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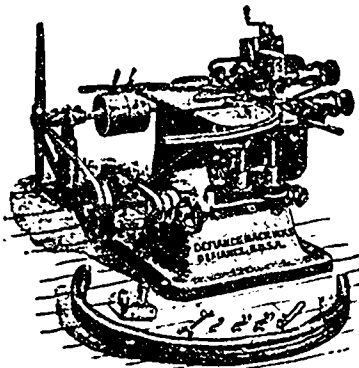
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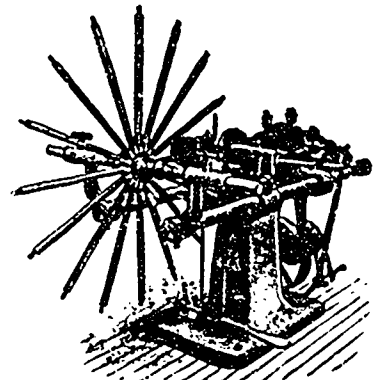
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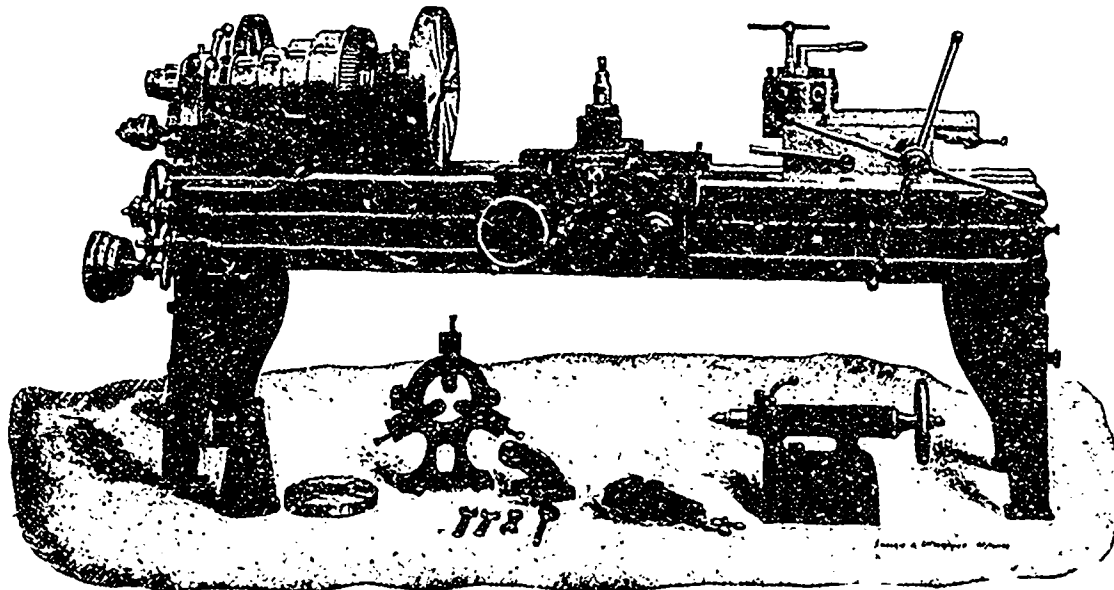
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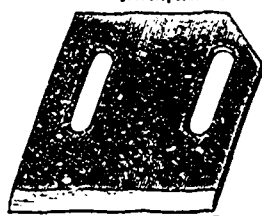


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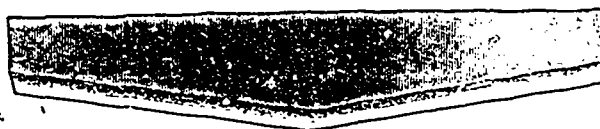
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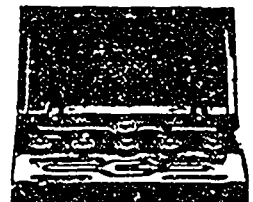
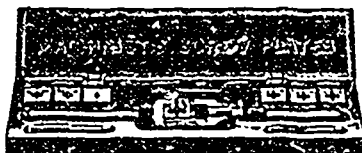
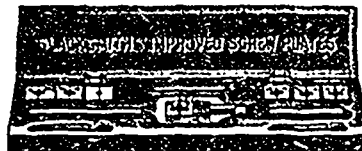
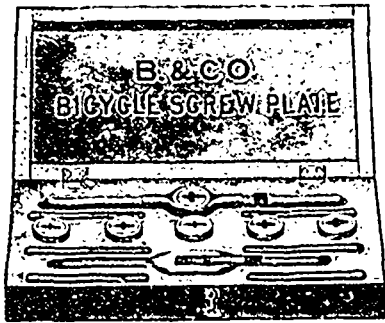
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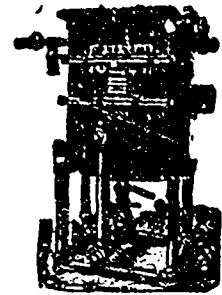
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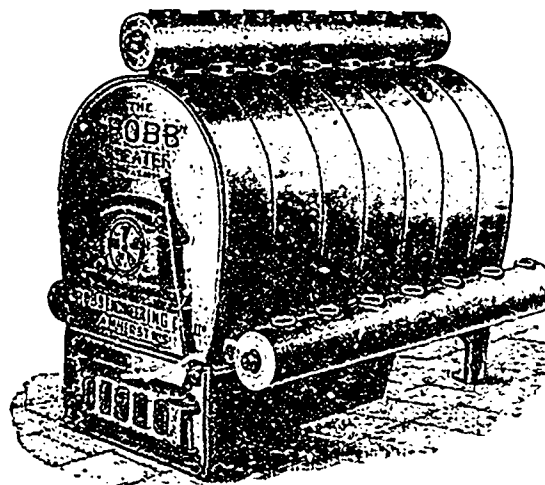
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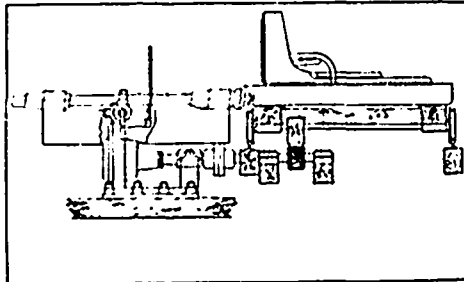
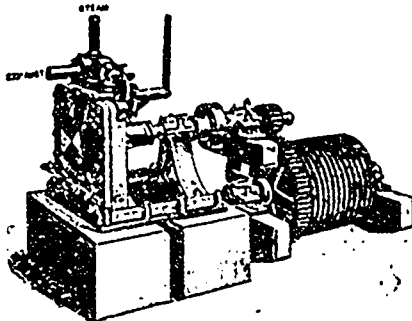
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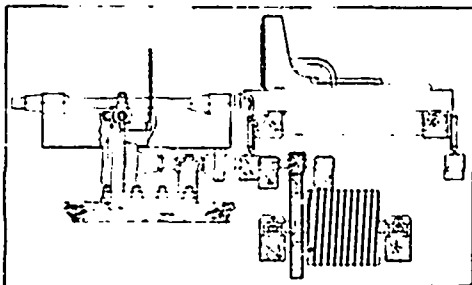
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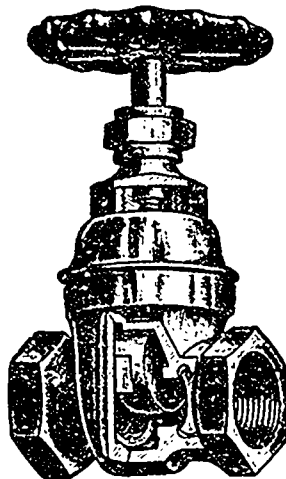
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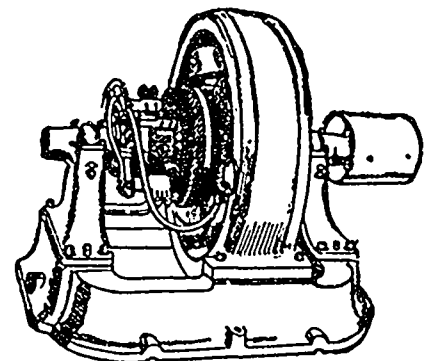
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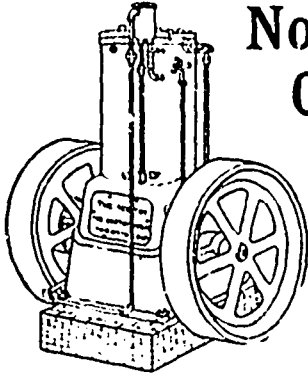


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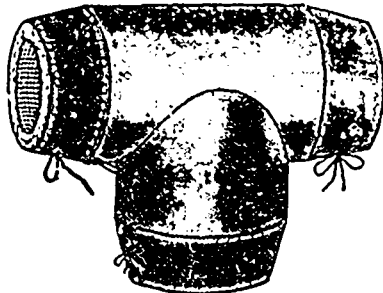
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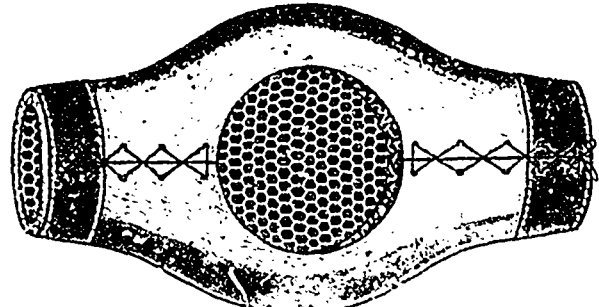
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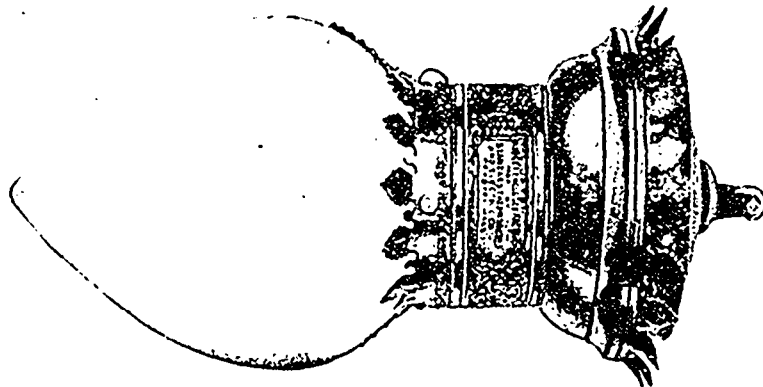
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SPECIAL MEETING

OF THE

CANADIAN MANUFACTURERS' ASSOCIATION.

According to notice previously given a special general meeting of the Canadian Manufacturers' Association, which was largely attended, was held on September 6th, in a hall over the general offices of the Toronto Industrial Exhibition, on the Fair Grounds during the time of the Toronto Fair. The object of the meeting was to discuss in an informal manner matters of general interest having reference to the manufacturing interests of Canada, and all manufacturers were cordially invited to be present.

Sir Wilfrid Laurier, Premier of Canada; Hon. W. S. Fielding, Minister of Finance; Hon. Sir Richard J. Cartwright, Minister of Trade and Commerce; Hon. William Paterson, Minister of Customs; Geo. H. Bertram, Esq., M.P., E. E. Sheppard, Esq., and George Anderson, Esq., late Canadian Commercial Agents to Mexico, South America, China and Japan, and other distinguished gentlemen had been invited to be present and make short addresses.

The meeting was called to order at 2.30 o'clock, p.m., by Mr. John F. Ellis, President of the Association, who occupied the chair.

Mr. Ellis, in his introductory remarks, pointed out that the Canadian Manufacturers' Association was doing a good work, but that while American manufacturers had had representatives at the International Conference at Quebec, the Canadian manufacturers had done nothing in that direction. He suggested that something should be done towards apprising the British delegates of the facts connected with the Canadian side of the question.

He also stated that the Association had commenced the monthly publication of Bulletins of Information for Canadian manufacturers, through which the members of the Association would be supplied, without charge, with reliable information regarding the home and foreign trade of Canada—that the information contained in these Bulletins is compiled from the

reports of the Consular and Commercial Agents of Canada, Great Britain and the United States in all parts of the world, and from other official and reliable sources.

Mr. J. J. Cassidy, Secretary of the Association, read letters from Sir Wilfrid Laurier, Premier of Canada, Hon. W. S. Fielding, Minister of Finance, and Sir Richard J. Cartwright, Minister of Trade and Commerce, expressing their regret at their inability to be present at the meeting.

Hon. William Paterson, Minister of Customs, was introduced and expressed his delight at being present at the meeting. The agricultural and lumbering industries were, of course, the leading industries of Canada, but manufacturing was making such steady strides that the next decennial census would undoubtedly show a large increase in commerce. The figures of the export trade showed this. The quantity of Canadian manufactured goods had been very largely increased in the last ten years. He submitted the following figures:—

COMPARATIVE STATEMENT OF EXPORTS OF CANADIAN MANUFACTURES.

1878	\$4,127,755
1888	4,161,282
1889	4,434,949
1890	5,741,184
1891	6,296,249
1892	7,040,988
1893	7,693,959
1894	7,692,755
1895	7,768,875
1896	9,365,384
1897	9,522,014
1898	10,639,227

Statement showing the value of Canadian manufactures exported to Great Britain during the undermentioned fiscal years:—

		Increase.	Decrease.
1878	\$2,224,373		
1888	1,762,894		\$461,479
1889	1,679,359		83,535
1890	1,816,147	\$ 136,788	
1891	2,252,295	436,148	
1892	2,617,472	365,177	
1893	2,454,009		163,463
1894	3,129,614	666,605	
1895	2,944,280		176,334
1896	3,799,266	854,986	
1897	3,617,128		182,128
1898	4,900,484	1,283,356	

Note—Excess in Ontario alone in 1898 over 1897, \$500,000.

Comparative statement of imports from the United States and Great Britain for the past four years, showing the totals of dutiable and free goods:—

UNITED STATES.		
	Dutiable.	Free.
1895	\$25,795,538	\$28,838,983
1896	29,101,646	29,472,378
1897	30,482,509	31,166,532
1898	37,674,000	40,589,000
GREAT BRITAIN.		
	Dutiable.	Free.
1895	\$23,311,911	\$7,819,826
1896	24,366,179	8,613,563
1897	20,217,422	9,194,766
1898	22,459,000	9,939,000

In short, the increase has been, roughly, from four million to ten million dollars. When the situation was looked at it was evident that Canadian manufacturing was going ahead. The skilled artizan, the faithful office hand and the efficient salesman had all done their part towards this result. Nothing could be more satisfactory than the fact that Canadian goods were finding a great market in Britain. In 1878 Canada

had sent to Britain \$2,224,273 of manufactured goods. In '98 this had swollen by \$1,283,356, a very remarkable increase. The increase in the past ten years was nearly 300 per cent. Ontario in the last year had increased her exports by over a million dollars. It was undeniable that steady progress was being made. Canada was growing, and the increased population would result in more manufacturers. In the world's market the Canadian manufacturer would have to make his way on merit. Sympathy cut no figure; merit alone told. Toronto had a large shipbuilding industry which later might do a great deal towards supplying other than Canadian buyers.

George H. Bertram, Esq., M.P. for Centre Toronto, and head of the shipbuilding firm of The Bertram Engine Works Company, Toronto, upon being introduced, spoke of the great improvement in the state of Canadian manufactures. Canadian goods now were able to compete successfully with American goods. They could be sold on their own reputation. They were being made successful in the same way as Canadian farm products were being popularized. In Scotland the Massey-Harris firm was competing successfully with other manufacturers. The Toronto Exhibition had contributed in no small degree towards bringing about excellence in Canadian goods. The moment Canadian manufacturers got the quality they must study the question of cheapening goods. The figures that Hon. William Paterson had quoted showed that Canadian manufacturers might look forward to greater prosperity. The wants of the consumers of Canada, as well as of other countries, must be considered, as must the tariff question. "So far as I am concerned," said Mr. Bertram, "I am neither a free trader nor a protectionist. Whenever the interests of the country are threatened I believe that we should do whatever we can do to conserve our own interests. In the lumber industry question, for instance, we should act in the direction of self defence, not retaliation. No country can be really prosperous if its people are to be hewers of wood and drawers of water for some other country." Canada could congratulate herself on her trade relations with Great Britain. Canada has now the ear of Great Britain as she never had before. Canada has an advantage in that she has extended to Great Britain a preference which would certainly result in good feeling on the part of the British buyer. It was satisfactory to know that the Canadian relations with the United States were in a better condition than ever before. As citizens of Canada, the gentlemen present should hail with delight the Quebec Conference, which would lay the foundation for future trade and future intercourse. The development of the Dominion would be so great that the American people would soon make a strong effort to get our trade. The Dominion of Canada would have a certain and inevitable prosperity. Mr. Bertram expressed the hope that a reciprocity treaty with the United States would be negotiated. He was satisfied that the Canadian commissioners would guard Canada's interests; but the same necessity for a reciprocity treaty was not so strong as years ago. If Canada could not get a fair treaty she could afford to do without it. The Americans were a hard people to carry on a dicker with, and if Canada could not get what was fairly her due she was quite capable of falling back on her own resources and opening up markets somewhere else. The Canadian people need not argue so strongly in favor of

reciprocity. The initiative should come from the United States. Canadians would make a great blunder if they accepted any arrangement that would curtail any of the great manufacturing industries of the Dominion.

Mr. E. E. Sheppard, late Trade Commissioner to the Central and South American countries, gave an interesting address on the conditions of trade in these countries. Canada, he said, should have a trade of \$65,000,000 or \$70,000,000 per annum with these countries, whereas it was now only from three to four millions. Mexico had a great trade with the United States, although the Mexicans hate the Yankees as they hate poison. In Mexico the business is done by large houses. It would need a great deal of push for anybody to establish a connection. So conservative were the Mexicans though, that the trade could not very well be lost when it had once been founded. It was exceedingly difficult to get statistics of Canadian trade with the Latin-American countries, as Canadian ships were always registered as British, and not Canadian. It would be to the interest of Canada if some arrangement could be made with Great Britain whereby the name of the Dominion could be known as being the name of a great country. Another difficulty was in the way of transportation. It was as cheap to send goods from Halifax via Bremen or Hamburg to South America as it was to ship from New York. Added to this, the British agents were better men than the United States agents. The anti-American feeling in the Latin-American countries would make it inadvisable for Canadians to make the United States representatives their agents. The South American countries bought their fish supplies largely from Germany, which had no fisheries, whereas the Dominion, the greatest fishing country in the world, sold comparatively nothing in the way of fish to those countries. Canada should learn to make cheese like those of Italy and Spain, which were used principally in the South American countries. The lumber trade also could be largely developed. All down the Pacific coast Oregon pine was most largely used. Yellow pine was most largely used in Argentine and Uruguay, but almost entirely imported from the United States. Chile, Peru, and the other countries on the Pacific coast of South America, used American goods altogether. Canada should have some connection with the Gulf ports; all the South American countries were heavily protected.

Mr. George Anderson, late Trade Commissioner to Japan, was introduced, but owing to a severe cold was unable to address the gathering.

Hon. N. Clarke Wallace, M.P., said he was glad with all Canadians to witness the prosperity of Canada. He agreed with Mr. Bertram that Canada need not be too anxious to negotiate a reciprocity treaty with the United States. An interchange of agricultural products would be mutually beneficial. The United States had ignored the generous offer which had been on the statute books of Canada for years, and it must be understood that the Americans were our competitors in the business both of raising agricultural produce and of manufacturing articles which were used in the business of farming. He hoped that protection would be continued whenever it was necessary to conserve Canadian interests. Protection was necessary to every industry in the country.

Mr. P. W. Ellis, Vice-President of the Association, made a few remarks in which he expressed his hope that the Quebec

Conference would be fraught with good results to the manufacturers of Canada. These gentlemen were glad to see that the Liberal Government had continued to give manufacturers a certain amount of protection. The Government of the day enjoyed the approbation of the manufacturers, and deservedly.

