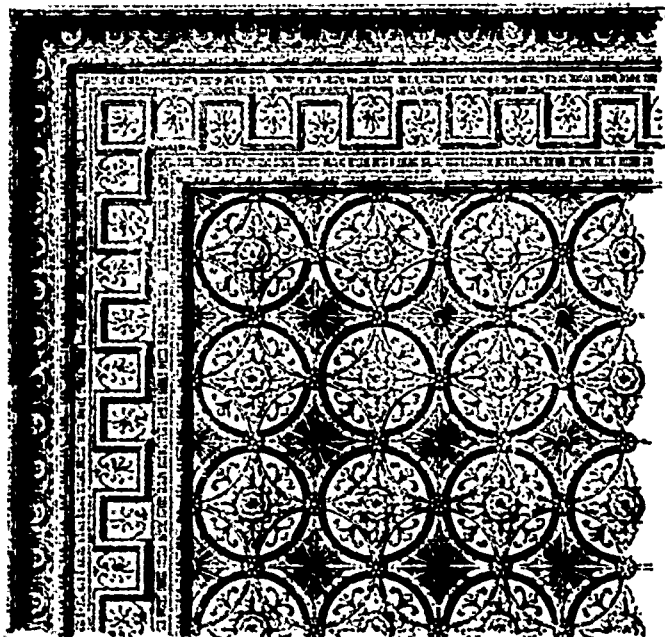
The T. G. Rico Wire Manufacturing Company, Toronto, has been incorporated with a capital stock of \$3,000, to carry on a general wire and ornamental iron-working business.

The Record Foundry and Machine Company, Moncton, N.B., recently completed a single span bridge, 240 feet in length, for King's County; a two span bridge, 400 feet in length, for Westmoreland county, and another single span bridge, 200 feet in length, for Northumberland county, all in New Brunswick. The company are also manufacturers on a large scale of stoves, furnaces, enamelled ware, etc., and have distributing houses at Montreal and Toronto.

The McKay Milling Company's flour mills at New Edinburgh, Ont., were damaged by fire July 19th. Loss, about \$25,000.

Mr. H. S. Arntfeldt, Preston, Ont., has patented an adjustable belt coupler, which, after being tested in shops in Preston, Galt and Hespeler, has been pronounced a success.

George Hawkes, Wakefield, Mass., will start a factory to manufacture rattan furniture at Lower Cape, Albert county, N.B.



ONE OF OUR DESIGNS

practically fire-proof, are highly artistic, do not harbor vermin or the germs of disease, and possess splendid acoustic properties in addition to many other points of excellence over any other form of interior decoration.

Embossed Metal Ceilings

These Ceilings are made from mild annealed steel plates in a great variety of designs, suitable for every description of building, including

**Hospitals, Churches, Schools
Convents, Opera Houses
Asylums, Offices, Stores
Residences, etc.**

The many advantages of their use, as a modern substitute for wood and plaster, lies in the fact that they are light in weight, will not crack nor drop off, consequently no danger of falling plaster; are unquestionably durable, have air-tight joints, are easily applied, are

SOLE MANUFACTURERS:

Write for prices and ask for Catalogue "O."

PHONE 5481

THE METALLIC ROOFING CO., Limited., Cor. King and Dufferin Sts., TORONTO

The foundry and machine shops occupied by J. Bunn, Cayuga, Ont., were burned a few days ago. Loss, about \$2,000.

Wm. J. Allison has started a new planing mill at Peterborough, Ont.

Quade's sawmill at Strathtay, Ont., was destroyed by fire a few days ago.

The Jenckes Machine Company, Sherbrooke, have just completed, for the Sultana mine at Rat Portage, Ont., one 30-stamp mill, with six vanners, one 150-h.p. Corliss engine, with complete equipment of boilers, compressor and hoisting plant. This is said to be the largest and most complete plant of this kind in the Lake of the Woods district.

On the Canadian Pacific since January 1st the following engines have been built, or are being built, in the company's shops at Montreal. Ten switching engines, two consolidation engines, three 10-wheel compound freight engines, six 10-wheel passenger engines 19x24, six 10-wheel passenger engines 18x24. The following cars are under construction: 600 35-foot 30-ton box cars building in the company's shops at Perth, Ont. They will be equipped with Hein or Trojan coupler, Westinghouse air brakes, standard brake beams, trucks and wheels made in the company's shops, and steel axles made by the Nova Scotia Steel and Forge Company; 130 20-ton flat cars have just been rebuilt in the company's shops at Perth and Farnham; 200 20-ton flat cars are being built by Rhodes, Curry & Co., of Amherst, N.S., and will be equipped with Hein couplers; 200 20-ton flat cars are being built by the Crossen Car Manufacturing Company of Cobourg, Ont., and will be equipped with the Hein Coupler. In addi-

tion to the above, the company is just completing 100 35-foot refrigerators, equipped with all modern refrigerator appliances.

Rapid progress is being made in the construction of the building and works of the big new pulp mill at Chicoutimi, Que. Three hundred thousand bricks will be used in the walls of the mill. Several carloads of machinery are already on the ground.

Messrs. Rhodes, Curry & Co., Amherst, N.S., will build the closed cars, and Messrs. Ahearn & Soper the open cars, for the Sherbrooke, Que., Street Railway.

Messrs. Frazer Bros., New Glasgow, N.S., are enlarging their works by the erection of a large machine shop.

The Disney & Devlin Manufacturing Company, Hanover, Ont., will build the Hollinger & Ball Chair Company's factory to be erected at that place. The size of the main building will be 42 x 100 feet, three stories high and basement.

The Lucky Jim Gold Mining Company, of Sandon, B.C., have placed an order with the Jenckes Machine Company, of Sherbrooke, Que., through their Roseland branch, for the iron-work for one three-wheel tramway.

The officers of the British Columbia Board of Trade in their annual report presented at the annual meeting, held at Victoria, referred to the industrial establishments of the province as follows:—The smelters lately established at Trail and Nelson are fully employed and their capacity has been increased since they were "blown in." Refining plants have been added, and instead of shipping "matte" it is now treated on the spot. Smelter men have been

looking at points on the Mainland and Vancouver Island for suitable sites for their operations, one object being to locate on a good harbor. In this respect there is no better than Esquimalt, which also has the advantage of being on the route of regular steamships to China, where there is an extensive market for lead. In the Sloean country five concentrators are reducing silver-galena ores, and as the output of the mines increases others will be built. These concentrators and smelters furnish employment for many skilled and ordinary laborers at good wages. British Columbia is the largest manufacturer in the Dominion in proportion to population. The following establishments are mostly able to supply present local demands: Lumber mills, sash and door factories, shipyards, iron foundries, machine shops, flour, rice and oat mills, chemical works, paint works, soap factories, coffee and spice mills, breweries, carriage factories and powder works. The manufacture of wood pulp for export has not yet started here, but the natural conditions appear favorable for such an industry. Metallurgical works have been established at Victoria recently, capacity at present twenty tons of ore per day. A chlorination plant is in course of erection, and as soon as the works are completed ores will be treated by several different processes. These works are the first of the kind established in British Columbia and should be of great value to mine owners.

