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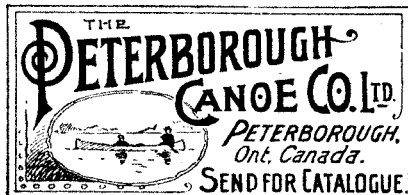
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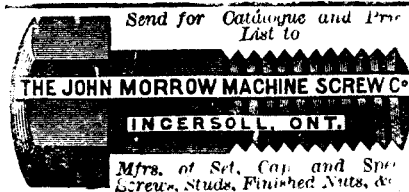
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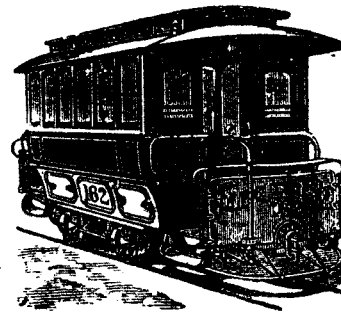


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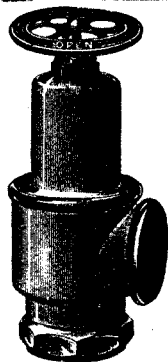
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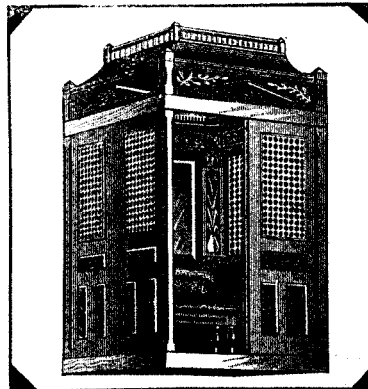


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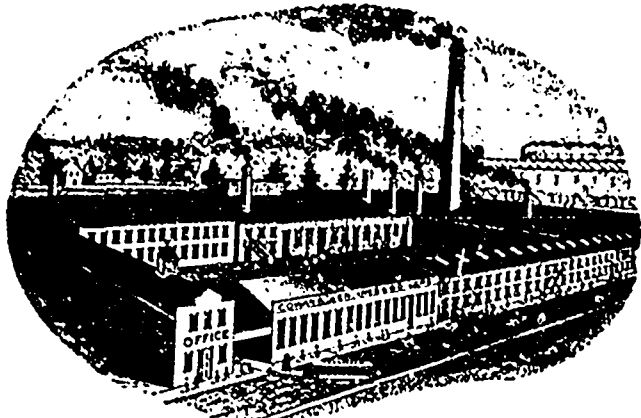
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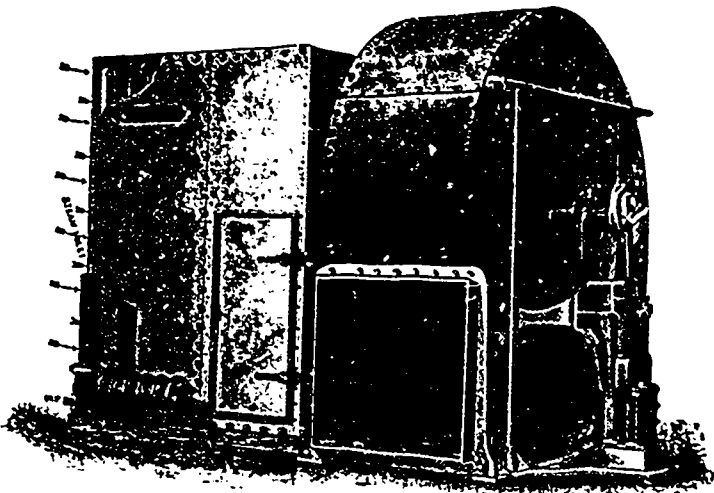
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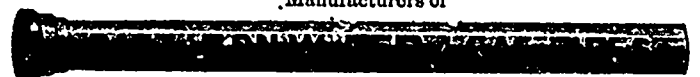
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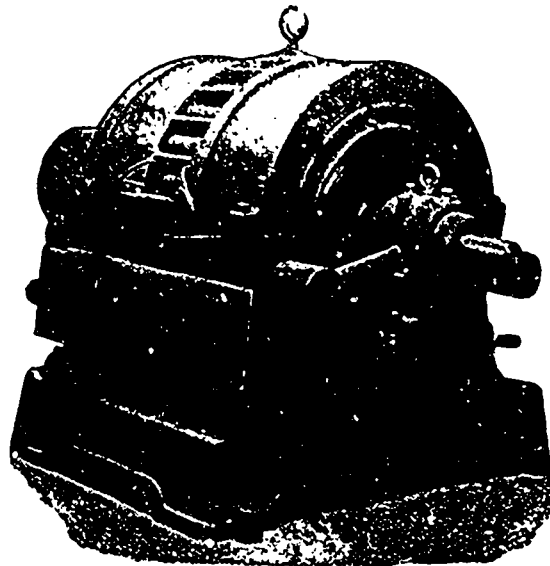
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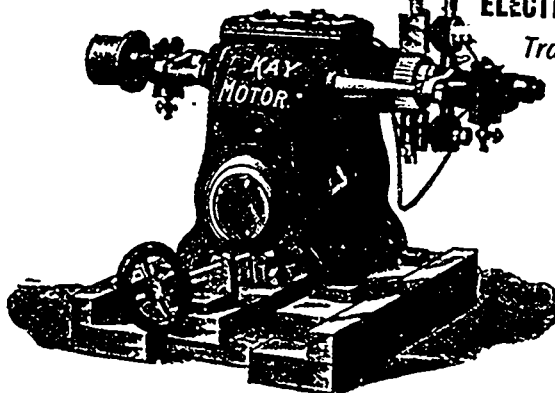
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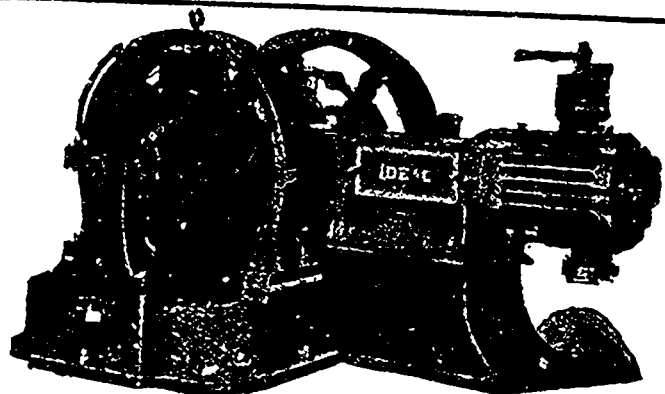
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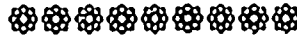


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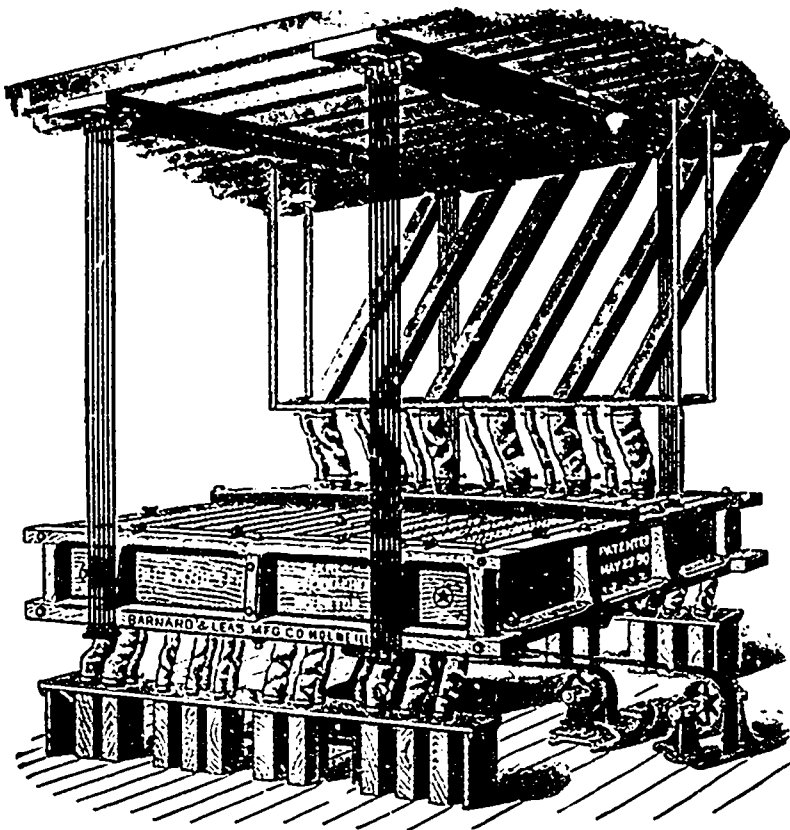
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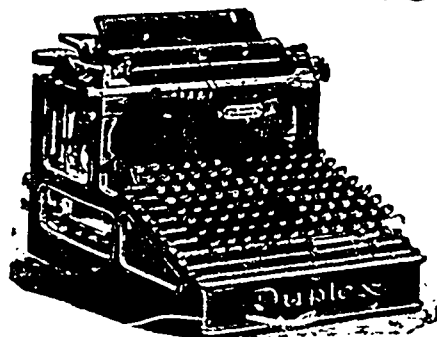
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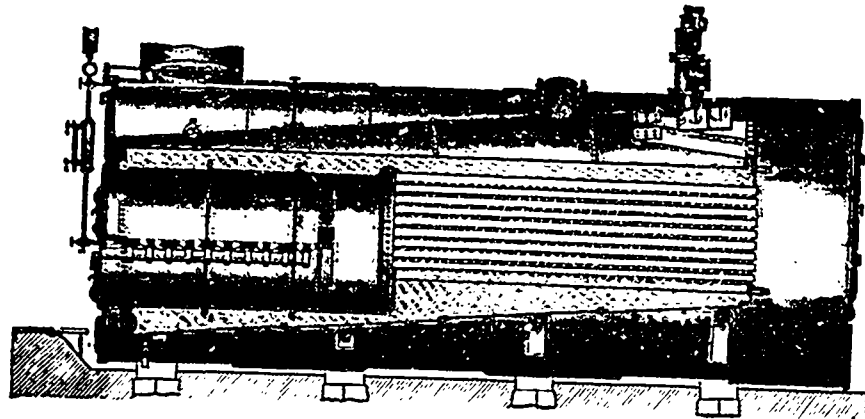
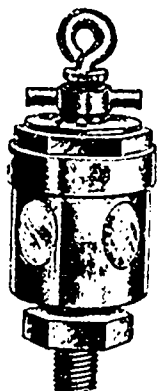
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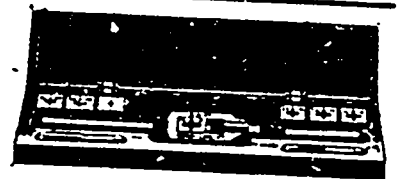
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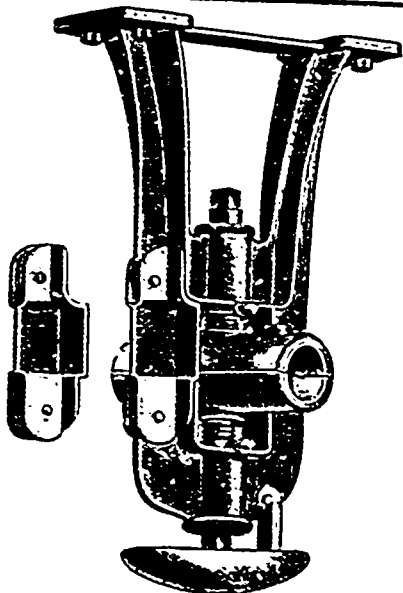
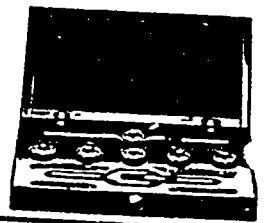
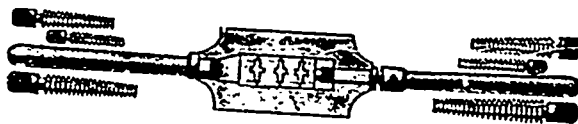
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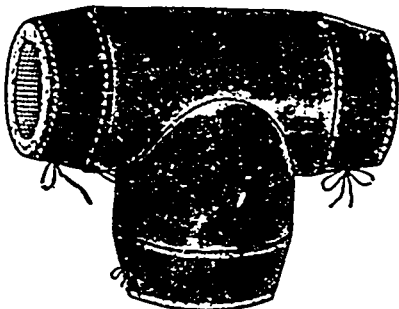
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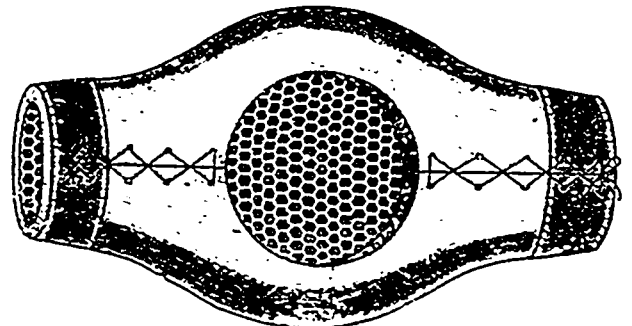
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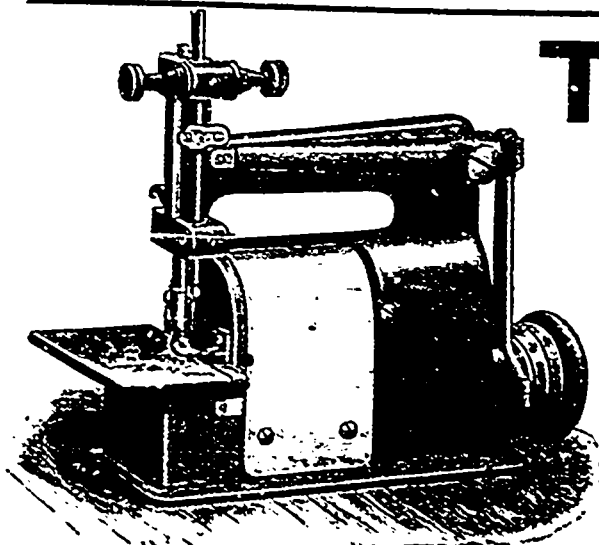


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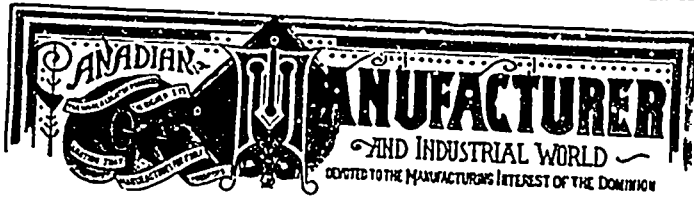
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THE CANADIAN PIG IRON INDUSTRY.

Perhaps the most comprehensive review of the pig iron trade of 1896, including, of course, statistics regarding the manufacture of pig iron in Canada, is that of Mr. George E. Drummond, of Montreal, president of the Canada Iron Furnace Company, from which we excerpt some of its many valuable facts.

Tariff enquiries specially touching the subject of iron in

the United States and Canada, says Mr. Drummond, and investigation into the causes of diminishing trade in Great Britain, marked the year, making it desirable that any review of the iron trade should take into account the political as well as the business phase of the situation.

Protective state legislation was the foundation upon which and by which the great iron industries of Great Britain, the United States and Germany were successfully established. Of these countries the United States and Germany still stand by the principle of protection as being the best method to ensure successful development. Great Britain alone abandoned protection, and then only after she considered her position impregnable. To Canada, in her present somewhat hesitating mood, the relative progress made by the United States and Germany, under consistent protection, as against Great Britain under so-called free trade, should be somewhat of a guide in shaping her own course in the question of the utilization of her natural gifts in iron ores, coal and forest wealth.

In Canada, uncertainty as to tariff matters, the somewhat natural outcome of the recent change in government, served, in the case of some of the furnaces, to restrict the production of iron during 1896, but, on the other hand, the advent of the Hamilton furnace made that year, in point of gross tonnage, one of the best years that Canada has ever seen. The returns from the furnaces at New Glasgow, Londonderry, Radnor Forges and Hamilton for the calendar year of 1896 showed an increase for the furnaces mentioned of forty-one per cent. over the tonnage of the previous year; and this does not include the record of the furnace at Drummondville, Que., which, at the time of writing, Mr. Drummond had not received.