Mr. D. W. Karn, of Woodstock, advocated the appointment of commercial agents in foreign countries.

On motion of Mr. W. K. McNaught, seconded by Mr. Karn, a vote was unanimously passed thanking the distinguished gentlemen for their kindness in addressing the meeting.

On motion the meeting adjourned.

RECIPROCITY vs. FREE TRADE.

The British and South Africa Export Gazette, of London, Eng., publishes a communication in which it is stated:—

By reason of a protected home market, the American houses can afford to sell abroad very much cheaper than they do at home—in fact, they can dump down in our Colonies their surplus production of all kinds, while at the same time, with their enormous tariffs, they boycott us out of their own market. Practically, therefore, the American home buyer is taxed indirectly by paying a higher price, so that the American exporter can undersell his foreign competitors.

Commenting upon this our contemporary says:—

That the American home trade does so bear the burden of fostering its export trade is undoubted, and that this is a competition which is unfair to the English merchant and manufacturer cannot be contested, and calls, with other disabilities such as shipping bounties from which they suffer, for the early and earnest attention of the Government, as well as of all Chambers of Commerce and other representative commercial institutions. It is certainly most unfair that whereas American goods are admitted to our Empire at large without restriction, the return service is denied us, and a specious and harmful system practised to our detriment. That the Americans are not unaware of the injustice of these barriers to traffic is well known, and it is doubtless a case with them of trying the extent of our forbearance. At the worst, however, the period when an Anglo-American alliance is spoken of should be one to enforce the claims on behalf of our trade and commerce to at least equitable dealing.

Our London contemporary, viewing the matter from the standpoint of the British manufacturer, falls into the usual free trade error in supposing that American consumers are taxed to bear the burden of fostering the American export trade. In nearly every line of products manufactured in the United States, it will be found on examination that the articles produced are sold in the open markets of that country as cheaply as similar articles are sold in Great Britain, which fact can be verified by any intelligent person who will enquire.

The Gazette says that it is most unfair that American goods are admitted into Great Britain duty free and without restriction, while British manufacturers are denied like favor, but that tariff protection to home industries is a specious and harmful system is open to question—certainly our American friends do not admit it.

We suggest to our British friends a palliative—not a remedy, for no remedy will cure the trouble—fight the devil with fire. Free trade will not answer. It has been tried long enough, tried until every protectionist nation is leaving free trade Britain in the rear. Britain pays an average of about fifty

or sixty per cent. on the value of her exports to the United States for the privileges of that market—the United States pays Great Britain for similar privileges—nil.

A DISPARITY.

The American Economist has been comparing the prosperity of Canada with that of the United States, and has the following to say on the subject:

The extraordinary trade showing of the United States for the past fiscal year has attracted attention in Canada, and our neighbors to the northward are beginning to ask how it is that in this year of unexampled prosperity for farm, factory and mill they failed to enjoy their due and natural proportion. They have begun to institute comparisons, and they find that according to their opportunities they fell far behind the people on this side of the line. They were equally fortunate in having a bountiful yield of agricultural products and in being able to sell their surplus at abnormally high prices. Other things being equal, they should have been able to surpass the showing of the United States, for their percentage of agricultural exports was greater than that of our country.

But it is seen that other things were not equal, and that therein is to be found the secret of Canada's discontent. She had the best year in her history in the matter of the quantity and prices of her agricultural exports, and yet her excess of exports over imports was only 21 per cent., while the excess scored by the United States was 100 per cent.

What caused this disparity? Manufactures. Canada had very little to sell outside of her foodstuffs, and her imports of foreign merchandise showed no decrease as compared with former years. The United States, on the contrary, increased her exports of manufactures alongside of her tremendous output of farm products beyond all previous records, and actually sold to foreign countries more of manufactured commodities than she bought of them by about \$50,000,000. In the one case a sensible tariff system operated to augment the demand for domestic products and to diminish the demand for imported articles, and left a favorable trade balance of over \$615,000,000. In the case of Canada only a relatively small proportion of the surplus realized from increased exports remained at home, the remainder went abroad, as usual, to pay for imports. It was a question of Tariffs pure and simple.

SUGAR BOUNTY EVILS.

The report of the sittings of the conference at Brussels for the abolition of sugar bounties, has been published, together with the report of the British Commissioners, in Blue Book form.

From a perusal of the publication it becomes abundantly clear that if England wants the bounties abolished she must have recourse to countervailing duties. While Austria-Hungary, Germany, Belgium, and Holland desire to effect a complete abolition of the bounties, France will not forego the indirect bounty created by the law of 1884, and Russia declines to discuss even whether her existing system amounts to a bounty on export or not. As long as these two Powers maintain this attitude the others, of course, will not alter their systems.

The British Commissioners point out that there are at

present but two methods of securing the suppression of the bounty system.

(1) By coming to some arrangement for such modifications or limitations in the French and Russian systems as may be acceptable to the other sugar-producing States, in return for the suppression of their bounties.

(2) By the conclusion of a convention between a certain number of the sugar-producing States providing for the total suppression of sugar bounties within their dominions, and engaging that they will either impose countervailing duties on, or prohibit the entry of bounty-fed sugar coming from States which cannot be induced to become parties to the convention.

It is also pointed out that the United States by this means is rendered unprofitable to bounty-fed sugar; that all the Continental States protect their home markets to the home producer; and that the English and Indian markets only remain open for the surplus sugar of the Continental-producing States. The commissioners conclude that any steps which would close these markets to bounty-fed sugar "would have a decisive effect in securing the speedy abolition of the bounty system."

The imposition of countervailing duties by Great Britain, as suggested by the report of the British Commissioners, could not possibly be construed as an approach to tariff protection, for the imposition of such duties is common in that country in many particulars.

The London Daily Mail sizes up the situation in this manner:—

Practically what is happening is this: The French, German, and Russian sugar producer is assisted by his Government out of taxation to undersell the sugar-producer in the British colonies. The bounty-fed sugar is sold below its cost price in the British market. We are sometimes asked to believe that this is done out of pure philanthropy. Viewing the usual attitude of Continental Powers to this country, we may ask—Is this likely? We shall hereafter pay through the nose for the cheap sugar which we are so cheerfully eating to-day; indeed, we have paid already, in the loss of the sugar-refining industry. In the interests of our colonies and of ourselves it is time for us to see fair play.

Perhaps Great Britain, after the horse has been stolen, will lock the stable door.

GUSH AND ROT.

The Shareholder is one of our esteemed contemporaries who thinks that British preferential trade as it now exists is of more importance than if Canada had insisted upon and obtained a quid pro quo for the preference we have shown the Mother Country and some of the sister colonies. Discussing the question The Shareholder says:—

Such a result was not achieved without encountering and overcoming obstacles which would have dissuaded less determined and less far-seeing men from attempting to overcome them. Canada had long sought, but sought in vain, to receive preferential treatment in British markets for her products, but the appeal to honest John Bull was too mercenary, too shoppish for him to consider, and the accomplishment of the proposition was apparently a long way off. Time, in its changes, brought new men to the front, men who realized that the way to John Bull's heart was through his nobler feelings rather than through his pocket. A new plan was tried with a result that has astonished the world and set other nations to realize that Canada has both genius and heart. To-day Canada's British preferential trade is on such

a basis that trade with Canada will receive an impetus which will add to imports and swell our exports. We lay stress upon our export trade, but it must not be forgotten that unless return cargoes for ships carrying our exports can be obtained, the exporters, and through them the producers, would be at a disadvantage in having to pay higher freights were return freights not obtainable. To-day Great Britain realizes that Canada is something more to her than she has ever hitherto been, and the realization of this will lead to results which in the long run will more than compensate the sacrifices which the offspring is making for the parent.

THE CANADIAN MANUFACTURER has always been an ardent advocate of preferential trade with Great Britain, but trade being a valuable asset of a nation, we were not and are not now willing to give it away without receiving something of approximate value in return. We are willing to give all due credit to Sir Wilfrid Laurier for what he did in bringing about a denouncement of the Belgian and German treaties, for as long as they were in operation it was impossible that any preferential arrangement whatever could be perfected between Great Britain and Canada. But it was never the expectation of Great Britain that Canada should perform a great act of magnanimity towards her, and an offer to return the compliment would be refused by us. Yet such was the case. The keenness of the sarcasm of 'The Shareholder' is greater than that of a sharp razor when it says that Canada, that had long sought to receive preferential treatment in British markets, was denied that privilege because the terms upon which it was requested was too mercenary and shoppish for honest John Bull to consider. What were the terms that Canada offered for preferential trade with Great Britain? That we would remit a valuable portion of our duties upon British goods if Britain would make a slight discrimination in favor of Canadian goods. That's all. And this is what The Shareholder calls mercenary—too mercenary and too shoppish for the consideration of honest John Bull. If this is really and truly a fact, which no one believes, not even the child-like and unsophisticated Shareholder, it is the first time in the history of Great Britain, or even of England, that the way to John Bull's heart was through sentiment and affection for another rather than through his own pocket. No doubt Sir Wilfrid will appreciate what The Shareholder says about the astonishment of the world and all the nations thereof at the fact, just discovered, that Canada has both genius and heart.

Our contemporary looks wise and tells us that Canada's preferential trade is on a basis which will add to our imports and swell our exports. Presuming that our export trade will take care of itself, we fail to see how our import trade can be materially affected unless it be by importing relatively less from other countries and more from British countries; and the theory is correct that supposes that our preferential trade will affect this. But we have had more than a year of so-called preferential trade, under which Great Britain has been allowed a large discount on our tariff charges, while the United States has had to pay full rates, and yet we find that our trade with the latter country has gone ahead by leaps and bounds, while that with the former has shown no such activity. Will The Shareholder explain this?

Great stress is laid upon the old free trade argument that unless return cargoes from abroad can be obtained for ships carrying away Canadian products we would be at a serious disadvantage in the transaction. This means that a ship

capable of carrying five thousand tons of merchandise should bring from Great Britain or elsewhere, five thousand tons of manufactured products, such as might to good advantage be made in Canada, to enable the ship owner to realize high freights upon the five thousand tons of wheat that the other country must have and cannot do without.

We quite agree with The Shareholder, however, when it says that to-day Great Britain realizes that Canada is something more to her than she has ever hitherto been. Yes, yes. Canada is more to Britain than ever, because we give her a discount of twenty-five per cent. on our duty charges, for which she should be, and no doubt is, duly and truly thankful. But, on the other hand, what is Great Britain to Canada more than she has ever been? Canada receives British praise and adulation, is patted on the back and has bestowed upon her statesmen high-sounding titles, and is told how good and filial we are in giving away our valuables, but no trade reciprocity is tendered us.

COMMERCIAL INTELLIGENCE.

In view of the fact that the German, French, United States and other governments recognize the advisability of maintaining special organizations for the purpose of rendering every possible assistance to those of their respective communities engaged in export trade, the British Government, who recently appointed a committee for the purpose, have received a report from them in which they recommend the establishment of an Intelligence Office, the organization and management of which should be trusted to the Board of Trade. The duty of advising the department as to the work of the proposed office it is suggested should be entrusted to a committee composed of one representative of each of the following Government Departments, viz., Board of Trade, Foreign Office, Colonial Office and of, say, six representatives of commerce, the last named to be nominated by the president of the Board of Trade.

The function of the proposed Intelligence Office is expected to be found in meeting the constantly increasing demand for prompt and accurate information on commercial matters as far as it can be met by Government action. It is recognized that the State may usefully afford assistance in the interests of the trading community as a whole, and may supply information from a broader point of view than that of the individual trader, although the committee point out that it is more than ever essential in these days that manufacturers and traders should rely mainly on their own efforts to extend the area of their transactions and the amount of their business. The work of the new office, it is thought, should supplement and not supersede work which is now being done by the Board of Trade, Foreign Office, Colonial Office, and other Government Departments.

The Intelligence Office, it is thought, should collect and focus existing information upon any subject of commercial interest whether delivered from official or unofficial resources, and whether relating to British colonies or dependencies or to foreign countries. Regarding this distribution of commercial information, the committee consider that the dissemination should be made not only among traders, but among recognized workmen's institutions with a view to make them more fully acquainted with the conditions of foreign trade competition and the cost of production. It is thought that the

general diffusion of such information might tend to prevent disputes and stoppages of work.

The committee further recommend an extension upon systematic lines of Mr. Chamberlain's plan of collecting and exhibiting samples of foreign made goods chiefly on demand in the colonies, the scheme to embrace also Indian and foreign markets. It is likewise suggested that special missions be sent to foreign countries as occasion requires and that special reports by experts upon particular trades or industries be obtained. The expenses of these recommendations the committee suggest would be met by a special grant, to be continued for five years with the object of determining whether the system can be made permanent with advantage or, if not, what scheme should take its place.

THE FURNITURE MANUFACTURERS.

The Canadian Furniture Manufacturers' Association held a meeting in Toronto on September 6th for the election of officers and the transaction of other business. The following officers were elected:—

President, George McLagan, Stratford; Vice-President, S. Snyder, Waterloo; Treasurer, James Baird, Plattsville; Secretary, John R. Shaw, Toronto. The Executive consists of the President, Vice-President, Treasurer and W. P. Box, Seaforth.

How the Association protects the interests of the furniture manufacturers was shown in the report of an enquiry held into alleged undervaluation on the part of an American firm. It was found that a concern doing business in Vermont were laying down furniture in Montreal and Quebec, freight and duty paid, cheaper than the goods could possibly be made for. The association took the matter up with the Canadian customs; an investigation was made, and it was found that the firm in question had been persistently undervaluing their goods. The firm was forced to reimburse the customs the amount of which it had been defrauded.

The directors of the Canadian Furniture Export Association also held their annual meeting on the same day. This association was formed last year to exploit the British market, Mr. F. E. Coombe being appointed representative at Liverpool. A report was received from Mr. Coombe speaking of the fair prospects for business, and already a large quantity of furniture has been shipped to Great Britain. It appears, however, that the styles of the furniture manufactured in Canada do not suit the British market. Mr. Coombe is at present selecting designs and patterns, which he will send to the association. He states that from the number of inquiries he has received he has no doubt but that an extensive trade can be opened up.

EDITORIAL NOTES.

PERSONAL.—Mr. J. C. Gardner is no longer connected with THE CANADIAN MANUFACTURER.

The Editor acknowledges the receipt of an invitation to be present at the Twentieth Annual Rhode Island Clam Dinner, tendered to the Electrical Fraternity by Eugene F. Phillips, Esq., general manager of the American Electrical Works, of Providence, Rhode Island, at Pomham Club, on Saturday, September 10th. The card informs us that lunch would be on

at 11.30 o'clock, and that the bake would be opened at 2 o'clock. The invitation was extended with the compliments of Eugene F. Phillips, Electrical Works, Montreal, of which Mr. John Carroll is secretary.

It is somewhat surprising that no enterprising Canadian has caught on to and acted upon the idea that money might be made by the manufacture of pictorial post cards. It is true that several varieties of such cards are offered for sale in some of the bookstands, but they are imported from the United States, and relate almost entirely to events that are more interesting in that country than in this. Canada abounds in beautiful scenery, interesting localities and things, and at almost all seasons of the year, thousands of visitors who are attracted hither to view them. The bookstands offer souvenirs of different sorts, including pictures of public buildings, parks, scenery, etc., all of which are well enough in their way, but there are not pictorial post cards offered, giving the tourist the opportunity, at a cost of a few cents, to send to friends at home suggestions of what they are seeing and enjoying.

By an arrangement between the Montmorenci and the Riverside cotton factories at Quebec, which recently amalgamated, and the Dominion Cotton Company, Montreal, the latter company will not meet with any competition in future in gray cotton from the former in the home market. Practically the same individuals own the controlling interest in all of the factories. The Montmorenci and Riverside will in future be under one management. The capacity of the latter will be greatly enlarged and improved. Both will manufacture exclusively for the China export trade. Mr. C. R. Whitehead will continue to direct the Dominion Company, while Mr. Craig will manage the Quebec factories.

The plans for the short steamship route between Milford Haven, Wales, and Paspébiac, Quebec, are progressing. The Canadian Steamship Company, working in conjunction with the Atlantic and Lake Superior Railway company, has announced that, pending the completion of a line of twenty-one knot steamers of the first class, steamships of a somewhat less power have been chartered with which to make the journey between Milford Haven and Paspébiac, in a little over four days. The railway company is completing the docks at Paspébiac for the largest ocean steamers, and the Great Western railway of England is arranging for special express services to London.

As a testimony to the sagacity of the Ottawa Government, the London Advertiser publishes a list of industries to be extended, or to be placed for the first time in operation. We welcome this list, because it carries a moral with it. The first item is an intimation that the Bell Organ Company will produce more organs and pianos. Looking at the tariff, it is found that the duty on these instruments is thirty per cent. A shoe company in Winnipeg will add to its factory. The rate of duty on boots and shoes is twenty-five per cent. Toronto and Chicago capitalists will operate a meat packing industry near Toronto. The duty on canned meats is twenty-five per cent. An industry is to be started at Stratford for the manufacture of garter elastics. Twenty-five per cent. is the duty here. Berlin is to have a brush factory. The duty

is again twenty-five per cent. A condensed milk factory is to be established in New Brunswick. The tariff on condensed milk is $3\frac{1}{2}$ cents per pound. It will be observed that where the Government has turned its back upon its free trade folly the industries grow and multiply. That another list of extending industries will soon be presented we cordially hope, first, because industry is good for the country, and, secondly, because free trade testimony to the value of the National Policy is useful.—The Mail and Empire.

A New York contemporary speaks of a large and rapidly-expanding trade being done in the United States in the manufacture of cigarette boxes for Japan and the Philippine Islands, in which there is no good reason why Canada should not participate. It is said of one concern that it has an immense foreign trade in cigarette boxes and sends a large proportion of the output to the Orient. There are facilities at the factory for turning out over 100,000,000 of these little pasteboard novelties in a day. The Japanese have of late acquired the art of making the cigarettes, but are not able to provide the boxes.

The annual meeting of the Dominion Millers' Association was held in Toronto on September 1st, the President, Mr. S. R. Stuart in the chair, about eighty members being present. The election of officers resulted as follows:—President, J. J. Hunt, London; First Vice-President, H. L. Rice, St. Mary's; Second Vice-President, R. Rayburn, Tweed, Representative on the Board of Directors Industrial Exhibition, James Goldie, Guelph; Treasurer, Wm. Galbraith, Toronto, Executive Committee—J. D. Flavell, Lindsay, John Goldie, Ayr; W. H. Meldrum, Peterborough; Hedley Shaw, Oakville; J. S. Spink, Toronto; M. McLaughlin, Toronto.

The Philadelphia Commercial Museum have sent us an exceedingly comprehensive pamphlet of forty-four pages having reference to "American Trade with India," a market whose value is beginning to be appreciated by American manufacturers and merchants. The book is descriptive of India, its agriculture, mineral and forest wealth, manufactures, railways, principal commercial centres, business methods, trade, etc., also a commercial directory of Calcutta, Madras and Bombay. The Philadelphia Commercial Museum is an institution maintained by public appropriations and operated under the guidance of an International Advisory Board made up of leading Chambers of Commerce and commercial organizations throughout the United States and in many other countries, the object being to aid in the building up of the foreign trade of the United States.

"A Memento of Toronto and the Brotherhood" is the title of a very beautiful souvenir sent us by Mr. W. S. Carter, editor of the Locomotive Fireman's Magazine, Penn., Illinois, which is the official publication of the Brotherhood of Locomotive Firemen. The souvenir is issued by the Magazine, commemorative of the Sixth Biennial Convention of the Brotherhood, which is now being held in Toronto. It contains a large number of photo engravings of the most beautiful and attractive views of public and private buildings, parks, streets, etc., in Toronto, and is an evidence of the enterprise of Mr. Carter.