The Jenckes Machine Company, Sherbrooke, Que., have just shipped the complete screen and pressing machinery for the pulp company at Sturgeon Falls, Ont., consisting of four seventy-two inch wet presses, with four ten-plate screens. They furnish the wood barkers for the same mill.

SADLER & HAWORTH

FORMERLY

ROBIN, SADLER & HAWORTH

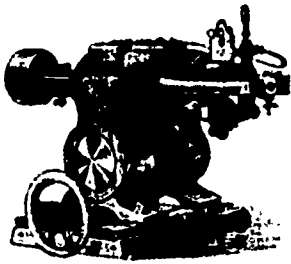
Manufacturers of

OAK-TANNED LEATHER BELTING

MONTREAL AND TORONTO

Orders addressed either to our Toronto or Montreal Factory will have prompt care. Goods will be forwarded same day as order is received.

ELECTRIC BARGAINS



**350-light Incandescent Dynamo
And One Smaller Machine
One Arc Light Dynamo
One Electric Motor**

Above are but slightly used, and are as good as new.

We Manufacture a full line of
Dynamos, Motors and Platers
WRITE FOR PRICES.

THE JONES & MOORE ELECTRIC CO.
22 Adelaide Street West
TORONTO.

The Acadia Pulp and Paper Company, of Halifax, N.S., have placed an order with the Jenckes Machine Company, of Sherbrooke, Que., for six seventy-two inch wet presses, and six ten-plate screens and two centrifugal pumps, for the extension of their mills at Milton, N.S.

Currie & Graham's bicycle factory at Ottawa was burned a few days ago. Loss about \$2,000.

The Colonna Gold Mining Company, Rossland, B.C., are putting in an air-pipe line to connect their two properties. This has been bought through the Ross'nd branch of the Jenckes Machine Company, of Sherbrooke, Que.

The Lake Deschenes Milling Company, Hull, Que., is being incorporated with a capital stock of \$40,000.

W. M. Dean's sawmill at Sprucedale, Ont., was burned a few days ago.

The Victoria Power Company, Victoria, B.C., has been incorporated with a capital stock of \$75,000, to install an electric power plant to supply light, heat or power in Victoria.

The Georgetown Sawmill Company, Port Simpson, B.C., has been incorporated with a capital stock of \$20,000, to carry on the business of saw-milling, etc.

A discovery of black granite is said to have been made at Welsford, N.B. The property has been acquired by a Bridge-water, Nova Scotia, firm, and they will commence the erection of polishing works. There is an excellent water power on the property for the working of the hydraulic drills and polishers. The owners of the quarry have secured a contract for 2,000 tons of rough stone, which will be shipped from St. John to Aberdeen, Scotland, during the summer and winter. The getting-out of this stone and the opening-up of the quarry will take most of the summer, and in the autumn the polishing works will be built and equipped.—Maritime Merchant.

The Penman Mufg. Company, Paris, Ont., manufacturers of knit goods, are making extensive additions to their mills by fitting up with machinery the large building formerly occupied by the Maxwell Mufg Company as a foundry. Fitting up this building, together with alterations in their other mills, and the purchase of new machinery, will involve the expenditure of about \$35,000 or \$40,000.

The Perth Flax and Cordage Company will erect a brick cordage factory, a frame flax mill and a rope walk at Stratford, Ont. The works will give employment to about 200 hands.

THE - - - -

WM. HAMILTON MANUFACTURING CO., Limited

MANUFACTURERS OF

THE "RELIANCE"

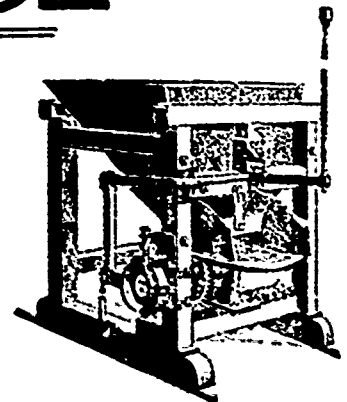
Mining, Milling

AND

Smelting Machinery

FOR THE DOMINION OF CANADA

(Under License from **The E. P. ALLIS CO., Milwaukee, Wis.**)



Crushers, Rolls, Jigs, Concentrators, Screens, Stamps, Pumps
Compressors, Hoists, Boilers, Engines, Water Wheels, Etc.

Branch Office
VANCOUVER, B.C.

PETERBOROUGH, ONT.

A publication just issued by the Brantford, Ont., Board of Trade, gives returns from fifty-seven of the leading manufacturing establishments of that city, as follows — Number of hands employed during 1896, 2,920, and the total amount paid in wages during the year, \$965,412.00. These establishments exported to foreign countries during the year goods aggregating in value, \$527,197. The leading articles exported were agricultural implements, bicycles, cot-

ton, cordage and machinery. The shipments went to twenty five different foreign countries.

The Jubilee smoke consumer is the name of a new apparatus invented by Mr. Chs. Morson, of Montreal. The principle upon which it works is the introduction into the fire-places of steam jets which prevent the escape of gas and help to consume it as well as the combustible matters contained in the smoke proper. Besides the prevention

of the smoke nuisance, great economy in fuel is also claimed for the new invention.

The Royal Paper Mills Company's saw-mill and pulp mill at East Angus, Que., were destroyed by fire a few days ago. Loss, about \$200,000.

The coking ovens of the Messrs. Duns-muir, at Umiu, Comox, B.C., are now work-ing with entire satisfaction. The output of these ovens is about fifty tons per day, forty of which are shipped to the Hail smelter at Nelson, and the Trail smelter, both of which would consume a much greater quantity were it possible to procure the same. These establishments pronounce the home-made coke equal in every respect to that imported from Wales, round the Horn to this port. Where tested in the United States the Uni-on coke has likewise been declared to be a first-class article. The ovens will hereafter be run to their full capacity. The industry promises to be a great one, and of much value to the province.—Victoria, B.C., Col-onist.

Messrs. Alonzo Bowen & Son, saw, flour and shingle mill, Mountain, Ont., have re-moved to Kempville, Ont.

The Calumet Mica Mining and Manufac-turing Company, Ottawa, is being incorpo-rated with a capital stock of \$100,000.

The Metal Shingle and Siding Company, Preston, Ont., has been incorporated with a capital stock of \$10,000.

The William Buck Stove Company, Brant-ford, Ont., is being incorporated with a capital stock of \$150,000, to acquire and continue the business heretofore carried on in that place by the late William Buck.

The Latimer Carriage and Implement Company, Montreal, has been incorporated with a capital stock of \$40,000, to take over and carry on the business of R. J. Latimer, manufacturer of carriages and implements at Montreal.

The Dominion Elevator Company, Winni-peg, Man., has been incorporated with a capital stock of \$200,000, to build elevators, mills, docks, etc., in Manitoba.

The Cockshutt Plow Company, Brantford, Ont., have purchased land immediately ad-joining their factory, and will at once begin the extension of their works.