So far as Britain's pig iron trade with Canada is concerned, observes Mr. Drummond, the fact is very noticeable in the returns for 1896 that the total shipments of Scotch iron to British North America is set down at 2,454 tons, whereas 1892 gave a record of 22,913 tons of Scotch iron shipped to Canada. A decline of nearly 20,000 tons is very significant.

As compared with the record of 1895 that of 1896 shows a very marked improvement in the industry in Canada. Returns from the furnaces at New Glasgow, N.S., Londonderry, N.S., Radnor Forges, Que., and Hamilton, Ont., reported a combined gross production of 61,839 net tons of pig iron, 12,964 net tons of steel, 1,243 net tons of forgings, and 4,575 tons of puddled bars, etc.

To produce this quantity the following Canadian materials were used:—

Ore.....	82,705 net tons.
Coal.....	114,554 " "
Coke.....	46,219 " "
Charcoal.....	557,400 bushels.
Limestone, consumed.....	34,496 net tons.

although a larger quantity was actually made.

Of foreign material used the Hamilton Blast Furnace Company reported:—Of American ore, 32,025 net tons, being about 72½ per cent. of their total consumption. Of American coke, 30,217 tons.

The Nova Scotia Steel Company consumed of Newfoundland ore 7,269 net tons; Spanish ore, 3,164 net tons, being about twenty-five per cent. of their total consumption of ore. The Londonderry Iron Company, and the Canada Iron

Furnace Company, of Radnor Forges, used solely Canadian material.

The details of operations are as follows:—

THE NOVA SCOTIA STEEL COMPANY WITH FURNACES AT NEW GLASGOW AND FERRONA, N.S.

FINISHED PRODUCTS.	
Coke pig iron.....	20,470 net tons.
Steel.....	12,964 "
Forgings.....	1,243 "
MATERIALS USED.	
Coal.....	113,298 net tons.
Coke.....	28,000 " "
Canadian ore.....	30,051 " "
Newfoundland ore.....	7,269 " "
Spanish ore.....	3,164 " "
Limestone.....	16,000 " "

Hands employed.....	705
Wages paid.....	\$277,500
Men employed mining coal and other raw material	260
Wages paid.....	\$153,000
Total wage roll.....	\$430,000
Total labor of all classes.....	965

This, as in all other cases dealt with, does not include merchants, railway men, etc., nor any of those indirectly dependent upon the business.

THE LONDONDERRY IRON CO., LONDONDERRY, N.S.

Coke pig iron made.....	10,497 net tons.
Ore charged.....	27,053 " "
Flux charged.....	8,882 " "
Raw coal.....	1,256 " "
Coke.....	18,290 " "
Total coke raised.....	29,327 " "
Total limestone mined.....	9,062 " "

Furnace output, 1896—rolling mills and forges.—Three heating furnaces and three train rolls manufactured in 1896.

Iron made (all sorts).....	361 tons.
Puddled bar made at works and scrap and other iron made at works.....	414 "
Total fuel consumed.....	452 net tons

Iron and steel works.—Eight double puddling furnaces and one single puddling furnace in fire.

Production of iron.....	3,800 net tons.
Consumption of pig.....	4,198 " "
Consumption of fettling ore.....	2,215 " "
Consumption of fuel.....	6,285 " "

Furnace campaign of 1896 very brief.
Average number of men employed in all departments, including labor in coal mining, etc..... 425

THE HAMILTON BLAST FURNACE CO., HAMILTON, ONT.

Coke pig iron made.....	25,270 net tons.
Ore used—Canadian.....	11,876
American.....	32,024
<hr/>	
Coke used (all American).....	43,900 net tons.
Limestone (all Canadian).....	32,176 " "
Average number of men employed at forges.....	8,469 " "
	120.

CANADA IRON FURNACE CO., RADNOR FORGES, QUE.

Operations in raw material department—Charcoal produced, 630,000 bushels; ore produced, 24,713 net tons; limestone produced, 2,415 net tons.

CHARCOAL IRON PRODUCED IN 1896, IN A CAMPAIGN OF EIGHT MONTHS.	
Charcoal pig iron made.....	5,602 net tons.
Charcoal consumed.....	557,400 bushels.
Ore consumed.....	14,725 net tons.
Limestone flux consumed.....	1,415 " "
Average number of men employed.....	600.

The labor of this furnace is principally drawn from the farming class, and the fieldwork is therefore of a more or less intermittent character, being performed between seed time and harvest, or at other seasons of the year when the farmer is not engaged in his usual agricultural pursuits.

The auxiliary branches of business in connection with this Company are the Montreal Car Wheel Co., and the Drummond McCall Pipe Foundry Co., at Lachine, Que. A portion of the output of the furnace is used at the Lachine works, where employment is given to a further staff of 150 men.

PICTOU CHARCOAL IRON COMPANY.

Ore produced—10,784 long tons. From thirty-five to forty men employed. Blast furnace idle the whole of 1896.

BRISTOL IRON COMPANY.

Ore produced—1,033 tons Magnetite, all shipped to the United States.

TORBROOK IRON COMPANY.

Ore produced—8,797 long tons. Mine worked for only four months. Forty-three persons employed.

Discussing the necessity of protecting Canadian labor employed in the coal and iron mining and blast furnace industry, against the lower range of wages paid to European labor; and also the equal necessity of protecting Canadian capital during the initial stages of our industry against the already developed industries of the United States and other countries. Mr. Drummond produces the following table which shows the average rate of wages paid to Canadian labor and to other labor for similar services:

	Blast Furnace Labor.	Mining Labor.
Canada.....	\$1.20	\$1.60
Belgium.....	.58	.83
Germany.....	.68	.68
Great Britain.....	1.06	1.08
Sweden.....	.40	.65

In the case of steel workers, puddlers, etc., he says the same ratio of difference exists as between wages paid in Canada and in the countries mentioned. Perhaps the keenest competition, in point of labor, that the Canadian producers have to contend with is that of the negro and convict labor of Alabama and other sections of the South.

In arguing in favor of continued and adequate protection to the Canadian iron industry, particularly to charcoal iron, Mr. Drummond points to a very notable illustration of the value of that particular industry coming from the farmers of the Province of Quebec, hundreds of whom recently signed a petition to the Dominion Government asking that that industry be preserved to them. Some of their reasons were as follows:

Because it is one of the very few rural industries that they enjoy, and because, through the resident employes at the works, it provides a ready cash market for farm products.

Because without it, they would be deprived of a cash market for the bog iron ore existing on their own and neighboring lands.

Because the operations of the furnace provide them with a profitable market for the waste hard woods, which they are compelled to clear from their lands in preparing same for agricultural pursuits.

That without the labor afforded by the existence of charcoal iron furnaces, they, as farmers, would be compelled, through climatic conditions, to exist for twelve months of each year upon the profits derivable from five month's work, in their ordinary agricultural pursuits.

Such a petition is surely worthy of the best consideration of the Government, for investigation will show that the interests of the farmer in the charcoal iron industry, are relatively

even greater than those of the capitalists who have invested their money in the enterprise.

The following are a few points that naturally present themselves in considering the question as to the advisability, or otherwise, of granting encouragement to the manufacture of pig iron from Canadian raw material.

Is Canada naturally fitted for the enterprise of iron making? The work of the Geological Survey has amply demonstrated the existence in Nova Scotia, New Brunswick, Cape Breton, Quebec, Ontario, Manitoba and British Columbia, of almost every class of iron ore known to science, and of mineral fuel in Nova Scotia, Cape Breton and British Columbia.

Wood, hard and soft, suitable for charcoal fuel, is found everywhere throughout the Dominion, and of such quality and quantity that Canada easily ranks in natural resources with Sweden and the United States and with a properly developed industry, stands to secure a share of the world's trade in the highest class of charcoal iron, of which there is an ever increasing demand, at the same time, through this medium, securing to herself a utilization of waste material and an employment of labor of incalculable value.

The moral obligation to utilize such gifts rests upon the Government and people of Canada. The mines and forests must be opened up, either by the Government or the country, or if, as in the case of other iron producing countries, by private capital and enterprise, then, as in the case of the latter under adequate Government encouragement and protection.

Due consideration must be given to the course pursued under like conditions by Great Britain, Belgium and the United States, the methods so successfully followed in the initial years of development in these countries being presumably good enough for Canada.

History attests that Great Britain gave seventy-three years efficient protection—from 1787 to 1860—to her iron industry. The trade returns of to-day show that not only has the British iron master been driven out of the Canadian and other foreign markets, but the protected iron makers of the United States and Germany are successfully invading the English market itself, the facts raising a very grave question as to whether Great Britain did not make a serious error when she abandoned the principal of protection.

The United States has already given thirty-four years of a strong policy of protection, and has elected Mr. McKinley and his party to continue that course.

Germany has consistently followed the same road to success. Would it be wise for Canadians to go against all experience and precedent, and follow an untried course, instead of acknowledging the wisdom of the methods adopted by the most successful iron producing countries of the world?

THE NEW IRON DUTIES.

In the new tariff there is a general reduction in the duty on imported iron and manufactures of iron. The duty on steel scrap is reduced from \$4 to \$1.50 per ton. The increase of the duty on scrap iron from \$2 to \$4 per ton went into effect on Jan. 1, 1895. The makers of pig iron naturally desired a heavy duty on scrap, which goes as a substitute for pig. While the severe depression continued

in the iron industry of the United States the piles of scrap were sold at prices so low that even the \$4 duty was not seriously felt by the rolling mills. The reduction now made is of considerable importance, as it affects an important line of raw material. The duty on pig iron is reduced from \$4 to \$2.50 per ton; on iron and steel ingots, blooms, billets and puddled bars from \$5 to \$4 per ton; on bar iron, steel shapes of rolled iron and steel, iron and steel hoops, bands or strips eight inches in width or less from \$10 to \$7 per ton. This makes a substantial reduction in the cost of material in many branches of the iron industry and in the wide range of industries in which iron is an important factor.

That Canadians engaged in the primary branches of the iron industry may still be able to compete with foreign producers compensating subsidies are provided. The bounty on pig iron made from Canadian ore is increased from \$2.00 to \$3 per ton, and a bounty of \$2 per ton is provided for pig iron made from imported ores. On steel ingots made from ingredients consisting of not less than fifty per cent. of pig iron made in Canada, and on puddled bars from pig iron made in Canada, a bounty of \$3 per ton will be paid. These subsidies will continue till April 23, 1902. The changes made will provide cheap raw material and at the same time protect the iron-producing interests. That the consumers may obtain the benefits of the change a reduction is made all along the line of iron products. Axles and springs are reduced from \$20 per ton to thirty-five per cent. Railway fish plates are reduced from \$10 to \$8 per ton, boiler tubes from 7½ to five per cent. and wire nails from one cent per pound to thirty-five per cent. ad valorem. Wood screws, formerly dutiable at rates of from three to eight cents per pound, according to length, are now thirty-five per cent. ad valorem. Cut nails and spikes are reduced from three-quarters of a cent per pound to thirty per cent. Cast iron pipe is reduced from \$10 to \$8 per ton. Wrought iron or steel nuts, formerly one cent per pound specific and twenty per cent. ad valorem, are now thirty-five per cent. Cutlery of all kinds, formerly entered under different headings, pass at a uniform rate, of thirty per cent. Tools or builders' hardware, formerly ranging from thirty to thirty-five per cent. and more, are now dutiable at thirty per cent. all round. Axes of all kinds, scythes, hay knives, forks, rakes and other agricultural tools are cut from thirty-five per cent. to twenty-five per cent.; shovels and spades from fifty cents per dozen and twenty-five per cent. to thirty-five per cent. ad valorem. Barbed wire and other wire for fencing, formerly dutiable at three-quarters of a cent per pound, will be fifteen per cent. ad valorem till January 1, 1898, after which it will be free, and the materials used in its manufacture will be free also. Steam engines and boilers, formerly 27½ per cent., and portable machines, steam engines and threshers, portable saw mills and planing mills, formerly thirty per cent., are grouped together at twenty-five per cent.

AMERICAN VS. BRITISH IRON.

In another page of this journal we make copious extracts from the recent address of Mr. Geo. E. Drummond, of the Canada Iron Furnace Company before the recent meeting of the Mining Association at Montreal. In that address

Mr. Drummond directed attention to the fact that reference to the Dominion statistics of 1885 to 1895 demonstrate that the pig iron producers of the United States are rapidly driving the iron masters of Great Britain out of the Canadian market. It is there shown that in 1885 Canada imported from Great Britain 34,773 net tons, and from the United States 7,389 tons; while in the fiscal year 1895-96 we imported from Great Britain 6,525 tons, and from the United States 32,597 tons, substantially the same progress going on steadily in almost all other manufactures of iron and steel. Where formerly we used British steel boiler plates, structural iron and steel, etc., we now use American; and he asserts that the only possible rivals now and hereafter to the American producers of iron and steel will be our own native furnaces and mills.

Mr. Drummond enquires: What has been the effect of the iron duties on the shipping interests of Montreal and other ports of the Dominion, and what will be the effect on the railroad interests if the Canadian iron industry is injuriously affected by a change in the policy of protection and encouragement; and answering himself he says:

British iron to-day competes with American under exactly the same tariff. As already shown, the British iron masters have almost abandoned the market, acknowledging that they cannot compete with their American rivals. Quotations on British pig iron for delivery in Ontario towns run fully \$2.00 to \$3.00 per ton over those of equal manufacturers of American make. Competition is impossible on these terms. If pig iron was admitted free into Canada the relative position as between the English and American iron producers would be unchanged, and not a single ton additional freight could be secured for Western Canadian points by the vessels plying between the British ports and Montreal, or other Canadian points. A glance at Government statistics will prove to the vessel owners that they can have no hope to increase the tonnage of pig iron from British or European ports by any decrease in the Customs duties.

It has been claimed that the iron duties injuriously affect the interests of the vessel owners by stopping the importation of bar iron. A further reference to statistics will evidence the fact that so far as tonnage is concerned, scrap iron, the present raw material of the leading Canadian mills replaced for a considerable time the loss of bars, the vessels from London and such ports simply taking the tonnage which formerly came in the shape of bars from Liverpool and Glasgow. The Americans to-day are capturing even the scrap iron trade, the vessel owners losing, but not through the operations of the iron duties.

Any legislation tending to injure the native iron industry of this country will be a direct blow at railroad interests. This can be readily understood when the fact is considered that Nova Scotia, Quebec, and Ontario furnaces have to depend very largely upon the railroads for not only carrying their finished goods to the market, but first of all to bring the raw material to the furnace. It is only necessary to mention one or two cases in point as an illustration of what the manufacture of iron means to railroad enterprise.

For instance the business of the Londonderry Iron Company, and the Nova Scotia Steel Company, combined,

means a revenue of \$200,000 per annum to the Intercolonial Railway and connecting lines, a very important factor to the Government.

In the case of the charcoal iron furnace at Radnor Forges the revenue derivable therefrom by the railways amounts to upwards of \$35,000 per annum, and with the expected increase of operations at that point, which will assuredly come if a consistent policy of Government encouragement is maintained, these revenues will constantly increase.

LATE, LATE, SO LATE, AND DARK THE NIGHT AND CHILL.

It is the undoubted and sacred privilege of Her Majesty's loyal Opposition in the House of Commons, and their duty also, perhaps, to criticise the acts of the Government; and the discussion of the new tariff proves that the leaders of the Opposition are not voiceless. It is in the interest of the country, too, that there should be a full discussion of the fiscal policy of the Government. The country has waited long for the appearance of this policy, and it goes without contradiction that the new Fielding tariff is a surprise to the rank and file of both political parties, and also to the leaders of the party displaced from power less than a year ago. It would be a mistake for any one to suppose that either the late Premier, Sir Charles Tupper, or the late Financial Minister, Mr. Foster are not of remarkably keen perception and quick to observe any weak points in the policy of their political adversaries, for they are old and experienced debaters, and the Government well know that as long as these gentlemen hold seats on the opposite side of the House, just so long will they be subjected to the burning of the caustic criticism that will be continually inflicted upon them.

It is remarkable, however, that while there may be many acts of the Government that are fairly open to criticism, viewed from the Conservative standpoint, and against which Conservative statesmen might hurl the shafts of their fiercest denunciation, that Sir Charles and Mr. Foster should work themselves into ecstasies of passion over the fact that in the new tariff the spirit of protection, and of the National Policy, should be preserved. They rage because the party in power have clothed themselves with the garments they so lately wore. Upon what ground do these defeated Conservative leaders expect sympathy from the rank and file of the Conservative party in their denunciation of the leaders of the Government because they have adopted the policy of tariff protection? It may be true that until now the Liberal party and its leaders denounced protection—it may be true that until now the Conservative party and its leaders advocated protection—then why should Sir Charles and Mr. Foster object to the Liberals going over en masse to their side? The only possible objection of these gentlemen to this political tergiversation is that they are no longer the leaders, and are not occupying the Government benches.