The censorious critics of the Kailyard in fiction will hail with delight what seems to be a return to the historic romance of the Stevensonian type. The newcomer is Mr. Neil Munro, whose "John Splendid" has appeared throughout the year in Blackwood's Magazine in England, and in The Bookman on this continent. It is now to be published in book form by The Copp, Clark Company, Limited, Toronto, and may be expected early in October. Mr. Munro's novel, "John Splendid," is his first long sustained effort, and is a remarkable performance, recalling the best of Stevenson, and succeeding where Stevenson failed, in portraying a womanly heroine with a glamor of witchery that wins the reader from the start. The story is autobiographic in form, and will prove to be one of the leading books of the year.—The Copp, Clark Company, publishers, Toronto.

CANADIAN MANUFACTURERS' ASSOCIATION.

President:
J. F. ELLIS.

First Vice-President:
JAMES KENDREY, M.P.

Second Vice-President:
P. W. ELLIS.

Treasurer:
GEORGE BOOTH.

Chairman Executive Committee:
R. W. ELLIOT.

Chairman Tariff Committee:
W. K. McNAUGHT.

The Executive Committee meet on the Second Tuesday of each month.

OFFICES
McKinnon Building,
TORONTO.
Tel. 1274.

J. J. CASSIDEY, - SECRETARY.

THE OBJECTS OF THIS ASSOCIATION ARE:

To secure by all legitimate means: the aid of both Public Opinion and Governmental Policy in favor of the development of home industry and the promotion of Canadian manufacturing enterprises.

To enable those in all branches of manufacturing enterprises to act in concert, as a united body, whenever action in behalf of any particular industry, or of the whole body, is necessary.

To maintain Canada for Canadians.

Any person directly interested in any Canadian manufacturing industry is eligible for membership.

CANADIAN INDUSTRIAL LEAGUE.
President, **JAS. KENDRY, M.P.**

WOOLEN MANUFACTURERS' ASSOCIATION,
President, **BENNETT ROSAMOND, M.P.**

KNIT GOODS MANUFACTURERS' ASSOCIATION,
President, **JOHN PENMAN.**

CARPET MANUFACTURERS' ASSOCIATION,
President, **J. P. MURRAY.**

CLOVE MANUFACTURERS' ASSOCIATION,
President, **A. R. CLARKE.**

REPRESENTATIVES TO
TORONTO INDUSTRIAL EXHIBITION ASSOCIATION.
R. W. ELLIOT. **GEORGE BOOTH.**
W. K. McNAUGHT. **A. E. KEMP.**
J. J. CASSIDEY.

WHAT THE ASSOCIATION ADVOCATES.

The following resolutions were passed at the Twenty-Third Annual Meeting of the Canadian Manufacturers' Association held in Toronto, April 12, 1898.

THE NATIONAL POLICY.

Whereas, from its geographical position and commercial environment the prosperity of the Dominion of Canada depends largely upon the maintenance of a fiscal policy which will foster our agricultural, mining, commercial and industrial enterprises, and which will make the interests of Canadians paramount to those of foreigners, by preventing this from being made a slaughter market for the surplus products of foreign countries; and

Whereas, the observance of such policy gives confidence and stability to capital and enables our artisans to obtain wages far in excess of those which prevail in European countries, and which keeps them in the country by the payment of wages which enable them to live in comfort; and which provides a home market for many lines of agricultural products, which cannot be exported; a policy which also attracts foreign capital and inaugurates industries by inducing those who desire to participate in the benefits of our market to manufacture their products here; a policy which encourages and develops inter provincial trade, and produces amongst the people a feeling of security, of national pride, and commercial and industrial independence, highly conducive to the welfare of the whole people, without which we can never attain to the acme of national prosperity; and

Whereas, the revival of the mining industry in this country has given an impetus, not only to agricultural, but to many other industrial enterprises, as nearly everything used or consumed in the mining regions has to be brought from outside sources;

Therefore, be it resolved, that this Association desire to again place itself upon record, that in its opinion the prosperity of this country imperatively demands the continuance of a fixed and definite policy of protection, from the general principle of which there shall be no deviation, in order that our agricultural, mining, commercial and other industrial enterprises may participate in its general prosperity.

PREFERENTIAL TRADE.

While heartily commending the Dominion Government for their desire to confine the scope of the Preferential Tariff exclusively to the Mother Country and the British Colonies, this Association is strongly of the opinion:—

1. That our Preferential Tariff should not be extended to any colony, unless such colony accords to us a tariff preference in their market, equivalent to the discrimination allowed by us in its favor.
2. Where our minimum Preferential Tariff is applied, the minimum rate of duty thereunder should be high enough to protect existing Canadian industries from the competition of countries having lower priced labor, cheaper raw materials and capital, and whose long-established industries give them great advantages over those of Canada.
3. That although the minimum Preferential Tariff has already been extended to Great Britain without any corresponding preference to Canada, we would strongly impress upon the Dominion Government the necessity of obtaining reciprocal concessions from the Mother Country as speedily as possible.

CANADA'S COMMERCIAL AGENTS.

Following is the correct official list of Canada's Commercial Agents in Great Britain, British Possessions and foreign countries.

- J. S. Lurke**, Sydney, N.S.W., agent for Australasia.
- G. Eustaco Burko**, Kingston, Jamaica, agent for Jamaica.
- Robert Bryson**, St. John, Antigua, agent for Antigua, Montserrat and Dominica.
- S. L. Horsfall**, St. Kitts, agent for St. Kitts, Nevis and Virgin Islands.
- Edgar Tripp**, Port of Spain, Trinidad, agent for Trinidad and Tobago.
- C. E. Sontum**, Christiania, Norway, agent for Sweden and Denmark.
- D. M. Ronnio**, Buenos Ayres, Argentine Republic, agent for Argentine Republic and Uruguay.

In addition to their other duties, the undermentioned will answer inquiries relative to trade matters, and their services are available in furthering the interests of Canadian traders.

- J. G. Colmer**, 17 Victoria Street, London, S.W., England.
- Thomas Moffat**, 16 Church Street; Cape Town, South Africa.
- G. H. Mitchell**, 15 Water Street, Liverpool, England.
- H. M. Murray**, 40 St. Enoch Square, Glasgow, Scotland.
- Harrison Watson**, Curator Imperial Institute, London, England.

METRIC CONGRESS AT PARIS IN 1900.

Mr. H. W. Gilbert, United States Consul at Liege, France, writes to his Government of the proposed Metric Congress at Paris as follows:—

The uniform numbering of textile fibers is of great importance to the spinning mills and textile manufacturers of the world. At present many different rules are in use, all absolutely dissimilar.

In France, the cradle of the metric system, the numbering "kilométrique"—that is to say, based upon the relations between the weight in demikilograms and the length in kilometers—is only in use for cotton thread and "boure de soie." Chaos reigns in the international numbering. In fact, few persons can distinguish in the many complicated modes of numbering the exact number of thread intended.

Uniformity in this matter would immensely simplify the technique of the textile industry, but, to accomplish this object, it will be necessary to establish an invariable rule to be applied to all countries.

This question has for a long time occupied the attention of those engaged in this industry. It was the subject of investigation at five successive congresses, held at Vienna in 1873, at Brussels in 1874, at Turin in 1875, and at Paris in 1878 and 1889. It is intended to study this subject again at the international exposition to be held at Paris in 1900.

At all the former congresses progress has been made, but no practical result has yet been obtained. There are two reasons for the failure—uniformity in this matter has not become general, even in France, and the metric system has not yet been adopted by all countries. England places goods in foreign markets that are not numbered and manufactured according to the metric system, and it is also permitted to be done in the United States. Our country is making strenuous and successful efforts to compete with other nations for foreign trade in merchandise, and, as our capacity to produce is almost unlimited, it would seem that our textile manufacturers should be well represented at the above-named congress in Paris in 1900.

MACHINERY WANTED IN JAPAN.

William Crichton, 20A Oura, Nagasaki, Japan, asks that makers will forward him their catalogues, price lists, containing terms, etc., for supplies both for the construction and equipment of railroads.

EXPORTS OF AMERICAN AGRICULTURAL IMPLEMENTS.

The exports of agricultural implements from the United States for the fiscal year 1898 were \$7,609,732, against \$2,645,187 in 1888. They went to Great Britain, France, Germany, Russia, British North America, Central and South America, British East Indies, and Australasia, other parts of Asia and Oceania and to Africa. Canada's export trade in such goods is gratifyingly large and is constantly increasing.

SCHOOL SLATES.

What is said to be one of the largest orders in school slates received in this city for export has just been booked by James S. Barron & Co. The order calls for 2,000 cases "D" Lehigh school slates for the Australian market. This represents ten carloads of slates. Recently some good sized orders have been received in this market for school slates from Argentina, and there are at present indications of business in this direction being done with certain European countries, to which quotations have been furnished for large lots of school slates.—New York Journal of Commerce.

Canadian quarrymen and manufacturers should investigate this opening.

DANISH COMPLAINTS OF AMERICAN BICYCLE TIRES.

The United States Vice-Consul at Copenhagen, Denmark, reports that American bicycle tires sent to that country are of a very inferior quality, a mistake that Canadian exporters should studiously avoid. He says:

Danish importers contracted in December last for enormous quantities of American bicycles, and the goods ordered are now coming. They are mostly of the lower grades, and therefore cheap. The bicycles themselves look very smart, and are no doubt good. Nobody complains about them, and the importers who have been wise enough to buy without the American tires are doing well, but the others repeatedly lodge complaints at this consulate about the miserable quality of the tires, which, while they look well, will not hold the air and necessitate constant repairs. If American tire manufacturers do not immediately remedy the evil, which I know to exist from personal experience, as I am often called upon to examine the articles, I fear this important bicycle market will be lost.

BUILDING MATERIAL FOR SOUTH AFRICA.

The quantity of builders' material which is being bought in the United States for the South African market is said to be quite satisfactory and unusual. Not only does this business include transactions in the iron line, but also in wood-work, such articles as doors, blinds, flooring, etc., to a very large extent having recently been contracted for. Metal ceiling is meeting with some demand also; nearly \$10,000 worth was shipped in one week and new orders are reported in the market. An order was placed a day or two ago with a manufacturer for \$11,300 worth of mining machinery, and upward of \$20,000 worth of such machinery went out to various parts of South Africa in one ship. Extensive shipments have also been made in car material, \$15,000 constituting the value sent to one port. In iron pipe the present transactions are considered good, purchases being constantly made. In one

week upwards of \$22,000 worth of harvesting machinery was shipped to South Africa. In contractors' supplies several good-sized orders have been placed which include such items as road-scrappers, wheel-barrows, shovels, picks, etc. The general condition of the South African trade is said to be good.

AGRICULTURAL MACHINERY IN SOUTHERN RUSSIA.

According to a British Foreign Office report (annual series 2076), sales of English machinery amounted to 35 portable engines and steam threshers, valued at £18,617 (\$90,599), in 1897, against 50, with a value of £26,596 (\$129,429), in 1896. United States machinery was sold as follows: Reapers, 300, valued at £7,181 (\$34,946); binders, 30, worth £957 (\$4,657); mowers, 200, valued at £3,191 (\$15,529); hayrakes 300, at a value of £2,074 (\$10,093). In the preceding year there were sold 600 reapers, 50 binders, 200 mowers, and 300 hayrakes, of a total value of £24,415 (\$118,816). There was a decrease in value during 1897, on account of the large stock of machinery on hand. Three hundred plows, mostly of German make, representing £1,117 (\$5,436), were sold during the year; and 40 horse-gear threshers, valued at £2,340 (\$11,388).

CHEAP WATCHES AND BICYCLES WANTED IN CHINA.

The United States Consul in Chefoo, China, reports a great advance in the demand for imitation gold watches. In a letter to him written by a well-informed American resident of Wei Hieu, Shantung, it is mentioned that while that province has little demand for canned goods, wheat and the like products, it has an unlimited capacity for watches and clocks; and it is estimated that the sale of bicycles might, if pushed by proper agencies, reach a couple of millions, the demand being, as usual, for the cheapest type produced. We quote the following passage from this gentleman's letter:—"Our chief imports into China to-day are kerosene oil, clocks, watches, canned goods, wheat, etc. Shantung has usually no demand for wheat, canned goods, and the like; but it has an unlimited capacity for cheap watches and clocks, and with a little adaptation to its use and financial ability (or inability) it could absorb a million or two bicycles with ease. . . . A wheel made strong and cheap, without too many luxuries such as pneumatic tires and easy saddles, that could be sold for twenty-five or thirty dollars (gold) would go like wildfire over this province. . . . So also might the importation of cheap watches be increased indefinitely by proper agencies at the coast."

TRADE IN EAST AFRICA.

The British Consul at Beira, East Africa, writes:—Under-mentioned are a few of the more common lines of goods with sale prices, as sold here:—Matches, Japanese, about sixty-five in a box, 2s. 9d. per gross; European, Ship brand, seventy-two in a box, 3s. 6d. per gross; European, Lion brand, ninety-eight in a box, 3s. 6d. per gross; duty on all kinds, 6d. per kilo.; candles, Belgian, 12s. per case, duty, 3½d. per kilo.; cotton blankets, Belgian, about 2 lbs. weight, at 3s. 4d. each; cotton blankets, Belgian, about 1 lb. weight, at 1s. 8d. each; duty, colored, 1s. 6d. per kilo.; white, 10d. per kilo. Piece-goods, fifty by seventy-two, at 1s. 8d. each. These sell in different patterns. They should be well starched. Duty, 1s. 6d. per kilo.; lamps, twenty-five line, are quoted from Germany at 7s.; from England at 9s. 6d.; thirty line, Germany at 8s., England, 13s. German lamps, therefore, sell in preference to British. The glasses come with the lamps. The better class of boots come from Portugal, selling at 20s. to 25s., against 30s. to 40s. for English boots. The common boots used by workmen and a little by natives come from the Cape Colony. Duty, hobnailed boots, 10d. per kilo.; not hob-

mailed, 4s. 5d. per kilo. Shirts, cotton, for natives, at 1s. 8d. each; duty, 10d. per kilo; umbrellas, multi-colored, at 1s. 3d. each; duty, 3d. each. The price of 1s. 8d. attached to so many articles of native trade, represents 500 reis, the coin for which is that most often in the hands of natives and best understood by them.

STEAM FIRE ENGINES WANTED IN FRANCE.

Several cities in the consular district of Cognac, which at present have no effective fire department, anticipate purchasing steam fire-engines. Cognac already has a fund for this purpose. Manufacturers should address M. E. Jouard, No. 1, rue Louise de Savoie, Cognac, Charente, France.

TASTES OF PURCHASERS SHOULD BE OBSERVED.

Year in and year out have we been told that the English manufacturers will not conform to the wishes of buyers; but what does the United States Consul-General at Cape Town say? He makes the same complaint as regards American exporters:—"Our manufacturers," he remarks, "object to carrying out the wishes of foreign customers when such wishes conflict with their own; they dislike to change methods, and consequently do not cater to foreign wants as do the manufacturers of other countries, particularly England and Germany. If the foreign trade desires nails packed in kegs of 112 pounds, instead of the American keg of 100 pounds; if it desires certain cheap cloths dyed in the yarn instead of the piece; if it wants vehicles with seats six inches wider, and with no wider 'track'; if it desires the boxes in which goods are shipped dovetailed at the corners or strapped with iron; if it wants goods sent in bags of a certain quality, when barrels have previously been used; if it desires a change of style of package—all these wishes should be complied with."—British Trade Journal.

PAPER IN GUATEMALA.

Germany stands first in the paper trade of Guatemala, but France takes a good second, and would do better still if attention were paid to the tastes and requirements of the country. The chief demand is for wood papers coming from Germany, Austria and Belgium, of a strength of 3, 4 and 5 kilos (this latter weight being in great demand); the usual size is that known as Sittriss $\frac{1}{4}$ and $\frac{1}{2}$ foolscap. Ruled paper is not in much demand owing to the dearness of hand labor and the scarcity of ruling machines. Unruled paper constitutes 25 per cent. of the total trade. Ruled paper comprises "office," 50 per cent. of the total trade; "margin," 15 per cent., and "invoice," 10 per cent. Plain unruled paper is used largely in 3 kilos. weight, and laid paper is used by cigarette factors. Current prices to sample are fcs. 65 per 100 kilos. in reams of 480 sheets, packed in half-reams; ruling is included in this price. Drawing paper comes from France and straw packing paper from Germany. Tissue paper comes from Austria; white kinds, 4 fcs. per ream, colored, from 10 fcs. per ream according to color. Cigarette paper comes from Spain. Bardou rice paper is imitated and sold at a low price in Austria and Germany; a lot of it is sold in Salvador. Printing paper comes from Germany, Austria, Belgium and the United States (especially). Envelopes.—The usual Italian, French and German sizes are employed, but those coming from the United States are preferred. Prices are 24 by 10 $\frac{1}{2}$, fcs. 6.25, and 28 by 12, fcs. 8.15. Wall Papers.—These come almost exclusively from France. The Customs duties per kilo upon paper are as follows, in piastres; cotton paper, colored and of all classes, not ruled, gross weight, 0.15; without borders, unglazed, gross weight, 0.15; papers of all kinds, ruled in any way, gross weight 0.30; wall papers of all kinds, but without gilding, silvering, or velveting, weight, with cover, 0.20; papers of all kinds, without borders, for cigarettes, gross weight 0.30,

tracing paper, weight with envelope, 0.20; tissue papers; weight with packing, 2.00; colored papers for flowers, weight with packing 0.20.

BICYCLES IN STRAITS SETTLEMENTS.

The importation of cycles into Straits Settlements would appear to be profitable under certain conditions. Last year Great Britain sold about \$70,000 worth of cycles there. High-class cycles would alone have any chance of success.

ORNAMENTED POST CARDS.

Sir Charles Oppenheimer, British Consul-General at Frankfurt-on-the-Main, in the course of his last report refers to the great increase in the number of post cards passing through the German post office. This is attributable, he says, mainly to the fancy people have taken for sending post cards with views as souvenirs. The number of these cards posted from spots frequented by visitors is enormous—in a single season 148,000 from the Kyfhauser monument, 128,000 from the national monument on the Niederwald, 36,000 from Heidelberg Castle; while the cards posted from the Berlin Trade and Industrial Exhibition were over a million and from the Hamburg Floricultural Exhibition 572,000. This new trade not only affects the post office, but also the paper industry and those concerned in illustrating, as well as various branches of the stationers' trade. Elegant albums are made for collecting these souvenir cards, and are favorite presentation articles. Quite recently the Government of Saxony offered a prize for the best series of about twenty souvenir post cards, with views of Saxony, and German manufacturers have helped on the craze by producing handsome cards in the greatest possible variety, and the Consul-General fears that, when it reaches Great Britain, German exporters will monopolize the manufacture and sale of these cards in that country unless British manufacturers take up the matter promptly.

THE RUSSIAN TARIFF.

On September 13th a new regulation went into force in Russia which permits, for five years, or until December 31, 1903, the importation, free of duty, of a number of agricultural implements and machines not now manufactured in Russia. This announcement ought to be of particular interest to Canadian implement manufacturers, as the list includes articles brought to a high state of efficiency in Canada, such as harvesting and stacking machines, sheaf binders, steam plows, complex threshing machines with double drums, tedders, horse rakes, assorting machines for grass seeds, assorting machines for potatoes, manure spreaders, pulverizers for sprinkling vines and trees, injectors for sprinkling sulphurous carbon under the roots of the vines in order to destroy the phylloxera, uninterrupted grape presses, centrifugal cream separators and their parts, etc. It is to be hoped Canadian manufacturers will take full advantage of the opportunity afforded them by the Russian Finance Department.

RECIPROCAL TRADE BETWEEN CANADA AND AUSTRALIA.

Speaking of the actuality and the possibility of trade between Canada and Australia, the Financial Adviser, of Sydney, N.S.W., says:—

The development of the trade between Canada and Australia as exemplified by the results of the past four years is an illustration of the direct effort to secure it. Prior to the depression caused by the collapse of the Australian Banks, Canada did an irregular but rising trade with the Australian colonies, principally in timber and fish. In 1889 the exports to Australia amounted to \$661,208. From that year it began

to decline, and in 1893 the volume had dwindled to \$281,352. This in part was attributable to the diminished demand of the colonies, but as the decrease in Canadian exports was very much greater than the lessened demand in the colonies it is clear the Canadians were being shouldered out of their former market.