The Romaine Automatic Agricultural Machine Company, Montreal, has been in-corporated with a capital stock of \$500,000, to manufacture automatic agricultural ma-chines.

The Canadian Locomotive Works, King-ston, Ont., have received an order for two new locomotives for the Quebec Central Railway.

The city of Sherbrooke, Que., purpose acquiring the land now occupied by the Q.C.R. Company's shops at that place and convey the same to the railway company, subject to certain conditions, the principal of which is that the company shall erect within three years, at a cost of not less than \$30,000, permanent and substantial shops on the property, where they shall carry on their principal work of manufacturing and repairing.

The Canadian General Electric Company, Toronto, will supply the electric plant for the West Kootenay Power and Light Com-pany, whose works will be located near Robson, B.C., and the Stilwell-Bierce and Smith-Vaile Company, Dayton, Ohio, will supply the turbine water wheels.

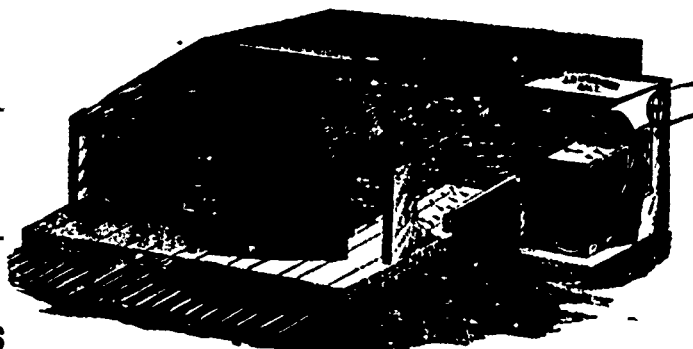
DRY KILNS AND HEATERS

HOT BLAST HEATING SYSTEM FOR LARGE BUILDINGS

Ventilating
Fans,

Shaving
Fans,

Blowers and
Exhausters



LITTLE WONDER HOT WATER BOILER for Heating Dwellings.

MCEachren HEATING AND VENTILATING CO.
GALT, ONT.

The Packard Electric Co., Limited.

MAKERS OF

Lamps and Transformers

Sole Agents for SCHEEFFER RECORDING WATT METERS
ST. CATHARINES, ONT.

HAHLO & LIEBREICH, BRADFORD, ENG.

Machinery Merchants and Exporters

NEW and GOOD SECOND-HAND **WOOLLEN MACHINERY**

SHAKE WILLEYS, TEAZERS, RAG PICKERS, GARNETS,
AUTOMATIC FEEDS, WASTE CLEANERS, CARDS, CONDENSERS, SELF-ACTING
MULES, TWISTERS, LOOMS, HYDRO-EXTRACTORS,
SHEARING MACHINES, Etc.

GOOD Second-Hand **COTTON and WORSTED MACHINERY**

BELTING, CARD-CLOTHING, PICKERS, PICKING BANDS, etc.

**BREWERS
COPPER
WORK**

Brewing Kettles, Boiling Coils,
Beer Coolers, Attempartors
Spargers, etc., etc.

—THE—
BOOTH COPPER CO.
LIMITED,
TORONTO, ONT.
Established 1854.

**VALVES AND
PIPE . . .
FITTINGS**

WRITE FOR LATEST PRICES

**RICE LEWIS
& SON, Limited**
Corner King and Victoria
Streets
TORONTO

A steamer was recently launched at Rat Portage, Ont., to ply on the route between that town and Fort Frances. The boat was built in Toronto by the Bertram Engine Works Company, taken to pieces and shipped to Norman, near Rat Portage, where it was put together again and finished. The steamer is 119½ feet keel, 152 feet over all, and twenty-seven feet beam, the extreme width over guards being thirty-one feet.

The Arbuthnot Brothers Company, Toronto, have been incorporated with a capital stock of \$45,000, to carry on a printing and publishing business.

The Rational Bicycle Seat Company, Toronto, has been incorporated with a capital stock of \$45,000, to manufacture bicycles, tricycles, parts, etc.

The John Watson Manufacturing Company, Ayr, Ont., has been incorporated with a capital stock of \$75,000, to manufacture agricultural implements.

The Ottawa Electric Street Railway Company is adding a 400 h.p. generator to its plant at the Chaudiere.

The Lloyd Manufacturing and Foundry Company, Kentville, N.S., are putting up a new building, 120 x 90 feet, to accommodate their growing business.

Ratepayers at Fort William, Ont., will, on September 15th, vote on a by-law to raise sufficient money to install an electric light plant for the town.

The Jenckes Machine Company, of Sherbrooke, Que., have just shipped to the Asbestos & Asbestic Company, of Danville, Que., one of their 20-drill air compressors, together with three high-speed crushing rolls and two picking tables, to be used by the company in connection with the extension of their operations.

The W. A. Johnson Electric Company, Toronto, report the sale of an electric plant consisting of direct current generators and engine and boiler, for the new mining town of Mine Center, Ont., to be used for commercial lighting and power; also the recent shipment to the Lachine Rapids Hydraulic and Land Company of one car load of Wagner transformers, weighing 44,000 pounds, of a capacity of 18,000 lights, and the further sale to same company of one 450 kilowatt transformer, capacity and voltage, 4,000 x 1,000 volts. They are now at work on the dynamos for two new steamboats for the Lake of the Woods and Seine River mining district, and have made recent sales of their motors in Montreal, Kingston, Ottawa, Berlin, Preston and Toronto.

THE ACME ROCKING GRATE CO.



The Acme Rocking Grate Bar is composed of fine zig-zag bars connected together; the centre bar is 5½ inches deep, the two bars next the centre are three inches, and the two outer ones are two inches. They are connected every six inches, thereby giving a very strong and durable bar, with very little iron on surface, giving a larger percentage of air space than any bar made, and will burn screenings as

well as lump coal, while there is no trouble whatever in crushing the clinkers. We guarantee ten per cent. saving in coal in every cast.

This is what a Street Railway has to say after making a test with screenings:

THE TORONTO SUBURBAN STREET RAILWAY CO.

R. WILSON SMITH, Pres. E. P. HEATON, Vice-Pres.
R. H. FRASER, Sec. and Manager.

Toronto Junction, April 29, 1897.

Messrs. The Acme Rocking Grate Company.

GENTLEMEN.—The Grates put in by you in our Power House have shown a decided saving in coal.

Yours truly, R. H. FRASER.

The Acme Rocking Grate Co. 176 FRONT STREET EAST,
TORONTO, ONTARIO

THE CROCKER TURBINE.

The cut shows the direct connection of two 29 inch.