Sir Charles and Mr. Foster were not deprived of power last year because of their advocacy of protection, nor were Mr. Laurier and his party placed in power because of their opposition to the National Policy. The change of Government from Tupperism to Laurierism was not

effected on fiscal grounds, or because of any objection to a policy that did so much to make Canada the great manufacturing country it now is. The masses of the people are wedded to protection, and nothing but the most inexcusable blundering on the part of the late Government could have caused the change. Mr. Laurier and his friends have caused the change. Mr. Laurier and his friends comprehend this; and if they have appropriated to themselves a good policy that had been abandoned by the Conservative Government in a quixotic fight for something else; and if the adoption of that policy by the Liberal Government meets with the approbation of the people, why should Sir Charles and Mr. Foster object. They were the authors of the dilemma in which they now find themselves. They have no one but themselves to blame for the chilly political atmosphere in which they are now shivering.

TRANSPORTATION IN BOND.

From some of the statements and threats recently found in the speeches and editorials of United States politicians and newspapers, it appears that there is rather a widespread sentiment prevailing in that country, that it is politic to submit to considerable inconvenience and loss, if thereby Canadian industries and interests can be crippled or injured. Their treatment of the question of transportation in bond, and their demand for the abrogation of the bonding privileges, enjoyed alike by both countries, is a striking illustration of the existence of this sentiment. Owing to the prominence of many of those who are agitating in this direction, it would be absurd to attribute their action to ignorance of the present working of this mutual arrangement. Volume 2, of the Commerce and Navigation of the United States, 1896, page 1026, furnishes a table showing the In. Transit and Transshipment trade of that country, for the five years, 1892-96. This table shows that there was received from the Dominion of Canada, for transportation over United States railways, etc., from one province to another, or to all foreign countries, merchandise of the the following value:—

1892.	1893.	1894.	1895.	1896.
\$23,600,139	\$17,503,587	\$17,068,626	\$19,385,447	\$19,739,585

Also that there was shipped from the United States to the Dominion of Canada, either passing from foreign countries to Canada, or from one province to the other, merchandise of the following value:—

1892.	1893.	1894.	1895.	1896.
\$26,697,152	\$22,693,822	\$20,175,576	\$21,714,450	\$21,786,648

Here is shown an annual average value of about \$42,000,000 in merchandise transported on Canadian account over United States lines of transportation, to their great advantage, and yet politicians feel that it would be a popular measure to repeal the existing arrangement, and that it would be politic for the United States to relinquish this valuable carrying trade, if by so doing they can put Canada to some inconvenience and loss, and divert from the Canadian Pacific Railway a relatively insignificant proportion of its through traffic.

It is not very gratifying to Canadians, that so large a proportion of their inter-provincial and foreign trade is transacted over foreign routes, but we recognize that owing to geographical and climatic reasons, both economy and

convenience are better served than could be otherwise done. Would it not be wisdom on the part of our neighbors to recognize the fact that Canada also possesses natural advantages and facilities through its short railway route from West to East, and through its splendid canal system, for the transportation of a large proportion of interstate and foreign transport? Unquestionably it is of great advantage to both countries to have competitive routes which largely tend to prevent excessive rates of transportation.

THE MONETARY TIMES AN UNFAIR CRITIC.

Advantage was taken of the occasion of the twenty-second annual meeting of the Canadian Manufacturers' Association, held in Toronto, to pass resolutions on protection, trusts, combines and reciprocal trade. The association calls for a minimum rate of duties under reciprocity "high enough to protect Canadian industries from the competition of all countries having low-priced labor and capital, and whose long established industries give them great advantage over the later established industries of Canada." This is the form in which the minimum tariff is objected to. More than this, all reciprocity is objected to unless the reciprocating country gives equivalent for what it gets. This does not differ essentially from what the Government proposes. The right to establish trusts is claimed on the alleged ground that the inhibition is only against manufacturers. Such restriction does not exist in fact, many others besides manufacturers being liable to come under the penalties denounced against the forbidden associations. The authors of the resolution are estopped by their own attitude from complaining of a discrimination between individuals, since all protection discriminates in favor of some and against others. If the associations which are referred to as excepted and legalized be labor associations, it would be necessary to show that they have equal power to profit from high duties by raising the price of what they have to sell, before they can be shown to be in the same position. Unless this can be shown, the analogy fails and the alleged discrimination is not made out.—The Monetary Times.

Our esteemed contemporary imagines that the reciprocal trade provided for in Mr. Fielding's schedule "D" of the new tariff does not differ materially from that which the Canadian Manufacturers' Association has always advocated; but it is very much mistaken in its interpretation. Mr. Fielding offers a reduction of twenty-five per cent. from our regular tariff schedule to any and all countries that accord as favorable tariff treatment to us; and the Government have announced that this reduced tariff applies immediately to imports from Great Britain and, at present, to no other country. We do not propose to discuss here whether Belgium and Germany, under their existing treaties with Great Britain are legally entitled to equal favor with that country; but we think it can be shown that the tariff laws of Belgium and perhaps some other countries are so arranged as to entitle them to the favor accorded under Schedule "D," although merchandise from that country has to pay the maximum duty.

Aside from this wide-reading provision of the new tariff, it should be remembered that the Manufacturers' Association has never proposed or advocated any sort of preferential trade with any country outside of the British Empire; neither has it ever advocated, nor will it ever assent to any fiscal arrangement with any country, not even with

Great Britain, that ignored the policy of tariff protection to our manufacturing industries.

Under the previous tariff our trade with Great Britain was in a prosperous and satisfactory condition, but it was not carried on at the sacrifice of our own interests. Under Schedule "D" we are sacrificing our manufacturing industries to build up similar industries in Great Britain, without obtaining, however, one cent's worth more advantage for ourselves. We have given away a great privilege; we have made an enormous sacrifice; we have most grievously injured large Canadian interests; we are throwing thousands of Canadian workmen out of employment; we are destroying the value of Canadian factories and workshops; we are wiping out and obliterating hundreds of thousands of Canadian capital, and we receive absolutely nothing in exchange therefore: we have nothing more to show for our sacrifices than we had before. And yet the Monetary Times tells us that this distressing condition does not differ essentially from the British Empire wide preferential trade advocated by the Canadian Manufacturers' Association.

Our contemporary shoots wide of the mark, too, in imagining that any but manufacturers come under the penalties denounced in the tariff against trusts and combines. The fact is, those denunciations were framed and intended to operate only against manufacturers; and the objection of the Association was, not that unlawful trusts and combines should not be suppressed, but that trusts and combines entered into by manufacturers should be dealt with precisely in the same manner that all other trusts and combines are dealt with. The Monetary Times is quite familiar with the fact that combines exist in all the walks of our industrial life, and that, to greater or less extent, they are in restraint of trade. There are laws, too, intended to mitigate or prevent any evils that might arise through such combines; and the objection of the Manufacturers' Association to that section of the new tariff having reference to this matter is that it is class legislation of a most pernicious and destructive character, that cannot possibly be administered with fairness or justice. In the ordinary course of justice, trial and conviction for an offence precedes the punishment therefor; but in this instance there is no presentation before a grand jury, no trial before an unbiased judge and petit jury; no cross examination of witnesses, no law defining the offence, and no statute bestowing the right upon an officer of the Government to embody in himself the functions of public prosecutor, judge, jury and executioner. Such a thing is an anomaly in British jurisprudence, and exists nowhere else on earth except where the tyranny of absolutism prevails.

The Monetary Times thinks that the manufacturers are estopped from complaining of this objectionable legislation because all protection is discriminatory in its character, from which it may be inferred that all sorts and kinds of protection should be suppressed by the strong arm of the law. To do this would, of course, bring us back to the primitive conditions of Adam and Eve, which would not be, in this age, just the most desirable state of affairs. Society at this time not only permits protective combinations of many kinds, but encourages them. The legal and medical

professions not only have their guilds, but are most tenacious in preserving and enforcing their rights and privileges under them. There are combines, too, in all branches of trade, and in many such organizations their mandates and rulings have the effect of law, and are enforced by the law. Our critic does not seem to comprehend that there may be more than one kind of combination. There may be combines for the promotion of trade, and combines in restraint of trade. The one has the sanction and encouragement of the law, while the law frowns upon and denounces the other. But until the presentation of the present tariff such a thing was never known in Canada that even the worst combine frowned upon by the law could be suppressed and punished except by due process of law.

WAKING-UP.

The Manufacturer, of Philadelphia, is waking up to the fact that for many years the legislation of the United States affecting Canada has possessed a strong flavor of injustice which does not result in any benefit to American manufacturing industries. Speaking of what it calls Canadian discrimination against the United States, it says:—

Canada's recent threat to arrange a tariff with features which would retaliate upon the United States for continually ignoring her in our customs laws, is about to be realized, and in a way that will be in no sense agreeable to the merchants and manufacturers of this country. It is probably not more than this Government has deserved, however, since it has pretended to care so little for Canadian trade.

During the time of the existence of trade reciprocity between Canada and the United States much benefit accrued from it to both countries; and the only reason given by American statesmen for the termination of the treaty was that Canada made more out of the arrangement than the other country. The converse of this argument would logically be that if the other country was making more out of it than Canada it should have been allowed to stand.

The argument did not display any high order of statesmanship, to say nothing of generous fairness, but it was not the only thing that induced our neighbors to cease their exhibition of neighborliness, for be it known that at that time, and before, and since, and until the present hour, under a most baleful Fenian influence the impression obtained that it would be a good thing to wrest Canada, the brightest jewel in the British crown, from its allegiance to the Mother Country, and to incorporate it into the American Union. Possessed with this idea the ridiculous opinion prevailed that the easiest and best way to accomplish this object would be to squeeze Canada in every possible manner until from sheer exhaustion, and in despair of ever attaining to the dignity and position to which it aspired, it would be ready to sever its allegiance to Britain, and to accept whatever might be its fate as a part of the American Union. Growing out of this feeling came the abrogation of reciprocity, the Fenian raids, the virtual exclusion of Canadian products by hostile tariff legislation, and the enforcement of Alien Labor laws that would be a disgrace to any nation.

Our neighbors forget that the best Anglo-Saxon blood

flows in the veins of Canadians, and that those who carry that blood are not to be overcome or persuaded by such tactics.

It is more than strange, then, that sensible, self-respecting Americans, particularly American manufacturers, should not have thrown the weight of their influence against the Fenian influence that has for so many years influenced public opinion and legislation in their country. They had much to lose, and nothing whatever to gain by the dominance of that influence. With a most highly favored country bordering theirs for several thousand miles, containing a population of five million souls of equal worth, intelligence and aspirations as themselves, and with markets that required just such things as were produced by these American manufacturers, instead of endeavoring to build up a trade that would have been most advantageous to them—instead of cultivating the pleasant amenities that should have characterized the occasion, all their exertions, whether intended or not to have the effect, were calculated to, and did, create and widen a breach that ought never to have existed.

In the face of all these objectionable features of American laws and sentiment, Canada has found it convenient to maintain a very large trade in the manufactures of the United States; and this trade would have continued to grow; and to have been as favorably treated by the Canadian Government had it not been but too apparent that there was to be no diminution of American tariff hostility to us; and it would have been strange, indeed, if Canada, thoroughly tired of trying to cultivate closer trade relations with our unappreciative neighbors; thoroughly disgusted with the repulses and unfriendliness invariably shown to her, should abandon the effort, and offer her favors where they would meet with favorable response.

Through the unfriendliness of United States legislation that country is closing the doors through which American manufacturers found access to the Canadian market, and in which they made sales valued at some sixty million dollars annually.

THE TARIFF CHANGES.

The tariff changes are moderate in their character, and in the main the duties are high enough to afford reasonable protection to any industry that can be carried on in Canada save at a great loss to the country. It would probably be impossible to satisfy the deputations which have been flooding the Government for the last few days except by virtually undoing the work of revision and leaving the duties as they were. Every manufacturer naturally wants all the State aid he can obtain, and if he has been aided to the extent of, say, thirty per cent. he will not be found willing to admit that twenty per cent. is sufficient. It is right that due regard should be had to the existing conditions of industry, and there should be as little disturbance of employment as possible; but the State-aided manufacturers cannot be allowed to virtually make the tariff. The Ministers spent several months in considering the proposed changes and consulting those who might be affected, and if a sound decision could not be arrived at in that way the situation is not likely to be improved by amendments made at this time. The changes made are by no means drastic, and the restoration of high duties under threats of ruin would be a backward step that the Government could not afford to take.—The Globe.

These be words of cold comfort for the manufacturers, and very icicles for their employes. "The tariff changes are moderate in their character" indeed. How about the binder twine industry, and the barb wire industry, both which articles have been placed on the free list? The change from existence to annihilation is beautifully moderate in its character. And how about the woolen industry? Can the changes of the tariff be considered "moderate" and in the interest of the country when they result in closing all of the smaller mills, making beggars of those who had invested their money in them, and paupers of the men and women and the boys and girls who found employment in them? No wonder that deputations of manufacturers have been besieging the Government, asking that in fairness they be not utterly ruined by the "moderate changes" that have been made in the tariff. The Globe tells us that it is right that due regard should be had to the existing conditions of industry, and that there should be as little disturbance of employment as possible; but the "right" and the "due regard" of these conditions are conspicuous by their absence; and the "as little disturbance as possible" of employment is characterized by the closing of mills and factories, the destruction of capital and the idleness of labor. And this is the result of what The Globe calls moderate changes of the tariff. We are told that these changes are "by no means drastic." They are more than drastic—they are deadly. And because the Government cannot afford to restore the duties under which the country prospered, because to do so would be a backward step, we are to stand by and see our manufacturing done in other countries by cheap or prison labor, with the alternative of forcing Canadian labor to accept greatly reduced wages for its services.

The tariff changes are moderate in their character with a vengeance.

EDITORIAL NOTES.

In a recent issue of this journal we gave several pages to a description of the reconstructed plant of the Royal Electric Company in Montreal. Alluding to this event The Electrical Engineer says:

In commenting on the situation in which many electric lighting companies found themselves to-day it was pointed out that entire rebuilding, or extensive improvements in machinery and auxiliary apparatus, could alone bring them up to date and place them in a position to meet the present demands of the public both as regards quality of service and as to rates. To reconstruct an old station is evidently more difficult than to start afresh from the foundations up; but in nine cases out of ten, financial considerations make it the only feasible method of attaining the desired end. How to carry out such a plan without interrupting the service is usually a serious problem and requires much finesse. Probably as representative a piece of work of this kind as has been carried out in recent years is the reconstruction of the Royal Electric Company's alternating current plant at Montreal, so well described by the company's electrical engineer, Mr. P. G. Gossler. While the actual methods employed in this delicate engineering operation are of great value in themselves, the results in dollars and cents will perhaps appeal still more strongly to those having in charge the financial management of central stations. To put over 10,000 lights additional on the circuits and shut down 1,000 horse power in engines at the same time is an achievement which is

deserving of more than passing notice; and when to this is added a considerable reduction in the cost of dynamo and transformer maintenance, dynamo attendance, oil, etc., the benefits due to the change make a superb showing. We congratulate Mr. W. H. Browne, the able general manager of the Royal Electric Company, and his technical staff on their brilliant feat, and believe that their work will not fail to have due influence on similarly situated companies this side of the border.

We are in receipt of the programme of proceedings to be observed at the seventh annual convention of the Canadian Electrical Association to be held at Niagara Falls, Ont., on June 2nd, 3rd and 4th proximo. The arrangements have all been made with a view to a profitable and pleasant meeting. Aside from the routine business and discussions of technical subjects, that will occur as a matter of course, the social features of the occasion will be of a most delightful character. There will be an excursion to Buffalo by special electric cars including a visit to the Buffalo Railway power house; an excursion over the Niagara Falls Park and River Railway to Queenston, Ont., crossing the Niagara River at that place to Lewiston, N.Y., returning to Niagara Falls, N.Y., via the celebrated Gorge Electric Railway; a yachting excursion on the Maid of the Mist to the foot of the Horseshoe Falls, etc., and a banquet at the Dufferin Cafe where other than John Collins refreshments will be served. For they are all jolly good fellows.