In 1893 the Canadian-Australian line of steamers were put on the route between Sydney and Vancouver. The Hon. Mr. Bowell, one of the members of the then Government, came here to spy out the land, and on his return home in the latter part of 1894, Mr. Larke was sent out to look after the interests of the Canadian people, as resident commissioner. From that period the trade has advanced steadily. The Canadian returns show it to have been:

1894.....	\$346,641
1895.....	428,267
1896.....	518,233
1897.....	1,422,426

The character of the trade has changed, as well as increased in volume. The two items which largely composed the trade of 1893 do not show great extension. The exports of fish and fruits were: 1894, \$68,302; 1897, \$77,698; and of timber, 1894, \$139,552; 1897, \$202,192. The largest increase is in breadstuffs, \$445,000 due to the deficiency of the Australian harvests. This is an exceptional business, but some of it appears likely to continue. The remainder of the increase, amounting to over half a million dollars, is made up of manufactures, the large items being in cottons, agricultural implements, bicycles, carriage maker's materials, organs and pianos, drugs and chemicals, boots and shoes, and other leather and rubber goods, paints, varnishes, etc. In a number of these lines the Canadians have been very successful, and the establishment of branch houses shows they have come to stay.

The Australian side of the account is not so rosy. The direct exports from this continent have fluctuated, and with no great advance. They are as follows:

1894.....	\$156,534
1895.....	117,941
1896.....	213,683
1897.....	147,900

The steamship line offered rather better facilities to Australia than to Canada for the export of goods. During 1897 the steamers were filled from Canada, frequently cargo was rejected, and the freight rates were increased. No such hindrance occurred with respect of goods shipped from Australia to Canada. In many lines of Australian produce, the returns show the Canadian demand has increased. Thus the Canadian importations of hides, skins, and horns increased by over half a million dollars from 1894 to 1897, while the exports from Australia only amounted in 1897 to five thousand dollars. British Columbia, our nearest Canadian market, increased its consumption of non-sparkling wines, and the United States has increased its exports to that province, but Australian exports appear to have fallen from \$1,802 in 1894 to \$107 in 1897. The same fact appears in regard to British Columbia in regard to butter, meat, etc., but with an increased demand the Australian exports fell from \$43,809 in 1894 to 13,764 in 1897.

The explanation for the difference between the two colonies can be accounted for only by the fact that Canada has made a direct and persistent effort to get into this market and has succeeded, while Australia has let the trade take its haphazard course, with the natural consequence that it has fallen off. Should not these figures give us a good practical lesson, and show those interested in the advance of Australasian commerce, the necessity of having a resident representative in the various foreign commercial centres, to look after our interests and push the introduction of our natural and national products?

England is waking up to the fact that her supremacy in the markets of the world is in danger, if not already lost,

and is taking active measures to recover lost ground. The Government has recently concluded to establish a bureau whose duty it shall be to furnish prompt and accurate information concerning commercial matters to its Board of Trade, the latter organization undertaking to spread the information where it will do the most good. The United States perform similar service in a degree by means of consular reports, but it might be well to perfect and expand the service, especially as we now have markets in our outlying territory which we must control at all hazards. England, fully awake, is a dangerous competitor commercially, no matter how great the advantage we may obtain over her for the moment. Generally speaking, her example is a good one to follow.—The Paper Mill.

CEMENT IN CHINA.

Cement is an article which deserves the special attention of our manufacturers, as the demand is very large for it in China, one firm here alone selling about 10,000 casks a month. Besides this, paper (cigarette paper especially), llama braid, cloth, wire nails, white metal and Gablonz wares could be profitably imported from Austria-Hungary.—Austro-Hungarian Consulate at Hong-Kong.

AGRICULTURAL IMPLEMENTS IN ENGLAND.

How comes it that the American makers have got such a grip on our rural districts with their agricultural machinery? Living a good deal in the rural districts of Derbyshire during the summer, it is my custom to look at the machinery and implements used on the farms. These usually are quite up-to-date, for, as a rule, the Derbyshire man is a poor farmer, and not at all prone to extravagance in buying new things in machinery. But what they do get appears to be American. During the present hay season this was particularly noticeable. The hay-cutter was American. The tedding machine at work in the hay-fields was also American, and even the rakes and hay-forks were, in several instances, from across the Atlantic, though forks, rakes and graips are made by various large firms in the city of Sheffield, not half an hour's railway journey off.—British Trade Journal.

Canadian manufacturers of agricultural implements should win a large part of this trade.

BARBED WIRE IN NATAL, SOUTH AFRICA.

Galvanized barbed wire comes from the United States. Special brands are in favor, as the "Iowa," quality generally satisfactory, and prices usually lower than English rates. Average cost 20 per cent. below English price.—Colonial Governor's Report.

CHILE.

According to a law recently published, cotton yarn and machinery, which are imported by manufacturers of cotton goods for employment in their industry, may be imported free from Customs duty up to the year 1920. The freedom from duty on materials for manufacturing lucifer matches for a term of ten years has been proclaimed, and a further law stipulates that the cost of unloading, paying duty, identification and removing the goods, admitted by the Customs authorities of the Republic, is to be paid by the importer.

MUST HAVE A PASSPORT.

The British Secretary for Foreign Affairs has received from Her Majesty's Minister at Berne a despatch, recommending strongly that all British subjects who are proceeding to Switzerland, including minors, who, unaccompanied by their parents, are going thither for educational purposes, should be

provided with Foreign Office passports. The production merely of a certificate of birth or baptism will not be sufficient under present regulations to obtain from the local authorities the "permis de sejour," or ticket of residence, without which no foreigner is allowed to remain in a canton.

JAPAN.

According to the latest reports received from Her Majesty's Minister at Tokio, the date at which the new Japanese tariffs will come into action still depends on the ratification of the treaty between Japan and Austria-Hungary. It is also stated that the Japanese Government will give three months' notice of the application of the tariffs.

BICYCLES IN GERMANY.

The importation of American bicycles into Germany increased by 850 per cent, in the first few months of this year compared with 1897. It is stated that a Munich agent has undertaken to purchase cycles to the value of £7,500 annually from one American maker alone. English bicycles, it is stated, are unfortunately not so much in request, partly owing to their reputation for heaviness, especially compared with American machines, though lately English makers have discovered that most cyclists on the Continent demand a very light and highly-g geared bicycle.—British Report from Munich.

FARM MACHINERY IN CAPE COLONY.

American agricultural machinery has become very popular in South Africa. The five years ended 1894 show a very large increase. American harvesters and reapers are coming into very general use, and British manufacturers will have to exert themselves to counteract this. Until lately the best plows were of British manufacture, though as regards numbers, more of the cheap American plows, such as the Eagle, 75, 55 and 25, were imported into this colony, especially into the Eastern province; but of late years the Americans have introduced their best plows, and these, both with regard to workmanship and efficiency, are equal to, and in some cases excel, the British. A few German plows are imported; these are of cheap make, and there is but little demand for them; they are suitable only for loose soils.—Colonial Governor's Report.

AUSTRALIAN FRUIT FOR LONDON.

The representative of a large London firm recently arrived in Sydney with a commission to purchase oranges and lemons for export to London. It is suggested that the fruit growers should establish a series of special sales in Sydney, leaving buyers to make their own export arrangements, as in the wool trade. This would lead to many necessary improvements being effected. To secure a ready sale at top prices, growers would have to devote more attention to quality, the possibility of disposing of large quantities at a time forming a strong inducement. It would also be requisite to convey the fruit to London in artificially-cooled, not chilled, chambers as in the case of shipments from Mediterranean ports. In fact, the whole of the work from the orchard to the market would have to be remodelled and done well. These are hints that Canadian fruit growers should remember.

CONDITIONS OF TRADE IN AUSTRALIA.

Agents of German houses are reported as being extremely active in endeavoring to secure Australian orders, and are promising, if sufficiently encouraged, to thoroughly study the requirements of customers. It is a cause of grave complaint

among many storekeepers there, that British shippers too frequently give more attention to inferior low-priced goods than to superior articles at moderate rates. Especially is this the case with tools and implements, in which English manufacturers continue to hold their own, despite the large consignments of inferior wares continually finding their way into the Australian market. The great competitor of Britain is the United States, which, in 1897, exported to New South Wales miscellaneous trade to the value of £45,833, the value of the British imports into the Colony during the same period being £17,366, and of those from Germany £1,841. In agricultural implements (spades, forks, axes, etc.), the United States furnished articles to the value of £9,731, and Britain to the value of £5,582. The United States also headed the list with ploughs, reapers, and binders, and the United Kingdom with plough materials. America, in addition, possessed the largest share of the trade in guns, rifles, and pistols the United Kingdom and Belgium coming next. In watch-makers' tools the New South Wales imports were:—United Kingdom, £2,613. Germany, £1,129. United States, £23.

WHAT SWITZERLAND BUYS THAT CANADA CAN SUPPLY.

Zurich is the great distributing point in Switzerland for most of the imports that come from the North American continent. Following are some of the articles that within the past year have found their way to the Swiss market, in which trade Canada is well prepared to share:

Lumber and logs in cargo lots, wood and iron-working machinery and tools, emery wheels, iron wheels and wheelbarrows, desks and other office furniture, cigarettes, smoking tobacco and chewing tobacco, ironing machinery for laundries, agricultural implements and machinery, phonographs, ice-cream freezers, road carts and wagons, picks and shovels, tools of all kinds, street-sweeping machines, rubber goods, canned vegetables and fruits, dried fruits, all kinds, honey, wheat, grass seed, cast iron, porcelain-enameled sanitary appliances, as bath tubs, lavatories, sinks, water-closets, etc., steam, water, and gas fittings, steel ceilings, ladies' and men's shoes, sole and other leathers, machinery belting, leather and rubber, pianos, organs, cash registers, provisions (hams, sides, lard and sausages), inks and mucilage, bicycles, tires, and other accessories, typewriters, collars, cuffs, and shirts, writing bond, and ledger papers, blotting paper, coffee mills, corn-cob pipes, photographic supplies and apparatus, tubular lanterns, picture hooks and wire, picture frames and mouldings, furniture and other hardware.

There are many other articles, at present not important enough to mention, but the sale of which may develop considerably in future.

BICYCLE TRADE AT MALTA.

The roads of Malta, as a rule, are hard and smooth, and, with the exception of the period from May to November—during which time most of the people who ride wheels are away—are well patronized.

The wheels are chiefly of English manufacture. There are a few American bicycles used, but they have been specially ordered, and their presence is not due to any influence of the manufacturers. American wheels are well regarded, the fact that a wheel is from the United States being sufficient guaranty of its reliability. By a little enterprise it is possible to gain a good market there for Canadian wheels. At the beginning of the season, October 1st, people are returning for the winter months, and from that time on there is quite a brisk business done, both in the way of new wheels and in sundries, the assortment of the latter being somewhat limited.

It is advisable to select a local dealer as an agent, giving the best of terms in order to encourage him to push the goods.

After a market has been secured arrangements may be made of a more permanent nature.

The kind of tires most in use is that known as the Dunlop Tropical, an English product, which costs the dealer \$15.80 per set, including all charges. Another make is known as the "Clincher," which costs the dealer \$12.16, including all charges. An Austrian concern has lately been trying to introduce its goods, but thus far it has not met with much success, notwithstanding cheapness, owing to inferiority of articles. Malta wants well-made goods and at as low prices as is consistent. Therefore, it is not advisable to attempt to introduce inferior goods. Very few single-tube tires are used. The demand seems to be for rough-tread double tubes.

The twenty-eight inch wheel seems to be the favorite. Lamps are not much used, but this may be due to the reason that there has been a poor assortment from which to select. Quick-mending kits should find a good market. In the matter of pedals the American article is almost wholly used.

The average retail price at which bicycles are sold in Malta is \$50.

Among firms in a position to handle goods are Melita Cycle Company, 27 Strada Mezzodi, and C. Breed Eynaud & Co., 17 Marina Barriera.

One of the chief obstacles to the increase of trade at Malta is the lack of direct communication, and it would be advisable for manufacturers not to rely upon their foreign agents to push their goods at Malta, but to send samples and price lists directly to the Maltese dealers.

HAWAIIAN TRADE.

Hawaii bought last year over \$8,000,000 worth of goods from all parts of the world, of which over 75 per cent. was

from the United States. The following table shows the total importations, including specie, into the Hawaiian Islands by countries during the year 1897, with the percentages contributed by each country :

	Amount	Per cent.
United States, Pacific ports.....	\$6,502,936	73.58
United States, Atlantic ports.....	297,091	3.36
Great Britain.....	865,781	9.80
Germany.....	192,932	2.18
China.....	260,417	2.94
Japan.....	292,316	3.31
Australasia and New Zealand.....	122,453	1.39
Canada.....	58,674	.66
Islands of the Pacific.....	5,864	.07
France.....	30,997	.35
Other countries.....	208,738	2.36
Totals.....	\$8,838,203	100.00

Canada should enjoy more than two-thirds of one per cent. of this trade.

SHOES IN THE PHILIPPINES.

The latest customs statistics of the Philippines show that the imports of footwear for the year 1894 were valued at \$94,306. The kinds of these goods are classified as boots and shoes of leather and canvas; boots and shoes of patent leather and calfskin, slippers and common shoes such as are worn by Chinese, and footwear for children.

Heretofore Spain, protected by laws that discriminated against all foreign products, furnished nearly all the footwear consumed in the Philippines. Now that that discrimination no longer exists, Canadian manufacturers should be prepared to obtain a fair share of the trade.

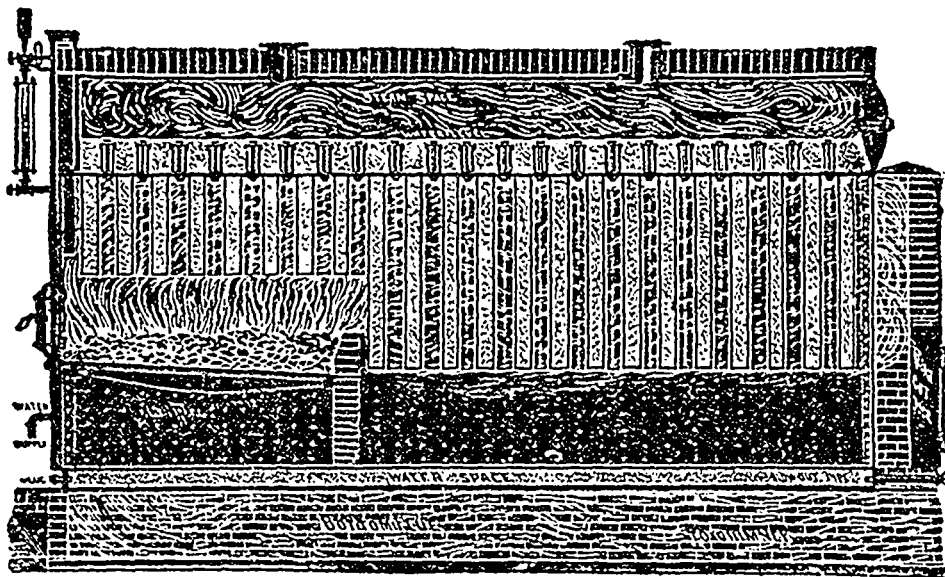
E. A. WALLBERG, C.E.,

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KINGSLEY WATER TUBE BOILERS

Manufactured in Montreal,
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Can be installed in any Basement,
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GUARANTEED: A Saving in Fuel of 30 per cent. over Return Tubular Boilers.
A Saving in Fuel of 50 per cent. over any Cast Iron Heater.

...Catalogue Free.

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, belt ing, 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.

Messrs. Body & Noakes, of the Winnipeg, Man., linseed oil mills, are erecting a flax warehouse at Gretna, Man.

The Northern Elevator Co. will build an elevator at Emerson, Man., with a capacity of 25,000 bushels.

The Dominion Elevator Co., and the Lake of the Woods Milling Co. will build elevators at Dauphin, Man., to have a capacity of 25,000 bushels each.

Tenders have been called for the erection of a schoolhouse at Baldur, Man.

Messrs. Rhodes, Curry & Co., Amherst, N.S., have been awarded the contract for building the new Sackville central schoolhouse.

The Queen City Specialty Company, of Toronto, has been incorporated with a capital stock of \$20,000 to manufacture and deal in paper boxes, etc.

The Skinner Co., Gananoque, Ont., has been incorporated with a capital stock of \$75,000 to manufacture hames, snow-shovels, etc.

The Morden Milling Co., Morden, Man., will erect a 40,000 bushel elevator in connection with their flour mill.

The Robb Engineering Company, Amherst, N.S., have installed a new 100 h.p. Robb-Armstrong Engine for the Electric Lighting Co., Windsor, N.S.

A building permit has been taken out by Architect Mills, Hamilton, Ont., for Pratt & Watkin's departmental store at that place. The building will be three stories, with a floor underground, and cost \$50,000.

The Electric Light Station at New West-

minster, B.C., have given the Robb Engineering Co., Amherst, N.S., the contract for building two boilers of 100 h.p.

Archibald Lindsay, Aylmer, Que., is erecting a sawmill at that place to cost about \$10,000.

A large warehouse is being erected at Winnipeg, Man., by the British Columbia Mills, Timber and Trading Co.

The Riordan Pulp Company are erecting a pulp mill at Hawkesbury, Ont., which will be eight stories high.

Tenders have been called for the erection of a round house, repair shops, etc., for the Canadian Pacific Railway at Calgary, N.W.T. The estimated cost is \$50,000.

The ratepayers of Bothwell, Ont., will vote on a by-law to raise \$1,500 to assist in building a fire hall and council chamber.

The Waterville, Que., Furniture Co., which was recently burned out, is looking for a new location in Sherbrooke, Que.

The Roberval Wool Manufacturing Co., Roberval, Que., was partially destroyed by fire recently.

Nicholas Sasseville's carding mill at Terrebonne, Que., was damaged by fire recently. Loss about \$800. The Electric Light Co's dynamo house was also damaged. Loss about \$1,500.

The works of the Bertram Engine Works Co., Toronto, was damaged by fire Sept 2nd. Loss on machinery and plant about \$150,000.

The Canadian General Electric Co., Toronto, have supplied the Rossland Water & Light Co., Rossland, B.C., with two of their standard three phase motors.

The sawmill of W. H. Lawson, near Park Head, Ont., was recently destroyed by fire.

The Peterborough, Ont., Light and Power Co. will erect a new power house to cost about \$35,000.

Messrs. A. B. Jardine & Co., Hespeler, Ont., have been enlarging their premises and have installed an electric lighting plant supplied by the Canadian General Electric Co., Toronto.

The Hamilton Cotton Co., Hamilton, Ont., have placed an order with the Canadian General Electric Co., Toronto, for one of their forty k.w. direct connected generators.

The Royal Electric Co., Montreal, have installed a thirty h.p. induction motor in the Watrous Engine Works Co., Brantford, Ont.

The plant of the London Electric Co., London, Ont., was damaged by fire to the extent of about \$12,000 on August 30th.

The Royal Electric Co., Toronto, has received an order from the Cataract Power Co., Hamilton, Ont., for two 250 k.w. and one 180 k.w. "S.K.C." generators.

Tenders have been called for supplying the town of Beeton, Ont., with an incandescent electric light plant.

R. C. Ennis, Neepawa, Man., is erecting an elevator at Arden, Man.

Mr. Waddell will build a flour mill at Dominion City, Man.

The Dominion Elevator Co., will erect an elevator at Greenway, Man.

Messrs. Brady, Love & Tryon, Winnipeg, Man., are building an elevator at Myrtle, Man.

The Dominion Elevator Co., has erected a new elevator at Moosomin, N.W.T.

The Lake of the Woods Milling Co. has erected an elevator at Alameda, N.W.T.

The property owners of Prescott, Ont., have voted in favor of a waterworks and sewerage system.

The McLaughlin Carriage Co., Oshawa, Ont., are erecting an additional three-story brick structure, 150x50 feet, in the rear of their main building.

