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Vol 45. TORONTO, NOVEMBER 21, 1902. No. 10

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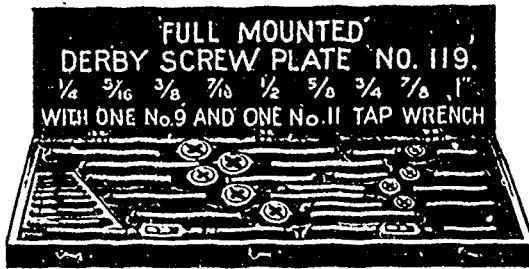
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One 20" " " Power Feed Drill
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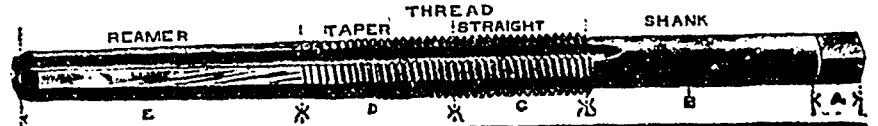
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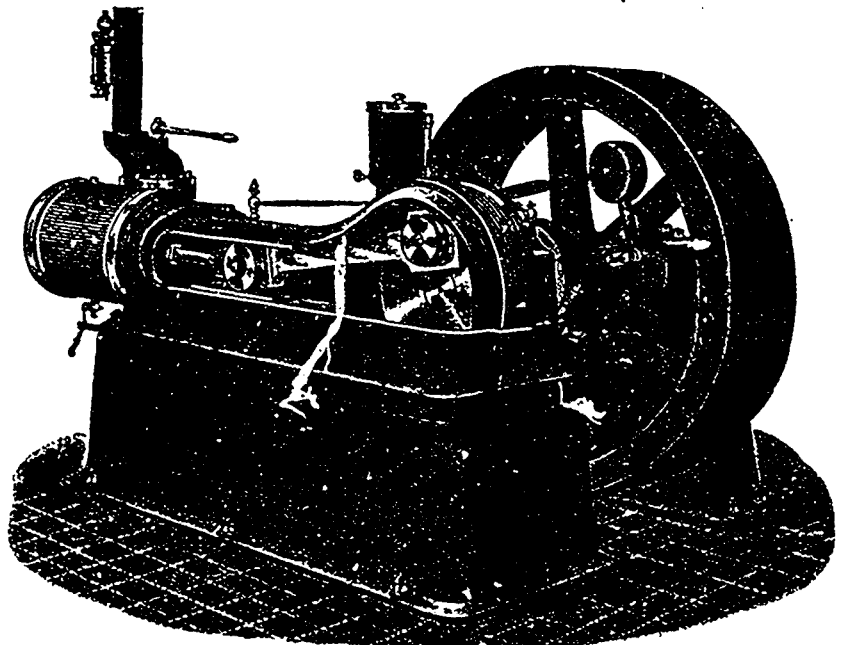
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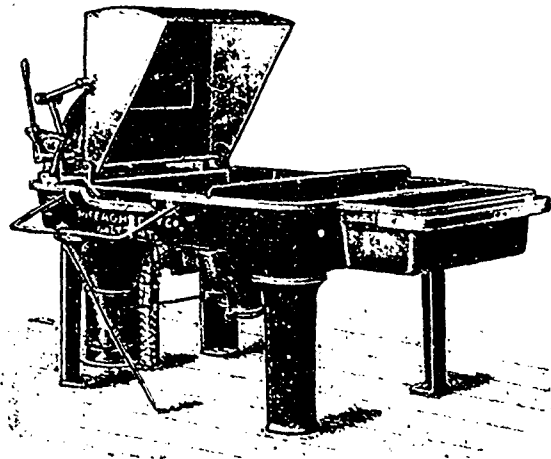
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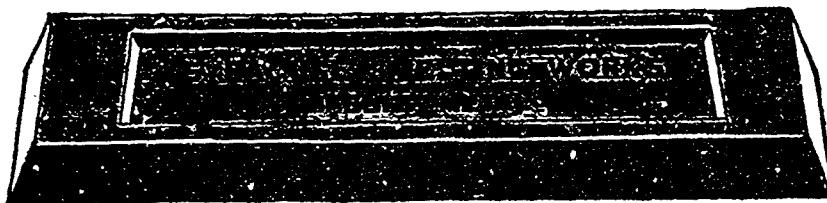
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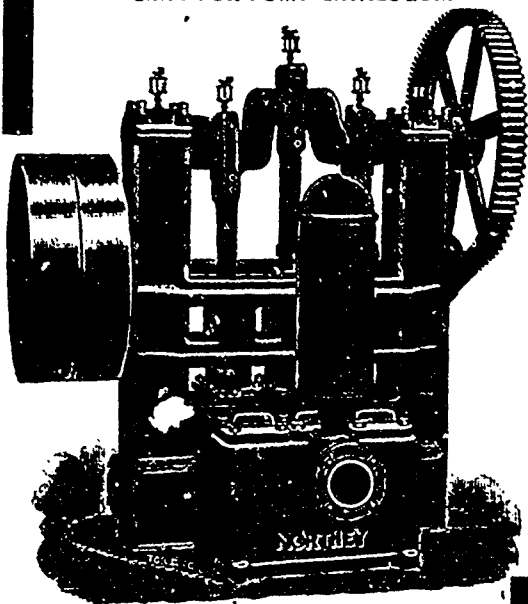
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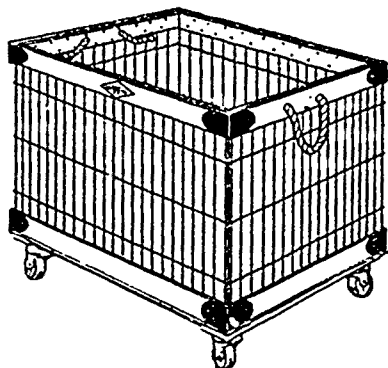
Many manufacturers who are users of Pumping Machinery pay coal bills that are from 10% to 50% higher than they should be, because their pumps are old and leaky, do not give the service they should, and waste steam. Would it not pay you to look into this matter? We can advise you what you can do most profitably with your present plant—discard it or repair it. Our business is the making of Pumps for all services—we do it on a large scale, and we are experts in our line. Write for Specifications and Catalogues.

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ESTABLISHED IN 1880.

PUBLISHED ON THE FIRST AND THIRD FRIDAYS OF EACH MONTH

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J. J. CASSIDY, Editor and Manager

THAT THOROUGH REVISION OF THE TARIFF.

The following resolution was passed at the annual meeting of the Canadian Manufacturers' Association held in Halifax, N.S., in August last :

Resolved : That in the opinion of this Association the changed conditions which now obtain in Canada demand the immediate and thorough revision of the tariff upon lines which will more effectually transfer to the workshops of our Dominion the manufacture of many of the goods which we now import from other countries ;

That, in any such revision, the interests of all sections of the community, whether of agriculture, mining, fishing or manufacturing, should be fully considered with a view not only to the preservation, but to the further development of all these great natural industries ;

That, while such tariff should primarily be framed for Canadian interests, it should, nevertheless, give a substantial preference to the Mother Country, and also to any other part of the British Empire with which reciprocal preferential trade can be arranged, recognizing always, that under any conditions the minimum tariff must afford adequate protection to all Canadian producers.

For the purpose of carrying out this resolution, and seeking to effect a readjustment of the tariff, the Tariff Committee of the Association, desiring to consult with the members with regard of any changes which they might desire, recently sent out a circular, with an accompanying form, requesting that the members note thereon any items in the tariff which they wished considered. It was specified that no recommendations re tariff changes would be made to the Government without first submitting them to every member of the Association.

The circular was of such involved expression that it was misunderstood and misinterpreted by a great many to whose attention it came ; and such was the misapprehension regarding it that the Committee felt impelled to send out a second circular to explain the first ; although the second stated very distinctly that the first said exactly what was meant, and meant exactly what it said.

It was a natural conclusion that, judging from the Halifax resolution and the circular first sent out ; and the subsequent reinforcing and explanatory circular, a thorough revision of the tariff was to be obtained if possible, which would more effectually transfer to Canadian workshops the manufacture of many of the goods which are now imported from other countries. This was the reason given why the tariff should be revised, and there was no direction or limit imposed upon the investigation to be made by the tariff committee.

There is probably no member of the Association, if he be a manufacturer, but believes that some changes might be made in the tariff which would be to his advantage, but it does not necessarily follow that any considerable number or members

The Canadian Manufacturer

Reaches all the Blast Furnaces, Iron and Steel Works, Rolling Mills, Manufacturers of Iron and Wood-Working Machinery, Steam Engines and Boilers, Pumping and Mining Machinery, Electric Machinery and Appliances, Machinery Dealers and Steam Fitters' Supplies, all Hardware Dealers, Cotton, Woolen, Knitting and Yarn Mills, Pulp and Paper Mills, etc., in Canada.

desire that any changes affecting their business should be made ; but it is recognized that some changes affecting some industries are absolutely necessary, the most important of which are those relating to the manufacture of textiles, and of certain forms of iron and steel. It is generally conceded that the tariff should at all times and under all circumstances operate in favor of Canadian interests ; and manufacturers are agreed that while a substantial preference might be accorded to the Mother Country, yet that preference should not act to the injury of any Canadian industry. Saint Paul said that he who provided not for his own household denied the faith and was worse than an infidel ; and applying this axiom to existing conditions, it might be meant that while we love the Mother Country much, we love Canada very much more. If therefore a substantial tariff preference must be shown in favor of Great Britain, it should be at the expense of imports from other countries—certainly not at the sacrifice of Canadian industries.

With the exceptions here alluded to it does not appear that the Association or any of the members of it, or of any manufacturers who are not members, have any burning desire to disturb or alter the tariff ; and it is not to be supposed that the Tariff Committee, although they might receive suggestions or requests from each and every one of the members, would formulate them and request a vote or expression thereon from every member before recommending them to the Government. The suggestion that such is the proposition and method of procedure is misleading in that members who may not be at all interested in a proposed change would have an influencing voice in the suggestions to be made to the Government ; and that unfriendly politicians and newspapers are declaring that the Association is striving for an entire and unnecessary revision of the tariff.