We are in receipt of a circular from Mr. E. E. Sheppard, Toronto, recently appointed Trade Commissioner for Mexico, Central and South America, having reference to a trip to be made by him through the countries named, under the direction of the Department of Trade and Commerce with the view to develop, if possible, the Canadian export business to those countries. Mr. Sheppard will start on his trip in about two weeks and in the meantime he asks manufacturers to send him their catalogues and price lists, which of course are to be treated as absolutely confidential, and also lowest possible prices at which they would be willing to sell their leading articles for export, so that by adding freight, insurance, lighterage, customs duties, wharfage, delivery charges, etc., he may be able to tell them on his return what chance they would have in competing with those who are now doing the export trade in the countries referred to. Manufacturers are also asked to state in their replies what articles they might manufacture with success for export to those countries. On his return Mr. Sheppard will report through the Department of Trade and Commerce the prices actually obtained by exporters and paid by the importers at the various distributing points. Prompt and comprehensive replies are requested, which should be addressed to Edmund E. Sheppard, Department of Trade and Commerce, Ottawa.

The Italian Government announced the other day that it intended to consider the question of the application of the new United States tariff, and would not fail to take diplomatic measures for that purpose at the proper time. We read this as an indication that it will not tamely submit to the tyrannical impositions of that country without

retaliation. This is a growing sentiment among European countries, and we welcome its appearance. The high jinks of both Democrats and Republicans are becoming a little monotonous and tiresome.—Manchester, Eng., Textile Mercury.

The three thousand farmers who are shareholders in the Patron binder twine factory in Brantford are anything but pleased at the reduction and proposed abolition of the duty on twine. As manufacturers, they decidedly object to this sop thrown to the farmers.—Montreal Herald.

Of course they object, and very reasonably, too. Like other manufacturers they invested their money in an industry they thought should be maintained, and now they find that their supposed friends have dumped them very unceremoniously into the soup. They will now know how to sympathize with the other manufacturers whose industries have been crippled or destroyed.

Statesmen and Governments are beginning to recognize the fact that industry and commerce are the principal elements in a nation's prosperity, and that the antiquated arrangements that have prevailed for long periods of time are obsolete when looked at from the requirements of to-day. The Italian Government has just given expression to this sentiment, in announcing its intention to terminate its commercial treaty with Russia, which has been in force for forty years, and of commencing negotiations for a new one on lines more suitable to present requirements.—Manchester, Eng., Textile Mercury.

Now let Great Britain terminate its treaties with Belgium and with Germany; and, being thus rid of a very inconvenient incumbrance, enter into an arrangement whereby all British Colonies will have preferential tariff treatment in consideration of such concessions as Canada would gladly accord.

There is no danger of live Canadian manufacturers of mining machinery suffering through the tariff. They will be relieved of the expense of lobbying at Ottawa for special favors, and the cost of their material will be greatly reduced. They will be forced to furnish cheaper machinery to the miners on account of the chances of competition, but will be able to do so. On some of the long hauls westward the traffic will not bear as high a freight rate, and that will be adjusted in accordance with railway policy.—Toronto Globe.

The facetiousness of The Globe is most refreshing. It tells us that the manufacturers of mining machinery will not suffer. Of course not—the dead do not suffer, they are dead, and that is the condition not only of the manufacturers of mining machinery, but the barb wire manufacturers and the binder twine manufacturers also. Of course these manufacturers are relieved of the expense of lobbying at Ottawa. They are also relieved of the expense of paying wages to workmen, and to commercial travellers, and to office help, and in this they are like the other dead men who are relieved of the expense of even paying the undertaker. Of course these mining machinery men will be forced to furnish cheaper machinery to the miners, which The Globe says they will be able to do—if they accept orders for it, but how can they accept orders? The Globe tells us that the cost of their material has been greatly reduced. Granted; but still they have to pay duty on all materials entering into the construction of

the machinery they produce, while there is no duty whatever on such machinery coming from the United States or elsewhere. The outlook for Canadian manufacturers of mining machinery is indeed gloominous. The Globe takes much delight in adding insult to injury.

Speaking of the arbitration treaty recently rejected by the United States Senate, The Manufacturer of Philadelphia, says:

The arbitration treaty with Great Britain is a lost cause. This may as well be recognized at once. The adoption of the Hoar amendment on Wednesday was all that was needed to give it a tombstone. That makes the treaty a mere verbal form, as Great Britain recognized very fully when a similar amendment was proposed by the Committee on Foreign Relations during the last Congress. There is not much reason to think that the British government will agree to this amended document. Whether it does or not, the treaty henceforth will mean nothing, as arbitration will be the exception rather than the rule. We have been settling our disputes with Great Britain according to the arbitration plan for many years. It is to be hoped that we may continue to do so without the treaty, just as well as with it. The mortification at the Senate's action, to sensible people, because of the inability of its members to understand certain basic principles, is indescribable. As we said last week, no treaty under the sun can prevent a nation from fighting if it wants to fight. It can break the treaty and fight whenever it wants to kick up its heels and try its gunboats. The problem in every nation, however, is to keep the mob down in some way and allow reasonable and temperate people to have a chance in managing the government. No government can exist for any great length of time which is run by a howling mob that constantly hankers after change and excitement. The treaty was designed to curb these dangerous elements, to appeal, if possible, first to reason and to arms only as a last result, and as a result of careful deliberation, in case every other means of settlement failed. The American nation, however, rejects the proposal for a righteous and civilized international arrangement of this character.

There never was an agricultural industry that awaits the action of Congress as does the beet sugar business in America to-day. Mr. Thomas R. Cutler, manager of the Utah beet sugar company writes us: "Let me say emphatically that unless Congress protects this industry, it is not a particle of use for anyone to attempt to put money into the business, for without that protection, it will become a question of the survival of the fittest under existing conditions. No new sugar factory can expect to make money for two or three years, as there is so much educational work to perform, of a costly nature. The best plan would be a specific duty sufficient to encourage the development of this great industry and at the same time help to furnish the revenue which the government so much requires. I would, however, advocate, a bounty on a sliding scale to help erect factories, because they need all that can be done for them the first two or three years, while in their infancy. Such bounties ought to be offered by the state that is directly benefited by the development of the industry." Mr. Cutler undoubtedly voices the sentiments of most of those who are well informed in the sugar business. There are lots of beet sugar propositions "in the air," but thus far we find capitalists very chary about

embarking in the business, because of foreign competition, which has been still further heightened by German and French export bounties. American Agriculturist believes that either the present Congress or its successor will act favorably on this matter. If such legislation could be perfected in January, several factories might be established in season to work the 1897 crop, but if the matter goes over until the next Congress the uncertainty would continue another year. Instant favorable action may save two years delay. Let us hope for the best and work for it.—American Agriculturist.

THE TARIFF COMMISSION AT MONTREAL.

(Continued from last issue.)

RUBBER CLOTHING.

Hon. Mr. Fielding—There are two factories making these goods in Montreal?

Answer—Yes, sir, two, the Montreal Waterproof Clothing Co. and the Beaver, also another company which really prefers free trade as they have only an office here. Our business is a young industry here. There were no waterproof tweed coats made in the Dominion of Canada before I came here. I will not ask you to reduce the 12 1-2 per cent. on the raw material, but I would certainly say that if you increase the tariff on the ready-made, not only will you have a revenue but a good many people will wear the coats, and a great many Canadians will have their bread and butter assured. We can sell here from \$300,000 to \$500,000 worth of coats; almost to the amount that is imported into Canada.

Mr. H. Wener remarked that he had nothing to say in regard to men's coats. His company manufactured ladies' goods as well as men's, and paid a duty on such goods of 27½ per cent., that is to say, on the rubber cloth, and thirty-five per cent. on the ready-made. They had to import all their ladies' goods ready-made, as such garments could be made cheaper abroad than here.

Hon. Mr. Fielding—What other article do you use?

Answer—Single texture cloth. There is a great quantity of cheap garments brought in from the United States and England, especially from the United States.

Mr. Rosenthal—When he says 27½ per cent. he does not complain about 27½ per cent. on the double texture. Single texture is a cloth tweed outside and rubberized. Double texture is rubber between two cloths; that is what we produce here in Canada.

Hon. Mr. Fielding—Have you keen competition in men's goods. Have you an understanding as to prices?

Answer—We do not interfere much with each other. We sell very near about the same prices.

Hon. Mr. Fielding—You make it a point not to undersell each other?

Answer—As a rule we do not. There is plenty of room.

Mr. Rosenthal—We have no understanding between each other.

Hon. Mr. Fielding—You sell at the prices of the imported goods plus the duty added?

Answer—The way we sell is this—We can sell a coat for \$8, but not for \$5. We cannot cut the \$5 coat, because the ready-made importers can sell it cheaper. We use a far better proofing on our double texture cloth than the English do.

Hon. Mr. Fielding—If the quality is so much better than imported goods, that amounts to protection?

Answer—Yes, but you cannot convince the public of that.

CORDAGE.

The Consumers' Cordage Company was represented by Mr. Elisha Fulton.

Gentlemen, I have the honor and the pleasure of presenting to you a very important industry of Canada, very necessary to the Government, to suppress the vicious; very necessary to help the fallen and wretched; very necessary to commerce and trade, and also very necessary for the extension of your territory. Manitoba could never have been settled, nor the Pacific Railway ever have been built if our factories had never been established. I say this without any hesitancy whatever. We manufacture cordage and binder twine, but as your honorable body has only assigned thirty minutes to each speaker, I will take up what probably has received the most public attention, viz: binder twine, separately from cordage, and trust for your indulgence to the cordage afterwards. I have prepared notes as there has been so much said and written in regard to binder twine since it has superseded wire but it is

almost impossible to meet all the erroneous reports and foolish statements published in the last six or seven years, particularly in the United States. Binder twine is almost exclusively made in the United States. Neither England nor Germany nor Russia makes any of any account. The United States sends hundreds of tons of it all through the Argentine Republic, through South America, to Russia, Greece, Turkey and other parts of Europe, where they plant grain in any particular quantity. Although Russia raises so much hemp and so cheaply, still the United States send the binder twine there to bind their grain. I only mention this to impress upon you that all along our border we have the only important competitor in the binder twine industry.

Mr. Fulton said that the Government must have had in view the employment of its prisoners when it started the making of binder twine in the penitentiaries. He believed that the Government had on hand nearly a thousand tons of binder twine at this time, some of it two or three years old.

If, he continued, you compare the Canadian and American prices for the last five years, it will show the Canadian prices to be lower than those of the United States. The Consumers Cordage Company's sales for the last season were 7,119,000 lbs. This Company has lost money on every pound of twine that it has ever sold since the reduction of the duty. The duty should be made the same as it was prior to 1893.

Another point was that the plants in Canada were better than in the United States. (There are forty-two in the United States.) Almost the same quantity of cordage has been imported for Canadian consumption during the last six years. Any reduction in the duty would kill Canadian manufacturers. Mr. Fulton here exhibited two samples of manilla, and two samples of binder twine.

In answer to a question by the Hon. Mr. Fielding as to whether the farmer was not the best judge as to the quality of the twine he required, witness stated that he did not think so. The merchants bought the cheapest twine, and the farmer would drive to the cross-road store and buy a bag of this twine, which if he afterwards found inferior, he would not have the time during the harvest season to drive back and exchange. The manufacturer could not sell direct to the farmers; they could not afford to pay commercial travellers.

Hon. Mr. Fielding—Why do the merchants buy the cheapest twine?

Ans.—Because it sells the most readily.

Mr. Fielding—Just so.

Hon. Mr. Tarte—Is the same American article as this cheaper or dearer?

Ans.—Cheaper for Canada; dearer for the United States.

THE JUTE INDUSTRY.

The jute industry was represented by Mr. J. Widmer Nelles, manufacturer's agent.

Mr. Nelles' principal contention was that the duty on jute had been changed from twenty to twenty-five per cent. during the time that Sir Mackenzie Bowell was Minister of Customs and that this change had been made unknown to the Minister. He wished to speak of the administration of the tariff, which had been changed by subordinate unknown to the Minister.

Mr. Fielding—You mean the application of the tariff?

Mr. Nelles—The Minister said that the duty should be twenty per cent. The duty was made twenty-five per cent. unknown to the collectors.

Sir R. Cartwright—I fail to see under what clause this twenty-five per cent. can be levied.

Mr. Nelles—We had tendered the Government what they asked. They came upon us afterwards. The collector at St. John, N.B., would not take any more than the twenty per cent. duty. When the tariff is changed the appraisers should go over it item by item, as otherwise various items are overlooked.

Mr. Fielding—But every man in the trade is bound to consult the tariff, and should know the correct rate.

Mr. Nelles—We could not get the duty back after it had been paid in different parts of the country for two years. We imported a package from England the other day, passed the entry, but could not get the goods. The package was burned on the wharf. The Customs would not let another package in in place of the one burned.

Sir R. Cartwright—Is there not a special provision in the statutes covering such a case as you have spoken of?

Mr. Nelles—I do not know of any.

Sir R. Cartwright—My recollection is that we are forbidden to make a rebate for goods destroyed by fire.

Mr. Nelles—Yes, sir; I am complaining of that.

Sir R. Cartwright—It is not in our power to change that. Your contention is that this particular clause should be modified or abolished.

Mr. Nelles—Yes, sir. If I can give proof that the goods were burned while in the possession of the Customs, why should I not bring in other goods or get duty back?

Mr. John L. Gallatti spoke for the bagging and jute business. The jute fabrics were imported in a rough state, and had been free of duty for the last twenty years. Those fabrics had to pass through five distinct operations in the factories here before being fit for the sewing machine. There was twenty per cent. duty on manufactured bags. This light protection should not be reduced. There was no combination or arrangement of prices, nor had there ever been. He contended that the rough material should come in free, and that considering the labor employed and the capital invested, the duty of twenty per cent. on finished bags should not be removed.

CARRIAGE MAKERS.

The carriage making and accessory trades were represented by Messrs. E. N. Heney, B. J. Coghlin, B. Leduc, F. Bacon, of Montreal, and Dr. Bowen and Mr. W. G. Matthew, of Gananoque. Mr. Heney stated his case as follows: Gentlemen, the carriage business is one of the most important industries in Canada, and gives employment to a great number of workmen. The census of 1891 gives the number of them directly employed as 9,036 the wages paid \$3,000,000 per annum, and the value of the products \$9,744,416. If blacksmithing were added, these figures would be doubled. Owing to the nature of the business, it is necessary to employ almost exclusively skilled labor. This labor on the whole earns fair wages—from \$7 to \$30 per week, and supports a large number of families.

The present duties, while protecting the trade, also protects liberally the accessory trades, and have not resulted in the prices being advanced to the consumer; on the contrary, on account of the introduction of modern methods of manufacturing, vehicles are sold at much less than formerly. The bulk of the business is represented by a class of vehicles, of which about sixty-five per cent. of the value consists of materials supplied by the accessory trades.

Previous to the adoption of the protective tariff, few, if any of these materials could be obtained in Canada. At the present time nearly all of them are manufactured here. The accessory trades are as follows: Manufacturers of wheels and shafts, manufacturers of drop forgings, manufacturers of springs and axles, manufacturers of carriage leathers, manufacturers of carriage paints, manufacturers of carriage varnishes, manufacturers of bolts and nuts, manufacturers of wood screws, manufacturers of tire steel and bar iron, manufacturers of rubber cloth, manufacturers of enamelled and oil cloth, manufacturers of plated wire mountings, manufacturers of malleable iron. In all about forty or fifty factories are employed in manufacturing these materials.

All these industries are dependent on the carriage trade for a market for their goods, and anything affecting the carriage manufacturers would seriously interfere with these industries.

The manufacturers of carriages had no reason to complain of the duties on these materials, which are from twenty to fifty per cent. as the duties on finished carriages protect their own trade from American competition. The present duties on carriages are, on carriages costing more than \$50, thirty-five per cent.; on carriages costing not more than \$50, \$5, and twenty-five per cent. If any reduction in the duty on carriages were made at this time, the whole trade would be very seriously affected, as the business in the United States is in a very demoralized condition.

A large number of very extensive factories are in the hands of receivers, and without the specific duty, or some other similar plan, the country would be flooded with low priced vehicles from the United States. We would therefore strongly urge that no change be made in the present tariff as it has been found to work satisfactorily for all those connected with the business. I might say, gentlemen, that this business is carried on in almost every part of the country, even in small towns. As an instance, in the County of Beauce, they make over 1,000 carriages a year. With reference to the condition of business in the United States, I may say that during the past few months over fifty of the largest factories have failed and they are only waiting for an opportunity to unload in Canada. This has been brought about by the introduction of bicycles so extensively and trolleys.

Hon. Mr. Fielding—But we have bicycling and trolleys in Canada?