Messrs. E. E. Niswonger and J. P. Cleal, of the National Cash Register Co., Dayton, Ohio, have been in Toronto recently looking up a site for the location of a branch factory and arranging other preliminary details. When once fully started they will employ a large number of hands, and add considerable to the prestige of Toronto as a manufacturing centre.

INGERSOLL-SERGEANT Rock Drills

FOR MINES, TUNNELS AND QUARRIES

PISTON INLET Air Compressors

STRAIGHT LINE
DUPLIX and
COMPOUND.

FOR ALL DUTIES.

... COMPLETE MINE EQUIPMENT ...

JAMES COOPER MANUF'G CO., Limited, - 299 St. James St., Montreal.

Other Offices - - - ROSSLAND, B.C. RAT PORTAGE, ONT. HALIFAX, N.S.

The Dominion Elevator Co., and Messrs. Brigham & James have each erected an elevator at Redjacket, N.W.T.

Mr. J. H. Still has purchased the Recreation Track at St. Thomas, Ont., as a site for his new handle factory. The main building will be used for the factory and a separate building will be erected for a sawmill.

The Safety Light and Heat Co., Dundas, Ont., write us as follows. The result of our exhibit of Cliff Wardlaw Acetylene Gas Generators at the Toronto Fair was far beyond our expectations, our orders were plentiful and very satisfactory. We think that the Fair has been the means of introducing the Acetylene Gas to the general public and educating them to such a point that they can now more intelligently understand—not only the light but—the various means of producing it. We are more than busy at present, trying to overtake our orders, within the past two weeks we have installed plants at Orillia, Peterboro, Perth and Hillsdale, Ont., Vernon, Traill and Golden, B.C., St. Stephen, N.B., Springhill Mines, N.S., and other places. We have yet to receive our first complaint regarding our apparatus—we have nothing but praise from our clients. These plants alluded to run from fifteen to 125 light machines. The 150 light machine at the Algonquin Hotel, Stanley Island, which has the Cliff-Wardlaw generators, is giving very great satisfaction, and so the story goes. We have a good, simple and safe machine and the public are appreciating it.

Three weeks ago fire attacked the Jenckes' Machine Company's shops and nearly destroyed them. Anyone who beheld the chaotic appearance of the place when the

work of the fire was done, should be vis't the works to-day, would find it difficult to realize the possibility of the marvellous change which three weeks' work has accomplished. The restoration is nearly complete and the big shops are again in full running order. The roof was closed in on Tuesday, August 30th, and the iron roofing finished on Wednesday. Over 200,000 feet of lumber has been framed and put into position, besides removing the old floor and other debris. This is really a remarkable accomplishment, considering the fact that none of the timber was on hand at the time of the fire and it was impossible to secure sufficient timber from any local source. It was picked up from various points all around the country and shipped in, to be quickly placed in position.

The credit of this great work is due to the president of the company, Mr. S. W. Jenckes, who has been on the ground almost continually day and night since the fire, and with remarkable energy rushed the work through and again brought the big shops into operation. A portion of the machinery has been running almost from the day of the fire, while other portions required much work to restore to running order. The only machine not in operation now is the big electric travelling crane which will be running the first of the week. Since Monday the company has shipped five car loads of machinery, and by energy the company will now be able to make up for time lost and fill without longer delay the many large orders on hand. —Shebrooke Record.

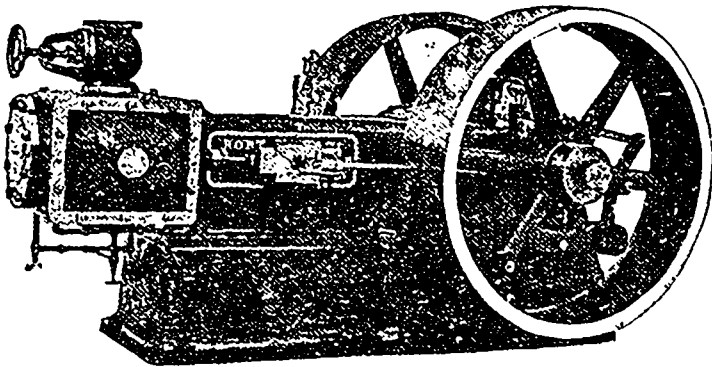
Interest in iron deposits in Northwestern Ontario is likely to be awakened by the building of the Ontario & Rainy River Railroad. The purchase of the Port Arthur, Duluth &

Western Railroad by Mackenzie & Mann, who hold the charter for building the Ontario & Rainy River road from a point on the former, also has a bearing upon iron developments. This road runs from Port Arthur about eighty miles in a southwesterly direction to the boundary line, and six miles into the State of Minnesota. It was originally constructed to tap the iron mines in that State. It is expected that Mackenzie & Mann will extend it forty or fifty miles further, and make Port Arthur a port for the iron trade of Minnesota.

Iron and steel form a considerable part of the mixed cargoes received by vessel from Chicago at Parry Sound, Midland and other Georgian Bay Ports, whence the goods are carried to Montreal or Ontario points. A few days ago the steam barge "Shores" from Chicago laid down a lot of sheet iron at Midland, and another vessel delivered a large quantity of Chicago pig iron at Owen Sound for the Massey-Harris Company of Toronto and Brantford.

The C. P. R. to-day brought to the city a beautiful parlor car. It is the Chautilly, the latest addition to the Canadian Pacific's rolling stock, and by far the handsomest parlor car ever seen in this city. Of this fact every citizen can satisfy himself, for the car will be open until five o'clock this afternoon and between six and eight this evening, and as it is lying on the siding just off Mill street, it can be easily inspected. Outside the car is like other C.P.R. sleepers, except that it has a newer appearance and a closed vestibule with a glass door. Inside it is radically different from any of the others seen here. It is beautifully and artistically finished in beautifully polished native woods

The New "Bell" Automatic Engine.



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**Electric Lighting,
 Electric Railways,
 Manufactories, Mills.**

UNSURPASSED FOR
Economy, Perfect Balance, Absolute Regulation, Smooth Running.

SEND FOR CATALOGUE
 Manufactured only by

ROBT. BELL, Jr., Hensall Engine and Machine Works, **HENSALL, Ont., Canada.**



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CLOTH AND PAPER.
 GLASS & FLINT PAPER.
 "Atlas Brand"

"FLORA" Knife Polish
 in 3d. Gd. & 1/2 Tins.

Ground, Washed & Flour

WHEELS of highest
 quality for general
 & special purposes.

Grinding Machinery.



and upholstered in silk plush. There are two staterooms in suite and an unusually large smoking room with sofas and reclining chairs. There are also eight berths. The car is lighted by electricity and there are lights above and in the berths, so that one can go to bed and read, a little light on the shoulder glowing directly on the page. The switch board is an ingenious one, and the electricity is generated by the train when in motion and sustained by a storage battery. The car is but another evidence of the intention of the Canadian Pacific Railway to give its patrons the very best in the line of ease, comfort and elegance.—St. John, N.B., Globe.

The traveller by the G.T.R. passing the pretty town of Acton, Ont., on the main line west of Toronto, cannot fail to notice a fine building towering above its surroundings. This is the headquarters of the Storey Glove Works, a concern whose business operations cover the Dominion. It is only, however, as one makes a personal inspection of the factory that its importance can be estimated. Nearly 200 wage-earners are here working full time all the week, including Saturday, and recently all hands have been compelled by press of orders to work overtime. The output comprises gloves, mitts, moccasins, travelling bags, etc. Fully two-thirds of the beautifully-finished stock required is tanned by the firm, and this secures excellence from start to finish. "Mocha" goods continue popular, but "Suede" is taking the place of the former as a popular-priced line. A little over two years ago the firm began putting a line of travelling bags on the market, and now this feature of their trade has so increased in volume that their travellers have ceased booking orders; and this will excite no surprise to those who know how neatly and substantially everything is made that bears the Storey trade-mark. The whole factory is a model of neatness and convenience. Every flat is well ventilated and lighted by

electricity. The power that propels the long ranks of sewing and other machinery is electric, the whole being generated by one of Goldie & McCulloch's perfect Wheelock engines.

The Dodge Manufacturing Co., of Toronto, Limited, with Samuel May, President, H. Stafford May, Vice-President, and Charles F. Wheaton, Secretary-Treasurer and Manager, have been incorporated, and have taken over the manufacturing business hitherto carried on by Dodge Wood Split Pulley Co. The new company will enter more extensively into the making of the celebrated Dodge Standard Pulley. They also will carry on a general engineering foundry and machine shop business. The company have been fortunate in securing the services of a very thorough and high-class mechanical engineer, who will take charge of the mechanical department. Special attention will be given to power transmission machinery in all its branches. Also grain elevator machinery will be one of the new departments. The firm are already taking large contracts for completion. Shafting and pulley outfits and the popular Dodge patent split friction clutch forms no small part of the output. The company will also make a specialty of repair work, having a complete and extensive machine shop and competent men. They feel able to take care of all miscellaneous jobs entrusted to their care. They will supply plans and estimates on all kinds of special and general machine work.

The Dominion Dyewood and Chemical Co., Toronto, have been appointed sole agents in Canada for the British Dyewood and Chemical Company, (English Branch), comprising the well-known firms of Messrs. Mucklow & Co., and E. D. Milnes & Bro., of Bury, Lancashire. The new company is a strong one, and the products, principally Dyewoods and Dyewood and Tanning Extract, of the above firms are already familiar to the principal consumers of dyestuffs throughout the world.

The strenuous efforts of the Harbor Commissioners to attract business to the port are not without appreciation elsewhere, says the Progres du Saguenay. At Quebec, with the sole object of shipping off our pulp, and having the loading of the steamers, the Harbor Commission is constructing large sheds in which all the produce of the pulp mills is stored free of charge. There is no storage charged, no wharf dues, all is gratuitous, even to the electric lighting, and the President of the Harbor Commission visits the place of loading every day, putting himself at the entire disposition of our Quebec directors, Messrs. Garneau and Couture, and of Mr. J. Edmond Couture, entrusted by the company with the care of receiving and loading the pulp at Quebec. Without going so far as our contemporary as to assert that the sole object of the construction of the new shed on the embankment is for the sole use and convenience of the Chicoutimi Pulp Company, says the Quebec Telegraph, we are yet pleased to see such testimony borne to the activity of the Harbor Commissioners, and their desire to promote and enlarge the shipping interests of the port by every means in their power.

On the strength of the reports of the Geological Survey and of later rumors, certain parties, said to represent large financial interests in England, have been treating with the Dominion Government with a view to acquire extensive concessions within what is believed to be the oil field of the Northwest—that is, on the Athabasca, about the mouth of the Pelican River, and at Victoria, on the Saskatchewan. As a result of their applications to the Minister of the Interior, an Order-in-Council has been passed under which authority can be given to an applicant to prospect on a selected section of 640 acres for a period of six months, at the end of which period the prospector shall have the right to buy the land at \$1 per acre, with the added condition, however, that he must pay a royalty of 2½ per cent. upon the sales of the petroleum produced.

THE CANADIAN RAND DRILL CO. have moved their General Sales Office, controlling Canadian Territory, to 18 Victoria Square, Montreal, in order to facilitate their business, which has been rapidly increasing during the last two years. They have established an office at 88 York St., Toronto, one in Halifax, one in Rat Portage in charge of Mr. George J. Ross, and one in Rossland in charge of Mr. Mendenhall. They are as usual manufacturing largely along the lines of duplex construction which they have advocated from the first. A duplex compressor costs a little more in the first place than a straight line machine, but the difference in economy of the two offsets the difference in price. Their Toronto office has lately contracted with the Canadian Copper Co., the largest nickel producers of Canada, for a very large mining plant. The Canadian Gold Fields of Marmora, they have also just equipped with a large Corliss Compressor.

Through the Halifax office the Intercolonial Coal Mining Co., of Westville, are also installing one of their high class machines for pumping. Duplex construction permits of an economical arrangement of cylinders in proper ratio to the steam pressure at hand, and to the air pressure required.

The Rat Portage office last year installed from start to finish a large plant at the Sultana mine, a large plant at the Foley mine, and also a large plant at the Mikado. They are now putting in machinery at the Cameron Islands mine, and also a large plant for the Boulder Gold Mining Co., which is controlled by Mr. Leclair and other American capitalists.

The Rossland branch has rather the advantage of the others in that it has a large warehouse at its back and is able to fill orders from stock. They have lately contracted with the Knob Hill mine for a large power plant and two mining plants, the object being for the second mining plant being supplied with power from the one Compressor located at Knob Hill.



B. GREENING WIRE CO.
(LIMITED)
WIRE MANUFACTURERS
& METAL PERFORATORS
**HAMILTON
& MONTREAL.**



Wire Screens for Every Class of Material.

Perforated Metal of Steel, Copper, Brass, Zinc for all purposes.

Special Attention given to Miner's Requirements.

Dr. A. P. Coleman and Professor Willmott recently returned to Toronto from the north shore of Lake Superior and Lake Huron, where they spent two months making a geological exploration for the Ontario Government. They coasted the north shore from Sault Ste. Marie to Michipicoten River. They visited the old copper mine workings at Point Maimaiso, where little was to be seen except the old buildings and machinery. The most important workings were at Michipicoten Island, where a copper mine has been pumped out and is likely to be sold to an American company. The Bruce mine properties on the north shore of Lake Huron they found all pumped out, and learned that negotiations were under way for the sale of them to a British syndicate. Dr. Hatch, a

London expert, was there examining the mines. North of Thessalon they found another copper mine, worked by a man from Elmira, N.Y., named Chaney, who has sunk a shaft down 150 feet and has raised a considerable quantity of ore, whose copper content he estimates at from twenty-two to forty per cent. Dr. Coleman expressed the opinion that there will be a revival in copper mining in Canada. The ore, he states, is the same as that on the American side.

The Montreal Terra Cotta Lumber Co., Montreal, have increased their capital stock to \$60,000.

The Ontario Packing Co., and the Sinclair Canning Co., New Westminster, B.C., were destroyed by fire September 10th.

The Laurio Spool Co., St. Alexis des Monts, Que., has been incorporated.

Quite an industry is now carried on in the production of green gutta percha from the leaves of the caoutchouc tree, a product which is said to possess not only all the advantages of the article procured by incision into the stem, but even to excel it in durability, thus promising to enter largely into use, industrially and commercially, in a hitherto unknown way. It is not only readily prepared but is also cheap, and does not require the expensive purification which has hitherto increased the price of the substance some fifteen to twenty-five per cent. It is highly plastic, very strong, can be divided into the thinnest leaves, and receives the most delicate and at the same time most distinct impressions by molding and pressing. In addition to these advantages there is the important one of perfectly withstanding the action of water and the strongest acids, and even in a worn and broken up condition is still worth one-fourth its cost of production.

The Best Wire Fence Co., of Ontario, Windsor Ont., have obtained a charter.

The Burlington Mfg. Co., Burlington Ont., was destroyed by fire a few days ago.



WATER WHEELS

For Heads of 3 Feet to 200 Feet.

ADAPTED TO MILLING AND ALL POWER PURPOSES.

Recent tests at Holyoke enable us to guarantee:

The Largest Power ever obtained from a wheel of the same diameter. The highest speed ever obtained for the same power. The highest mean efficiency ever obtained when running from half to full gate. We guarantee also a runner of the greatest possible strength. A gate unequalled in quietness and ease of opening and closing. Write for pamphlet, stating your head.

JAMES LEFFEL & CO., Springfield, Ohio, U.S.A.

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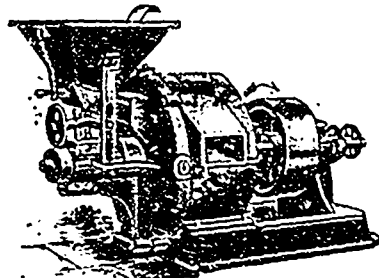
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LARGE POWER FOR THE DIAMETER.

SUPERIOR STRENGTH AND DURABILITY.

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5 inch Crocker Wheel Plant at the works of The Boston Rubber Co., St. Jerome, Que.

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THE SAULT STE MARIE CANAL.

The superintendent of the Canadian Sault canal, in conversation with a Cleveland vessel owner a few days ago, stated that there will be no further delay in preparations for the removal of the bridge abutment, which has, ever since the construction of the canal, been a matter of considerable inconvenience to vessel men. It was the intention to have had this matter remedied last year, but for some reason a postponement was made. Under the present arrangement it is possible for only one vessel to pass the railroad bridge at a time. Last year an up-bound and down-bound vessel attempted to pass at this point, with the result that they became so tightly wedged that traffic was completely blocked for over six hours, and the boats were only released after the fenders had been sawed. Under the plan now projected the bridge will swing in such a manner as to make available the full width of the canal.

Officials at the Canadian Sault say they still hear compliments from masters, who declare that they receive better treatment from them than is to be had at the American canal. One of the principal matters cited is that of the taking of lines. It is claimed that two men are always to be found at the head of the Canadian canal, and that even if a master offers to send men ashore they assure him that it is needless, and carry the lines the entire distance, assisting in the checking of a vessel as often as her master may desire. Another representation made is that the Canadian officials are much more accommodating to vessels that tie up for the

night, allowing them to tie up in the canal, whereas on the American side it is often necessary to engage a tug to be taken to suitable anchorage when little effort is made to keep clear space at the government dock.

Capt. John McKeighan, of the schooner J. J. Barlum, who has been using both canals ever since they were opened, has never been a complainant regarding any treatment he has received, but in answer to queries a few days ago, admitted that he preferred the Canadian Sault by reason of the greater number of courtesies shown. One of the points made by Capt. McKeighan was that whereas in the Canadian canal tows are allowed to have any length of line, 600 feet or more, if desired, they are restricted to a few feet in the American canal. The result of this restriction is to necessitate constant checking in coming down the American canal, and moreover, the schooner following so close is almost certain to be constantly caught in the current from the propeller of her steamer and dragged hither and thither in a manner making it extremely difficult to steer. A fault found with the Canadian canal is the narrowness of the lock, which is only sixty feet. It was a surprise to most persons at the time the canal was built that the lock was not made eighty feet, and the inconvenience in consequence has been constantly growing more serious. It is practically impossible to remedy the matter now, however, inasmuch as the canal officials state that to widen the lock would be almost equivalent to constructing a new one as far as cost is concerned.—Marine Review.

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A gentleman who has been in South Africa, would attend the Exhibition to be held at Grahamstown, South Africa, during December, 1898, and January, 1899, in the interests of two or three Canadian Manufacturing firms. The object being to minimize the cost of representation to each firm.

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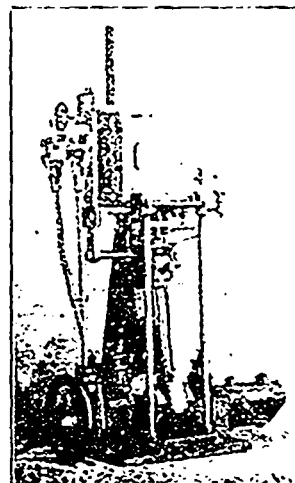
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Canadian Patent No. 2318, relating to apparatus for rapidly discharging cargo from vessels, whereby the necessity of shoveling grain, coal, etc., in small quantities is avoided. Apply to

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Electrical and Mechanical

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5 King Street West, - - TORONTO.

THE TROLLEY AND THE ELECTRIC FAN AS HEALTH GIVERS.

The great mass of citizens are wont to look upon trolley lines as mere transporters of human freight, and the current as well as the trolley as things to be avoided, if possible. And this, regardless of the great strides made within recent years in electro-therapeutics and the invaluable benefits its promoters have conferred upon mankind. Who would underestimate the value of electro dentistry or doubt for a moment the usefulness, nay, the indispensability of the Rontgen rays? Besides, the electric current is employed for the production of a large number of medicinal agents and the health of entire communities is insured by the disinfection of sewage by means of electricity. We might, continuing in this strain, mention in detail the healthful influence of the electric light and the various application of electricity for heating and power purposes.