AN IMPORTANT QUESTION.

One of the most important questions now presented for the consideration of thinking men—more important even than that of the tariff or the transportation problem, is whether or not there shall be steady work and good wages for working men and continued prosperity for business men. This question has recently come very prominently to the front in the city of New York in the following way :—

The Pennsylvania Railroad Company are seeking a franchise to build about ten miles of underground tunnel across that city, and is willing to pay at the rate of about \$11,500 per mile for the franchise. The work would afford rapid transit to a very large territory now difficult of access, and the city would

receive at least \$5,000,000 a year additional revenue from taxes by reason of increased land values. The best interests of the city as a whole, and especially of its working people, would be served by building the tunnel.

At a meeting of the Central Federated Union, held in New York, October 12, a resolution was passed protesting against granting the franchise to the railroad company unless the company agreed to pay ten hours wages for eight hours work.

At the same meeting of the Union the New York Cloth Sponger's Union complained that their work was leaving them, being transferred to other cities, alluding to which the New York Times reported :

The delegate of the Cloth Spongers' Union, of this city, said that the New York union was the only organization of cloth spongers in the country, and that trade was shifting to Baltimore, Chicago, St. Louis and other cities. The central body promised to aid as far as possible in organizing the cloth spongers in those cities.

According to a statement made by the Merchant's Association of New York, five years ago the clothing industry of that city led the world, while at this time more than half of it has gone. Gone, because the labor unions, compelled shorter hours and prevented more than a limited daily output per man. They forced the payment of excessive wages for a limited class of workers, made the manufacture of clothing in that city comparatively profitless, and deprived of work many thousands of workers who had previously drawn good wages. The complaint of the cloth spongers shows how prosperity is sometimes destroyed and work driven away by the arbitrary demands of labor.

It is pointed out that at least two and a half million of working people in New York would be directly benefitted by the construction of the tunnel alluded to, in that it would greatly aid in promoting and sustaining the business prosperity of the city. The demand of the Federated Union, which threatens to prevent the construction of the tunnel, will, if granted, benefit less than five thousand workmen and do great harm to all the others in the city by preventing the investment of capital and lessening the employment of labor, for capital will not come, and will not stay where it cannot be made profitable by the imposition of such unjust burdens.

It cannot be that intelligent workmen desire to injure capital already invested, as has already been the case in Toronto, where appeals to the courts for protection have occurred in cases with which we are familiar; or to prevent the investment of capital in proposed manufacturing and industrial enterprises which would mean so much to the commercial and financial interests of the country. It cannot be that working men are willing to assist in driving capital away. Unless we can build up and develop our manufacturing industries by encouraging the investment of capital on fair terms, employment will decrease and wages will also decrease. It is not wise for working men to promote such results.

THE TARIFF A POLITICAL QUESTION.

A circular recently sent out by the Tariff Committee of the Canadian Manufacturers' Association announces that "the members of the Association of both political parties, are unitedly desirous that the question of the tariff should be removed from the political arena and dealt with always upon purely business lines. They feel that only in this way can its stability be secured, and without this requisite Canada will never be able to progress at a rate commensurate with her magnificent capabilities and resources."

In the opinion of many the tariff is per se a political ques-

tion, and therefore can no more be removed from the political arena than the rock of Gibraltar can be removed from the foundation upon which it rests. No doubt the tariff should be of a most stable character, the principle of the fiscal system which maintains it always recognizing that as there are mutations in all human affairs, so there are circumstances arising from time to time which require tariff modifications which must be made. The tariff law is not like the laws of the Medes and Persians, which could know no change; and he who entertains that opinion is not an observant student of history. If all men were of the same mind regarding the tariff, and never changed their opinions, the tariff would be as substantial and unchangeable as the rock of Gibraltar, but men are not so constituted; and as it is inevitable that some sort of fiscal system must prevail in all countries, the quality and composition of that system must of necessity be controlled by those who create it. It is impossible that in Canada or any other country all voters who elect legislators, or that all the legislators who make the laws, can be of a unanimous opinion on any important fiscal proposition; and it is this difference of opinion which creates different political parties. No question could possibly be presented to any national legislative body of as much importance as that of providing ways and means for carrying on the government. In Great Britain the legislative opinion prevails that free trade is essential to the well being of the country, and consequently the fiscal system is based on free trade, although there are many able statesmen there who advocate the adoption of a different system, and this difference of opinion constitutes, and always will constitute, a burning political question. So, too, in the United States, and in Canada also, the opinion prevails that tariff protection is essential to the general prosperity, and so a protective system prevails, although many able statesmen view the question in a very different light. How then is it possible that the tariff be removed from the political arena? It is a fact that manufacturers of both political parties are strong advocates of a protective fiscal policy, and, having the tariff adjusted to suit their views, desire to have it remain so; but it is also a fact that there is a large element in the community who differ in opinion with these, whose views are entitled to respect, and who insist that the tariff is not framed to suit them, and that important changes should be made in it. These views are voiced in legislative assemblies by representatives elected by this element; and it is inevitable that the fiscal policy of the country must be a matter upon which discussion is had between those who constitute the respective political parties. In discussing the fiscal system of the country those who favor a high tariff believe that they are dealing with the question upon purely business lines, but those who oppose a high tariff entertain the same idea, hence the impossibility of the removal of the tariff from the political arena.

It is a fact that manufacturers of both political parties are unitedly agreed as to the necessity of tariff protection to their respective industries; and if they consider that this protection is of more importance to them than any other feature involved in the political parties to which they adhere, they should, of course, waive all lesser considerations and band themselves together for the election of legislative representatives who would work and vote first, last, and all the time in their interest. This was the policy engineered by Sir John Macdonald with the manufacturers of the country, which resulted in the organization of the Manufacturers' Association and the adoption of the policy of tariff protection to our manufacturing industries which has continued until this day;

but there was no suggestion whatever that the tariff was not a political question or that it could be or even should be removed from the political arena.

AS TO TRADE INDEXES.

American Industries, the organ of the National Association of Manufacturers' of the United States, notices the fact that Mr. J. G. Jardine, Commercial Agent for the Dominion of Canada, at Durban, South Africa, in a report to his Government had the following to say regarding the American Trade Index, published by that Association: "The Americans have sent out a Trade Index for 1901-2 containing the names and addresses of every prominent manufacturer in the United States prepared to do an export trade; and this book is in the hands of every dealer throughout South Africa."

We are informed that the Canadian Manufacturers' Association are about getting out another edition of their Canadian Trade Index; and it is to be hoped that it will be of similar character as that to which Mr. Jardine alludes. If it is it will be of great value not only to Canadian manufacturers but to the whole country, but if its construction should be similar to the previous editions it would be well if it never saw the light of day. The last edition of the Index contained the names of a few hundred members of the Association, a considerable portion of whom were not manufacturers at all, and but very few of them were prepared to do an export trade, while some of the concerns enumerated included local agents for manufacturers in other countries. The book possessed no intrinsic value whatever, but was misleading and well calculated to depreciate the industrial importance of Canada. It is true there has been an increase in the membership of the Association since that Index was issued, but the accretions have not to any considerable extent, been of concerns who are prepared to do an export trade; and it is not probable that of the thousands of Canadian manufacturers who are prepared to do such trade, not ten per cent of them will be enumerated in the forthcoming Trade Index. An Index similar to that alluded to by Mr. Jardine, which included an exhaustive list of all Canadian manufacturers who were prepared to do an export trade, whether they were members of the Association or not, would be of real and substantial value to Canada, but if it is not to enumerate any but members, the publication of it would be a foolish waste of money.

NEW ONTARIO.

The development of that vast combination of industrial interests now grouped on the Canadian side at the "Soo" canals reads more like a fairy tale of science and industry than actualities accomplished by human endeavor. The latest addition to these great works is the new power canal just opened, and which is to furnish cheap power in enormous quantities for these varied industries, and for the vast enterprises now planned, and of which the industries already developed, great as they are, will form but a nucleus.

The object of the Consolidated Lake Superior Co., which is the corporate name of these industrial enterprises familiarly known as the Clergue interests, is the development of New Ontario, a region in itself greater than many European countries, but vast as it is, forming only a small portion of Ontario, and, of course, a much smaller portion of the Dominion.

The foundation of the company is its holdings of land, carrying with it the possession of forest and mineral wealth almost beyond computation, and which makes possible the resources that lie upon and exist under the soil, the latter largely

of unknown extent, and in many respects the most remarkable in the world. Such are the bases of the industries already developed in New Ontario and those which are being developed.

The entire energy of this vast enterprise, of which Francis H. Clergue is the head, has been directed toward the utilization of a series of industries each depending upon the other, all working in harmony to convert into profit the wealth bestowed by nature upon the Canadian "Soo" region. In completing each industry and getting it into productive and profitable operation as rapidly as possible the company does not fail to give due regard to the requirements of each step of development which is to follow.

In all the work of this vast community of industrial interests, nothing but substantial and permanent construction and the most modern and efficient equipment has been installed, and the wisdom of this policy has already been demonstrated by the minimum cost of repairs to plants which are already in operation. Of all these vast interests the Consolidated Lake Superior Co. is the parent organization, owning all the capital stock of the various subsidiary companies.

These various companies comprise the Algoma Steel Co., which includes the blast furnace plant, Bessemer steel plant, blooming mill and rail mill; the Lake Superior Power Co., which has a water power canal delivering 20,000 h.p.; the Helen iron mine in the Michipicoten range; the Gertrude and Elsie nickel mines in the Sudbury district; a 20-ton nickel smelter at the Gertrude mine; a ferro-nickel plant for roasting and briquetting nickel ore, and a sulphurous acid plant at the "Soo"; the Sault Ste. Marie Pulp & Paper Co., which owns and operates extensive ground wood pulp and sulphite mills; the Algoma Central and Hudson Bay Railway Co., which will soon have in operation 190 miles of track, and which now owns 739 freight and passenger cars, 14 locomotives, and 13 ore carrying vessels, with a capacity of nearly 45,000 tons, besides three smaller passenger and freight vessels. To these may be added the Tagona Water & Light Co., which supplies the Canadian Sault Ste. Marie with light, power and water, and the International Transit Co., which is now completing an extensive street railway system, while the Michigan Lake Superior Power Co., also a component factor of these interests, has just opened a 60,000 h.p. hydraulic power canal across the border in Michigan.