Mr. Heney—Yes, but not nearly to as large an extent. I have also a letter from the president of the Canada Carriage Company, which is probably the largest factory in Canada, in which he says that he knows more than one manufacturer who is willing to have the duties removed in order that they might get the trade of the United States, and at the same time hold the most if not all our Canadian trade as well, simply by moving the factory across the

river; but a more important statement is this, that if the matter is brought before the Commissioners it should be mentioned that the slightest reduction of duties on vehicles would let in such a flood of cheap goods manufactured by irresponsible firms in the United States as to absolutely close every factory in Canada, without in the least benefiting the purchaser.

Hon. Mr. Fielding—Then he is evidently afraid that the people are going to get cheap carriages?

Mr. Heney—Low priced carriages, but very inferior.

Mr. Fielding—But surely the man who buys a carriage is the best judge of that?

Mr. Heney—No, sir; he is not. It is a peculiar fact that in the carriage business, when a carriage is painted and finished, even a practical man cannot tell whether it is good or bad until it is used.

Hon. Mr. Fielding—You say that the Americans flood the country with low priced goods, which is a disadvantage to you; then it ought to be the business of legislation to keep up the price of goods?

Mr. Heney—And at the same time give good value. It is the business of legislation to give employment to our people. The carriage builders are certainly a large and industrious class.

Hon. Mr. Fielding—Did not we have a fairly prosperous carriage industry under the low tariff?

Mr. Heney—No, sir, we did not, under the low tariff; and, furthermore, we could not get the materials here—we could not buy a foot of carriage leather.

Mr. Fielding—Would you be surprised to learn that in the smaller towns of the Province, the smaller carriage-makers use the very same complaint against your large concerns in Ontario that you use against the firms in the United States.

Mr. Heney—Well, we are all Canadians, we cannot prevent competition among ourselves. We have been doing business for twenty-five years in Nova Scotia.

Hon. Mr. Fielding—If there is a Nova Scotia—since you have mentioned Nova Scotia—carriage builder who finds he is being crowded out by your competition, he is supposed to take comfort in the fact that it has been done by a brother Canadian?

Mr. Heney—No, but he can start up for himself in building carriages. There are plenty of small builders who are making quite a number of carriages.

Hon. Mr. Fielding—Is it not a fact that they are making fewer carriages to-day than they used to make.

Mr. Heney—In some cases.

Hon. Mr. Fielding—Is it not a fact that the large producer up here—I am not saying it is wrong; it is the law of trade—that the large producer up here is sending his goods down there at a cheaper rate and consequently pressing him to the wall?

Mr. Heney—Well not if he is an enterprising man, because he can sell a better class of vehicles.

Hon. Mr. Fielding—So that instead of becoming manufacturers in Halifax and St. John, they are becoming dealers in your goods!

Mr. Heney—To some extent.

MANUFACTURE OF RHEA FIBRE.

The remarkable development of the Rhea fibre throws for the moment all tariff differences between Bombay and Manchester into the shade. The Indian Government has long been aware that in this widely-spread variety of the nettle family its provinces possess a source of unused wealth. In 1869 it offered a reward of £5,000 for the invention of a machine or process which should separate the delicate fibre from the bark at a cost consistent with the requirements of commerce. An offer of Rs.50,000 was renewed in 1877. Various machines were submitted under these inducements but they failed in regard to the essential element of cheapness, and after many trials the offers were withdrawn. They effectually attracted, however, the attention of experts in Great Britain, Europe and America. Rhea became recognized as one of the most valuable fibres known to the ancient or modern world. Its use in Egypt, India and China dates from before the dawn of history. Rhea cloth is unrolled from the mummies of the Nile and unearthed in the burial mounds of Assam. The nets and lines spun from it had, for strength, fineness and durability, no rivals among the fishermen of Bengal and the Malay Archipelago. As "China grass" it won its way about the beginning of this century into European commerce.

The difficulty is to separate the strong silky fibres of the bark from the outer cuticle and the tenacious bums in which they lie embedded. In the past, when labor was of little account, the wives or daughters of the husbandmen and fishing communities scraped and washed small quantities of the bark till, by the

persistent toil of many days, each family produced a few handfuls of the much-prized fibre. But the cost of this manual process proved an insuperable difficulty in the adoption of Rhea for modern textile manufactures. Dr. Royle, as industrial advisor to the India office, showed that the Rhea fibres "are exceeded by none in fineness, excel all others in strength, and may be fitly compared to the trunk of an elephant which can pick up a needle or root up a tree." He declared that, if the difficulty of separating the fibre can be overcome, "the benefits to India and the world will be incalculable." It is this problem that the chemists and machinists of Europe and America have during the past thirty years been endeavoring to solve. France and Germany at once entered the field with factories for the extraction of the fibre. They worked it up into many forms, from ropes and sail canvas to plushes and dress-pieces resembling silk goods in appearance. They failed, however, to produce a filasse, or clean fibre, which should be at once cheap and serviceable. No machine or merely mechanical operation eliminated the resins with a perfection which yielded fine yarns, except at a cost prohibitive of their general use.

The chemists seemed for a time to be more successful. They produced by means of various re-agents a filasse which was at once cheap and apparently sound. Beautiful fabrics were woven on the Continent, and the inventors laid out a large capital, in the belief that they had solved the problem. But by the time the fabrics came into the hands of the consumers, indeed often before they passed from the shops of the retail dealers, it was found that the chemicals had injured the fibre, and the goods were often returned to the makers. Process after process and machine after machine failed to extract a Rhea fibre which should be both durable and cheap.

The honor of solving the problem has fallen to an English chemist, born, we believe, in India. Mr. Gomess after many experiments elaborated a process which the Indian Government is at length able to pronounce a complete success. "The difficulties which previously existed," says the official memorandum lately issued by its Inspector-General of Forests, "in regard to the extraction of the valuable textile fibre from the bark of the Rhea plants have been entirely overcome by what is known as the Gomess process, and a large demand has sprung up for ribbons of dried Lark with every probability of its increasing to enormous proportions." After referring to the operations of the Rhea Fibre Treatment Company in London and its dependent associations now being established throughout India, Europe and America, the official memorandum proceeds to indicate how the production of fibre may be increased in practically unlimited quantities to meet the demand.

"These facts seem to point to the conclusion that we are on the dawn of an industry which even promises to rival jute cultivation." The Inspector-General then draws out a scheme for aiding the cultivators by official information as to the areas most suitable for the growth of the plant and the varieties best adapted to each locality, and by Government experiments as to the best modes of stripping, drying and baling the bark. The subject, he insists, "becomes all the more important and urgent as reports reach us from the French colonies of considerable activity in the Rhea fibre trade, and as it would not be convenient to be outstripped by them."

The Gomess process adopts zincate of soda for the elimination of the resins, and effects it without the slightest injury to the fibre. After the "ribbons" or strips of bark have been freed from dirt they are placed in weak acid baths for a night. Next morning they are passed through a mild alkaline bath, caustic soda to which zinc has been added. When washed and dried by the usual mechanical means, the fibres emerge as a long, silky filasse, entirely free from the cuticle and resinous gums in which they were embedded; clean, white and ready for the comb of the spinner. They take the most beautiful dyes and can be worked into every variety of fabric from gorgeous velvets to cheap drills and delicate laces. The combined lightness and toughness of the fibre render it peculiarly suitable for tents and ship canvas. Three-fifths more cloth of equal strength can be made from Rhea than from the same weight of linen. That is to say, a thousand yards of the Rhea canvas weigh only as much as six hundred yards of linen. Its durability and resisting power to strain are also much greater.

The Government of India is taking effectual steps for the rapid extension of the cultivation. If its forecast be correct, we may congratulate ourselves that what promises to become a great new industry has been rendered possible by the science of an English chemist and has been practically inaugurated by an English company.

The Baltimore American claims to have reliable information, that at least fifteen Democratic representatives from the Southern States in the present Congress will take their stand in favor of a protective tariff.

The 1897 Canadian Tariff

The 1897 United States Tariff

The British Tariff

As soon as the new Canadian Tariff Bill was presented in the House of Commons at Ottawa it became the Law of the Land, going into effect immediately. The Dominion Parliament being already in session, it is the intention of the Government to press the Tariff Bill to its final passage with as little delay as possible.

The new United States Tariff Bill has been already introduced into Congress, and it is expected that it will become law and go into effect at an early day.

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The importance and value to all manufacturers and business men of having the Tariffs of these three great countries—Canada, United States and Great Britain—published in full within one cover cannot be too highly appreciated. The Special Edition of THE CANADIAN MANUFACTURER containing them will be printed on heavy paper, and provided with loop for hanging in any convenient place.

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AT THE GATES-AJAR.

A British Columbia boomer died [no matter what day or date], and when he reached the portals spied St. Peter standing at the gate. From out beneath his shaggy brows the good saint eyed the coming guest, who, with true Chesterfieldian bows, his honor of the saint expressed. He said he had grown tired below, his brain was worried with its cares; the struggle was a hard one, so he thought he'd climb the golden stairs. St. Peter asked the man his name, his occupation when down below, his church, from whence he came, and then with indiscretion rank, ne'er dreaming of the fruit 'twould bear, he asked the disembodied crank how things in British Columbia were. This question never yet has failed to start the British Columbian's tongue, and saintly ears were soon assailed with wildest anthems ever sung. He talked of leads and shafts and veins, of tunnels, stones and fissures true, of mammoth strikes and golden gains, until the heavenly air was blue. With growing eloquence he sped along the oratoric track, with gestures of both hand and head, and frequent bowing of the back, till Peter's ears began to ache, and "that tired feeling" came to him; yet still the British Columbian spake his little piece with added vim. At last forbearance ceased to be a virtue, and the saint arose, believing that the guest would see the interview was at a close. Then grabbed he Peter by the robe, and talked, and talked, and talked again, until the patience of a Job would not have stood the trying strain. In desperation Peter threw the golden gateway wide ajar, and said unto him: "If you'd view the heavenly glories, there they are." The Western boomer stepped inside, and gazed on the street of shining gold, and in a business manner eyed the buildings of unequalled mold. The dazzling beauties one and all he studied; then, with a shake of head and converted Western gall, turned to the waiting saint and said: "Just as described in Holy Writ, and I confess it's mighty sleek, but I just want to say that it ain't in it, sir, with our Trail Creek!" Then Peter seized him by the neck and near the bottom of the spine, gave him one vigorous, saintly kick, and shot him down the dark decline, and as the body downward sped, old Peter gave his ears a rub, and with most touching pathos said: "I pity poor old Beelzebub!"

The Glover's Directory for 1897 is issued by the American Glover, 84 Gold street, New York City, and 298 Devonshire street, Boston. The little book contains the names and addresses of about 2,500 firms engaged in one or another branch of the glove industry. It also gives, besides the wholesale dealers, about 500 large department stores, with the names of glove buyers given in most cases. The make-up of the little volume is as compact as possible, that it may be carried conveniently on the road. Comfortable margins are left for notes which the trade may make against the names. As to the trade in gloves some deductions may be made from its pages. There are in the United States and Canada in round numbers, exclusive of kid glove manufacturers, five hundred firms producing leather gloves and mittens, and fabric goods with leather palms. New York State comes first in the list as to the number of factories, having in New York City and state about 275 firms, large and small, producing gloves and mittens from kid and leather. Among the cities and towns Gloversville, N.Y., is first with 140 factories, Johnstown second with sixty-six, Fulton county having, all told, 215. There are about fifty factories in the state outside of New York City and the Fulton district. In New York City there are but few factories. The city is the great disturbing centre of both domestic and imported gloves. The wholesale glove business for which New York receives credit exceeds \$15,000,000 annually. Illinois comes second in the list of states as to the number of shops and factories, possessing about sixty-five, nearly forty of which are within Chicago. California numbers about thirty, Wisconsin twenty, and the New England States about the same number. Other sections have their factories and small shops which go to make up the total. Canada is represented by a couple of dozen establishments.

Everybody knows that the introduction and discussion of the second edition of the McKinley Tariff in the American Legislature has led to a very extensive exportation of every class of merchandise usually taken from this country. Information comes from Liverpool that the docks of the city have during the past three weeks presented a scene of unprecedented activity, in consequence of the enormous exports in anticipation of the tariff. The White Star cargo steamer "Cevic," which sailed a week ago

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carried the largest outward cargo ever shipped on a single vessel. The rush has been especially heavy in wololons, dyers' goods, cottons, laces and novelties. But what, it may be asked, of the retroactive clause of the Bill which is now under discussion? Of course importers will have to take their chance.—Manchester, Eng., Textile Mercury.

Canada's new government seems to be determined in its efforts to complete the St. Lawrence canals to fourteen feet navigation within the next two years. The government estimates, which have just been submitted, call for \$5,327,696 to be expended on canals during the coming year. Of this amount \$1,250,000 is for the Soulanges canal, and other leading items are also for connecting parts of the St. Lawrence system. It is the general opinion that the design of the Canadian government in pushing the St. Lawrence canals to completion, in extending the Intercolonial railway and in continuing the Trent Valley canal is to give effective competition to American trade routes by a rail and water route controlled by the government from Fort William to Halifax, with branches into central Ontario.—Cleveland, O. Marine Review.

A fabric of beautiful appearance, says the London Telegraph, is to be put upon the market—an improvement upon water proof coated materials rendered thus impervious by treatment with the well known India rubber and other solutions. The improvement in this case consists in giving to the coated surface of such goods a dressing formed by a film of powder made by reducing glass to an impalpable dust and finely sieved, so as to remove all crystallized appearance, this coating giving to the surface treated a fine, soft, silky and luminous effect. Thus coated, the material may be ornamented either before or after vulcanization, by printing or other method, in a suitable medium, and in the colorings preferred, the desired pattern or design. For this purpose colors having an india rubber or other suitable water proof medium are selected, and in order to counteract the adhesive property the material is treated after ornamentation to a second coating of pulverized glass; this also produces a luminous appearance; while not being soluble in water it possesses the advantage of being more substantial and lasting in its effects than the ordinary powders employed.

It is asserted that repeated experiments have proven, in the transmission of power, that ropes and belts, when well arranged, absorb almost the same amount of power. Some French trials in this line, as reported in Engineering Mechanics, were made, it appears, with a 200 horse power engine, fitted with rope and belt fly-wheels, 14½ feet in diameter. The steam engine had a fly-wheel for the belt and one for the ropes; the dynamo was driven direct off the fly wheel, without a counter shaft, and was provided with two pulleys, one for the belt and one for the ropes. The dynamo was driven direct off the fly-wheel, being mounted on adjusting screws, so that the tension of the belt or ropes could be regulated at will. A cotton belt, a leather belt and a homogeneous leather belt and ropes were of standard quality. Experiments of a comparative nature were made alternately, with the ropes and belts, several tests each day, the result being as above indicated.

NEW DYESTUFFS.

NEW ALIZARINE COLORS.

Alizarine Cyanine Green—Is a new wool dyestuff of a clear green shade hitherto unobtainable by any other alizarine green, and which on account of its great fastness to light will be of considerable interest in wool dyeing. It may be dyed in any of four methods:

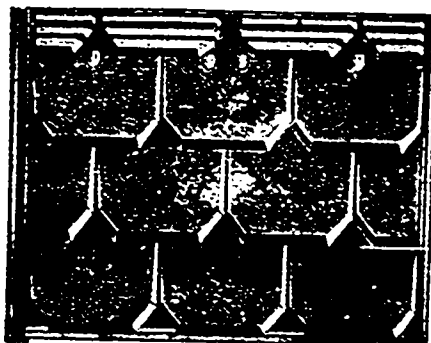
1. Like any ordinary acid color with sulphuric acid and glauber salt; in this way it may be combined with fast yellow extra, quinoline yellow, azo fuschine, brill-alizarine cyanine 3-g. extra—all are light fast.
 2. Dye acid and chrome after with fluor chrome, for combinations, alizarine yellow 3.G. powder, alizarine red 2. A. B. cloth red, brilliant alizarine blues and victoria blacks are suitable.
 3. Dye acid and chrome after with bichromate of potash; for combinations, Diamond F lavine G., alizarine red 2 A.B., sulfon cyanine, diamond blacks, etc., are suitable.
 4. Dye on a chrome, oxalic acid or chrome and tartar mordant usual combinations with other alizarines can be made, alizarine blues, cyanines, chrome yellows, anthracene browns, etc.
- The shades produced by these four methods do not differ materially one from another. Nos. 1 and 2 methods give brightest shades. As regards fastness, the different methods do not differ:

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great deal. The fastness to light is exceedingly good and in this respect greatly excels coeruleine and similar alizarine green dyestuffs. Fastness to acid and alkali is sufficient for all general purposes; fastness to milling is also good. It stands the finishing process well. Considering that shades of great fastness to general wear can be produced with alizarine cyanine green in one bath, the product is undoubtedly interesting. This method of dyeing offers so many advantages in respect to saving of steam, labor, time, etc., the material also being in better condition, that it is scarcely necessary to emphasize these points here.