Needless as it may appear to cite examples in support of the above, it may nevertheless be of interest to select from the panorama of our daily life those bright spots which reflect credit on the fresh air work done by the electric fan and the "deadly" trolley.

Thus we might mention the case of a man prominently identified with the banking and street railroad business of Brooklyn, who had heard of the illness of a woman and her little one, and that there was little hope for the recovery of the mother. Instead of sending boxes of dainties, he had a wire run from the railway circuit near the house to the sick chamber and an electric fan placed at the foot of the invalid's bed. His fresh-air scheme reduced the patient's tempera-

ture in a short time and the physicians are of the opinion that it has much to do with the patient's improved condition.

As an antidote to the much abused trolley car we are gratified to see the following novel and beneficent uses made of it in various parts of the country. From Pittsburg comes the report of the growing use of trolley lines for fresh air outings. Listen to these words of a business man who says he has barely enough time to eat each day and is enthusiastic in his eulogy of the new condensed vacation trips: "I have been riding around since 8 o'clock this morning, and although I am feeling pretty tired now, it's a healthier feeling of tiredness than I leave the office with every day. I have been out in the open country in every direction from Pittsburg, and it has only cost me about \$1.40. Besides I have breathed lots of fresh air, in an open car, and I have seen bits of the country that surprised me. I am going to take these trips every time I get a few spare hours. People don't know how much good a series of trolley rides can do, if their time is limited, and they want the benefits of an outing."

A young physician, in a recent conversation, made the assertion that the number of children who actually owe their lives to the electric cars may be estimated by thousands. In support of this we quote his own words: "You can hardly calculate," said he, "the good that a ride into the country does a baby which is fairly prostrated with heat. It is possible to find along the lines of the electric railways places where the temperature is twenty degrees lower than in town. The cool, fresh breeze after a stifling hot day, in a close room in town, means a new

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BLACKWELL UP-TO-DATE VARNISHES
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Write us, our Prices are reasonable and work good.



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24 Hutchison & Hollingworth Dobby Looms.

20 Harness. 3 Box. 9'4.

9 Leeming's, of Bradford, England, "Dandy" Looms.

6 Harness. 1 Box. 10'4.

1 Hand Loom, Complete, with Shuttles, etc.

32 Harness. 4 Box.

1 Waste Shaker.

2 ft. 8 in. wide. 24 in. diameter.

1 Iron Doffer.

36 in. diam., 60 in. wide, with 24 in. shaft.

1 Knowles Pump—Steam.

4 1/2 in. x 3 1/2 in. Water Cylinder.

1 Horizontal Engine.

Six Horse Power.

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We are prepared to entertain any reasonable offer for above.

Further Particulars on application.

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MONTREAL.

lease of life to a child. I wonder that some fresh air society doesn't charter a car on some of the lines and reserve it in the evenings for mothers with sickly little children, letting them ride free. I don't know of any charity that would be cheaper and I don't know of any that would do more good here in Washington, where a five cent ticket puts within reach of everybody a luxury our grandfathers couldn't have had for a million dollars."

As to the extent to which this desire to get fresh air is carried it is encouraging to note the quick perception of our Philadelphia friends in the down-town districts who, instead of sleeping in their over-heated homes at night or on the blistering brick pavements, are now spending their nights in an atmosphere more beneficial to their health. They now leave their homes at about ten o'clock at night, board a trolley car and in about an hour they have reached a spot in the Fox Chase woods where there is a difference of temperature of about ten degrees. Women and children go as well as men, and it is a novel sight to see hundreds of them camped about in the woods like so many travelling bands of gypsies. Their only baggage, however, is a pillow and a covering of some kind. Fox Chase is free from mosquitoes and other insects which generally make outdoor life uncomfortable in summer.

The term "deadly" as applied to the trolley must soon be altered to "health giving" among the populace.—The Electrical Engineer.

The shoddy mill of A. W. Brodie, Hespeler, Ont., was destroyed by fire September 14th.

THE CATARACT POWER CO.

Readers of this journal are familiar with the fact that the Cataract Power Company were building extensive works at DeCew's Falls, Ont., by which the immense power heretofore not utilized for commercial purposes was to be harnessed and converted into electric energy. These works are so nearly completed that on August 25th the machinery at DeCew's Falls was set in motion for testing purposes, and found to be fully up to what was expected. The electric current was sent along the wires to Hamilton, and the event marked the near completion of the Cataract Power Company's plans for supplying Hamilton and other contiguous places with energy for manufacturing and other industrial purposes.

Speaking of the occurrence The Spectator says:—

"Out at DeCew's Falls—thirty-three miles away—were gathered representatives of the company and Manager Leydon, and the big machinery was set in motion without a hitch. The water from the Welland canal was turned into the penstock, and 200 feet below the big turbines revolved and set the generators in motion to turn out electrical power and send it along the wires to Hamilton.

"At the city end—in the sub-station on Victoria avenue north—yesterday afternoon were waiting a small party of interested citizens, among them John Patterson, J. Moodie and J. Moodie, jr. At 4 o'clock the power flowed into the two transformers and a thirty horse power motor, giving ample indication that the work so far was a success. From 4 to 10 o'clock the power continued, the visible evidence, besides the motor, being an immense star inside and a maple leaf out-

side the building, both in incandescent lamps, and an arc lamp.

"The power being brought from the generating station is 22,000 volts, the highest potential known in Canada. By means of the two transformers this is reduced to 2,400 volts for city use. When all the connections are complete the power will be carried from the transformers along ducts in the floor of the station, through which air is blown by a fan. From there it will be carried to the wires, and into the premises of those who have purchased power. The company's biggest customer is the Hamilton Electric Light and Power Company, and the Cataract managers will get their lines into the works as soon as possible. They hope to have everything in working order within a few weeks.

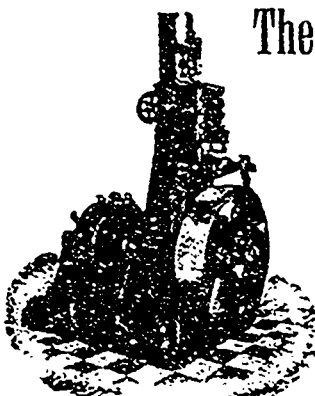
"The power at the Victoria avenue station will be turned on again this afternoon.

"It is intended to have a formal opening of the works as soon as things have been fixed up in ship-shape order."

A NOVEL BRIDGE FOR TORONTO.

Mr. John S. Fielding, an expert engineer of Pittsburg, Penn., has offered to construct a novel travelling bridge to connect the city of Toronto with Toronto Island, the connection to be made at Queen's wharf.

The design has all the appearance of being a successful solution of the problem which the task of joining the two sides of that gap presents. We cannot see that any of the conditions has been left out of account or has been inadequately provided for. At present the cardinal condition is probably cheapness. We want a substantial, efficient bridge, that will in every way facilitate



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- SIMPLICITY. COMPACTNESS.
- PERFECT REGULATION,
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For Electric Lighting Mills, Factories, and other purposes where Economy, close regulation and enduring service is required.

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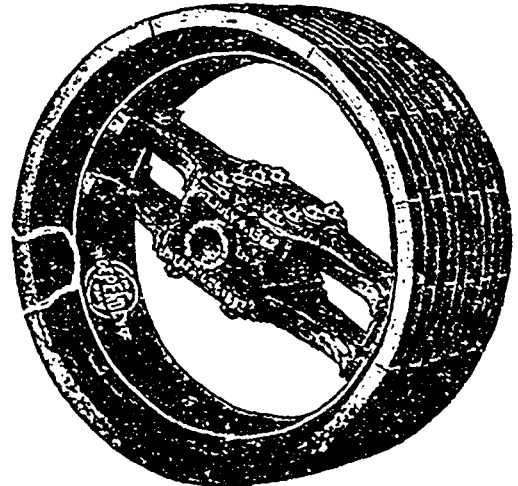
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THE STANDARD WOOD PULLEY THE WORLD OVER.

Buy the Best. It Pays. Prompt Delivery. Close Prices
Shafting, Hangers, Pull-ys and Friction Clutches our Specialty.

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Office—74 York Street, Toronto.
Works—Toronto Junction.



traffic, and in no respect obstruct it, but we want it at a low price. Rather than build a very costly structure just now, the city would worry along a few years more without a bridge. Mr. Fielding's plan comes within our means. It can be executed, he estimates at a cost of between \$30,000 and \$40,000. In point of expense, therefore, it is on what the people of Toronto would to-day regard as a businesslike basis. As to efficiency, it appears to make provision for all the requirements. Twenty-four feet in width, carrying a roadway for carriages, with a double track for street cars, a four-foot walk and a four-foot bicycle path, the bridge would accommodate all the traffic to and from the Island

for many years. In this respect its claims are stronger than those of any other practicable scheme that has been suggested. None of the others could serve a flow of traffic so nearly uninterrupted. A swing-bridge would cause a stoppage five times as long at every opening. Moreover, a swing-bridge of so great a span is liable to be rendered unmanageable by high gales. Further, the pier on which a swing-bridge revolves would be an obstacle to navigation. In a travelling bridge constructed on the Fielding design there is no central stationary pier. Each half of the bridge carries its own mechanical support back with it when it is drawn in to let vessels through, and the

latter will have all the width of channel to ride through that they have to-day. Therefore, for both traffic upon it and vessel traffic below it, the travelling bridge would appear to be preferable to a swing-bridge, first, because it subjects both to less delay, and, second, because it leaves a clear way for navigation. Compared with it, too, the subaqueous trolley arrangement suggested a short time ago would be very deficient, affording, as it would, only a small measure in which to handle large crowds. If a staunch travelling bridge can be built at Mr. Fielding's estimate, and if the mechanism can be depended on at all times to work smoothly, it would appear to be the structure we want between the water front and the Island.

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1/8 to 20 HORSE POWER.

Noiseless Running, Require No Attention, operated with water at a pressure of 30 pounds and upwards.



Reliable intending purchasers can have our Motors on trial by writing us, stating water pressure available, power required and class of work to be done.

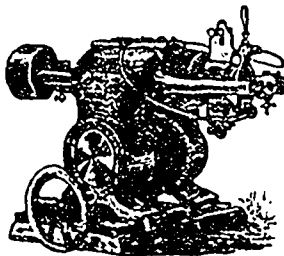
Our Motors are sold on their merits. Our prices are low.

Enquiries solicited and cheerfully answered.

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Jones & Moore Electric Company



ELECTRIC LIGHT AND POWER PLANTS

Multipolar Machines
25 to 100 H. P.

16-Light Arc Plant for sale cheap. Good as New.

22 Adelaide Street West, - Toronto.

CLIFF-WARDLAW ACETYLENE GAS GENERATORS.

The Safety Light and Heat Co., Dundas, Ont., manufacturers of the Cliff-Wardlaw acetylene gas generator, have handed us a copy of a letter written by D. B. Maclellan Esq., of Cornwall, Ont., having reference to a Cliff-Wardlaw generator in use in the Algonquin Hotel at Stanley Island, Ont., and we are informed that the generator was made under the instructions of Mr. Cliff, of the Safety Light and Heat Company. Mr. Maclellan's letter is as follows:—

DEAR SIRS.—The acetylene gas generators and holder you have placed in the Algonquin Hotel at Stanley Island and which have now been in use for a month, have given entire satisfaction. The system of running these generators being entirely automatic, the attendance actually required is simply for charging the generators once a day, occupying not more than ten minutes. The light has far exceeded my expectations. It is very powerful, free from disagreeable odors and excellent in every way. I find that in every part of the Hotel with the exception of the bedrooms and where one light only is used, we require only fifty per cent. of the number of lights for which I made provision, on the assumption that the lighting power of acetylene gas and that of ordinary gas were equal. I intended to have placed gas lamps on the grounds surrounding the hotel for the purpose of lighting the walks as well as the grove in the immediate vicinity, but find that the veranda lights serve the purpose. The

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STICK FAST FELT DRESSING.



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Guaranteed to keep any Belt from slipping the moment it is applied; also to keep Belts from cracking.

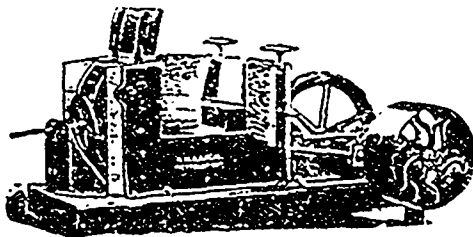
This Dressing will save you power and money.

Give it a trial order. Hundreds of testimonials from users.

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Railway, Mill, Foundry and Engineers' Supplies.

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Will increase your productive power and decrease your fuel account.

Write us for Booklet C.

'Twill interest you.

The JAMES MORRISON
BRASS MFG. CO. Limited,
TORONTO

cheapness of the acetylene gas is one of its great features. For the production of the same amount of light it costs less than coal oil when to the price of the material there are added the breakages and the cleaning and handling of coal oil lamps, not to speak of the superiority of the light produced by acetylene gas.

PEAT FUEL.

One of the most interesting exhibits at the recent Toronto Industrial Fair was that of the Canadian Peat Fuel Company, of Toronto. It is well known that very large areas of peat bogs exist in many parts of Ontario, as well as in many other countries, but the commercial value of them has never been demonstrated until a process invented by Mr. Dickson, of Toronto, was brought into use. The product of this process is the transformation of peat into blocks of fuel, each of which may be described as a novel article of manufacture, in the form of a hard, dense block, containing all of the fibrous, carbonaceous, volatile and other materials and elements which are originally embodied in the raw peat, and an amount of moisture only corresponding approximately with that in the surrounding atmosphere.

The new process solves the problem of furnishing a cheap, clean, uniform and reliable fuel for domestic purposes, as it is equally serviceable for grates, stoves, cook-

ing ranges and furnaces, giving a long, bright flame and intense heat almost from the moment of ignition, and its durability compares favorably with that of coal in consumption, as the density and hardness of the blocks ensure the retention of their original form until the last atom of the inherent carbon and gas has been consumed. The combustion is so thorough that no volume of free carbon or deleterious vapor is allowed to escape, hence its hygienic and economic advantage over either soft or hard coal. It will not absorb any undue moisture or deteriorate while in storage, and it is odorless and cleanly to handle.

Critical tests of the Dickson pressed peat, in the presence of advocates of coal, and the local engineers in charge, as well as of the company's representatives, have been made upon the raising of steam in stationary boilers.

The first of these was made at the Abell Engine Works, Toronto, in 1892, and at that time, for lack of better facilities, the peat had to be first artificially dried and the blocks formed in a press which was simply a working model. Even with the serious depreciation of the fuel by the loss of volatiles during the application of the heat necessary for drying, and the more or less imperfect compression due to the action of the small machine, the result showed that pressed peat was equal for the purpose to good anthracite coal. The proprietor of the above works and his

engineer (who made the test) unhesitatingly confirm this statement at this day, and add that had they had the same acquaintance with the peat fuel at the first as they had acquired by the end of the test they could have fired so as to make it last longer than the coal.

The second test and comparison was made in December, 1897, between peat dried and pressed by the latest improved Dickson process and full-sized machines, and Reynoldsville Mine Run Coal (of the best quality and known to be greatly superior to ordinary anthracite), at the power house of the Metropolitan Street Railway, North Toronto, and the report concluded with the following statement from the experts in charge:

"That the thermal value of 100 lbs. of peat is equal to 91.15 lbs. of Reynoldsville Mine Run coal of excellent quality."

The Canadian Peat Fuel Company propose to form local companies to operate this industry, which could be done to good advantage as there are large deposits of peat to be found in almost every county of Ontario.

STEEL SHIPBUILDING IN CANADA.

The Maritime Board of Trade, which is an association of the several local boards of trade in Nova Scotia, New Brunswick and Prince Edward Island, held its annual meeting a few days ago in Truro, Nova Scotia. The affiliated boards composing it are seven-

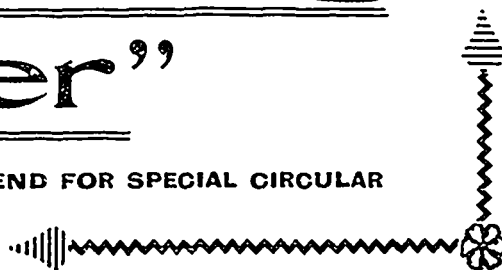
THE WM. HAMILTON MFG. CO., LIMITED,

Engineers and Builders

MODERN MINING and MILLING MACHINERY

"Gyrating Vanner"

SHAKES LIKE A PAN—SEND FOR SPECIAL CIRCULAR



Contractors for the Design and Construction of Complete Stamp Mills, Concentration, Chlorination, Cyanide, and Smelter Equipments....



Department "E"

PETERBOROUGH, ONT., or VANCOUVER, B.C.

teen in number. An interesting programme was carried out, of which the first, and probably the most important, item was a paper by J. M. Carmichael of New Glasgow, N.S., on steel shipbuilding in the Maritime Provinces. He began by presenting these figures, showing the decrease in the shipping tonnage owned in these provinces:

	1878. Tons.	1895. Tons.	Loss. Tons.
New Brunswick	535,965	122,417	213,548
Nova Scotia	553,368	343,356	210,012
P. E. Island	54,520	19,323	34,927
Totals	1,143,853	485,096	458,487

Steel had displaced the wooden ships and

steam had driven out the sailing vessels, and the two influences combined had killed the shipbuilding industry that flourished twenty years ago in both New Brunswick and Nova Scotia. The demand for wooden vessels having thus failed, he considered that enterprise in the provinces should have taken to the building of iron and steel ships ten years ago. Also, he thought it would have been good business policy, as well as patriotic, if marine interests in the provinces had purchased iron vessels when these began to supersede those made of wood, as by that means the provinces carrying trade would have been retained and increased, whereas now the big deal cargoes are nearly all

carried in Norwegian bottoms and the grain traffic has passed into other hands. Can the Maritime Provinces build iron ships now? It would be out of the question for them to attempt very large vessels just now, or even vessels of 4,000 tons. But the building of steel coasting vessels and steel fishing vessels, he had no hesitation in saying might be begun in the provinces at any time and carried on with a profit. The lack of appliances to build a plant for large power steamships need not deter any one contemplating shipbuilding. With facilities now available steel steamships of 500 or 600, or even 800, tons can be built in New Glasgow. As to Government assistance, he thought all that was necessary was relief from taxation.

Some discussion followed the reading of the paper, Geo. Robertson of St. John expressing confidence in the idea and suggesting that the Government be asked to ease the duties that would bear disadvantageously upon such an industry. Harvey Graham of the New Glasgow Iron & Steel Works considered it important to attract public attention to the question. To make the industry a success, however, he held that bars and angles would have to be made in Canada, and for that a protective duty would be necessary. A resolution was unanimously adopted approving the idea, undertaking to urge it upon the attention of all persons interested in the industrial development of the provinces, and engaging to request the Government to remove all hindrances within its control to the prosecution of iron and steel shipbuilding.

Messrs. Senkbeil Bros., Brandon, Man., manufacturers of felt, were burned out September 14th.

The carriage factory of John Finnegan & Son, Belleville, Ont., was destroyed by fire September 7th.

CHEMICAL COMPOUND COMPANY **C**ORRECTLY COMPILED CHEMICAL COMPOUNDS **C**IVILITY CAREFULNESS COMPLETENESS CONTINUITY

DO YOU KNOW

That you are paying for Boiler Compound all the time whether you use it or not?

IF YOU DO NOT BUY

You will pay your coal dealer more than its cost in the extra Coal you burn.

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MANUFACTURERS OF

CARBON POINTS for all kinds of Arc Lamps, including Cored and Solid Carbon for Incandescent Circuits.

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ALL GOODS GUARANTEED TO GIVE SATISFACTION.

A Saving.

The first cost is not the test of an actual saving. The truly Economical Manufacturer knows this to be true. For instance, the cheap, trappy Pulley, by its inferior working qualities, is a source of loss to the user the moment it is put in operation, and this loss continues all the time the Pulley is working. You do not get the full or proper results from your power plant. Higher price, though, is not always a sign of better quality, for instance--you may or may not have to pay more for

"THE REEVES" PATENT WOOD SPLIT PULLEY

but in either case you are getting the best value on the market. Because with THE REEVES the saving is continual, in Power, in Time, in Shafting, in Belting, and last but not least, and as a result of all the other savings, a saving in Money. CAN YOU AFFORD TO BE WITHOUT "THE REEVES"? Is the best too good for you? WRITE TO-DAY FOR OUR CATALOGUE AND GET OUR PRICES.