Such are the industrial enterprises built up within a few years in what was, until that time, practically a wilderness, and in view of what has already been accomplished no one can doubt the prediction of the originator of these vast industries, that within a decade or so Sault Ste. Marie will be a city of 200,000.

CANADIAN WATERWAYS.

For many years Canada has possessed a material advantage over the United States as regards water traffic from the interior to the Atlantic Coast, in fact this country possessed through the Great Lakes and the St. Lawrence the only great water outlet direct to the Atlantic, to all that vast country lying between the Rockies and the Atlantic Coast, and for many years to come the millions of tons of traffic originating in this vast territory must seek its outlet to Europe and elsewhere through our great internal waterway. The United States must share her commerce with us. We have the route to the ocean and can make the rates, as has been pointed out frequently by those familiar with our commercial affairs. For a long time Canada has maintained the only route for commerce between Lake Erie and Lake Ontario, and even were

he United States to attempt the construction of a ship canal around Niagara, the work would occupy many years, and when completed the commerce of such a canal would have to reach the ocean through Canadian territory. The construction of a ship canal between the Great Lakes and New York city has also been proposed, but such a project is at best a remote possibility. Even with such a canal in operation, the St. Lawrence route would continue to be the great highway for traffic between Europe and the Great Lake region of the United States, and this from the fact that it is the direct route, and is unobstructed by the numerous canal locks which would be required on the Erie Canal.

Aside from possessing the great commercial outlet to the Great Lakes, this country has now in operation a great canal system at the Soo, and the traffic of this canal is growing very rapidly. Its importance is certain to increase with the development of New Ontario and the North-West, and in connection with the Welland and the St. Lawrence Canals, places this country in a commanding position with reference to the traffic of the Great Lake region, both American and Canadian. Some idea of the importance of the outlet to these lakes controlled by this country is seen when it is remembered that Chicago and Cleveland, the third and fourth ports of the United States in point of shipping, are compelled to send their ocean going traffic by way of the Welland and St. Lawrence Canals; while such great American ports as Milwaukee, Duluth, Erie, and Detroit are in a similar position.

Although the traffic of the Great Lakes far exceeds that of any other internal waterway in the world, the graneries of the great North-West are emptied into Europe over this route, while such products as lumber, ores, etc., form important items in the traffic. For some years the Pittsburg district has been shipping iron and steel products, as well as coal, to Europe by way of Cleveland and Buffalo; and the construction of a ship canal between Pittsburg and Lake Erie, which is now a certainty, will add materially to the American traffic which will be sent out through Canada's outlet to the Great Lakes. The development of such enormous industries as the Clergue interests at the Soo, and the Cramp industries at Collingwood, Ont., gives some idea of what Canada will in the future contribute in the way of shipping to the St. Lawrence route. With the further industrial development of this country such important natural waterways as the Ottawa, and such artificial waterways as the Trent Canal will add an enormous tonnage to Canadian shipping, and the establishment of a great ocean going fleet between the Great Lakes and Europe is one of the certainties of a no remote day.

However, Canada's greatness in matter of transportation does not lie wholly in its maritime advantages. Already the country has experienced a vast railway development, and now railway work is well under way all over the Dominion. One phase of railway work in this country is to be seen in the preparation of the Canadian Pacific road to handle the great trade which is being developed between the Pacific Coast and the middle west with Europe. For this feature of the trade the Canadian road is fast getting into shape to practically control the trade as refers to fast travel and fast freight, for through the shorter ocean voyage between European ports and Halifax, St. John, Montreal and Quebec as compared with New York, at least two days can be saved, and this is a material factor where time is money for travelers, and where mails, and express freight are to be handled in the least possible time. Aside from the great route for travel and traffic of all kinds in Canada, this

route is quite certain to become the favored one for similar traffic from the central and western sections of the United States. Thus Canada is destined to become the dominant factor on this continent in certain phases of railway traffic as it now is in the water transportation to Europe over the Great Lakes.

THE BOYCOTT.

In recent issues of this journal mention was made of the fact that the Canadian Association of Stationary Engineers had declined to become affiliated with the International Association of Engineers for reasons therein alluded to, it being the determination of the Canadian Association to keep clear of any entangling alliances with the foreign concern. This determination is most commendable in that the International Association is closely allied to the American Federation of Labor, the operation of which cannot be considered of a friendly character as far as manufacturers and other employers is concerned.

It may be interesting to mention some facts concerning this organization and its methods. The first convention of it met in Pittsburg, Pa., on November 15, 1881, at which 107 delegates from different trades unions were present, representing more than 250,000 workers. The body was organized under the name of the Federation of Organized Trades and Labor Unions of the United States and Canada. At the sixth convention, held at Columbus, Ohio, a more perfect plan of organization was adopted and the name changed to American Federation of Labor.

The main objects of this great organization, which now represents its millions of workers, are, briefly stated, as follows:

- The encouragement and formation of local unions.
- The closer federation of such societies through central trade and labor unions in every city, with the further combination of these bodies into state, territorial, and provincial organizations.
- The securing of legislation in the interests of the working masses.
- The establishment of national and international trade unions, based upon a strict recognition of the autonomy of each trade, and the promotion and advancement of such bodies.

- The aiding and encouragement of the labor press.

The twenty-second annual convention of the Federation, now in session, was opened at New Orleans on November 13 instant.

At the twenty-first annual convention of the Federation, held at Scranton, Pa., last December, the boycott was specifically brought forward as the most effective weapon available for the purpose of coercing independent manufacturers and independent employees. President Gompers insisted that not only was the strike the exercise of a lawful and moral right, but that the boycott was equally a lawful and moral right. At this convention committees of various trades reported the names of numerous firms boycotted.

Mr. W. G. Merritt, an intelligent writer in American Industries, says that the boycott policy of the trade unions has been ignored by newspapers and other periodicals. It is only actual physical violence against the rights of liberty and property that has received any considerable attention. The more peaceable methods of encroaching on these same rights have been left uncriticised. While the open and forcible infliction of injury will never succeed in winning public approbation or the consent of the courts, the more peaceable methods are the more alarming because so subtle in their operation. Though they are fully as great an encroachment

on individual and public rights, and cause as much substantial damage, they are more easily disguised and concealed, and to superficial observation are not so flagrant. It is this permanently established system of ruining others that demands public opposition.

The indispensable part of all boycotts is a distinguishing mark. In the case of labor organizations the efficient weapon is the union label, or in some cases the specific trade mark of the boycotted manufacturer. The former is the pre-eminently important part of their machine of conspiracy. Registered in most of the States, no unlicensed person can use it without incurring a severe penalty according to the laws, thus making a complete monopoly. It is now a well recognized trade mark, by which the dealer and walking delegate distinguish all goods of union manufacture from those of non-union make. As soon as this practical method of discrimination was adopted the establishment of the boycott was assured. All articles without the label are severely proscribed.

This label does not necessarily represent quality, earning capacity, sanitary conditions, or short hours, but is a club to coerce employers and injure independent workmen by making possible the boycott. It is so totally void of the usual significance of trade marks that in the absence of special statutes many courts have denied it protection. It cannot exist as a mere abstract right, they say, but only as an incident to business indicating certain facts concerning the purchased article. The union label is used in all manner of factories, most of them only partly organized, and represents no uniform conditions for which it would be a guarantee to the consumer. Because of such decisions the unions have in many cases been obliged to establish its legality by special act of the State legislatures. It is useless to say that such a mark is only used to right wrongs. The boycott is used in defiance of right and as a power to subdue both employers and employees who dare to exercise their liberty. The notorious example of boycott of the special machine made by the National Cash Register Co., of Dayton, Ohio—the modern Utopia of wage earning—illustrates the flagrant use of this illegal and morally wrong power. The threat of being deprived of valuable trade causes the distributor to select union goods with the label, and the general consumer not in the labor union buys what is offered him regardless of the label.

By combining many unions of all trades with an aggregate membership of great volume into a central national body known as the American Federation of Labor, through the use of the boycott, a gigantic engine of tyranny has been created. Resolutions are offered by local unions asking the American Federation of Labor to boycott certain concerns. These resolutions are referred to a boycott committee for consideration. If the decision is favorable the president sends out letters to the various affiliated unions promulgating it. A report by the boycott committee on a resolution introduced at the Scranton convention recommended that the incoming Executive Council endeavor to bring about a satisfactory settlement of the controversy between the National Cash Register Co. and the Metal Polishers Union by the first day of February, 1902, and in case of failure to do so, that the Council declare a boycott against the aforesaid company, and place its product on the unfair list of the Federation. Mr. Gompers, the president of the Federation, not waiting for the expiration of the time set by his Council, on January 3 sent out a letter addressed to all affiliated unions interested, in which it was stated that after due investigation and attempt named, at settlement a number of concerns, which were therein including the Dayton Company, had been declared unfair;

and secretaries were instructed to read the notice at union meetings, and the labor and reform papers requested to copy.

After the receipt of such a letter the local unions appointed committees to wait upon jobbers and retailers who were in the habit of handling boycotted goods, informing them that they represent a large number of organized laborers who would not patronize them if they sold the boycotted article.

Frequently local unions have national organizations of the same craft, and these employ agents to travel over the country to spread the boycott in behalf of their own particular product. The constant circulation of vituperative letters, pamphlets, and labor periodicals, conspires, with the ceaseless vigilance of the walking delegate and the traveling agent, to bar the sale of the goods made by the condemned manufacturers. In every trade in which they have a union, all articles of non-union manufacture are proscribed, especially those manufactured by specifically boycotted concerns. It is, as Mr. Merritt says, a system of reciprocity carried on between the numerous ramifications of the American Federation of Labor "You boycott all non-union goods in my line and I will boycott all non-union goods of your line."

CANADIAN INDUSTRIAL CENTRES.

HAMILTON.