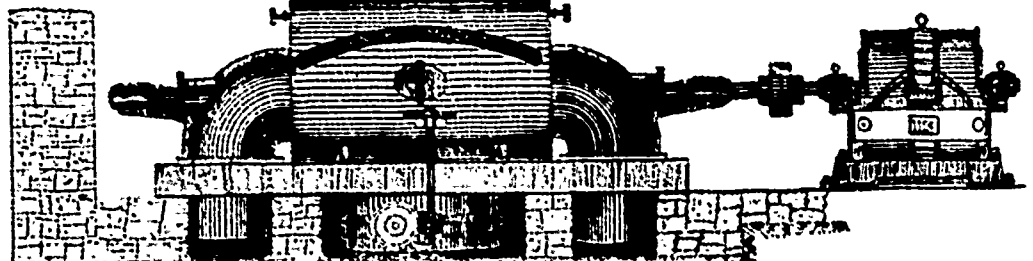
Crocker TURBINES

Under 70 feet head to
ELECTRICAL GENERATOR

At Power Station of North Shore Power Co., St. Narcisse, Quebec.

Two sets were furnished for lighting and power for City of Three Rivers.

17 Miles Distant from Power Station



THE JENCKES MACHINE CO., SHERBROOKE, QUE.

**COMPLETE WATER POWER PLANTS
BUILT AND INSTALLED.**

Address for Catalogue and full information—28 LANSDOWNE STREET

At the auction sale of Ontario timber limits held at the Parliament Buildings, Toronto, on August 18th, appended to the usual circular distributed to prospective bidders was a new rule that all timber cut on the lands sold must be manufactured in the province. The sale resulted as follows:
 Township Rathbun, berth 4, area 7½ square miles, Mr. C. Beck, bonus \$500 per mile.

Township Kelly, berth 1, area 7½ square miles, Mr. Jn. Collins, bonus \$1,375 per mile.
 Township Kiely, berth 2, area 7½ square miles, Mr. Bigwood, bonus \$2,350.
 Township Rathbun, berth 1, area 6½ square miles, Mr. C. Beck, bonus \$800 per mile.
 Township Rathbun, berth 2, area 6½ square miles, Mr. J. Waldie, bonus \$1,000 per mile.

Township Rathbun, berth 3, area 8½ square miles, Mr. C. Beck, bonus \$1,000 per mile.
 Township Kiely, berth 3, area 7½ square miles, Mr. Sheppard, bonus \$900 per mile.
 Township Kiely, berth 4, area 7½ square miles, Mr. Sheppard, bonus \$3,400 per mile.
 Township Davis, berth 1, area 9½ square miles, withdrawn.
 Township Davis, berth 2, area 10½ square miles, withdrawn.

WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY
PITTSBURG, PA.

THE LEADING MANUFACTURERS OF ELECTRICAL APPARATUS FOR ELECTRIC LIGHTING, POWER TRANSMISSION, AND ELECTRIC RAILWAY PLANTS

New York—120 Broadway. CHARLOTTE, N.C.—35-38 College St. PITTSBURG—Westinghouse Building.
 Boston—Exchange Bldg. CHICAGO—New York Life Bldg. St. Louis—American Central Bldg.
 Buffalo—No. 1130, Guarantee Bldg. PHILADELPHIA—Gillard Bldg. SAN FRANCISCO—Mills Bldg.
 WESTINGHOUSE ELECTRIC COMPANY, Ltd., 32 Victoria Street, LONDON, S.W., ENGLAND.

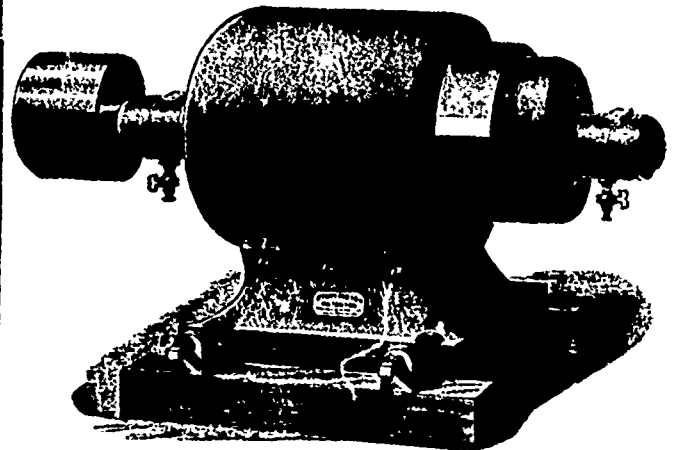
For CANADA address, - - - - - **AHEARN & SOPER,** - - - - - **OTTAWA, CANADA**

CANADIAN
Rand
 DRILLS
 COMPRESSORS

ARE MANUFACTURED BY

THE CANADIAN
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 MONTREAL

THE
Storey Motor and Dynamo



MANUFACTURED BY

THE STOREY MOTOR AND TOOL CO.

John St. North, Hamilton, Can., and Philadelphia.

Send for Catalogue.

Dominion Oil Cloth Co.,

Manufacturers of....

OIL-CLOTHS OF EVERY DESCRIPTION

Floor Oil-Cloth, Table Oil-Cloth, Carriage Oil-Cloth,
 Enamelled Oil-Cloth, Stair Oil-Cloth, etc, etc.

Office and Works

Cor. St. Catharine and Parthenais Sts., MONTREAL, Que.



**BRASS, BRONZE, PHOSPHOR BRONZE, ALUMINUM
 BRONZE, COPPER, ZINC and ALUMINUM
 CASTINGS TO ORDER. Large or Small.**

Write for Prices.... **DEAN BROS., 184 Richmond St. West, Toronto**

FERGUSON & PATTINSON

PRESTON, - - ONTARIO.

MANUFACTURERS OF

FINE AND MEDIUM TWEEDS

To Manufacturers

Ability and integrity of the highest degree are possessed by a travelling salesman—now in Toronto for a few days—calling on the wholesale trade of South America (East and West Coasts), and South Africa.

Canadian manufacturers, of unquestioned standing, desiring to be represented through the above countries, will, in the first instance, communicate with

"Rio," Adelaide and Toronto Streets, Toronto

Township Davis, berth 3, area 8 square miles, Mr. Brennan, bonus \$425 per mile.

Township Davis, berth 4, area 8 square miles, withdrawn.

Township Scadding, berth 1, area 7 1/2 square miles, Mr. R. Connolly, bonus \$1,500 per mile.

Township Scadding, berth 2, area 7 square miles, Mr. Marlatt, bonus \$2,000 per mile.

Township Hammer, berth 1, area 6 square miles, Mr. Sidney Band, bonus \$2,700 per mile.

Township Hammer, berth 2, area 6 square miles, withdrawn.

Township Hammer, berth 3, area 7 1/2 square miles, Mr. R. Thomson, bonus \$550 per mile.

Township Hammer, berth 4, area 7 1/2 square miles, Mr. Thomas Hale, bonus \$6,600 per mile.

North part of Collin, additional, area 8 1/2 square miles, N. Dymont, M.L.A., bonus \$300 per mile.

Township Hess, berth 1, area 6 square miles, Mr. C. A. McCool, bonus \$1,100 per mile.

Township Hess, berth 2, area 2 square miles, Mr. C. A. McCool, bonus \$650 per mile.

Spanish and Biscotasing waters. Block 6 1/2 square miles, Mr. Thomas Sadler, bonus \$450.