Also COLUMBUS, IND.

REEVES PULLEY CO., Toronto, Ont.

WATER POWER AND THE PULP INDUSTRY.

Great attention is now being given to the various water power enterprises in Canada which may promote the development of the pulp and paper industry.

Once started on that line of development, Canada, especially Ontario, Quebec and New Brunswick, must become a cheap country in which to manufacture pulp and paper. Scattered all over these provinces are points apparently designed and destined by nature for great manufacturing centres. The St. Lawrence system strings together several mighty power sites. The great series of rapids along the upper course of the stream from the point where it leaves Lake Ontario, would supply enough power, it would seem, to meet all the requirements of Quebec province. At the last session of the Provincial Legislature several bills were introduced to incorporate companies to develop power at certain of these points.

A correspondent of The Paper Mill, thus discusses the situation :-

On the tributaries of the St. Lawrence

river are numerous great natural heads which are in the hands of proprietors who mean to develop them. Farther up the St. Lawrence are the completed works of the Lachine Land and Hydraulic Company at Lachine rapids and the Chambly Company's great works on the Richelieu. Passing over the many minor power sites on both sides of the northern watershed in Ontario province, we have next to note the Niagara. Niagara peninsula is bound to become the industrial hub of Ontario. On this side the Canadian Niagara Falls Power Company has a charter, under which it is obliged to have 10,000 horse power ready for use by the first of November. Then there is the Canadian Power Company which aims to develop power from the Welland river by cutting or tunnelling into the Niagara, but which so far has been blocked by the Canadian Niagara Falls Power Company's rights on that bank. The Canadian Power Company sought to secure a right of way by Act of Parliament in the session of 1897, but as all the authority sought was amended out of its bill in committee, it withheld the measure.

The Welland Power and Supply Company

is another company which proposes to develop power from the Niagara. It, too, would make use of the Welland river, or Chippewa creek as it is otherwise named. Throughout that part of its course twelve miles from its mouth, the Welland river is perfectly level, its waters being bridled and backed up by the Niagara. While the Canadian Power Company proposes to utilize this stream at a point near the mouth, the Welland Power and Supply Company proposes to utilize it at a point five miles from the mouth, and through a canal to bring a current of water to the brow of the escarpment seven or eight miles away, where it will have a natural outlet to the lake through the channel of Six Mile creek. This is a tremendous scheme, but it has been pronounced feasible by two or three of the most distinguished engineers in England.

Still another big scheme for developing power over the same plateau, from the upper Niagara, through the level of the Welland river and to a point on the same escarpment, is that of the Hamilton and Erie Power Company. It has power to draw from Welland river to the channel of the

GEO. REID & CO.,

Dealers in

Textile Machinery and Supplies,

TORONTO, ONT.,

Have bought and are offering for sale at great **Bargains** the entire machinery of the Campbellford Woolen Mill (which they are now taking out), also

A 4-Set Mill (Running). A 2-Set Mill (Running), and Three 1-Set Mills (Running).

✉ Write at once for Prices and particulars.

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.. ORDER ..

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VICTORIA SQUARE, - MONTREAL.
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WESTERN TRADE :-

Our Mr. R. M. W. McLaren, in charge of Galt Branch, will be pleased to give quotations as well as receive orders.

STORAGE BATTERIES
THE LIGHTEST. THE STRONGEST. THE BEST.

If you use Electricity wo Batteries Repaired and Recharged
can save you Money. at Reasonable Rates.

The Croftan Storage Battery Co.
W. M. H. NELLES. CANADIAN BRANCH. REIN WADSWORTH.
22 Sheppard Street, Toronto, Ont.

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**BOBBINS
SPOOLS
PICKER
STICKS
CLOTH
ROLLS, Etc.**

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

THOMPSON & CO., Manufacturers of
BOBBINS and SPOOLS

FROM SELECTED STOCK.

Correspondence Solicited ... Orders Promptly Filled..... • **SNERBROOKE, P. Q.**

Twenty Mile creek, otherwise known as Jordan river, where there is a fine fall. In the last session of the Dominion Parliament this company had its capital stock increased and the time for commencing operations extended to July 22, 1901, and the time for completing constructive operations to July 22, 1904.

The Cataract Power Company remains to be spoken of. The works are now completed. The machinery is about to be tested. It has 3,000 horse power ready for distribution and contracts secured amounting to \$100,000, with Hamilton parties, notably with the Hamilton Electric Company. It draws its water from the old Welland canal, which is nowadays used exclusively for power purposes, and utilizes the very highest bluff in the peninsula, that namely near DeCew Falls, where it has a head of 275 feet.

Another vast centre of power is the Sault Ste. Marie river, where there are already great actual developments on the Canadian side, with others of far greater magnitude projected. Big schemes are also being talked of for the use of power brought from the same source to the American side, schemes to be carried out by Mr. Clergue and those associated with him, unless an export duty be put on electricity. At the other end of Lake Superior, in the country of Rainy River district, are many fine natural heads, of which we have one developed at Keewatin, and another at Kakabeka Falls, over which parties have been warring for years.

Mr. Jennison, who has been carrying on one side of this long fight, has had his rights defined and fixed by the courts. The falls are on the Kamistiquia river. He says that he can supply electricity to produce 60,000 horse power, for which he expects

Fort William and Port Arthur to furnish a demand. He thinks there is no place in Canada better fitted by nature to be a great industrial and commercial centre than the spot on which these twin towns stand at the head of Lake Superior.

The syndicate which some weeks ago purchased the Quebec District Electric Railway and La Bonne Ste. Anne Railway is reported to have also acquired the property and rights of the Montmorency Electric Light and Power Company, with the intention of amalgamating the three concerns under one and the same board of direction, but each with its own manager.

CHEAP POWER FOR TORONTO.

A very vital question for this city, one that has been allowed to fall too much into the background of late, is that of cheap power. It is time that the Council took hold of it in earnest. We are not to give up because one scheme has proved worthless, or because the foreign corporation controlling Niagara Falls chooses to obstruct development. It is understood that the Welland Power and Supply Canal Company is prepared to negotiate with the city on a very favorable basis. If it has made an offer, the conditions ought to be looked into at once. We must have cheap power if we are to have any future as a manufacturing centre, for in the face of the present competition among enterprising towns and cities in quest of factories we cannot otherwise retain the industries we have, much less add greatly to their number. In all parts of Canada towns are offering bonuses or similar inducements to tempt manufacturers from other places. In the proceedings of nearly every board of

trade in the provinces there is usually one item of business relating to this matter of securing industries located elsewhere, or of granting better terms to those already secured. The Shawinigan Water and Power Company, which holds the franchise for developing Shawinigan falls on the St. Maurice river in Quebec, is offering special inducements to manufacturers to move their works to that power centre. Such economic attractions tend to steal away the industries that we have. Our only defence is cheap power. If we can furnish that grand condition to manufacturing production, we can make this city a hive of industry. Cheap power is doing great things for Montreal since the Lachine Hydraulic and Land Company and the Chambly Company came into the field. It would likewise be a new creation for Toronto. Without it the city must give up the ambition to be the seat of such a great industry as it is proposed to establish for the refining of nickel. The Council must remember that this question of securing cheap power is no longer a speculative one, but an intensely practical and pressing one. —Toronto Globe.

NEW ANILINE DYESTUFFS.

Direct Deep Black R. W. (patented). —The somewhat greemish shade of direct deep black B, recently patented by the "Farbenfabriken," has led the above named firm to produce and place upon the market a new, cheap, one dip black of a less greenish tone, called direct deep black R. W. A small card of loose dyed patterns is in rapid preparation, showing some good combinations with benzo olive, etc. Considering the concentration of this color, its price compares most favorably

CANADA IRON FURNACE CO., LIMITED

Montreal, Radnor and Three Rivers

Manufacturers of the well-known

"C.I.F." Three Rivers Charcoal Pig Iron

Suitable for Car Wheels, Cylinders and Fine Castings, where the utmost strength is required.

UNSURPASSED IN STRENGTH BY SWEDISH, RUSSIAN OR AMERICAN CHARCOAL IRON.

Offices: *Canada Life Insurance Bldg., Montreal.*

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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 Powders and General Chemicals, Fertilizers, etc.

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SUCCESSORS TO (Limited)

DRUMMOND-McCALL PIPE FOUNDRY CO.

Manufacturers of



"Specials," Hydrants, Valves, Etc.

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REDDAWAY'S PATENT



BREAKING STRAIN 6 IN. CAMEL HAIR BELT—14,181 lbs
6 IN. DOUBLE OAK LEATHER—7,522

W.A. FLEMING

SOLE AGENT FOR CANADA.

57 ST. FRAS. XAVIER ST. (24 FRONT ST. E. VICTORIA CHAMBERS)
MONTREAL (TORONTO) OTTAWA

Toronto

with other allied blacks. An advantage also not to be overlooked is its adaptability to be topped with aniline salt, producing a shade which should meet with appreciation.

Benzo Chrome Brown, 5G. The well-known aniline family of benzo chrome browns, has recently been added to by the above homogeneous brand. Benzo chrome brown is used in the same manner as the older brands, more especially for the dyeing of cotton, viz., with Glauber salt and soda ash, and after chroming with equal parts of chrome and blue-stone. Dyed direct it produces an orange brown very fast to light, which can be used to advantage in mixtures owing to its clearness of shade. If the direct dyed shade is afterwards treated with three per cent. bichromate of potash a great alteration in shade takes place (the shade being converted into a yellowish brown), its fastness to washing being at the same time very much increased.

If an addition of blue-stone be made to the chrome bath a still greater change of shade takes place, a yellow tan brown being obtained, which is extremely fast to light and washing. In combination with the older brands of benzo chrome browns (G, R, B and 3R) it serves for the production of old gold, straw, tan and Rhaki shades. In the dyeing of half-silk and half-wool this new color is not so adaptable as the former brands.

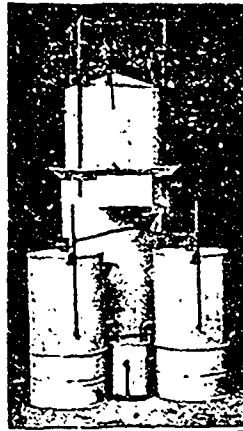
Benzo Olive.—The above is by no means a new product; but owing to recent improved methods in the mode of its manufacture has led to a consequent reduction in price. Benzo olive gives a dull green shade, very fast to light and also to washing; it can be used for olives, and on account of its level dyeing properties, for combinations. In combination with direct deep black R. W. very fine full blacks can be produced. By topping with basic colors, such as auramine, turquoise blue, etc., it is possible to produce very bright shades. Greater fastness to washing in these shades is easily obtained by simply adding two-fourth per cent. tannic acid to the benzo olive dye bath (dyeing and preparing with tannic acid in the same bath), and the shade can then be topped with basic colors, either with or without previously fixing in an antimony bath.

Nigrosine, S.R. and S.R.T. (soluble in spirit). Two new qualities of Nigrosine, soluble in spirit, distinguished for their easy solubility, and which, when used for lacquering, give a fine smooth brilliant surface. The S.R. brand produces a strong bluish-black shade, whilst the S.R.T. yields a deep black shade, so often demanded. In dyeing, these new products give fuller shades than the previous Nigrosine brands.

For fuller particulars call or write to the

Dominion Dyewood & Chemical Co., who are always pleased to send samples, quote latest prices, or forward immediately the newest German pattern cards and circulars. Sole agents in Canada for Farbenfabriken, vormals Friedr. Bayer & Co., Elberfeld, Germany.

The Queen City Granite Co., Toronto, has been incorporated with a capital stock of \$20,000.



The "SAFETY" ACETYLENE GAS MACHINE

THE MOST SIMPLE AND THE SAFEST MACHINE MADE. It does what other machines cannot do. It generates Gas Cool. It washes and purifies the Gas twice. Automatically removes the Ash from the Carbide. Leaves the Ash perfectly dry and thoroughly exhausted.

Manufactured by..... **EVERY MACHINE GUARANTEED.**

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Proprietors and Sole Manufacturers for the Dominion of the celebrated **CLIFF-WARDLAW GENERATORS.**

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HAMILTON, ONTARIO.

**YARN MANUFACTURERS,
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Warp Yarns of all descriptions, in Skein, Chain or on Beams.
Hosiery Yarns in Single or Double; in Cop, Skein or Cone.
Yarns of all kinds for Manufacturers' use.

Twines, Lampwicks, Webbing, Etc.

Dyeing of all colors, including **GENUINE FAST BLACK.**

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THE GARTSHORE-THOMSON PIPE & FOUNDRY CO.

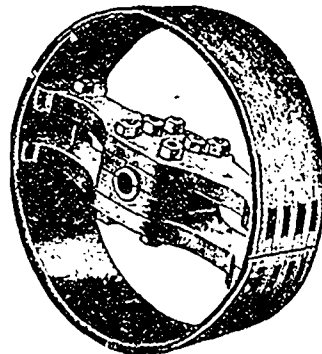
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For Water, Gas, Culverts and Sewers

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WATER WORKS SUPPLIES HAMILTON, ONT.



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RIM... **(REID'S PATENT).**

The Strongest, Lightest and Best Belt Surface in the World

No Glue, no Nails in Rim like Segment Rim Pulleys, to be affected by Steam, Dampness or Moist Temperature.

EVERY PULLEY GUARANTEED.

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THE CANADIAN COLORED COTTON MILLS COMPANY.

Cottonades, Tickings, Denims,
awnings, Shirtings,
Flannelettes, Gingham,
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Dress Goods, Lawns,
Cotton Blankets,
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Only Wholesale Trade Supplied.

D. MORRICE, SONS & CO.

AGENTS

MONTREAL and TORONTO.

The London Machine Tool Co., LONDON, ONT.
MANUFACTURERS OF GENERAL MACHINERY...

Having recently sold our patterns and plant to the A. R. Williams Co., of Toronto, retaining only such machines as are useful in our business, we beg to say that we are rapidly putting in New Machinery, from new and improved designs, and are now in a position to receive orders for all Standard Tools for Metal Working in all branches. It will be our aim, by personal supervision of the product of works, with expert men of large experience at the head of each department, to turn out nothing but first-class work at moderate prices. And as we intend to deal directly with the manufacturers, they will be enabled to get their machinery at first cost.

As we shall not be able to personally visit each manufacturer, it is for this purpose that we publish this advertisement. This is our agent who is going about to solicit a share of your patronage. We are thankful for the patronage extended to us in the past, and hope that we may secure an extension of the favors for the future.

All correspondence relating to the following Tools will be promptly answered, viz:
LATHES - Engine, Gap, Break, Turret, Fox, Spinning, Etc.
PLANERS - Standard, Crank, Plato, Etc.
DRILLS - Standard, Sensitive, Multiple, Radial, Etc.
MILLING MACHINES - Lincoln, Plain, Universal, Etc.
SHAPING MACHINES Whitworth, G. & E., Rack-Driven, Etc.
HAMMERS Steam, Sandago Drop, Stiles Drop.
BULL-DOZERS for all purposes.
PUNCHES AND SHEARS for Plato, Angles, Channels, Gauges, Etc.

And we would call special attention to our **PRESSES** for Cutting, Stamping, Drawing Wiring, Riveting, Etc. We shall also esteem it a pleasure to give quotations on Special and General Machinery in our line.
LONDON MACHINE TOOL CO.

A QUARTER MILLION HORSE POWER.

The Westinghouse Electric and Manufacturing Co., Pittsburgh, Penn., have sent us a beautiful brochure entitled "Quarter Million Horse Power of Polyphase Electric Transmission Apparatus," in which is answered the every-day question: What has been actually accomplished in the electrical transmission of power?

All the electrical power transmitted from Niagara Falls, this brochure tells us, is generated by Westinghouse apparatus, 40,000 horse power operating on the American side, and 1,000 horse power now being installed on the Canadian side. The electrical power is used for a variety of purposes. It drives machinery, operates railways, and lights cities.

Manufactories have been established in the vicinity of the famous cataract solely for the purpose of availing themselves of the cheap and never-failing power furnished by Westinghouse electric generators. The current is already transmitted as far as Buffalo, some twenty-four miles distant, and there utilized by Tesla polyphase motors, which are a product of the Westinghouse Electric & Mfg. Co., and are the most serviceable and reliable motors ever made for power purposes.

It also tells us that the Canadian Niagara Power Co., of Niagara, recognizing the advantages of the Westinghouse three phase system for light and power distribution, have purchased from the Westinghouse Electric & Mfg. Co. two 500 horse power three phase generators.

These generators will be the first to utilize the power of Niagara from the Canadian side, and their installation will, in all probability, be followed by a rapid growth in the industrial enterprises on the British side of the Falls.

The book contains a list of Westinghouse polyphase installations, principally in the United States, but also in many other parts of the world, in which is given the location, the name of the customer, the number of generators, the number of motors and rotary transformers and static transformers, with their capacity in both K.W. and H.P. transmission voltage, nature of service, etc., which aggregate as follows:

Horse power of generators.....	219,649
Horse power of motors and rotary transformers.....	35,511
Horse power of static transformers.....	51,598
Total horse power.....	306,758

WILSON BROTHERS' BOBBIN CO.

There was no exhibit at the recent Toronto Industrial Exhibition that excited more interest among the woolen manufacturers who viewed it than that of the Wilson Brothers' Bobbin Co., Cornholme Mills, Todmorden, England. The display was contained in an elegant glass case, and occupied a prominent position in the Main Building near the eastern entrance, and we are informed that upon the exhibit as it then stood the company had expended some £200.

The exhibit consisted principally of the rabbeth ring bobbins for twist and weft. Ring spinners are well aware of the disadvantage and loss resulting from the use of ill-fitting and badly-balanced bobbins, and in response to many enquiries from machinists and spinners, for a better and more reliable ring bobbin than had hitherto been supplied, Messrs. Wilson Brothers decided

JOHN J. KELLER & CO.

104 and 106 MURRAY ST.
 NEW YORK

220 Church St., Philadelphia.

135 Pearl Street, Boston.

**Aniline Colors,
 Dyewood Extracts,
 Sumac and
 Nutgall Extracts.**

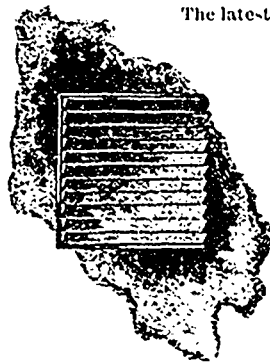
FAST COLORS for Wool Dyeing,
 One Dip Cotton Colors, Novelties
 and Specialties for Calico
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**LIGHT YOUR
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LUXFER PRISMS



The latest device for

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dark rooms and
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By Daylight

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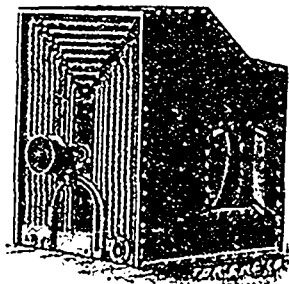
**Ventilating Steel-Plate
 Fans, Blowers and
 Exhausters.**

WE have on hand Fans of the Best American Makes, ranging from 15 inch to 72 inch. Also Second-hand Coil Heaters, with Fans to suit, from 1,000 feet to 5,000 feet of inch pipe capacity.

THE ABOVE ARE FOR SALE CHEAP.

Write for Prices and Send for Catalogue.

**McEachren Heating and
 Ventilating Co., GALT, ONT.**



to establish a separate department of their works, devoted entirely to the manufacture of this class of bobbin. This department, we are informed, has been working most satisfactorily for several years, during which time the concern found it necessary to enlarge their facilities again and again to enable them to meet the growing demand for their goods; and they are constantly on the alert, adding to their plant every improvement that skill and capital can secure.