The development of Hamilton into the important manufacturing centre which it now is, fitly exemplifies the trend of Canada in its struggle for industrial supremacy along a myriad of diversified paths, and that of hundreds of Canadian manufacturers throughout the country whose best efforts are now being directed towards placing Canada among the great manufacturing nations of the world. In point of equipment, as well as in the quality of the product, many of the industrial establishments of Hamilton are the acme of excellence in their line, and it must also be borne in mind that this city contains a number of the largest industrial establishments in the Dominion to-day.

In the development of a great manufacturing centre the advantages conferred by nature are necessarily seized upon and improved in every direction by the ingenuity of man. The geographical position of Hamilton, at the head of Lake Ontario, is of course one of her most valuable assets as judged from an industrial standpoint. However, the unsurpassed shipping facilities thus contributed by nature have been amply reinforced by railway lines which radiate in all directions and supply rapid communications to all parts of Canada and the United States, the Grand Trunk system and the Toronto, Hamilton & Buffalo road, in connection with which latter the Canadian Pacific participates in the railway traffic of the city, giving Hamilton about everything that is to be desired in the way of railway facilities.

In addition to these necessary adjuncts to modern industrial progress another potent factor has during recent years been at work in numerous ways, contributing liberally toward placing Hamilton among the great industrial centres of Canada, no less a force than the mighty powers of DeCew's Falls which were for countless centuries permitted to run their course while man toiled on in ignorance of the giant awaiting to be set to work on the highways and byways, in the mills, workshops and factories.

The Cataract Power Co. now furnishes the industrial establishments of Hamilton with cheap power and at the same time furnishes light and operates the street railway system of the city, as well as the important inter-urban lines which connect Hamilton with Dundas, Beamsville, and other impor-

tant towns. Important improvements are now being made at the Hamilton plant, of the Cataract Power Co. Two cross compound engines of 1,500 h.p. each, recently ordered from the Goldie & McCulloch Co., Galt, and of which contract mention was made in a former issue of THE CANADIAN MANUFACTURER, are to be installed for auxiliary power purposes, and other equipment is to be added which will result in material additions to the capacity of the plant.

Among the important iron and steel manufacturing plants of Hamilton are the Hamilton Steel & Iron Co. and the Ontario Rolling Mills Co., both of which concerns are very busy. The Hamilton Bridge Works is another important Hamilton industry. This company is doing a large amount of structural steel and bridge work in all parts of the country, and work is being rushed at its large plant on numerous contracts. Such industries as the Gurney-Tilden Co., the Hamilton Wheel & Foundry Co., the Canada Screw Co., the Ontario Tack Co. and the Hamilton Bolt Co. are among the largest of their kind in the country, and have contributed liberally to Hamilton's industrial progress.

The Hamilton Brass Mfg. Co. operates one of the largest and most complete plants of the kind in Canada; and the company enjoys a large trade all over the country. At present the company has an immense amount of work on hand and is constantly receiving new business. The B. Greening Wire Co. is one of the largest manufacturers of wire rope in Canada. Its plant is of the most modern pattern and equipment, and the company has a steady demand for its immense output. The Gairshore-Thompson Pipe & Foundry Co. is another of Hamilton's immense industries which has attained a reputation unexcelled in the country.

In electrical work the Toronto & Hamilton Electric Co. has built up a large business; the Hamilton Facing Mills Co. is the largest manufacturer of foundry facings in Canada; J. N. Tallman & Sons operate a large brass foundry and are manufacturers of solders, babbitt metal and similar products; J. Wallace & Sons manufacture the Wallace carbide feed and are doing a large business in installing heating and ventilating apparatus and similar work; and R. Spence & Co. are manufacturing files and similar tools.

The Hamilton Tool & Optical Co. has built up a large business in their line of work. Another important concern is the Hamilton Motor Co., which is a large manufacturer of gas and gasoline engines and motors. The Gurney Scale Co. is perhaps the largest manufacturer of scales in Canada and their products are in great demand. The Norton Mfg. Co., makers of tire cans, etc., has recently completed an immense new plant and is now installed in its new quarters. In the Canadian Corundum Wheel Co., Hamilton possesses the only manufacturer in Canada of abrasive materials from Canadian corundum.

A concern which will add considerably to Hamilton's industrial work is the Canadian Otis Elevator Co., which recently purchased a plant which it is equipping. The International Harvester Co. and the Westinghouse Mfg. Co. are numbered among the great industries, not only of the city but of the country, and both of these concerns are adding thousands to the population.

Among the other important industries of Hamilton may be mentioned the Ontario Lantern Co., the largest of its kind in Canada; the Hamilton Stamp & Stencil Works; the Hamilton Engine Packing Co.; the Dowswell Mfg. Co.; the Hamilton & Toronto Sewer Pipe Co.; the Niagara Construction Co.; the Meriden Britannia Co.; the McKenzie Stained Glass Co.; the Good Roads Machinery Co.; the Smart & Turner Machine Co.; the Hamilton Tar Distilling Co.; the Welding Compound Co.; Parkin & Somerville; Webster Bros.; Burrows, Stewart & Milne; the Crown Oil Co.; F. W. Hore & Sons; the Domestic Specialty Co.; the Hollywood Paint Co.; Chadwick Bros. Brass Co.; E. T. Wright & Co.; Brown, Boggs & Co., and Adam Hope & Co.

In the textile industries Hamilton holds first rank, containing the immense plant of the Hamilton Cotton Co., and one of the largest plants of the Canadian Colored Cotton Co. This busy industrial centre contains many industries in addition to those mentioned above, and new companies are being constantly formed. Altogether there are few lines of manufacturing which are not represented in Hamilton, and the rapid

industrial progress already enjoyed by the city, together with the forces which are at work for her material advancement will convey a fair idea of the other great enterprises which are to be built up within the next few years.

EDITORIAL NOTES.

The growth of lake traffic is shown by the list of vessels on the registry books of the Dominion, recently published by the Department of Marine. In gross tonnage of sailing vessels and steamers Ontario is second among the Provinces, with a total of 145,237 tons, Nova Scotia being first, with 214,560 tons, and Quebec a close third, with 142,664 tons. New Brunswick has 75,293 tons on her registers, and British Columbia 62,102. In steamers Ontario heads the list, with 1,076 vessels, having an aggregate gross measurement of 110,400 tons, Quebec being second, with 351 steamers measuring 86,805 tons, and British Columbia third, with the same number of steamers measuring 58,463 tons. The figures are corrected to the end of December last, and they show that the total number of vessels on the books at that date, including old and new vessels, sailing vessels, steamers and barges, was 6,792, measuring 664,483 tons register, an increase of 57 vessels and of 4,949 tons register over 1900. The number of steamers on the books at the same date was 2,177, with a gross measurement of 298,421 tons. Quebec City has the largest number of vessels on its register, 638, of which 495 are sailing vessels; while Montreal has the largest tonnage, 95,793; and Toronto has the largest number of steamers registered, 220. Assuming the average value to be \$30 per ton, the total value of the registered tonnage of Canada would be \$19,934,490.

To the raising of a manufacturers' fund for educational purposes no one can take exception. The raising of a fund for political purposes cannot be justified upon any ground. If the manufacturers are asking for only what is fair, there is no reason why they should be required to pay for convincing people of the justice of their cause. If they are asking for more they ought not to get it, though they raise a fund running into the millions. The manufacturers ought to be careful that none of their money goes into elections. If the manufacturers have any money to spare out of their business, there is no better investment than technical education. In the long run, skill, intelligence and inventiveness will win the day, and education is a better investment than politics. We should strongly advise all manufacturers to button up their pockets whenever they are asked to help any political party or any candidate, but to be most generous in regard to all plans for scientific and technical education. Let this be coupled with the idea of educating the people into buying Canadian goods. Make these products such that they will win on their merits, and then let their merits be fairly placed before the Canadian consumer.—Toronto Globe.

It is understood that the Canadian Government has obtained satisfactory guarantees that no exclusive privileges in Newfoundland which would operate to the disadvantage of Canada will be granted to the United States, but, on the contrary, whatever privileges are conceded in the market of the island colony to our neighbors across the line will also be extended to the products of Canada and the other British possessions. This removes the misunderstanding which arose some years ago, when the Newfoundland negotiations were initiated, and under the circumstances Canada will not press objections to the proposed treaty. The recent telegram from Washington respecting the proposed commercial treaty between the United States and Newfoundland, and the alleged action of the Canadian Government against the arrangement, attracted some attention here, but the telegram is believed to be the work of an imaginative correspondent, and not in any way authorized by the Newfoundland Government. There is no such difficulty between Canada and Newfoundland as is alleged in the telegram. It would be a convenience to have commercial relations with the States arranged on grounds common to both Canada and Newfoundland, but if such an arrangement is not available no one will question the right of Newfoundland, as an independent colony, to act as she thinks best, so far as her policy is not inconsistent with Imperial interests.

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 whatsoever, this interest extending to supply houses also.

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

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

The Winnipeg Elevator Co., Winnipeg, Man., has erected ten new elevators in the province and has six more under way.

The Dominion Oil Filter & Metal Co., Guelph, Ont., recently incorporated, are manufacturing a new oil filter and will erect an extensive plant. The company will also engage in other lines of the iron and steel business.

The Canada Cash Register Co., whose offices are now in Toronto, will be located in the building of the Mills Properties Co., Dundas, Ont., where a complete factory will be equipped at once.

The Bowmanville branch of the Oshawa, Ont., Canning Co., together with all machinery and equipment, was destroyed by fire last week.

The name of the Hamilton Model works, Hamilton, Ont., has been changed to the Hamilton Motor Works, and will enlarge its line of products.

The Willson Carbide Co., Merriton, Ont., report a heavy demand for their product. Some improvements looking to an increased production are being made.

The Copeland-Chatterton Co., Toronto, have purchased a site for a factory on College st. in this city and will erect a new plant.

A fine 70-h.p. horizontal boiler has been shipped to Trussler Bros., Trout Creek, Ont., by H. W. Petrie, Toronto.

Senator McMullin will erect a flour and oatmeal mill at Fort Francis, Ont.