Block 7, 1 square mile, Mr. Munro, bonus \$2,100.

Block 8, 1 square mile, Mr. R. Thomson, bonus \$750.

Block 9, 1/2 square mile, Mr. Munro, bonus \$1,000.

Block 10, area 25 square miles, Messrs. Booth & Shannon, bonus \$1,150.

Block Z, area 12 square miles, Mr. Thomas Long, bonus \$3,100.

Rainy River District. Berth 36, area 24 square miles, withdrawn.

Berth 37, area 15 square miles, withdrawn.

Berth 3 D, area 13 square miles, withdrawn.

Berth 4 D, area 6 1/2 square miles, withdrawn.

Berth 5 D, area 18 square miles, withdrawn.

Berth 6 D, area 4 square miles, withdrawn.

Block A, area 1 1/2 square miles, withdrawn.

Block B, area 2 1/2 square miles, withdrawn.

Block C, area 2 1/2 square miles, withdrawn.

Messrs. Champoux & Brother, Disraeli, P.Q., are installing a 650 light alternating current dynamo, which they purchased from the Royal Electric Co. to light their mills and to furnish light for the town.

The adjourned annual meeting of the Pelee Island Wine and Vineyard Co., Limited, was held in Brantford, Ont., on 9th inst. Messrs. J. S. Hamilton, W. J. Aikens and C. J. Parker were re-elected Directors, and afterwards Capt. J. S. Hamilton was re-elected President, and W. J. Aikens re-appointed Secretary-Treasurer. A dividend of six per cent was declared for the year ending August 1st, 1897.

We are advised that the Central Business College, Toronto, has just closed its most successful year. Many young men and women having found their way through it into good positions in the business world. The next session will begin on Sept. 1st, and anyone interested in commercial education, shorthand, typewriting or telegraphy will receive full particulars by sending a postal request to the principal, Mr. W. H. Shaw, Yonge and Gerrard streets, and mentioning this paper.

DO YOU WANT TO GIVE

YOUR SON

- A Profession ?
- A Start in Business ?
- A Farm ?

YOUR DAUGHTER

- A First-Rate Education ?
- A Dowry ?
- A Home of her own ?

-- If so, take out Children's Endowments for them in the --

Manufacturers' Life Insurance Company.

For particulars address, **George H. Sterling**, Secretary, Head Office, Toronto, or your Local Agent.

GEORGE GOODERHAM, President.

J. F. JENKIN, General Manager.

Cleveland WIRE SPRING Company, CLEVELAND, OHIO, U.S.



TEMPERED STEEL MACHINE SPRINGS.

SPECIAL SPRINGS of all description to order and for Upholstery, Furniture, Beds, Chairs, etc. WIRE, Oil Tempered, Spring Steel and all kinds

BAR IRON AND STEEL

Bar Iron and Steel

Railway Spikes

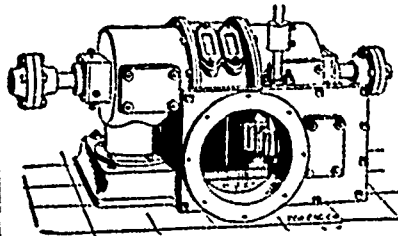
Pressed Spikes

Washers

Rhode Island Horse Shoes

Cut Nails

ABBOTT & CO., - MONTREAL



"LITTLE GIANT" TURBINE

... FOR ALL PURPOSES.

HORIZONTAL AND VERTICAL.

BUILT IN 44 SIZES.

We guarantee a higher percentage of power from water used than any other wheel on the market.

Water Wheel Governors, Machine Dressed Gearing, Pulleys, Shafting and Bearings. Catalogue and Gear List mailed on application. Correspondence Solicited.

J. C. WILSON & CO., - GLENORA, ONT.

The Thompson Electric Co.

HAMILTON, ONT.

"Enclosed Arc Lamps"

To burn 150 hours without Recarboning, for Series, Incandescent, Alternating and Power Circuits.

"Open Arc Lamps"

For all Circuits, Single and Double Carbon Lamps.

We are the only concern in Canada making a specialty of manufacturing all kinds of Arc Lamps.

WRITE US FOR PARTICULARS.

Frank Moseley's tannery at St Hyacinthe, Que., was destroyed by fire a few days ago. Loss about \$100,000.

We are in receipt of a bulletin, with samples, from Messrs. Wm. J. Matheson & Co., New York, showing results obtained by scarlet FR., scarlet FRR., and scarlet FRRR., manufactured by Leopold Cassella & Co. Messrs. Matheson & Co., will take pleasure in dyeing these or any of their other colors, or in matching any required shades upon customers' own goods, and will submit exact dyeing directions for producing results thus obtained, without charge.

McQuat & McRae, Lachute, Que., have just shipped the last of a complete outfit for a new saw mill in course of erection by E. M. Paitras, of Belle River, Que. which they expect will be in operation in a few weeks.

The Calumet mills, destroyed by fire last fall, have been rebuilt, and are in successful operation, working night and day. The machinery was supplied by McQuat & McRae, of Lachute, Que.

La Compagnie Electrique, of Chicoutimi, Que., have increased the lighting capacity of their plant by the addition of another 40-K.W., "S.K.C." generator, which they have purchased from the Royal Electric Company. This addition has been made necessary owing to the growth of their power transmission work.

The Canadian Pacific Railway are making active preparations to handle the vast grain crops which they expect to secure from the North-West this fall. Rolling stock is being rushed out of the shops as rapidly as possible, and the grain elevators of the company are being got ready. The new grain elevator at

Owen Sound, which is at present building, will be completed about October 1st. The roof is now on. This elevator will have a capacity of 800,000 bushels, and when finished the Canadian Pacific Railway will have facilities at Owen Sound for the storage of 1,050,000 bushels of grain. The new flour sheds at Owen Sound are also about completed, and they have a capacity of 40,000 barrels. At the present time it is taxing the resources of the Canadian Pacific Railway to handle the great traffic which is general all along the line. The train crews are the largest that have been on the road in five years.

The Petroleum Oil Trust, Limited, Montreal, who have for the past four years been boring for oil in Galt township, Gaspé, Que., have struck what is reported as a remarkable flow of oil, one well yielding at the rate of over five hundred barrels a day.

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NEW ATMOSPHERIC RECORDING THERMOMETER.

The accompanying illustrations are of Bristol's New Atmospheric Thermometer for closed spaces.