Diamond Flavine G. (Pdr). Since 1891 this color has been in great demand in paste form; it is now offered in powder form. The powder has this advantage, although being five times stronger is far cheaper in price on comparing value for value. The properties are well-known, viz., easily soluble, dyes very level, of great fastness, etc. May be dyed in combination with all dyestuffs, working on a chrome mordant, same as with the paste.

Brilliant Alizarine Blue D, (paste)—is a new alizarine blue of great fastness to milling and light, but differs from the ordinary alizarine color in that it has to be developed with soda hyposulphite, a

specially suitable brand of which is manufactured by the Farbenfabriken Co.

NEW ANILINE COLORS.

Phenol Black S. S. is very similar to the well-known naphthol black. Its main points are dyeing very level and cheapness. It also has an advantage over diamond black and the Victoria blacks in not tingeing white cotton salvages. This color also suits well for navy blues, in combination with other colors. Phenol black S. S. is a full bluish black. For a good navy use 2.3 per cent. phenol black S. S., two per cent. acid green B. B. N., 1.6 per cent. acid violet 3. B. extra, ten per cent. glauher salt. Boil half an hour and add two per cent. acetic acid, boil for another half hour and add five per cent. soda bisulph, and finish by boiling half an hour longer. The whole operation takes 1½ hour which is not too long for a full shade.

Double Ponceau 1. R., 2. R. and 3. R. resemble double ponceau 4. R., but are yellower in shade. They are cheap brands, easily soluble, cover well, and are faster to washing than the ordinary ponceaus. Silk dyes best from a broken soap bath.

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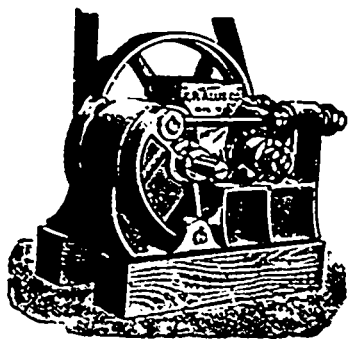
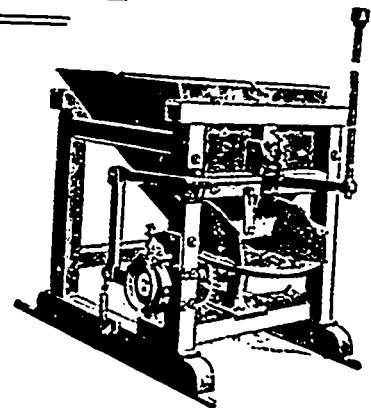
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Acid Green 3. B. can be exhausted well from a neutral bath, a property useful in dyeing half woolsens. In other respects this brand resembles the older brands of acid greens.

Acid Violet 3. B. dyes easily, level, and possesses further the advantage of remaining in clear solution in a sulphuric acid bath, and not forming a tarry scum, shade is somewhat redder than 5. B. and 4. B. extra.

NEW COTTON COLORS.

Benzo-chrome black blue B. is the latest brand of the benzo-chrome colors. It does not green in the air like aniline black. fastness to acid and alkali are good. May be dyed in several ways, may even be topped with aniline salt, producing a color which will complete well with aniline black.

Induline 5. R. - Indulines are much in use for bottom shades, for shoddy with logwood topping, and this new product is particularly suitable for combination with soluble blue. This color is also of importance in silk dyeing, produces a shade fairly fast to water, and fairly fast to light.

New fast grey dissolves and covers well. Shades produced on cotton previously mordanted with tannin and tartar emetic are very fast to light. Shade not altered by alkalis or organic acids: fast to washing. New fast grey scarcely tinges white in a strong alkaline bath. The shades are also fast to perspiration.

New Grey P. (paste), similar to the above product, but faster to light.

ALIZARINES ON LEATHER.

Alizarine colors in leather dyeing are only suitable on chrome tanned stock. The process is very simple, and the shades produced

are faster than any other colors. Prepare the bath with about two and a half gallons of water, quarter ounce acetate of soda, (or the same amount acetate of ammonia), and work for one to one and a half hours at a temperature of about 135 degrees F.

After dyeing, rinse well and work skins in a bath containing, -
Nine ounces Marseilles soap,
Three ounces Olive oil.

This operation is best performed in a milling vat. The following colors are of special service and a range of tans and browns from yellow to chocolate may be produced with anthracene brown G, chrome yellow D, chrome orange.

KATIGEN BLACK BROWN N.

A new brown dyestuff, fast to light, which dyes cold without a mordant. On loose cotton a full brown can be produced with forty per cent. color.

Wet out well, enter cold work a few minutes and let stand over night. In the morning wring out and rinse well. This color is very cheap and will eventually be produced in more concentrated form. By topping with other colors, many new shades can be produced of great fastness to milling and light. By topping with basic colors a full jet black is wrought. Preserve the color in closed vessels as it is hygroscopic and in dyeing, it is advisable to use rubber gloves as being strongly alkaline it injures the hands if not protected.

New shade cards, dyed skeins and other samples may be obtained from the Dominion Dyewood & Chemical Co., Toronto, sole agents in Canada for the Farbenfabriken vorm. Friedr Bayer & Co., Elberfeld, Germany.

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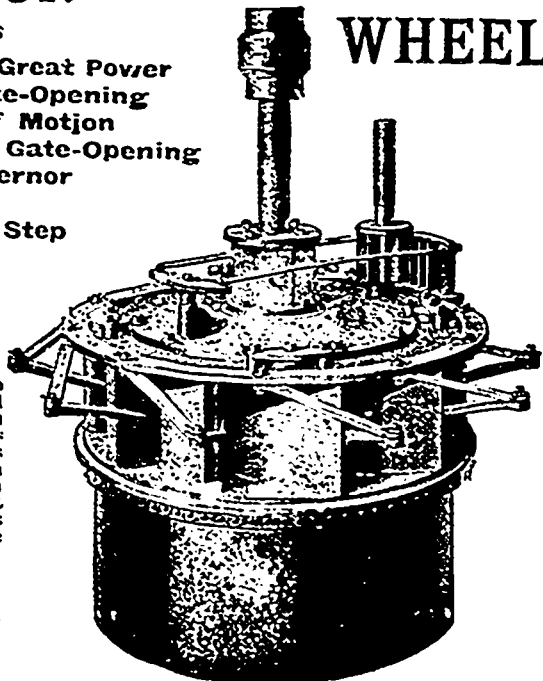
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GENTLEMEN.—Your favor of the 5th to hand. Have been away from home, and hence delay in answering your letter. You ask us how your Dominion Wheel compares with the . . . Well, sir, the comparison is this—we have been using two 35 inch diameter, double 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 35 inch wheels. Yours truly,

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Machinery Brushes for woolen and flour mills, jewellers, shoes, breweries, dairies, platers, foundries, and all machinery work; old rollers refilled.

Frank Wehrle & Co.,

Brush Manufacturers,
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WHOLESALE DEALER IN

DOMESTIC
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Sumac, Japonica, etc.

Cans, Solder

AND

CANNERS' SUPPLIES

WE have special facilities for manufacturing Solder in triangle bars, large bars and wire. . . .

GET OUR PRICES BEFORE BUYING

THE NORTON MFG. CO.

Hamilton, Ont.

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, bolting, 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 pipes for the water works system of Parrsboro, N.S., will be supplied by the Londonderry Iron Works, Londonderry, N.S.

Cowan & Co., Galt, Ont., have the contract for a 75 h.p. engine for the new electric light plant for Waterloo, Ont.

The Queenston Quarry Company, Niagara Falls, Ont., has been incorporated with a capital stock of \$50,000.

T. G. Nichol, Mahone Bay, N.S., has purchased a water power on the Mush-amush River, where he purposes putting up an electric plant to furnish light to Mahone and furnish power for light machinery.

Messrs. Derbyshire & Co., Gananoque, Ont., recently shipped two car-loads of machinery to Prof. Robertson to be used in equipping new creameries in the North-west.

The Duryea Motor Wagon Company, New York, are seeking a suitable location in Canada for a branch factory.

Adam Beck's cigar box factory at London, Ont., was damaged by fire a few days ago. Loss about \$600.

The Fort Erie and Bridgeburg Street Railway Company has been incorporated with a capital stock of \$50,000 to construct and operate an electric street railway in Fort Erie and Bridgeburg, Ont.

M. Robson, Ayr, Ont., purposes building a new 30,000 bushel elevator to take the place of that destroyed by fire some time ago at that town.

The Milton Wire and Roofing Company, Milton, Ont., has been incorporated with a capital stock of \$40,000.

G. A. Burrows' carpet factory at Guelph, Ont., was burned April 23rd. Loss about \$4,500.

The Duvall-Miller Manufacturing Company, Toronto, is being incorporated with a capital stock of \$100,000 to manufacture grain cleaners and separators.

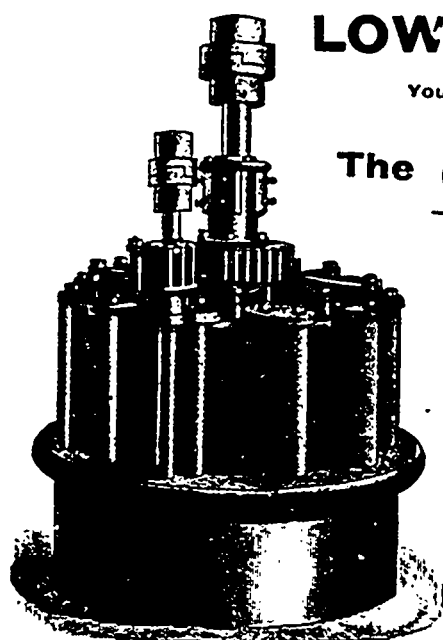
The town of Midland, Ont., has passed a by-law to grant a bonus of \$65,000 to aid the Grand Trunk Railway in building a one million-bushel elevator at that place.

The negotiations between Owen Sound citizens and the G.T.R. for a 500,000 bushel elevator have been concluded and a company is being formed to erect it.

An electric railway is projected to connect the Niagara Falls Park and River Railway with Niagara Falls South. Mr. Henry Symmers, banker, Niagara Falls South, Ont., is one of the backers of the scheme.

The Truro Foundry and Machine Company Truro, N.S., recently shipped a carload of mining machinery to the Kootenay district, B.C.

The May number of Vicks Magazine, Rochester, N.Y., is remarkably attractive both in illustrations and reading matter. It is a publication for the people, giving the best ideas on gardening from those who have proved all they have to offer, and therefore reliable. Looking through its pages we notice an illustrated article in relation to the plumed hydrangea, and the most effective way of planting it; another giving descriptions of several new floral decorations for the bicycle with illustrations, etc. Some special subjects are "Our Winter Birds," "The Strawberry Weevil," "The Polyantha Rose," "A Good Strawberry Mulch," "Mushrooms," "Miniature Chrysanthemums," illustrated, something new and interesting, also an article for children about the dandelion.



LOW WATER

You may have it in the Summer, or
You may want More Power now

The Crocker Turbine

WILL HELP YOU

Perhaps...

You have an Undeveloped
Power?

Why not use it?
It will increase Your Income.

Write Us for Descriptive Circular

Address.....

The Jenckes Machine Co., 28 LANSDOWNE STREET Sherbrooke, Que.

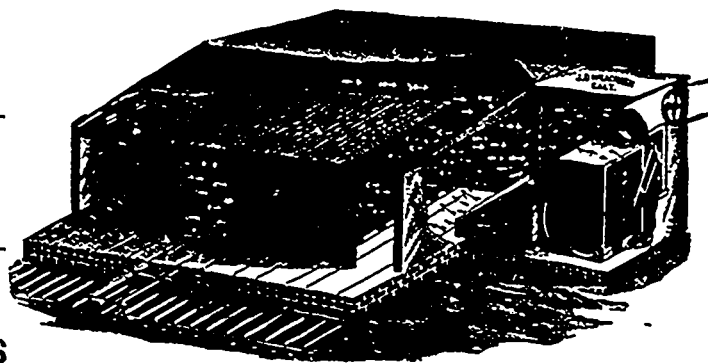
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HOT BLAST HEATING SYSTEM FOR LARGE BUILDINGS

Ventilating
Fans,

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Fans,

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LITTLE WONDER HOT WATER BOILER for Heating Dwellings.

MEACHREN HEATING AND VENTILATING CO.

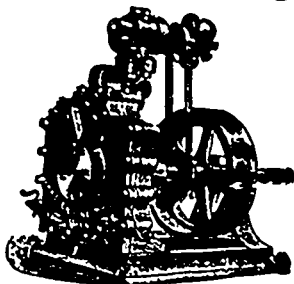
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CHARTERED ACCOUNTANT
AUDITOR, ASSIGNEE, ETC.
500 McKinnon Building, Toronto
Audits and Investigations a Specialty.

The Dake Engine

For Running Dynamos in



Small Isolated Plants.

CONTRACTORS' HOISTS

STEADY AND EVEN MOTION,

ALSO FOR

Attachment Direct to Fans, Blowers, Centrifuga
Pumps, Stokers, Steering Gear, Etc.

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Phelps Machine Co'y,
EASTMAN, P.Q.

BOILERS

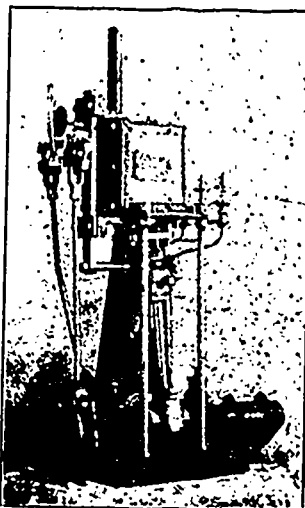
You Want Them
We Make Them

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BANNERMAN & FINDLATER,
Boiler Makers, OTTAWA, ONT.

ALBERT BELL

DUNNVILLE, ONT.



Maker of

YACHT ENGINES, 1 H.P. to 50 H.P.
Safety Water Tube BOILERS
PROPELLER WHEELS
Stationary Engines and Boilers

WRITE FOR CIRCULARS

Kemp Mfg. Co.

TORONTO.

Galvanized Steel Pails

FOR FIRE PURPOSES ONLY.

NO HOOPS TO FALL OFF.

PRICES ON APPLICATION.

La Compagnie Electrique de St. Etienne de la Malbaie with head quarters in the Parish of St. Etienne de la Malbaie, Que., is being incorporated with a capital stock of \$5,000, to do a general electric business.

Messrs. J. B. Stringer & Co's grain elevator and warehouse at Hayercroft, Ont., were destroyed by fire a few days ago. Loss several thousand dollars.

The Nova Scotia Lumber Company's mills at Sherbrooke, N.S., were destroyed by fire a few days ago. Loss about \$20,000. They will be rebuilt at once.

The M. Campbell Fanning Mill Company, Chatham, Ont., has been incorporated with a capital stock of \$150,000.

The Walkerville Printing Company, Walkerville, Ont., has been incorporated with a capital stock of \$3,000.

The Messrs. Pierce are removing their saw mill plant from Edmonton, N.W.T., to Ten Mile, Slocan lake, B.C.

The Brown & Wigle Company, Kingsville, Ont., has been incorporated with a capital stock of \$20,000 to manufacture woollen goods.

Large quantities of improved machinery are to be added to the St. Croix cotton mill at Milltown, N.B.

The McIntosh Granite and Marble Company, Toronto, has been incorporated with a capital stock of \$48,000.

Hugh McCulloch has purchased the flour and woollen mills at Hawksville, Ont., from the executors of his late father and purposes continuing both.

The Independent Cordage Company, of Ontario, Toronto, has been incorporated with a capital stock of \$150,000.

F. F. Cole's elevator at Whitewater, Man., was destroyed by fire a few days ago. Loss about \$7,000.

Alexandre Barr, carriage maker, Pembroke, Ont., has been succeeded by Lockhart & Barr.

BAR IRON AND STEEL

Railway Spikes

Pressed Spikes

Washers

Rhode Island Horse Shoes

Cut Nails

ABBOTT & CO., - MONTREAL

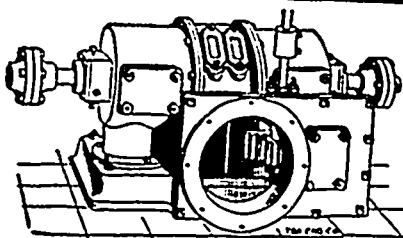
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TURBINE

...FOR ALL PURPOSES...

HORIZONTAL AND VERTICAL.

BUILT IN 44 SIZES.



Horizontal Type.

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.