N. J. Armour is at the head of a company which will erect a factory at Hamilton, Ont., for the manufacture of linen and light fancy articles. The building will be a three story brick, 120x55 feet, with an annex 40x30 feet. About 100 hands will be employed.

It is probable a new elevator will be built at Ninga, Man., to replace the Dominion elevator, which collapsed recently.

The Ogilvie Flour Mills Co., Winnipeg, Man., is erecting a 250,000 bushel elevator at that place.

The application of the Toronto Steel Co. for a site for necessary plant has been made to the Toronto City Council. The site desired is the old Dry Dock Co's property, and sufficient land east of it to make up sixteen acres. The conditions proposed are: That the company will erect a steel plant which shall have an output of 100 tons a day of flat, round and square bars, angles, channels, tie plates, fish plates, splices, etc.; that they will expend \$100,000 for buildings, plant and machinery; that they will expend \$60,000 and upwards a year in wages; that they be granted a thirty-year lease of the property; that the city shall dredge and keep open a channel four-teen feet deep, capable of accommodating boats of 43 feet beam; that a railway switch be laid into the property; that the company be grant-

ed exemption from taxes. It was stated that most of the capital of the company was paid up, and they expected to have their works in operation by March 15 next. It is also stated that the company contemplated erecting a plant for the manufacture of cold rolled steel and wrought iron pipe up to two inches in diameter.

The contract for a new drill hall at London, Ont., has been awarded by Hon. Jas. Sutherland to Messrs. Sullivan & Langdon, of Kingston. The contract price is in the neighborhood of \$100,000.

The general plan of the new freight sidings and sheds to be constructed by the Grand Trunk on the site of the old Parliament buildings, Toronto, has been decided upon. Plans of the whole of the work are being prepared, and tenders will be called for at an early date. The whole of the works will be of the most modern description, and the facilities for handling traffic will be equal to any demand which an enormous increase may necessitate.

The Mill Properties Co., Dundas, Ont., has been incorporated with a capital stock of \$25,000, to acquire certain lands and buildings in the town of Dundas to lease for industrial purposes. The provisional directors include J. A. Kammerer, Robert McKay, both of Toronto, and W. E. Woodruff, Hamilton, Ont.

The big electric plant of the Shawinigan Water & Power Co., Shawinigan Falls, Que., has been put in operation. The machinery consists of a water wheel of 6,000 h.p. capacity and the generator of 5,000 h.p. capacity, and is intended to deliver electrical power to the Lachine Rapids Hydraulic & Land Co., Montreal. The operation of the first unit will be quickly followed by the starting of the second water wheel and generator, of equal capacity, which is also installed, designed to furnish electrical power for the operation of the immense plant of the Shawinigan Carbide Co., now nearing completion.

The Niagara Falls Machinery & Foundry Co., Niagara Falls, Ont., have enlarged their plant by adding thereto a fourteen foot gap lathe and a 15 inch x 6 foot screw cutting engine lathe. This machinery was installed by H. W. Petrie, Toronto.

Pneumatic Tools and Appliances ARE GREAT MONEY SAVERS.

Air Hoists,
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Syrups in Re-
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pet Cleaners,
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chinists, Boiler
Makers, Stone-
cutters and
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ing, Air Brushes

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PISTON AIR COMPRESSORS FOR ALL DUTIES
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Augers,
Punches,
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Rotary Drills,
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Reversible
Boring Machine,
Fluo Cutters,
Rollers and
Welders,
Air Lift Pumps,
Jacks,
Paint Spreaders,
Bolt Nippers.

A hitch has occurred in the negotiations between the Dominion Government and Mr. G. W. Backus, of Minneapolis, Minn., for the lease by the latter of the water-power at Fort Frances, Ont. The Government, it is understood, insisted on Mr. Backus developing half the total power on the Canadian side of the river, so as to secure the establishment of important industries on this side, and this Mr. Backus seems unwilling to do. It is not known if the negotiations are off altogether, but at the present they are at a standstill for this reason.

The Dominion Cotton Belting Co., Hamilton, Ont., will erect a brick building 150x50 feet, two stories high, and employ about 100 hands.

The Canadian Construction Co., Toronto, has been awarded the contract for the building of the new plant for the Cockshutt Plow Co., Brantford, Ont. The plant will cost about \$110,000.

The Schultz Bros. Co., Brantford, Ont., have received the contract for the erection of the new Macdonald Institute at the Agricultural College at Guelph, Ont. The contract price is said to be about \$80,000.

An explosion took place at the Hamilton Powder Mills, Windsor Mills, Que. The mill was blown to pieces.

The International Portland Cement Co. will erect a factory at Hull, Que. The city promises to exempt the company from the payment of all municipal taxes whatsoever for a period of fifteen years.

The company must keep constantly engaged not less than 100 men.

The Halifax Electric Tram Co., Halifax, N.S., will erect a carburetted gas plant with a capacity of 450,000 cubic feet of gas daily, and another plant for ordinary coal gas with a capacity of 360,000 feet daily.

A biscuit factory will be erected at Stratford, Ont., by a company headed by W. J. Mooney. The plant will cost about \$100,000.

The Ontario Bureau of Mines have been advised that Mr. Rinaldo McConnell, Ottawa, is opening up a graphite mine in the township of Elmsley, on the Rideau Canal, and is installing a plant for the refining of graphite. This property was recently explored by the Government diamond drill and found to contain a large body of this mineral, which is now in active demand for the making of crucibles for melting steel; also used in foundry facings and in the manufacture of lubricates. This property was worked some years ago and abandoned, but with more modern machinery and a better market the outlook has greatly improved.

An oil well of somewhat unusual capacity has been found on the Seaman farm, about nine miles from Chatham, Ont. So great was the pressure that much difficulty was experienced in capping the well, and the ditches in the vicinity were flooded with the fluid. The capacity is put at a barrel a minute but this is probably an exaggeration, although all who have seen the well agree that it is a won-

der, while the oil is pronounced of a superior quality. It is said that the farmers round about will not profit by this underground wealth, as the land originally belonged to the Canada Co., who on reselling reserved the right to the minerals.

Hon. G. E. Foster, Toronto, has purchased the rights for Canada for a process of manufacturing artificial stone, the invention of Wm. Owen, Esq., London, England. A company will be organized and a plant put into operation at Toronto.

The McClary Mfg. Co., London, Ont., is erecting a stove-mounting and nickel-plating plant. The building will be 307x82 feet, two stories high. The walls will be entirely of concrete.

The London Rolling Mills Co., London, Ont., is constructing a new building, which is practically of steel and glass. The Hamilton Bridge Co., Hamilton, Ont., has the contract.

Messrs. Phelps, Beachville, Ont., have purchased the old Woodburn Mills property at Woodstock, Ont., and will proceed to erect a chopping mill.

Fire in the motor room of the Lake Superior Power Co's reduction works at Sault Ste. Marie, Ont., did damage to the extent of about \$10,000.

The Henry Kuntz Brewing Co., Hamilton, Ont., has been incorporated with a capital stock of \$100,000, to manufacture lager, ale, porter, etc. The provisional directors include A. C. Beasley, J. C. McCabe and S. B. Cunningham, all of Hamilton.

"Oil which would otherwise be wasted"



GENTLEMEN.—The two Cross Oil Filters purchased of you two years ago are giving entire satisfaction. We filter and reuse a great deal of oil which would otherwise be wasted, and we feel confident that the saving in our lubricating oil bills is very material. We believe your Filters are necessary to the economical operation of any plant using oil. Very truly,

CUMBER LUMBER Co.,
Jacksonville, Fla.

Don't Put Out One Dollar
until you have satisfied your
own judgment that a

CROSS OIL FILTER

will reduce your oil bills at least 50%. Let us send you one on 30 days' trial.

THE BURT MFG. CO.,

Largest Mfrs. of Oil Filters in the World.

AKRON, OHIO, U.S.A.

A complete stock carried by the
FAIRBANKS CO., - Montreal.

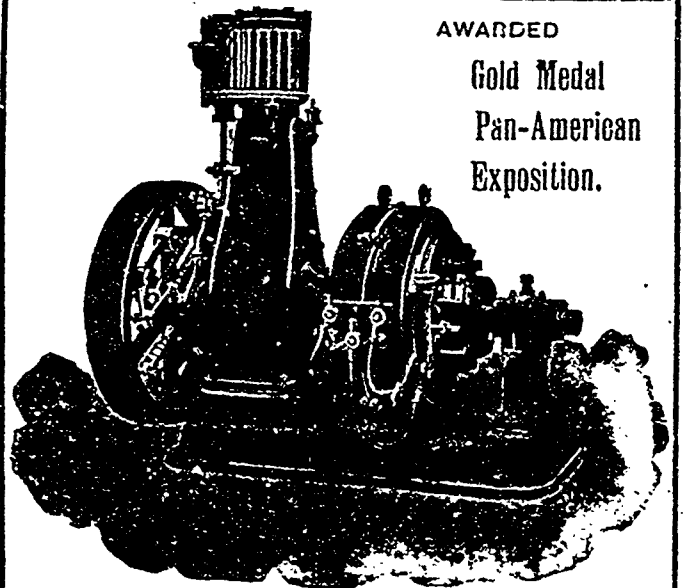
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BELTED

SIMPLE
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DIRECT CONNECTED

AWARDED

Gold Medal
Pan-American
Exposition.



BUFFALO FORGE COMPANY,
BUFFALO, N.Y., U.S.A.

The London-Elgin Oil Co., London, Ont., has been incorporated with a capital stock of \$250,000. The provisional directors include G. G. Steele, F. J. Darch and G. M. Fox, all of London.

The mill and lumber yards of Simpson & Peel, Montreal, were destroyed by fire recently. Loss about \$40,000.

La Compagnie Electrique de Lorette, St. Ambroise de la Jeune Lorette, Que., has applied for incorporation with a capital stock of \$50,000, to transmit electric hydraulic and other power. The provisional directors include Raoul Shehyn, G. A. Cloutier and Joseph Martel, all of St. Ambroise.