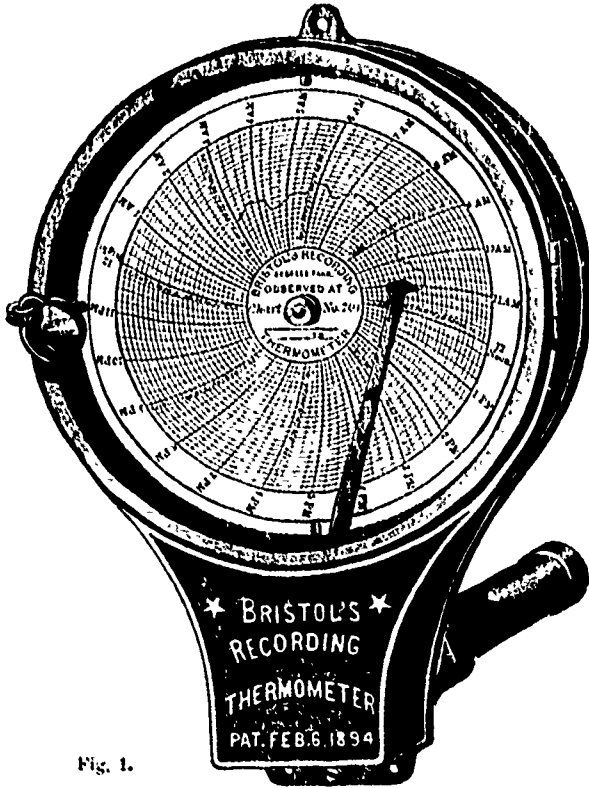


Fig. 1.

This instrument has been developed to meet a demand for a recording thermometer for atmospheric ranges of temperature, that can be applied to air, liquids or gases, in a closed pipe or room. Fig. 1 shows the complete instrument, which consists of a Bristol recording pressure gauge, in which the hollow tube is completely filled with an expansible liquid. The tube, which is sensitive to and is operated by changes of temperature, is inclosed in the cylinder projecting from the back of the case of the recorder, as shown in Fig. 1. This cylinder, containing the sensitive tube, is furnished with a screw thread so that it may be conveniently located within a gas man, through the side of a tank, or through the partition of a room, as may be required. Fig. 2 is an illustrative outline of one of the thermometers as applied to a large gas main, A, representing the protected sensitive bulb; B, a cross section of gas main; and C, the recording portion of the instrument.

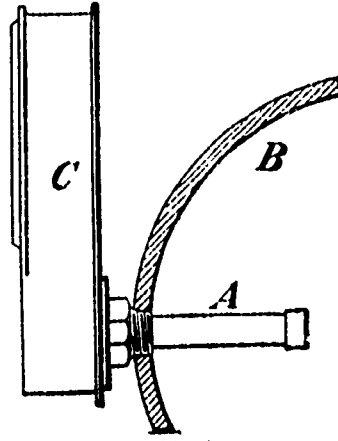


Fig. 2.

It will be observed that the operative part of the thermometer is entirely protected from any action of the gases or liquids of which the temperature is being recorded, hence the operation of the instrument is absolutely independent of the pressure or vacuum within the closed space. Fig. 3 shows a specimen section

of the chart of these thermometers for a range from 0 to 120° Fahrenheit.

Other ranges may be made by using weaker or stronger pressure gauge tubes. By varying the quantity of the expansible liquid inclosed in the pressure tube the lower end of this scale



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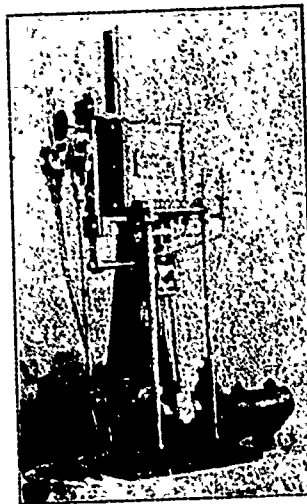
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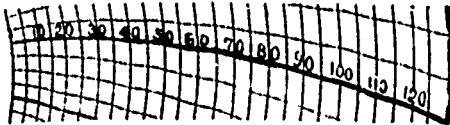
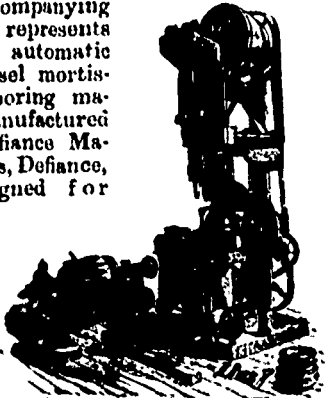


Fig. 3.

operation for several months. They are being manufactured and placed on the market by The Bristol Company, of Waterbury, Conn.

HUB MORTISING MACHINE.

The accompanying illustration represents a patent automatic double chisel mortising and boring machine, manufactured by the Defiance Machine Works, Defiance, Ohio, designed for automatically mortising hubs from the smallest up to eighteen inches diameter,



cutting the mortises straight or stagger at the rate of 400 hubs per day. It is equally well adapted for cutting mortises of the regular kind in hard or soft wood, from one-eighth of an inch to two-and-a-quarter inches wide, to five-and-a-half inches long, such as required in wagon, carriage, furniture and agricultural implement shops, and when not engaged in mortising, the boring spindles may be utilized as a regular boring machine.

This machine is calculated to do four distinct classes of work, hub mortising, regular carpenter mortising in straight work, and as a general boring machine, for vertical and horizontal boring; and it also has the advantage of doing the work more perfectly, and six times faster than it can be accomplished with a single chisel-machine.

The frame is a heavy casting in one piece, with the driving power at the top. It has two chisel bars arranged side by side upon the front of the column, their axes being on a vertical plane at right angles to the axis of the main shaft, and they are adjustable to give the mortises desired dish and taper.

The horizontal boring spindle is conveniently fitted through the main frame with a universal chuck for holding the auger, having adjustments to bore holes for straight or stagger mortises, and it is intended for hub work, and general boring.

In mortising hubs the attachment, as shown on the floor, is used; it holds the hub at one end in a three-jawed universal chuck, the other end turning in a taper cup. The weight of the operator's foot upon the treadle at the base of the machine instantly starts the chisel bars, and the table carrying the hub is gradually lifted to the chisels until the full depth of cut is reached, when it remains stationary until the mortise is complete, when it descends, the hub turning one notch of the index plate ready for the next mortise, and it is again presented to the action of the chisels, and so continuing until all of the mortises are finished. The jiggling, spacing, feeding, etc., are entirely automatic in their movements, and all of the adjustments are of the simplest character.

For straight mortising the table on which the timber rests has a screw clamp for holding the work; it has a longitudinal and transverse (right angular) adjustment for regulating the position of the mortise to be made, and the work is automatically presented to the action of the chisels as explained above. Six thousand medium sized mortises in soft wood can be cut in ten hours without variation in the dimensions of the mortises of one-thousandth of an inch from a specific measurement. It will make mortises tapering in either direction or parallel, as desired, or tapering at one end, and perpendicular to the surface at the other end. No painstaking, difficult, and uncertain jiggling of a carriage is required, and no reversing of chisels.

The vertical boring apparatus is contained within an iron case completely covering the gears, and so constructed that the centre of the auger is always exactly in line with the centre of the chisels, so that the object, after being bored, has only to be moved horizontally to bring in proper place under the chisels to receive the mortises. The boring spindle has a radial adjustment for boring holes to any angle.

The friction drive pulley is twenty four inch diameter, six-inch face, speed 300 rotations per minute.

For further information enquire of the Defiance Machine Works, Defiance, Ohio; or estate of T. I. Coleman, Scaforth, Ont.