ATLAS

ATLAS FACTS



METAL

Speak louder than words, and

ATLAS does not rely on empty talk for its UNSURPASSED REPUTATION.

It Has Been Undeniably Proved that ATLAS METAL is Superior to all and has stood under Enormous Pressures and Phenomenal Speed.

TRADE MARK.

TRY ATLAS METAL WHERE ALL OTHERS HAVE FAILED.

WE CHALLENGE A TEST

Against any Anti-Friction Metal on the Market.

THE ATLAS METAL CO., Limited
75 Queen Victoria St., London, Eng.

H. G. McLAREN, General Agent for Canada,
318 ST. PAUL ST., MONTREAL, QUE.

Shipments by the Dominion Coal Company for April amounted to 32,000 tons, compared with 30,315 tons last year, 5,854 tons in 1895 and 1,664 tons in April, 1894. This makes shipments for the first two months of the company's fiscal year, 56,000 tons, compared with 39,486 tons in 1896, 7,653 tons in 1895 and 5,824 tons in 1894.

Development work has been commenced on the lithograph stone quarry at Burleigh, Peterborough county, Ont., owned by Messrs. W. H. Casement and R. H. Strickland, Lakofield, Ont., and several Peterborough gentlemen.

The Lake Medad Portland Cement Company, Hamilton, Ont., has been incorporated with a capital stock of \$150,000, to manufacture all kinds hydraulic and Portland cement.

The Hamilton Bridge Company, Hamilton, Ont., has been awarded the contract for the bridges for the new subway, Queen street west, Toronto.

The Bronson and Weston Lumber Company, Ottawa, have sold their present season's cut of lumber, estimated at 15,000,000 feet, to Messrs. Watson and Todd, Liverpool, England.

Messrs. Whitehead and McGregor's carriage factory at Thurso, Que., was destroyed by fire a few days ago.

J. A. Honeyman & Sons, Portland, Oregon, purpose locating a foundry and machine shop at Nelson, B.C.

The Watson Manufacturing Company, Ayr, Ont., purpose manufacturing road machines.

The Selator Asbestos Manufacturing Company's stock and factory were damaged by fire May 16th, to the extent of about \$30,000.

A. C. Neff, chartered accountant, and James Wood, late secretary of the T. Eaton Company, Toronto, have formed a partnership under the style of Neff and Wood to do business as public accountants, auditors, assignees, etc., with offices in the McKinnon Building, Toronto.

The Dominion Cotton Mills Company have received an order for \$30,000 worth of goods for China.

Robert Kay's portable saw mill at Three Mile Brook, near Dorchester, N.B., was destroyed by fire a few days ago, loss about \$1,500.

**BREWERS
COPPER
WORK**

Brewing Kettles, Boiling Colls,
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, Ltd.**

Corner King and Victoria
Streets
TORONTO

**Canada Chemical
Manufacturing Co.**

Manufacturers of

Sulphuric, Nitric, and Muriatic
Acids — Commercial and
Chemically Pure.

Mixed Acids for Explosives.

Liquid Ammonia, Glauber Salts,
Copperas, Muriate Tin,

Tin Crystals, Acetic Acid, Nitrate
Iron, Bisulphite Soda,

Acid Phosphate for Baking Pow-
ders and General Chemicals.

Fertilizers, etc.

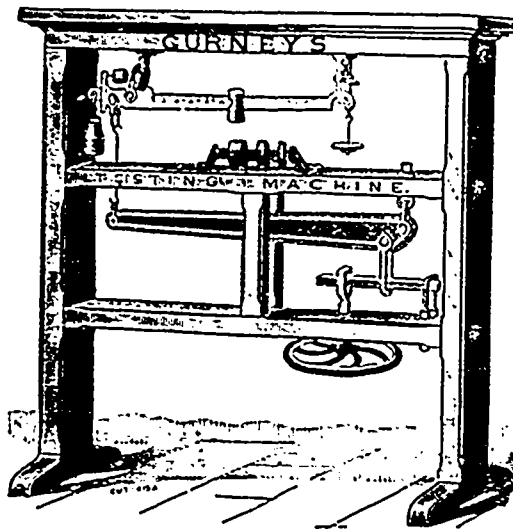
LONDON
ONT.

FOUNDRYMAN'S TESTING MACHINE

A Durable and Effective
Machine for the Use of Foundry-
men in Testing the Strength
of Best Iron, and
ascertaining the Best Mixture
of Iron for any work,
thus showing positively which is
the Best Iron for the Re-
quirements.

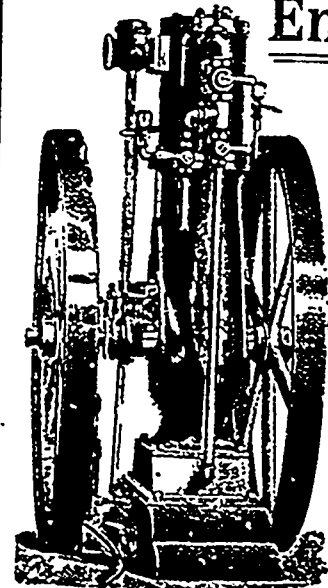
Can be done in a few minutes.

SUBSTANTIALLY CONSTRUCTED.
HIGHEST CLASS OF
WORKMANSHIP.
CAPACITY, 5,000 POUNDS.



Manufactured by... **THE GURNEY SCALE CO., Hamilton, Ont.**

**THE ELECTRICAL GAS OR GASOLINE..
Engine**



WRITE
FOR
PRICES
AND
TESTI-
MONIALS

J. R. BAIRD
WOODSTOCK, . . . ONTARIO

The trucks for the four new cars added to the rolling stock of the Park and Island Railway, Montreal, were manufactured by the Canada Switch and Spring Company, Montreal.

There are at the present time 113 hands employed at the Bain Wagon Works, and vorily it is good to hear the hum of industry in the building once more. In the course of an interview yesterday, John A. Bain told the Sentinel-Review that the factory had since the first of the year been running twelve hours and a half a day. According to the request of the men, the firm have returned to the ten-hour day. —Woodstock Sentinel-Review.

The Manufacturers' Club of Philadelphia, Pa., will celebrate the Tenth Anniversary of its organization by joining with the Philadelphia Commercial Museum in making a success of the first annual meeting of the Inter-

national Congress of Business Men, to be held in that city, June 1st, 2nd, and 3rd.

The Manufacturer, of Philadelphia in rounding out its tenth year, will celebrate the event by issuing a special edition of 50,000 on the occasion of this meeting. It has been selected to give an official report of the proceedings, and in addition will contain much valuable information bearing on the business interests of the country.

The Stratford Bridge and Iron Company, Stratford, Ont., has been awarded the contract for a bridge over the Credit river at Huttonville, Ont.

The Dominion Brussels Carpet Company, Sherbrooke, Que., have bought the machinery and plant of the Elora Carpet Factory at Elora, Ont., and will remove it to Sherbrooke as soon as they have completed a building being erected to receive it.

The Publishers' Syndicate of Ontario, Toronto, has been incorporated with a capital stock of \$45,000.

The Rondeau and Cleveland Steamship Company, Chatham, Ont., is being incorporated with a capital stock of \$20,000.

The first wheel forged at the Facer Solid Steel Car Wheel Works, Perth, Ont., was successfully turned out a few days ago. The company intends putting in additional machinery at once and will erect a steel plant in the near future.

WANTED

One Polishing Machine—Jenny Lind type—for Granite Works.

ADDRESS

MARBLE, Care CANADIAN MANUFACTURER, TORONTO, Ont.



ARE MANUFACTURED BY



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.

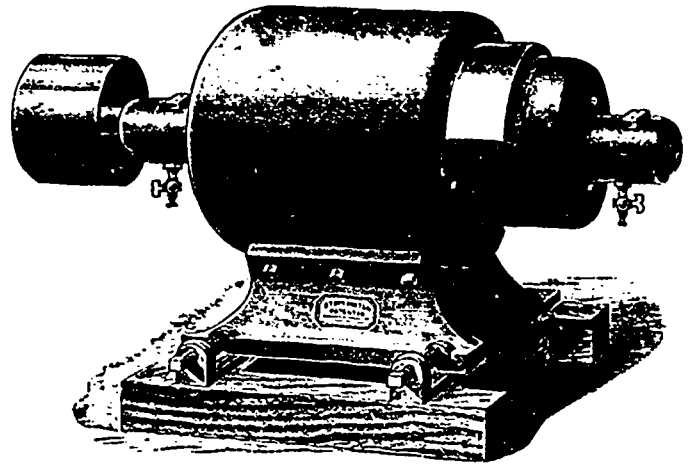
Office and Works
Cor. St. Catharine and Parthenais Sts., MONTREAL, Que.



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**

THE **Storey Motor and Dynamo**



MANUFACTURED BY

THE STOREY MOTOR AND TOOL CO.

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

Send for Catalogue.

FACTORY BRUSHES



All Kinds of MACHINE BRUSHES Made and Blocks Re-filled.

Highest Quality and Best Workmanship
.... Guaranteed.

... CLOSEST POSSIBLE PRICES....

CHARLES BOECKH & SONS, Manufacturers, TORONTO, ONT.

FERGUSON & PATTINSON

PRESTON, - - ONTARIO.

MANUFACTURERS OF

FINE AND MEDIUM TWEEDS



**Purest and
Cheapest**

FORM OF

Washing Soda

1 ton of CRYSTAL CARBONATE contains as much Alkali as 2½ tons of Soda Crystals.

Sole Makers, THE UNITED ALKALI CO., Limited.

Sole Agents for Canada,

ARTHUR P. TIPPET & CO., Montreal & Toronto.

HAHLO & LIEBREICH

Machinery Merchants and Exporters

BRADFORD, ENG.

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

SHAKE WILLEYS, TEAZERS, RAG PICKERS, GARNETTS, 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.

D. K. McLAREN

CARD CLOTHING AND MILL SUPPLIES

The Lancashire Brand

ORIGINAL PATENTEES AND MANUFACTURERS OF THE

CAMEL HAIR BELTING

Patented by this Company thirty-four years ago.

FULL STOCK, ALL SIZES, ON HAND.
PRICES UPON APPLICATION.

SOLE REPRESENTATIVES FOR THE DOMINION,

24 Victoria Square, - Montreal



ARCHITECTURAL IRON & STEELWORK

MANUFACTURERS OF: ROOF SCARFES, GIRDERS, TRUSS STAIRS, AREA LIGHTS, FORGINGS & CASTINGS.

CAST IRON GAS AND WATER PIPES, OF EVERY DESCRIPTION FOR BUILDERS, MACHINISTS & RAILWAYS.

SPIKES & BOLTS.

PATTERNS & MODELS.

REPAIRS & MACHINE TURNING DONE WITH DESPATCH ESTIMATES GIVEN & WORK EXECUTED ON SHORTEST NOTICE.

262 TO 278 FRONT ST. EAST. TORONTO.



Wood or Iron-Working Machinery, Engines, Boilers, Motors, Shafting, Etc.

The Toronto Machinery Supply Co.,
164 King St. W.

SHUTTLES



BOBBINS SPOOLS PICKER STICKS CLOTH ROLLS, Etc.

JOHN HOPE & CO., - - LACHUTE, QUE.

Penman Manufacturing Co., Ltd.

PARIS, ONTARIO.

Manufacturers of

HOSIERY, SHIRTS, DRAWERS, GLOVE LININGS AND YARNS

Selling Agents: D. MORRICE, SONS & CO., Montreal and Toronto.

ROSAMOND WOOLEN COMPANY

ALMONTE, ONT.

FINE TWEEDS, CASSIMERES, AND FANCY WORSTED SUITINGS AND TROUSERINGS.

Guelph Woolen Mill Co., Ltd.

GUELPH, ONTARIO

Manufacturers of

Underwear, Hosiery, Wheeling, Fingering and Worsted Yarns EIDERDOWN FLANNEL, ETC.

Selling Agents: Donald Fraser, Montreal E. H. Walsh & Co., Toronto.

AUBURN WOOLEN COMPANY

PETERBOROUGH, ONT.

Manufacturers of Fancy Tweeds, Etc.

Selling Agents, D. MORRICE, SONS & CO., Montreal and Toronto.

The City Council of Victoria, B.C., have offered a bonus of \$150,000 to a syndicate to erect a 400 ton smelter at that place.

The following is the output last year of a few of the factories and mills of Guelph, Ont., as furnished by The Herald:—James Goldie, flour, \$500,000; Burr Bros., furniture, \$120,000; Armstrong Company, carriage goods, \$100,000.

The Toronto Biscuit & Confectionery Company, Toronto, is being incorporated with a capital stock of \$100,000.

The Dominion Foundry Supply Company, Montreal, have removed their offices from 43 St. Sacrament street to 22 and 24 St. George street, where they have concentrated their business and now have their warehouses and offices in the same building.

R. Harrington, sash manufacturer of Unionville, Ont., has sold out to Harrington Bros.

Messrs. J. Goldberg & Co. have commenced the manufacture of show cases in Montreal.

Messrs. Fraser & Cameron have started a sash and door factory at Indian Head, Assa.

Clarkson Bros.' planing mill at Woodstock, Ont., was partially destroyed by fire a few days ago.

The Pembroke Navigation Company, Pembroke, Ont., is being incorporated with a capital stock of \$40,000.

Thomas Dickson's cheese factory at Seaford, Ont., was destroyed by fire a few days ago. Loss about \$15,000.

James Richardson & Sons, Kingston, Ont., in conjunction with Hugh Maclellan, Ogilvie & Co., and other grain dealers in Montreal, propose to build an elevator at Kingston with a capacity of 500,000 bushels.

Mr. Albert E. Reid, paper manufacturer of Maidstone, Kent, England, has purchased the Masterman sulphite pulp mills at Miramichi, N.B., and proposes to enlarge their capacity to thirty tons per day.

The Royal Electric Company of Montreal, have been awarded the contract to supply all the machinery and equipment for an electric light plant for North Hatley, Que.

The Ranger Cycle Company of Toronto has been incorporated with a capital stock of \$5,000.

The work of construction has commenced on the electric street railway of Sherbrooke, Que.

Frank E. McKyes has bought the Dominion Button Works at Montreal and will continue under same style.

Wm. McLachlan, whose saw mill at Magnetawan, Ont., was burned some time ago, has rented Neil McEachren's mill at that place for the season.

Messrs. Munro Brothers, New Glasgow, N.S., manufacturers of woven wire, etc., inform us that they are working on an order for 50,000 yards of woven wire fencing. They say they have the most modern wire spring machines in Canada.

The survey of the Windsor and Amherstburg, Ont., Electric Railway has been completed and grading has been commenced at Amherstburg.

Messrs. D. W. Karn & Co, Woodstock, Ont., organ manufacturers, have commenced the manufacture of pipe organs and expect to employ from fifty to sixty hands in this department alone.

A. M. Robinson, foundry, Wingham, Ont., has sold out to Randall & Co.

The name of the Merchants' Mfg. Company, Montreal, has been changed to Merchants' Cotton Company.

H. Lapointe, Montreal, has commenced the manufacture of boots and shoes.

The Portland Packing Company's factory at White Head, N. S., was burned a few days ago.

The Canada Paper Co, will build another large pulp and paper mill at Windsor Mills, Que.

H. G. McLaren, Montreal, the general agent in Canada for Atlas metal, has moved to 318 St. Paul St., where he has more commodious premises.

The Goldie & McCulloch Co., Galt, Ont., lately sold a 150 h.p. Wheelock engine to the Huntingdon Electric Light Co., Huntingdon, Que.

The C.P.R. Co., have given Goldie & McCulloch Co., Galt, Ont., an order for a 400 h.p. Wheelock engine also boiler for their new elevator at Owen Sound, Ont.

The Goldie & McCulloch Co., Galt, Ont., have removed an order for a 200 h.p. Wheelock engine for Delagoa Bay, South Africa.

Messrs. R. Gardner & Son, Montreal, have just booked an order for a complete outfit of bread and biscuit machinery for New Zealand. This firm shipped over \$30,000 worth of their bread and biscuit machinery to Europe during the past year.

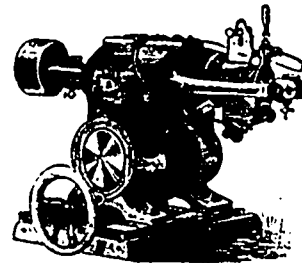
The Canadian Pacific Railway shops at Montreal recently turned out five first-class coaches and are now building several baggage, express and smoking-cars for service on their new line between Toronto, Hamilton and Buffalo.

C. Norsworthy & Co.'s foundry and machine shops at St. Thomas, Ont., were burned a few days ago. Loss several thousand dollars.