The first granulated sugar made in Canada from beets grown in the Province was shown by Mr. M. McLaughlin at the Toronto Board of Trade recently. The sugar was from the Ontario Sugar Co., Berlin, Ont. Those who examined the product pronounced it equal to the best granulated sugar they had ever seen, and they kept Mr. McLaughlin busy answer-

ing questions about the new enterprise. There has been a good deal of competition among those who are promoting the beet sugar industry in the several localities in Ontario, each being anxious to get its plant completed and get its product on the market ahead of all competitors. This proud distinction fell to the Ontario Sugar Co. of Berlin. The following gentlemen are the directors of this pioneer company in the manufacture of beet sugar in Canada: Hugh Blain, Robert Jaffray, John Flett, M. McLaughlin, W. Vandusen, H. M. Pellatt, Toronto; L. S. Weber, Heidelberg; S. J. Williams, C. K. Hagedorn, Berlin; E. Carrington, W. B. Route, Bay City, Mich.

The cement industry is being developed rapidly in different parts of Ontario, and indications are that another important industry of this kind is to be located at Kingston, where important deposits of marl and clay abound. In 1891 the first Portland cement was produced in commercial quantities in Ontario, the output being 2,033 barrels valued at \$5,032. In

1897 the quantity was 96,825 barrels, and the value \$170,300. In 1900 the quantity was 306,726 barr. and the value \$598,021. In 1901 there was an increase in quantity to 350,660 barrels, but a decrease of value to \$563,255. That is a good record of growth for 11 years and with the reduction of price the consumption of cement will be sure to greatly increase. Before long, we may expect to see many houses built with cement as the principal material for the walls, and perhaps for the floors and roofs also. Besides the domestic product, Canada imported last year \$675,768 worth of cement, of which \$230,584 came from Britain, \$228,845 from the United States, \$142,936 from Belgium, and \$70,170 from Germany.

Stead & Harriett will build an elevator at Mowbray, Man.

The Hill Electric Switch Co., Montreal, has been incorporated with a capital stock of \$10,000, to manufacture generators, motors, lamps, etc. The charter members include Hon. C. J. Doherty, G. H. Hill and C. A. Bernard, all of Montreal.

CAMEL BRAND
BALATA
RUBBER

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Linen Fire Hose,
Water and Steam Hose,
Packings, Etc., Etc.

THE STANDARD



GOLD WATER PAINT

**WEATHER PROOF, FIRE PROOF
WHITE AND COLORS.**

MILL SUPPLIES

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PAINT, PAINT OILS, ETC.

W. A. FLEMING & CO.

Montreal and St. John, N.B.

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MANUFACTURE "RATHBUN'S STAR" BRAND

THE LEADING CANADIAN PORTLAND CEMENT

Capacity of Works—500,000 Barrels per Year

THE RATHBUN COMPANY,
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Telephone Main 1379.

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Telephone Main 3987.

MONTREAL, QUE.

When writing to Advertisers kindly mention THE CANADIAN MANUFACTURER.

The International Rubber Co., Montreal, has been incorporated with a capital stock of \$50,000, to manufacture rubber boots and shoes. The charter members include J. J. McGill, William Strachan and A. V. Roy, all of Montreal.

The Grant Acetylene Generator Co., St. Thomas, Ont., has been incorporated with a capital stock of \$100,000, to manufacture acetylene gas generators, mantles, etc. The provisional directors include W. A. Grant, Richard Doyle and T. L. Cochrane, all of St. Thomas.

The Page-Hersey Iron & Tube Co., Guelph, Ont., has been incorporated with a capital stock of \$500,000, to manufacture iron, steel, etc. The provisional directors include G. H. Page, Cohoes, N.Y.; W. W. Near and Randolph Hersey, both of Montreal.

The Standard Meter Co., Toronto, has been incorporated with a capital stock of \$60,000, to manufacture meters, etc. The provisional directors include R. H. Stewart, E. E. Slaght and W. D. Taylor, all of Toronto.

The Peterborough Sugar Co., Peterborough, Ont., has been incorporated with a capital stock of \$350,000, to manufacture sugars, syrups, etc. The provisional directors include Y. E. Bradburn, James Kendry and Arthur Stevenson, all of Peterborough.

The Rogers Furniture Co., Toronto, has been incorporated with a capital stock of \$40,000, to manufacture furniture, etc. The provisional directors include W. B. Rogers, David Rogers and J. J. Mackle, all of Toronto.

The Canadian Cash Register Co., Toronto, has been incorporated with a capital stock of \$50,000, to manufacture cash registers, etc. The provisional directors include D. M. Spiers, J. A. Kammerer and Robert McKay, all of Toronto.

The Surprise Mfg. Co., Toronto, has been incorporated with a capital stock of \$10,000, to manufacture wringers, mangles, sashes, doors, etc. The provisional directors include Brooks Walton, E. S. Smith and Daniel Urquhart, of Toronto.

The Dominion Canister Co., Toronto, has been incorporated with a capital stock of \$50,000, to manufacture cans, boxes, bags, etc. The provisional directors include J. A. Kammerer, Robert McKay, both of Toronto, and W. E. Woodruff, Hamilton, Ont.

The Canadian Automatic Hay Press Co., Brantford, Ont., has been incorporated with a capital stock of \$50,000, to manufacture agricultural machinery, trucks, etc. The provisional directors include James Nightingale, G. W. Brohman and S. M. Burnley, all of Brantford.

The Frontier Lighting Co., Bridgeburg, Ont., has been incorporated with a capital stock of \$40,000, to produce electricity for heat, light and power. The provisional directors include J. T. James, Henry Emrick, R. G. Baxter, all of Bridgeburg.

The Great Lakes Dredging Co., Toronto, has been incorporated with a capital stock of \$250,000, to carry on a business of dry-docking, dredging, towing, etc. The provisional directors include W. G. Francis, N. W. Rowell, and J. G. Shaw, all of Toronto.

The Henderson Roller Bearing Mfg. Co., Toronto, has been incorporated with a capital stock of \$1,000,000, to manufacture bicycles, motor-carriages, car-wheels, shaftings, etc. The provisional directors include A. E. Henderson, J. J. Main and G. C. Edwards, all of Toronto.

La Fonderie de Victoriaville, Victoriaville, Que., has applied for incorporation with a capital stock of \$30,000, to carry on a foundry business. The applicants include Thomas Buleau, Alfred Proulx and Paul Tourigny, all of Victoriaville.

The Victoriaville Furniture Co., Victoriaville, Que., has applied for incorporation with a capital stock of \$60,000, to manufacture furniture, etc. The applicants include Paul Tourigny, Cyrias Thibault and Achille Marchand, all of Victoriaville.

DID YOU EVER STOP TO FIGURE

DID you ever stop to figure the relative advantages of a wood and an iron pulley.

That an iron pulley, while not only weighing about four times as much as a wood pulley, will not carry within 50% as much power as a wood pulley.

And that the first cost of an iron pulley is more than a wood pulley.

Then take into consideration the advantages of the Dodge Wood Split Pulley.

That it costs less than an iron pulley.

That it costs a great deal less to put on the shaft, no shafting to be disturbed or taken down.

That it will transmit 50% more power than an iron pulley.

And consequently a lighter weight on the shaft and a saving on belts.

That in fastening on the shaft the Dodge Wood Split Pulley will not only hold better than a set screw, but will not throw the shaft out of center. That the Dodge is absolutely balanced.

Take these facts into consideration—Then when you next order pulleys, order the Dodge Wood Pulley. No delays in making, as with the interchangeable bushing, orders for any diameter or face of pulley can be instantly filled.

THE DODGE MANUFACTURING CO. of Toronto, Limited,
TORONTO

Let us send you the Catalogue. It tells about some other good Dodge products.



The Wire-Woven-Wood Mfg. Co., Toronto who have for some months been manufacturing various lines of wire-woven-wood packages, have recently added a line of trucks to their products. The company will manufacture light trucks for various industrial purposes. At present they are arranging for larger quarters in order to enable them to handle their constantly increasing business. The company has been offered several sites and in the near future will decide upon its new location.

The Prescott Elevator Co., Prescott, Ont., has sold its half-million bushel elevator to the Wolvin syndicate for \$85,000.

The Jessop Steel Co., Sheffield, Eng., whose Canadian offices are in Toronto, is building a large steel plant at Washington, Pa., in which electrical power distribution will be employed. The company has recently purchased a considerable amount of direct-current apparatus from the Westinghouse Electric & Mfg. Co., Pittsburg, Pa.

The plant of the Sun Portland Cement Co., Owen Sound, is now in full operation, and the company have shipped a considerable quantity of cement during the past week or two. It is said that the quality of their product is equal to any made in America. The plant at present is producing about 250 barrels per day, but we understand that it is the intention of the company to increase it to 600

barrels as soon as the machinery can be procured.

It is reported that the promoters of the proposed locomotive works at Longue Pointe are backed by the American Locomotive Co., of which S. R. Callaway is president, and the Kingston Co. will be merged and incorporated with the American organization. It will be remembered that when Mr. Callaway visited the city some months ago he visited all the suburbs in search of a suitable site for the works. The 250 acres purchased for \$80,000 will, it is said, give ample accommodation for works capable of turning out a thousand engines a year, and as the company will manufacture largely for export, the situation is considered an excellent one, and shipping facilities can be very easily arranged for. The works will be amongst the largest of the industrial enterprises started in Canada for some years. The capital stock will be \$1,000,000, and 1,500 men will be employed.—Montreal Star.

The Columbian Fireproofing Co., Pittsburg, Pa., has just been awarded the contract for a new building for the Army Medical Department at Woolwich, England, to cost £3,000.

It is reported that the Dominion Iron & Steel Co. will convert the large rail mill, in course of construction at Sydney, into a structural steel mill, for which product there is a great demand. Officials will

leave soon to purchase the required machinery in England.

Messrs. J. Wallace & Sons, Hamilton, Ont., have just installed a new automatic sprinkler and steam heating system in the new cotton mills of the Hamilton Cotton Co. An automatic sprinkler outfit has also been installed by the same company in part of the plant of the Canadian Colored Cotton Mills at Hamilton and another large contract just completed by Messrs. J. Wallace & Sons was that for a continuous automatic fan system for the Imperial Cotton Co., Hamilton. The company has also recently remodeled the lumber kiln of Semmens & Evel, Hamilton.