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THE NEW STEEL ARCH BRIDGE ACROSS THE NIAGARA RIVER.

The new steel arch bridge to replace the railway suspension bridge across the Niagara river, and which was given the official test July 29th last, is one of the largest bridges of its kind in the world. The main span measures 550 feet between the centres of the end piers. The measurements of some of the other great arches of the world are as follows:

- Louis I, Oporto, Spain 566
- Garabit, France..... 543
- Pia Maria, Portugal..... 525
- Washington bridge, New York.... 510
- Eads, St. Louis, Mo..... 520
- Palermo, Italy..... 492
- Rochester, N.Y., below lower falls 428

The work was commenced late last fall, and has gone on since without loss of life or serious accident. The arch rests on four abutments of masonry, two on each side of

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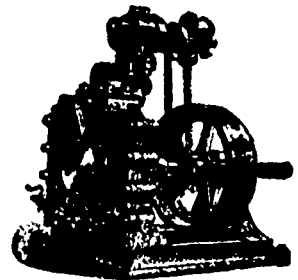
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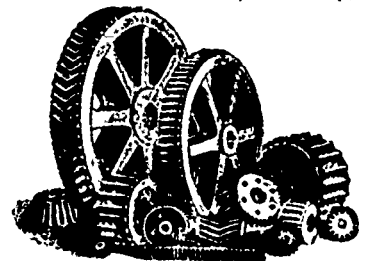
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the river. It was proposed first to locate the abutments on the stratum of Clinton limestone, but this was not feasible on the Canadian side, where a foundation of concrete was laid. On both sides the abutments are located almost midway of the cliffs. The Queenston quarries supplied the stone for the Canadian masonry, and for the other side it was obtained from Chairmont, N.Y. From the abutments on either bank spring the great steel arch spanning the gorge, with

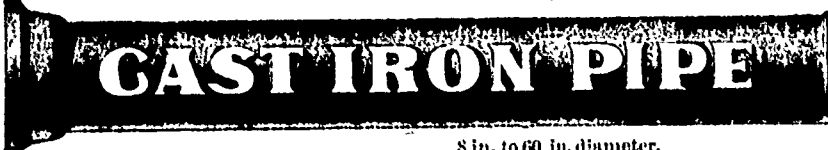
its highest point 226 feet above the water. At each end a trussed span 115 feet long connects the arch with the bluff. The total length of the bridge, with its approaches, is over 1,100 feet. One end of each shore span is hitched to the arch by a pin at the intersection of the end post and top chord of the arch, while the shore end rests on expansion rollers, which in turn rest on masonry abutments.

The new arch will have two floors, or

decks. The upper floor is occupied by the double track of the Grand Trunk railway, and is thirty-five feet wide. On the lower floor, which is fifty-seven feet wide, are a carriage-way, sidewalks, and trolley track. The old suspension had but a single track on its upper deck for railway purposes, and the double track affords greatly increased facilities for railway traffic. Resting on the upper chords of the arch, above each post, there will be transverse steel beams, and between these beams will be four lines of longitudinal steel stringers seven feet apart, and directly under the railway tracks. The lower deck will be formed by four lines of longitudinal steel stringers, about eleven feet apart, and transverse beams. The "I" beams, which will be placed across the stringers, will extend beyond the trusses to carry the sidewalks. It is on this floor that the first trolley track across the Niagara is to be laid, and the new bridge will carry the first trolley car to pass between the United States and Canada. The carriage-way and trolley track will be planked with oak plank, and the sidewalk will be a few inches above the carriage-way.

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St. CATHARINES,
February 9, 1897

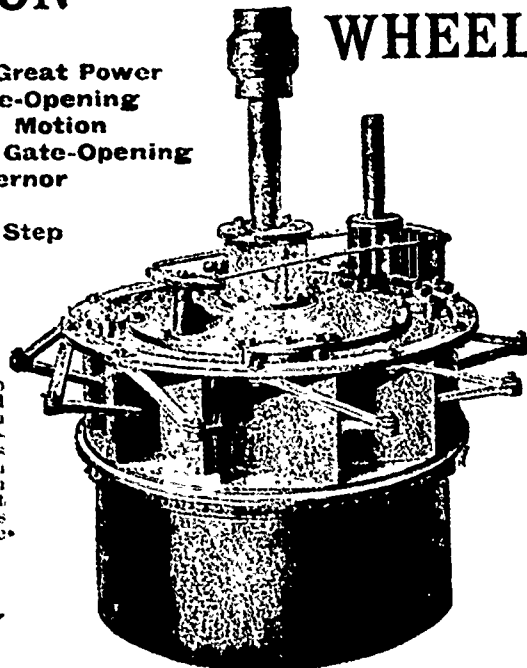
Messrs. Wm. & J. G. Greey,
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GENTLEMEN.—Your favor of the 5th to hand. Have been away from home, and hence delay in answering your letter. You ask us how your Dominion Wheel compares with the . . . Well, sirs, the comparison is this—we have been using two . . . 38 inch diameter, double wheels, and your 51 inch Dominion wheel we put in December last gives us as much power as both, and does not use but very little more water than one of the 38 inch wheels. Yours truly,

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WEIGHT OF THE STRUCTURE.

The arch when completed will contain over 6,000,000 pounds of steel. Of this amount there are about 5,560,000 pounds of steel plates and angles, 218,000 pounds of steel castings, 182,143 pounds of eye bars and pins, and about 30,000 pounds of wrought iron rods, etc. The great incentive to the construction of the new bridge was the desire to insure safety and increased facilities for crossing the gorge, and in consequence it is designed to carry a very heavy load, both on the upper and lower decks. It is expected that the arch will carry on each railroad track two locomotives with four pairs of drivers each, and 40,000 pounds on each driver. These are to be followed by a train having a weight of 3,500 pounds per ton. And the lower floor is expected to carry 3,000 pounds to the running foot, altogether an exceedingly heavy load.

During the time that the arch has been building, the old suspension bridge has been in constant use, despite the fact that the new bridge has been built beneath and about it, practically on its very site. This called for the display of rare engineering skill and extreme accuracy in the length of all the pieces of steel that entered the arch.

The engineer in charge of the work was Mr. L. L. Buck, the chief engineer of the Niagara Falls International Bridge Company, and the Niagara Falls Suspension Bridge Company, owners of the bridge. This is not the first time Mr. Buck's rare abilities have been exercised in connection with the bridges over the Niagara gorge. The old railway suspension bridge, begun in 1848 and completed in 1855, was of wood with stone towers. In 1880 the wood was replaced by steel, and six years later the stone towers gave place to new ones of steel. All this difficult work of renewing was done under Mr. Buck's supervision without the least interruption of regular traffic. The old bridge was the first great bridge of its kind to be erected in America, and its removal takes away one of the early landmarks of railroad enterprise on this continent.

The contract for the erection of the new bridge was held by the Pennsylvania Steel Co., of Steelton, Pa.