Being among the very largest makers of ring-spinning bobbins in the world, the company are necessarily in touch with the principal machinists, spindle makers, and spinners, and thus enjoy exceptional facilities for ascertaining and embodying in their patterns the latest improvements, the results of a wide practical experience. They manufacture over twenty different styles of bobbins, embracing every pattern known.

The efficiency of a ring bobbin depends largely upon the timber from which it is made. The company pay most careful attention to this point, and import the very finest timber for this purpose. They carry very large stocks of this timber, none of which is used in the manufacture of their bobbins that has not been seasoning for at least a year.

Regarding the rabbeth ring bobbin we are told that it should never go tight on the spindle. The fit should be so accurate as to give a good grip on the spindle point, and yet be easy to doff. So much importance is attached to this and to true running, by makers of ring spinning machinery, that they are constantly warning spinners of the evil resulting from ill-fitting and badly balanced bobbins.

The enamelled bobbin, manufactured by

this company, specimens of which were shown in the exhibit, has been, we are informed, thoroughly tested in Lancashire Mills for more than five years, and therefore the concern feel fully sustained in claiming for it the following advantages: Being completely covered with enamel, both outside and inside, it is impervious to water, steam and oil. The enamel, though hard, is elastic and will neither crack nor peel off, never become sticky, avoiding loss of yarn from this cause, as is sometimes the case with bobbins soaked in oil or varnish. The enamelled bobbin has a firmer grip upon the point of the spindle than the ordinary ring bobbin,



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Factories,
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Are best protected against fire by being equipped with

Eddy's Indurated Fibreware
FIRE PAILS

We are the only manufacturers in Canada of this celebrated ware.

The E. B. EDDY CO., Limited.

Hull, Montreal, Toronto

The Pulsometer STEAM PUMP

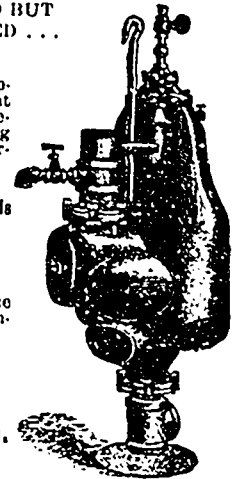
OFTEN IMITATED BUT
NEVER EQUALLED . . .

The handiest simplest and most efficient steam pump for general Mining, Quarrying and Contractors' purposes.

Muddy or Critty Liquids
Handled without wear.

Descriptive Catalogue with prices, furnished on application.

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Steam Pump Co.
New York, U.S.A.



A. R. Williams Machinery Co.

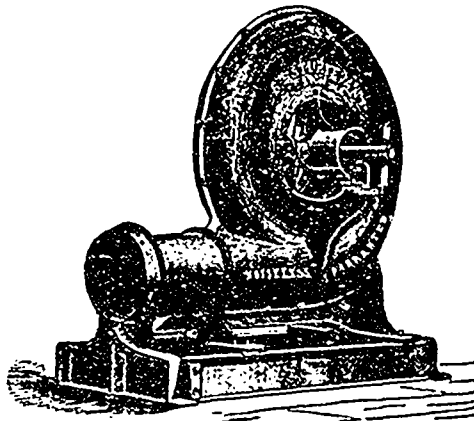
Toronto and Montreal,
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Send for Catalogue and Price List to

THE JOHN MORROW MACHINE SCREW CO.

INGERSOLL, ONT.

Mfrs. of Set, Cap and Spec. Screws, Studs, Finished Nuts, &c.

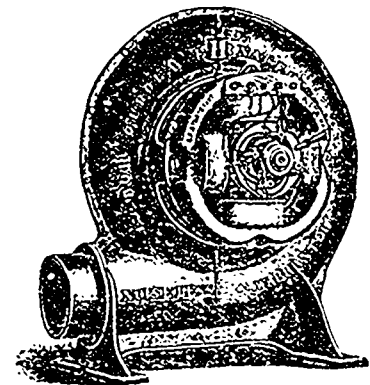


Blower on Adjustable Bed.

The STURTEVANT STEEL Pressure Blowers

—FOR—

Cupola Furnaces and Forge
Fires

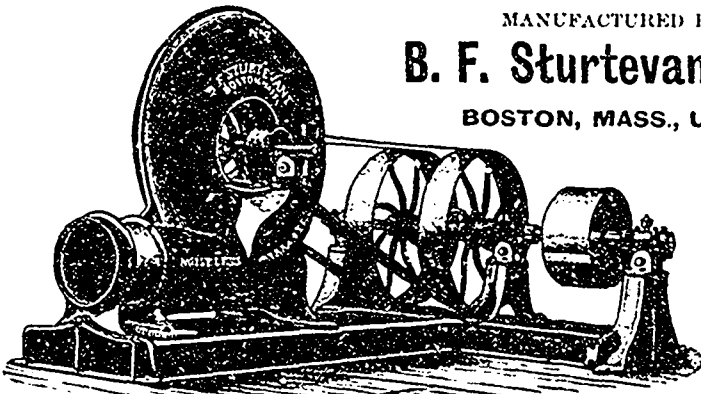


Blower with Electric Motor.

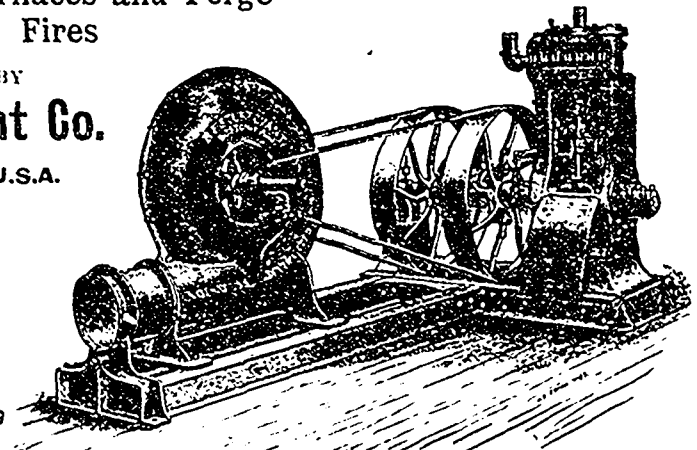
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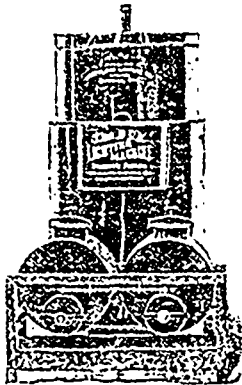
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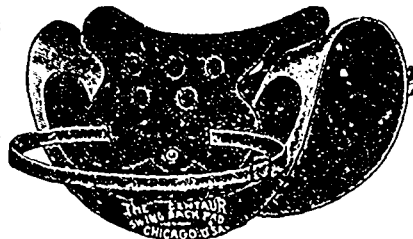
hence loss from slipping is avoided; does not rise up in the spindle; is smooth, cleanly and more absorbent; is uninjured during the processes employed in conditioning yarn, and after repeated steaming, continues to fit the spindle perfectly, and cannot warp or twist.

Messrs. Wilson Brothers' patent metal protectors, also shown in their display, have become well known throughout every country, and their durability and effectiveness commend them to spinners. The advantages of them are evident on a comparison of the average pressure various kinds are capable of resisting. From tests that have been made it is ascertained that, while a plain bobbin will only resist an average pressure of 57 1/2 pounds, the same kind of bobbin with their American pattern of shield will resist

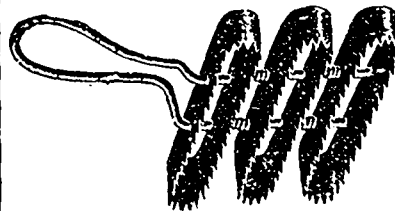
an average pressure of over 230 pounds; and while the plain headed bobbin will bear only ninety six pounds, the Wilson patent pattern "C" bobbin will bear 411 pounds.

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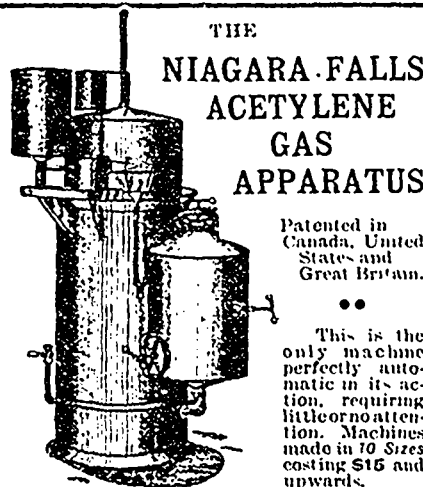
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por cent. bichrome and boil thirty minutes longer. These proportions are understood for medium and dark brown shades. For tans and drabs the quantities of acid and bichrome should be correspondingly reduced.

For Black.—Enter the material into the hot bath previously charged with 5 per cent. acetic acid and the required dyestuff, boil forty-five minutes, cool slightly off by adding cold water, add 2½-2¾ per cent. sulphuric acid or the corresponding amount of bisulphate of soda and continue boiling till the color is completely exhausted. Finish off by saddening in the same bath with 1½ per cent. bichrome while boiling another half hour.

Should it be deemed necessary to continue using the old bath for further lots, these may be entered without any addition and allowed to boil for twenty minutes. The color solution may then be added and the process described above proceeded with.

In order to save entering the material too hot, part of the old bath may be let off and replaced with cold water.

ONTARIO'S CORUNDUM.

Mr. M. A. Snyder, President of the Chicago Wheel & Manufacturing Company, was in Toronto a few days ago and paid a visit to the Ontario Bureau of Mines, where he had a long discussion in regard to the deposits of corundum in Hastings, Renfrew and Peterboro counties. Mr. Snyder is an extensive user of emery and corundum in the manufacture of wheels and other articles of an abrasive or polishing nature. His attention had been drawn to the recent discoveries of corundum deposits in eastern Ontario, and he had been on the ground looking over the corundum belt. About the same time Dr. Coy, an associate of Mr. Snyder, also went over the ground. Their object was to ascertain in what quantities the mineral was to be found and to see to what uses it could be put in the manufacture of their articles. When asked his idea regarding the extent of the deposits in Ontario, Mr. Snyder said:—"My impression is that there is corundum enough in Ontario to supply the world. Its range is extensive; the outcrops are frequent, and there must be an immense quantity of corundum there." As to the quality of the mineral, he said that was a point which

could only be settled by practical and thorough tests in wheels and otherwise, and this would need time. Some samples which he had seen had a soft appearance. But of course they were only taken from the surface and were probably to some extent affected by the atmosphere. The only way in which representative samples could be obtained was by sinking on the deposit and taking the mineral from a depth at which it would be free from weathering and other softening influences. If after such a trial the Ontario deposits were found to possess all the properties of the first-class articles they were certainly valuable.

As to the uses to which corundum might be put, Mr. Snyder said its principal use was in the manufacture of wheels for grinding smooth surfaces upon objects of iron, etc., such as knife sharpeners, whetstones, polishers, buffing cloths, etc. It comes in grains of various sizes, which are cemented together by various substances, usually trade secrets, or they are put through a process of vitrification. The emery is an impure form of corundum, with a good deal of magnetite, and is used for coarser grades of work.

A sharp competitor is carborundum, a silicide of carbon, which is made by fusing together carbon and a pure quartz sand in the electric furnace. This is extremely hard and cuts well, but is more expensive than corundum.

It has been suggested that the corundum of Ontario might be used as an ore for the production of aluminium. It is much richer in alumina than the materials now employed. A large outlet would thus be afforded for the mineral if it were found suitable for smelting into aluminium.

The Department of Crown Lands is to receive proposals for the purchase of corundum lands until September 15. The conditions of sale will provide for actual development on a considerable scale, and preference will be given to those tenderers who agree to erect the largest and most complete works for the treatment of corundum and the manufacture of articles from it. The indications are that an industry of considerable extent will be established in the province, with corundum as a basis.

The Crown Lands Department are getting some 500 pounds of corundum from a mine in Methuen Township for experimental purposes. Some samples of the methuen mineral approach to the gem, sapphire, and

it is not improbable even that this precious gem exists there also.

ANOTHER WESTINGHOUSE LONG DISTANCE TRANSMISSION PLANT.

Contracts involving ten thousand horse power are not common. Especially is this true when the agreement is to transmit this enormous amount of power over a distance of forty-five miles. And when the contract further stipulates that the losses in generators, transformers and line shall remain normal, notwithstanding the difficulties involved, the agreement then becomes of still greater interest.

Such a contract has just been executed by the Westinghouse Electric & Manufacturing Company, in which they agree to comply with the above conditions. The plant is for the Snoqualmie Falls Electric Power Co., of Snoqualmie Falls, Washington.

The power station is to be located at Snoqualmie Falls, forty-five miles from Tacoma, and thirty-one miles from Seattle, to which places the current is to be transmitted and then utilized by Westinghouse motors.

The contract involves the building and delivery at above points, of four three-phase, rotary armature, generators, having a normal aggregate capacity of 6,000 kilowatts, and which are to be direct connected to water wheels; two 75 kilowatt kodak exciter dynamos also to be direct connected to water wheels; high and low potential switchboards, for main power station and sub-stations at Seattle and Tacoma, involving 76 marble panels with all necessary instruments, switches etc.; high tension oil insulated static transformers having an aggregate capacity of 10,875 kilowatts; rotary transformers with a total output of 2,700 kilowatts and 6 type "C" motors developing 1,600 horse power, with adequate lightning protection at both ends of the line.

These machines when installed will make available for industrial, railway and lighting purposes the power of Snoqualmie Falls. The line potential will be 25,000 volts, and its current will be carried over bare aluminium wires to sub-stations where lowering transformers will sufficiently reduce the voltage for safe transmission within the corporate limits of the two cities.

The Northern Elevator Co. will erect a 2,000 bushel elevator at Somerset, Man.

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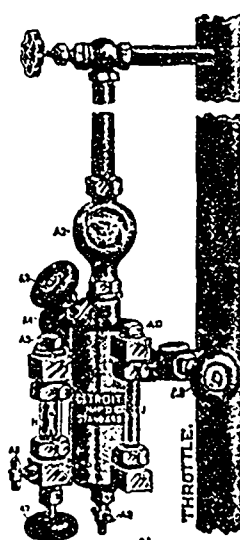
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WM. J. MATHESON COMPANY.

The accompanying picture is of the new offices and warehouse building of the Wm. J. Matheson Co., 182-184 Front street, New York City. As is well known to the readers of THE CANADIAN MANUFACTURER this concern is one of the largest in the United States manufacturing and dealing in dyestuffs, who do a large business in Canada, with offices in Montreal, and who keep their business card constantly before their Canadian customers through the columns of this journal. The building has only recently been completed, and a large and beautifully mounted representation of it adorns this office. The disposition of it is as follows:—

1st Floor.—Shipping and receiving office and shipping room.

Basement, 2nd, 3rd, 4th, 5th, 6th and 7th floors.—Storage of dyestuffs.

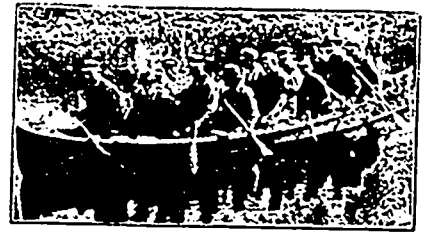
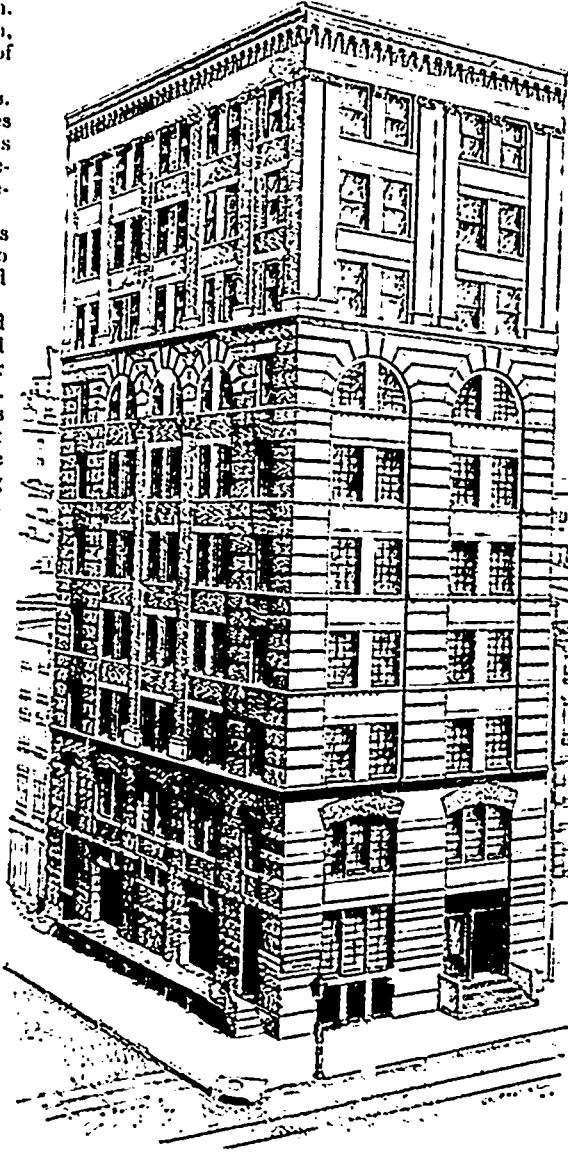
8th Floor. Rented as offices.

9th Floor. - General offices and counting room, private offices of president, treasurer and secretary, bookkeeping and correspondence departments.

10th Floor. - Private offices of salesmen and chemists, also laboratory, sample room and committee room.

There are toilet rooms and lavatories on the 8th, 9th and 10th floors, and on the 2nd floor for the warehousing department. The building is fitted with Otis electric and passenger and freight elevators, and with pneumatic tubes for packages, connecting all departments, likewise an interior telephone system with nineteen stations, besides a long distance telephone service connecting the several departments. In the bookkeeping department an innovation has been introduced by which each bookkeeper has his own individual safe. The laboratory on the 10th floor is one of the most complete of its kind, and has many features especially designed by the technical men connected with the company. It is exceedingly well lighted both from the sides and from the roof. In fact, the building in all parts has little use for artificial light.

A correspondent of the British Trade Journal, writing from Athens, Greece, says that "Acetylene gas generating apparatus is in great demand, and that the Germans are successfully introducing it." This is a suggestion that Canadian manufacturers of such apparatus should act on.



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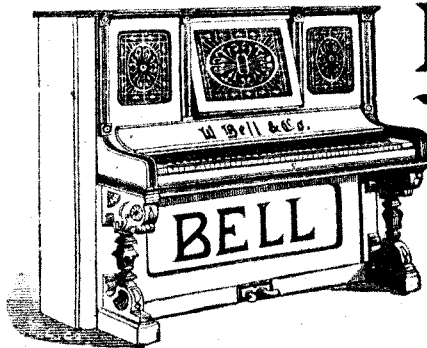
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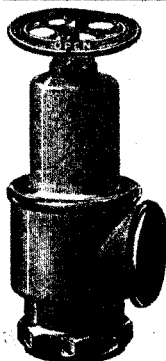
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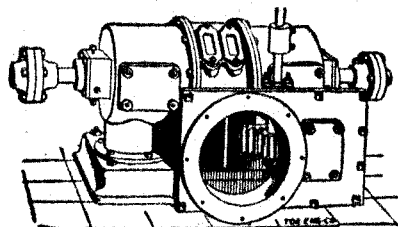
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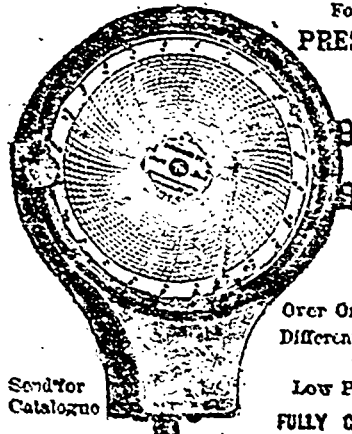
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