The Paris Plow Co., Paris, Ont. recently installed a 10-ton refrigerating machine, brine tank and pump for use in their plant. The equipment was furnished by the Frick Co., Waynesboro, Pa.

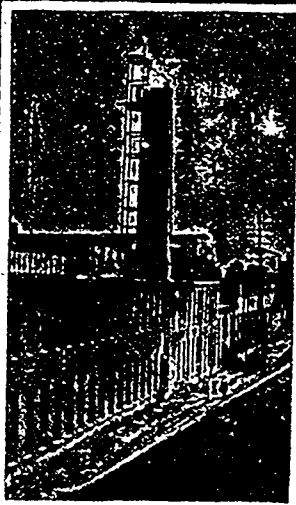
A company, headed by J. A. Cowan, Qu'Appelle, Man., will re-open the woolen mill just out of Rapid City, Man., which has been closed for a number of years.

According to the Dominion Department of Trade and Commerce, on July 1, 1902, there were in Manitoba and the North-West, including Fort William and Port Arthur, 544 elevators, having a total capacity of 23,100,000 bushels. This was an increase of 118 elevators, and 3,220,000 bushels capacity over the corresponding period of the preceding year.

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BUILD A

CHIMNEY



USE

MECHANICAL DRAFT

IT COSTS FAR LESS

Is independent of weather. The fan is positive in action. Responds instantly to sudden demands for more steam. Burns cheap fuel. Costs practically nothing for operation when exhaust steam is utilized

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B. F. STURTEVANT & BOSTON, MASS.

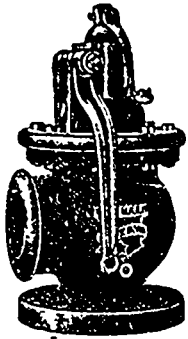
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**IRON, STEEL
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PIG IRON.**

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When shipments from mills are delayed, our large stock may help you out. We probably have what you want and plenty of it. Our stock list, mailed monthly on application, is an accurate account of stocks on hand.



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VALVE
YOU
CAN
RELY
ON

SEND
FOR
PRICES

CROSBY STEAM APPLIANCES EXCEL

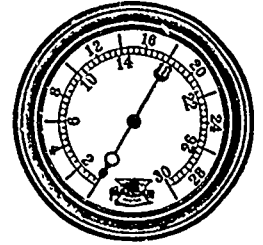
Steam Engine Indicators.
Recording Gages.
Revolution Counters.
Pressure and Vacuum Gages.
Lubricators, etc.



Stationary and Marine Valves.
Water Relief Valves.
Blow-off Valves.
Globe and Angle Valves
Single Bolt Check Whistles.
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CROSBY STEAM GAGE and VALVE CO.
BOSTON, NEW YORK, CHICAGO, LONDON

A TRUTHFUL GAGE
IS THE
ONLY GOOD GAGE



The Burt Mfg. Co., Akron, Ohio, have equipped a number of mills of the American Sheet Steel Co. with their Cross oil filters and Burt exhaust heads. The large new plant of the Allis-Chalmers Co., at West Allis, Wis., has also been equipped recently with the Cross oil filters.

The well known firm of Sadler & Haworth, dealers in belting and supplies, are making a number of improvements in their Toronto offices and salesrooms.

A. E. Cameron, Melita, Man., is erecting a 30,000 bushel elevator near Lyleton, Man.

The McEachren Heating & Ventilating Co., Galt, Ont., recently shipped a carload of machinery, consisting of a steel plate fan 15 feet high and blast wheel for same 9 feet high, and all accessories for installing a system of mechanical induced draft in the Ogilvie Flour Mills, Winnipeg, Man.

A quantity of electrolytic copper from the Dorchester works of the Intercolonial Copper Co. has been sent to St. John, N. B., for conversion into ingots. This is the first practical experiment of the profitable character of the maritime copper industry, and it is sincerely to be hoped that the cost of the ingots will be such that it can successfully compete with the imported article. As the copper is produced by leaching, and on account of its almost theoretical purity, there is every reason to expect that the work will be successful, and if so it is said that one firm of St. John metal workers will handle the entire output. This firm, T. McAvity & Sons, are erecting a new five story building in St.

John and connected with their present works by a steel overhead bridge on Water street.

At the recent celebration in commemoration of the completion of the power canal at Sault Ste. Marie, Ont., Mr. F. H. Clergue made a number of significant remarks. Among other things he said: "I do not want you to think that the opening of this canal marks the end of the development of hydraulic power at the Sault. This is but the beginning. The present development is not one-quarter what the Consolidated Lake Superior Co. intends to do, and what they have already planned. When the power from this canal has all been utilized we shall build another canal and still another, just as long as we can find use for the power, and if our present plans do not miscarry we shall have practically unlimited use for it. I predict that in ten years time not a ton of coal for manufacturing purposes will be used in Canada between Quebec and Hamilton. The fall of water between those two places is equal to 10,000,000 tons of coal per year.

Messrs. D. R. Fraser Co. will erect a sawmill on their claim, 60 miles from Edmonton, N.W.T.

A proposition looking to the establishment in Toronto of large smelting works was placed before the city officials a few days ago. Mr. Jones, of the Dominion Steel Co., Mr. McMaster, of the Montreal Rolling Mills, and Mr. Watson, of Hamilton, are conducting the negotiations for the proposed syndicate, with which a number of prominent capitalists are identified. The intention is to bring billets from Cape Breton and to convert

them into steel at the works here. To this end, water transportation is necessary, and Toronto has been selected as the best point available.

The Pratt & Leachworth Co., Brantford, Ont., will erect an addition to their factory, which will mean doubling their capacity and employing 600 hands.

The Robb Engineering Co., Amherst, N.S., will establish a branch factory in New York for the purpose of manufacturing the Robb-Mumford boiler and a superior type of marine boiler. The company has received a charter under the name of The Robb-Mumford Boiler Co. D. W. Robb, Amherst, is president, and J. A. Mumford, New York city, is one of the directors.

The plant of the Grey & Bruce Cement Works, Owen Sound, Ont., will be enlarged by installing another boiler, an additional rotary machine and lengthening those already in the building.

The St. John's, Que., Hat Works have been moved to Brockville, Ont., where the machinery is being placed in the company's new buildings and no time will be lost in commencing the manufacture of hats.

The factory of the Goderich Organ Co., Goderich, Ont., was recently destroyed by fire. Loss about \$50,000.

The Adamite Abrasive Co., North Tonawanda, N.Y., will begin placing its machinery in the plant being erected, and by the first of next month the factory will have been put in operation. The first consignment of emery ore which the company will manufacture into emery wheels arrived at Tonawanda from Austria on October 14.

The Central Ontario Power Co., Limited

OF

PETERBORO, ONT.

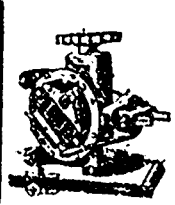
Offer Electrical Power **TO MANUFACTURERS** at Low Rentals

The Municipal Corporation also offer Special Inducements for Manufacturers to Locate.

Peterboro, with a population of 15,000, is seventy miles east of Toronto on main line of the Canadian Pacific Railway, the Grand Trunk Railway, and the Trent Valley Canal; and through its unequalled facilities has lately secured several immense industries, both Canadian and American.

Apply to **J. ALEXR. CULVERWELL**, Managing Director, PETERBORO, or 1 TORONTO ST., TORONTO

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ARMSTRONG'S PIPE THREADING AND CUTTING OFF MACHINES,

Save Time and Labor.

For Hand or Power.

Capacity from 1/4 to 6 inches.

Armstrong's Genuine Stocks and Dies, THE BEST WATER, GAS, AND STEAM

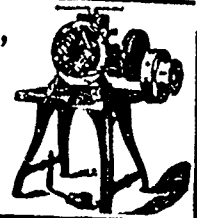
FITTERS' TOOLS

ARE MANUFACTURED BY

THE ARMSTRONG MFG. CO., - BRIDGEPORT, CONN.

New York Office-139 Centre St.

Catalogue on Request.



The new steel elevators at Fort William, Ont., lie about one and a half miles straight along the river bank, west, and look like so many gasometers. The first sixteen are sixty feet high, and about the same width. The more interesting ones, those being built, are made of half-inch steel plates, five feet wide, and sixteen of them, laid in widths, form a tank, its dimensions being 80 feet in height and 28 feet in diameter, with a wheat capacity of 41,000 bushels. They rest on a concrete foundation, upon which cement pillars and walls 18 feet in height are first built.

The Deering Harvester Co., Hamilton, Ont., has closed a contract with the Cataract Power Co., to furnish the former with 3,500 h.p. The company will erect 250 houses for its employees.

The Burt Mfg. Co., Akron, Ohio, have just closed a contract for four large Cross oil filters of special style for use on four new battleships now being built for the Government. In this connection they call attention to the fact that their filters have now been adopted by ten different governments.

The Turner Lumber Co., of South River, Ont., have purchased a 150-h.p. engine to supply power for their plant. It was installed by H. W. Petrie, Toronto.

The Edmonton Milling Co. is erecting a second elevator at Strathcona, N.W.T., with a capacity of about 60,000 bushels.

The Canadian Iron Co., Youngstown, Ohio, which was recently organized with a capital of \$200,000, is interesting Pittsburg people, as there are several local capitalists connected with the project. The company is probably the first in which Pittsburgers have become interested, and which will operate exclusively in Canada. It has secured control of the Abbott-Mitchell Iron & Steel Co., in Belleville, Ont. This plant has been idle for some time, but the American owners propose to remodel it, making it modern and enlarging its capacity. It will manufacture bar iron and steel, cut nails, horseshoes, railroad spikes, track bolts, etc., and will employ a large force of men. It is proposed to bring a number of Americans over to the new plant as soon as the equipment can be put in

order, and the company proposes to secure its supply of raw material from Canadian steel companies and furnaces.