Mr. J. T. Harvie's lumber and lath mill at Burk's Falls, Ont., was destroyed by fire a few days ago. Loss about \$10,000.

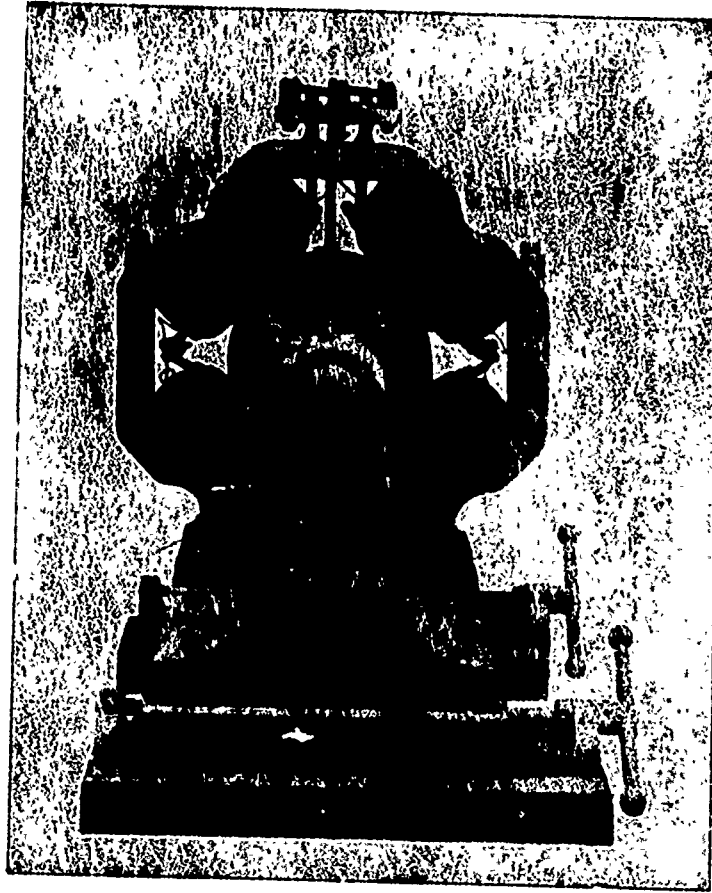
Mr. D. K. McLaren, of 24 Victoria Square, has just returned from a flying trip to England, and is high in his praises of the way he was entertained by his business friends during his stay in the Old Country. Among the most prominent places of business he visited was the factory of Messrs Wilson & Ingham, card clothing manufacturers, who run 350 card machines and are extending their present premises to enable them to put in 150 more. Another place which proved very interesting was the works of the Lancashire Pat. Belting and Hose Co., where they turn out over a mile of hair belting per day, average width of one foot and are still behind in executing their orders, the call upon them being so great. Mr McLaren has been appointed sole agent for the above named firms in the Dominion of Canada. A much enjoyed visit was also paid to the establishment of John Ormerod & Sons, of Castleton, where there were to be seen millions of dozens of roller skin in all conditions. This firm exports largely to Russia, Germany, India, Japan and China. His next visit was to Messrs Howard and Bullocks, carding engine works at Acerington. Their premises cover an area of half a mile of solid stone and brick buildings, and they do an immense business on the continent besides their branch works on this side. While in Liverpool Mr. McLaren called on Messrs. John C. Gale & Co., the greatest warehousemen in England, who carry a stock of strap belts, besides an endless variety of other kinds of leather. The stock carried by this firm is equal to the requirements of the Dominion for the next twenty years. At the kind invitation of Wm. Ormerod, Mr. McLaren spent a pleasant day at Shrewsbury, which was thoroughly appreciated by him.--Montreal Herald.

A mine of nearly pure quick silver has been discovered near Darmouth, N.S.

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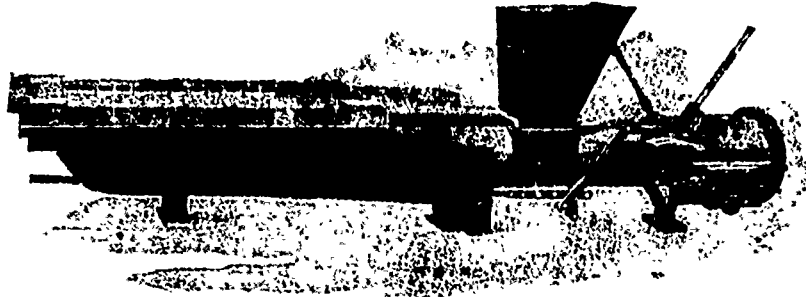
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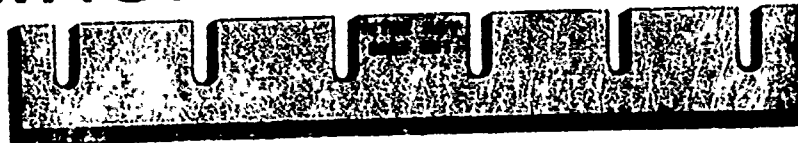
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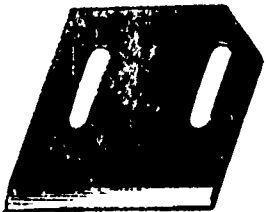


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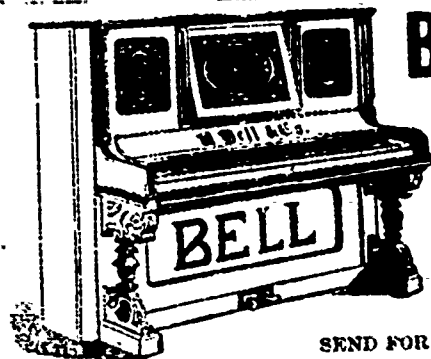


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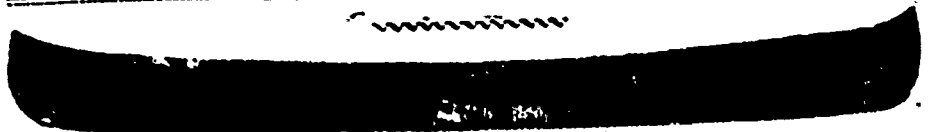
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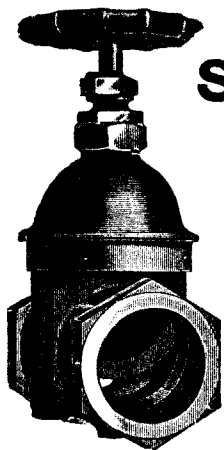
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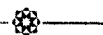
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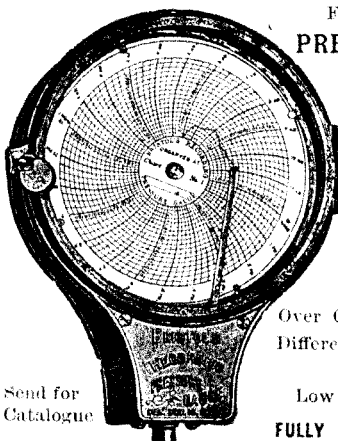
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