The Holland-Emery Company of Tawas, Mich., have purchased the site of the Georgian Bay Lumber Company at Byng Inlet, Ont., where they will erect two saw mills, dredge the harbor and manufacture lumber.

The C.P.R. will construct new docks at Rat Portage.

ELECTRIC BARGAINS



Two Incandescent and one Arc Dynamo, in perfect condition, for sale at a sacrifice.

We also Manufacture a complete line of

**MOTORS,
DYNAMOS
and PLATERS.**

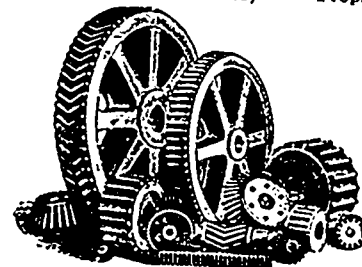
WRITE FOR PRICES.

THE JONES & MOORE ELECTRIC CO.

22 Adelaide Street West

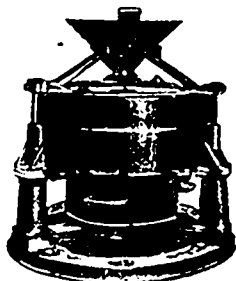
TORONTO.

THE DOWNER PATTERN WORKS, J. M. DOWNER, Prop.



Patterns and Models in wood or metal of every description made to order. The largest and best equipped pattern shop in Canada, and employing the largest staff of skilled workmen of any one in the trade. Telephone 2672.

89 Wellington St. W., TORONTO.



ROCK

CRUSHERS

EMERY

MILLS

AND

MILLSTONES.

FRENCH BUHR AND ESOPUS STONES. *Send for Circular.*

STURTEVANT MILL CO.

BOSTON, MASS.

Peter Arnot and J. C. Shook, of Toronto, are said to have closed a deal with the Canadian Pacific Railway Company for about 25,000,000 feet of timber on Slocan River, three miles below Slocan City, B. C., where they will at once erect a saw and planing mill.

A saw mill at Barry's Crossing, owned by Bernard Ripley, Milltown, N. B., was destroyed by fire a few days ago.

The Waterloo Mfg. Co. of Waterloo, Ont., write us that none of their machinery was damaged by the recent fire in their factory and that all is in good order again.

A company of Canadian and American capitalists, in which Mr. Albert J. Corriveau of Montreal is interested, propose to build an electric railway from St. Lambert or Longueuil, opposite Montreal, to points in Eastern Quebec not touched by the trunk line railways, as far as Sherbrooke, with crossing powers over the bridges and ultimately connecting with the railway systems at Newport, Vt. The company also proposes to put electric launches on the River Richelieu to run from St. Johns, Quebec Province, to points on Lake Champlain. The whole system will cover something like 150 miles, and the power is to be supplied by the Chambly Rapids Water & Power Company, which also expects to deliver 100,000 horse-power in Montreal by the middle of July next.

J. & C. Hodgson, Montreal, will start up their wrought iron pipe factory again.

Messrs. John Inglis & Sons, Toronto, have secured contracts to install refrigerator plants for the Cowan Company, chocolate manufacturers, Toronto, and Messrs. T. Lawry & Son, pork packers, Hamilton.

The Macgregor-Gourlay Company, Galt, Ont., have commenced the manufacture of bicycle hub machines. Their first machine of this kind was for the Welland Vale Manufacturing Company, St. Catharines, Ont.

Messrs. John Starr & Co., Halifax, N.S., have been awarded the contract to install an electric light plant of 200 lights for Messrs. D. & J. Ritchie & Co., Newcastle, N.B., for their mills and lumber yard.

The Lake of the Woods Milling Company recently shipped several car loads of flour from their mills at Keewatin, Ont., to South Africa, which is said to be the first Canadian flour shipped to that country.

Messrs. W. S. Rockwell & Co., 26 Cortlandt Street, New York, designers and builders of furnaces for manufacturing purposes, have sent us their new catalogue of fuel oil appliances and furnaces, fully illustrating and describing the Rockwell improved duplex system for burning fuel oil; the Rockwell fuel oil burner; oil storage tanks; oil pumps; oil meters; oil hose for unloading tank cars; hardening and tempering furnaces; annealing furnaces; brazing furnaces; cloth singeing furnaces, Japanning furnaces, etc.

James Harriman's planing mills at Niagara Falls, Ont., were damaged by fire a few days ago to the extent of about \$1,000.

The Goldie & McCulloch Company, Galt, Ont., recently shipped two large boilers to D. S. Perrin & Co., London, Ont.

The Lock Wire Fence Company, London, Ont., have secured the contract to erect two and a half miles of their fence on the farm of Mr. W. E. H. Massey at Little York near Toronto.

The Packard Electric Company, St. Catharines, Ont., call attention to their series incandescent lamps which they propose carrying in stock if customers will inform them of their needs in that line.

The Montreal Lumber Company, Montreal, has been incorporated with a capital stock of \$25,000.

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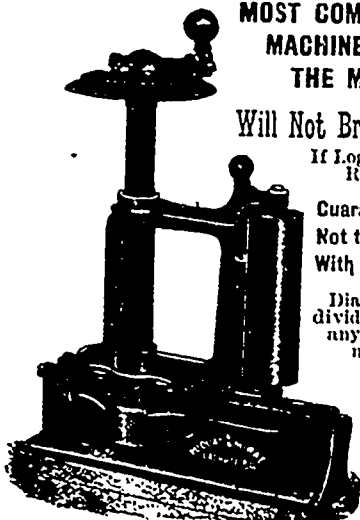
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Wm. Clark's canned meats and sausage factory at Montreal was destroyed by fire a few days ago. Loss about \$10,000.

Sealed tenders will be received at the office of the Commissioner of Public Works, Charlottetown, P.E.I., until June 1st, for the construction of the proposed Prince of Wales College and Normal school at that place.

Ex-Senator Warner Miller, of New York, who owns an interest in pulp mills at Grand Mere, Que., has purchased the right to the water power of the Shewanigan Falls, near Three Rivers, Que., and purposes building a pulp mill there this summer.

The Canadian Salt Works, Windsor, Ont., recently sent a train of thirty-five cars of salt to the North-West.

Messrs. Wm. J. Matheson & Co., 178 Front Street, New York, announce that they will supply customers with any of the colors heretofore controlled by the Substantive Colors Company, such as Benzo Purpurine, Congo, etc., the latter company having been dissolved.

Capt. A. L. Howard, Capelton, Que., manufacturer of chemicals, purposes manufacturing fulminate of mercury on a large scale.

Messrs. M. & N. K. Connolly, Kingston, Ont., have secured a contract from the Government of Uruguay for the construction of a canal sixteen miles in length. The contract price is said to be over \$10,000,000.

The Electrical Construction Company, London, Ont., have been awarded the contract to install an electric light plant in St. James' church, South London.

Petroleum has been discovered on the farm of Mr. S. Atmore, Parkhill, Ont.

Mr. John Brennan's tannery at Chesloy, Ont., was burned a few days ago. Loss about \$12,000.

Mr. W. J. R. Cowell, Victoria, B.C., is erecting a concentrating plant there capable of handling twenty tons of ore a day.

The ratopayers of Picton, Ont., will be asked to provide funds to extend their electric light system.

Messrs. Geo. White & Sons, London, Ont., have moved into their new machine shops.

Messrs. Brown & Boggs' machine shop, Hamilton, Ont., was damaged by fire a few days ago to the extent of about \$1,000.

Maguire & Dryden, flour mill machinists, Toronto, have been succeeded by T. H. & A. H. Dryden.

Messrs. Bellhouse, Dillon & Co., Montreal, have secured the contract for 20,000 barrels of Portland cement to be used by the Dominion Government on the St. Lawrence canals.

Messrs. Sessenwein Bros., dealers in scrap iron, steel and metals, and iron and steel rails, Montreal, have been succeeded by Sessenwein & Leavitt.

W. J. Bodder's canning factory at Wallaceburg, Ont., was destroyed by fire a few days ago.

Messrs. George White & Sons, London, Ont., are being incorporated with a capital stock of \$170,000 to take over the business of manufacturing steam engines, machines, etc., at present carried on at that place by themselves.

The Owen Sound Portland Cement Company, Owen Sound, Ont., have secured the contract for 10,000 barrels of cement to be used by the Dominion Government on the St. Lawrence canals.

The work of reconstructing and enlarging the Victoria Bridge at Montreal has been commenced. The present structure, an iron tubular bridge, was opened by the Prince of Wales in 1860 and was considered the best that engineering skill could produce at that time. The new bridge will be an open steel structure and will consist of twenty-four spans each 254 feet long and one span 348 feet long and will be about 65 feet in width, with double tracks for steam and electric cars, and with driveways and footways. It required five and a half years to build the old bridge, and the new one, on account of utilizing the old masonry, will be completed in one year. The Dominion Bridge Company, Montreal, and the Detroit Bridge Company, Detroit, Mich., have the contract. The total cost of reconstruction will be about \$1,500,000.

Messrs. W. H. Storey & Son, Acton, Ont., recently put in a new 50 h.p. engine and a 65 h.p. boiler both from the works of the Goldie & McCulloch Co., Galt, Ont.

St. Patrick's church, Sherbrooke, Que., was damaged by fire a few days ago to the extent of about \$2,000.

S. Morley's flour mill at St. Ann's, Ont., was destroyed by fire May 11th. Loss about \$7,000.

The Elgin Field Oil and Gas Company is being organized to bore for oil in Dunwich township, Elgin county, Ont. W. Hollingshead, Port Stanley, Ont., is interested.

The Wm. Hamilton Manufacturing Co., Peterborough, Ont., have the contract for the machinery for Messrs. J. W. Howry & Sons' new saw mill at Fenelon Falls, Ont.

The McEachren Heating and Ventilating Company, Galt, Ont., have recently received the following orders for dry kilns; Densmore & Crowe, Lower Stewiacke, N.S.; J. & D. A. Harquail, Campbellton, N.B.; Dymont, Baker Lumber Co., London, Ont.; Laking, Thompson, Patterson & Co., Hamilton, Ont.; M. Brennan & Sons, Hamilton, Ont.; Dowswell Bros., Hamilton, Ont. and the Mechanics Manufacturing Co., Summerside, P.E.I.; and from E. H. Grove one thirty-six inch ventilating fan and from the T. Eaton Co., Toronto, two sixty inch ventilating fans.

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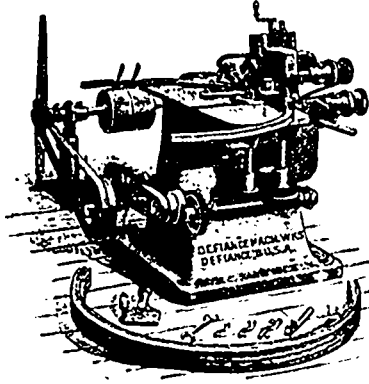
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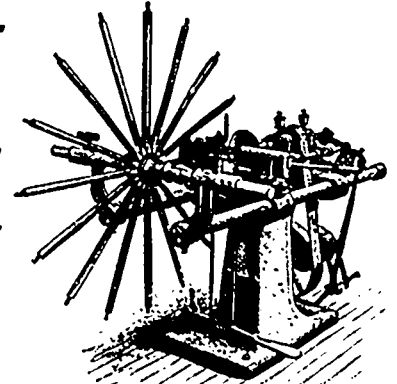
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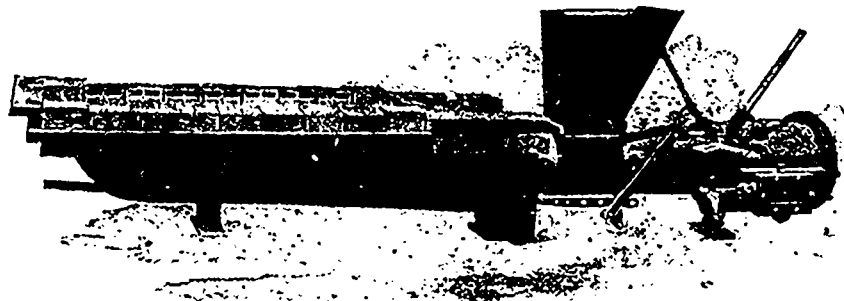
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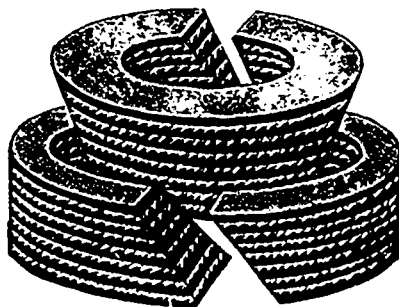
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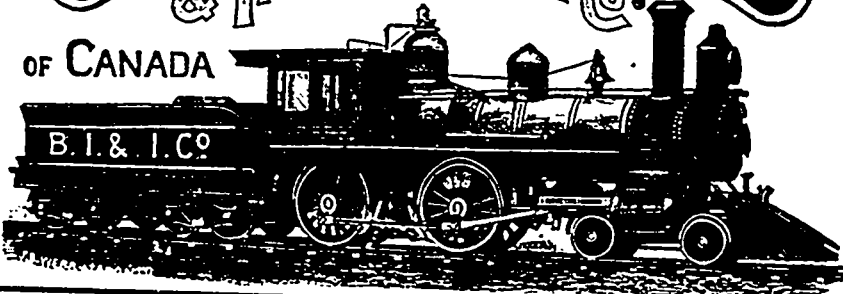
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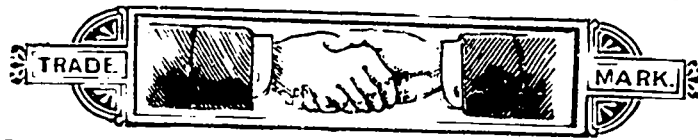
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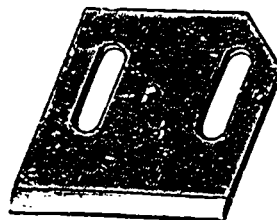


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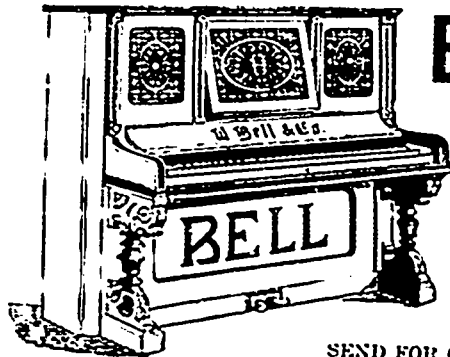
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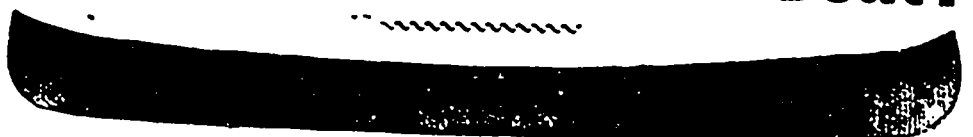
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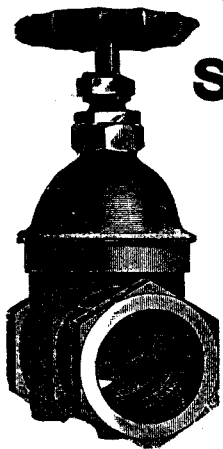
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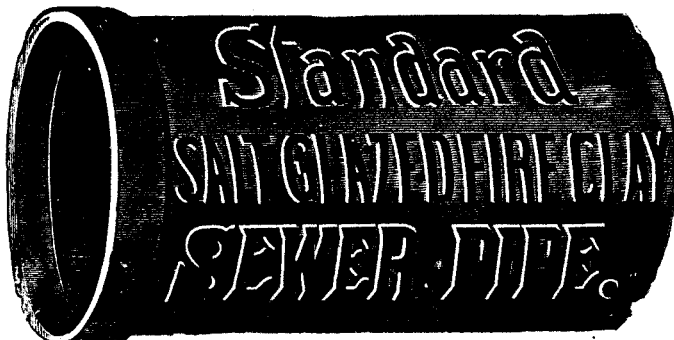
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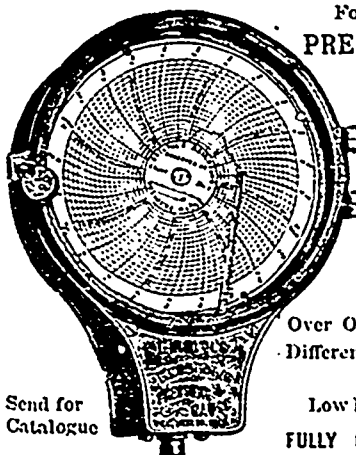
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