The Fort William, Ont. plant of the Imperial Oil Co. has four enormous tanks in which the oil is stored. Two of these have a capacity of 426,000 gallons, and two of 211,448 gallons. All these tanks are practically bonded warehouses, no oil being allowed to be taken out without the knowledge and permission of the customs authorities. Oil is taken to the docks [there from Cleveland, Chicago and other places by tank steamers, some of which can carry a cargo of 125,000 gallons. The oil is pumped direct from the steamer's hold into the company's tanks at the rate of about 10,000 to 12,000 gallons per hour. Quite an appreciable quantity is barrelled here also, but the bulk is shipped in the tank cars, which are destined for all points west, even as far as Vancouver. The company have a splendid dock, right at the mouth of the Kaministiquia river and an extensive, well lighted and modern power house and sheds.

The Rhodes, Curry Co., Amherst, N.S., have all the new buildings of their immense plant about completed. The plant occupies a space of about 15 acres. They have put up this year a solid brick blacksmith shop, and have just finished a brick passenger car shop, 130 by 230 feet. The plant in the car department consists of a wheel foundry, grey iron foundry, axle shop, blacksmith shop, machine shop, paint, truck, tinsmith, pattern and wood working shops, also erecting sheds for freight cars and passenger cars. The number of men employed averages 830. On an average they turn out between eight and nine cars a day. Besides the car working department they have also a factory for building materials. They expect to be working in the new axle shop within two weeks. This will finish all the new extensions they will build on the plant this year.

Port Emsley, Ont., which has been almost a deserted village since the closing down of the woolen mills there a few years ago, is now about to enter upon a more prosperous era. The woolen mill

was secured, a few months ago, by a Mr. McConnell, of New York, who decided to open plumbago works there. The old mill was repaired, the water power was improved, and considerable mining machinery was installed, making the place an up-to-date manufacturing concern with the number of employees steadily increasing. At the last meeting of the North Emsley township council Mr. McConnell asked the council to be exempted from all taxes but school taxes for a term of ten years in compensation for the large amount of money spent in the erection and equipment of the factory. The council decided to exempt the lands, buildings, etc., from taxation, as requested, for a period of 10 years.

It is stated that the agreement with the Ontario Government for the development of power of Koochiching Falls, near Fort Frances, on the Rainy River, will contain a clause to the effect that the first 3,500 h.p. developed would be devoted to the local industries of Fort Frances and other enterprises on the Canadian side. This amount will rank on the Canadian share in the division of the amount of power developed, which division will be on a basis of half and half. The amount named, however, must be developed first, and all of it will go to Canada. The Municipality of Fort Frances will obtain for itself 1,000 h.p. at minimum rates.

F. G. Street, 36 LaSalle St., Chicago, Ill., has been appointed sole agent for Northern Illinois, Indiana, Michigan, Minnesota, Wisconsin, North and South Dakota, and Kansas, for the Scaife and We-Fu-Go Water Softening and Purifying Systems, manufactured only by Wm. B. Scaife & Sons Co., Pittsburg, Pa. Mr. Street is known throughout the territory he will handle, in manufacturing and engineering circles, and has given the subject of water purification considerable attention, and is in a position to furnish complete information on this subject.

The municipality of Lorne, Man., is offering a bonus of \$2,000 to secure the location of a 75 barrel mill at Somerset, Man.

Theo. Ludgate will erect a sawmill at Arrow Head, B.C.

PIG IRON.

M. & L. SAMUEL, BENJAMIN & CO., 27 Wellington St. W., Toronto.

ENGLISH HOUSE—SAMUEL, SONS & BENJAMIN, LONDON, E.C.

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The Sturgeon Falls, Ont., Pulp Co. propose a further expenditure of \$2,000,000 in plant and machinery, making the total expenditure \$3,000,000. They will stop exporting pulp and will manufacture paper for the English market.

Victor Blagden, London, England, was in Sydney, N.S., a few days ago, for the purpose of considering the advisability of establishing a plant there for the manufacture of coal tar. Crude naphtha and carbolic acid are among the products which would likely be turned out by Mr. Blagden's company.

The Harold-Sanderson Co., Paris, Ont., has been incorporated with a capital stock of \$40,000, to manufacture refrigerators, screen doors and windows, pails, buckets, etc. Mr. John Harold, Brantford, Ont., is manager of the company.

The Edmonton Milling Co., is erecting an elevator at Strathcona, N.W.T., with a capacity of about 60,000 bushels.

In addition to coal there are large deposits of copper, silver and lead ores being worked at Cheticamp, N.S., and the Dominion Iron & Steel Co. have lately become interested in a valuable find of iron pyrites at Pleasant Bay. The lead and copper deposits at Cheticamp have been examined by experts who reported on them for New York people, and they made no secret of the fact that they were well pleased. The establishment of important works at Cheticamp, which has a very fine harbor, is looked forward to. A copper deposit which has been worked for two years, has turned out so well that

the Eastern National Copper Co. has been formed in Halifax, with a capital stock of \$50,000 to work it. A reef of copper ore nearly a mile long, and ten feet wide, carrying also gold and silver is reported to have been located. Henderson & Potts are also working a valuable deposit of barytes at Cape Rouge. Quite a number of mining claims at Cheticamp have lately been taken up. The country is well supplied with timber and water power.

A joint stock company with a capital stock of \$50,000 is being organized in St. Thomas, Ont., for manufacture of cheese for export. The cheese will be in thin squares, each square divided into smaller squares of half a pound each, so that the dealer may readily cut off half a pound or any quantity desired, and besides preserve the cheese much better and keep it much cleaner.

By the expenditure of the additional \$20,000 just appropriated by the Ontario Government for Temiskaming district roads, making \$40,000 in all for the year, a splendid basis system will be completed for that growing settlement. It will enable the completion of 60 miles of new roads this year, making 100 miles in all of first-class trunk roads in that region. This will include a highway from Liskeard south to Haileybury, six miles; one north, 14 miles, to White River, and one north and west, 31 miles, through a thickly-settled country, besides several branches. Next year it is hoped to reach the southern end of a line of water communication, reaching north-westerly an-

other 25 miles or so, which will facilitate the settlement of a large district now inaccessible. The Government have pursued the plan of building main roads of a standard quality, leaving the subordinate highways to be constructed by the settlers or the municipalities locally benefiting. The Department of Public Works have pursued the work with energy this year, employing 300 men, and they intend to continue operations as long as the weather permits.

The Office Specialty Co., of Newmarket, Ont., and Toronto, have been given the order for the office fittings for the new Canadian immigration offices at Whitehall, London, Eng. The counter and vainscoting of the main office are to be finished in bird's eye maple, while the other five rooms will be finished in plain oak, quarter oak, birch, ash and cherry respectively. Canada's national emblem, the maple leaf, will be brought into striking relief in the woodwork of the main office. The main purpose in all this decorative work is to demonstrate the variety, utility and excellence of Canadian woods. It will impress upon the stranger as nothing else can, the richness of our forest resources.

Mr. P. A. Stanhope, secretary of the International Cement Co., and Mr. J. S. Irwin, one of the directors from Toronto, together with Messrs. George Bailey and Daniel Driver, were in Hull, Que., a few days ago completing arrangements for the installation of their cement plant there. The company will secure a desirable site,

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Trade Mark.

**Bonnyside Fire Clay Works,
Bonnybridge, Scotland**

DOUGALL

Trade Mark.

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**J. N. TALLMAN
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Brass Founders
Solder and
Babbitt Mfrs.
...HAMILTON, ONT.

a property near Hull which consists of 200 acres, but will not be quite large enough, and some adjacent land will be purchased. Mr. Irwin said that the Hull mill would be according to the latest plans, the best and most modern in the world. "We are also building a mill in Winnipeg in order that we may control the Canadian trade. We will not have to export any of our product, as we will be able to sell it all in the Dominion."

The mineral riches stored in the rocks of Ontario are becoming better known every day as a result of the impetus which has been imparted to prospecting and development in every part of the Province. The latest discovery reported to the Crown Lands Department is of great value from an economic standpoint. It is a deposit of molybdenite, which occurs in the south-east corner of Haliburton County, and which, from all the information that could be obtained by sinking a few test pits, is quite extensive. The veins are several feet wide in some places and are very rich in large

crystals of the precious article, some of which are from three to four inches across and one inch in thickness. Molybdenite producing 50 to 55 per cent. of molybdenum is worth about \$400 per ton and the product is worth \$1.55 to \$2.00 per pound. Molybdenum is used mainly as an alloy of steel, to which it imparts an especial hardness.

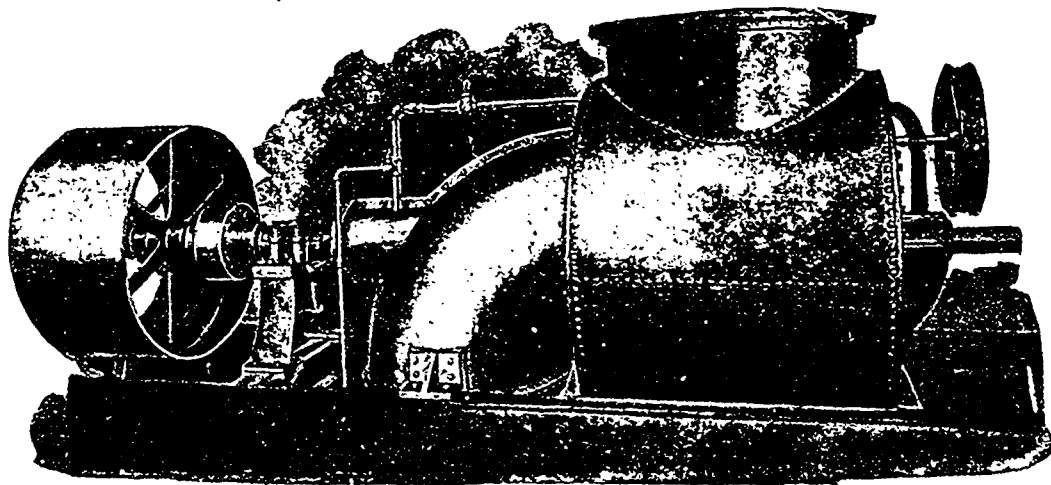
The machine shop of the Canadian Pacific Railway Co., at Fort William, Ont., occupies a rectangle near the roundhouse. The walls are being built of solid stone, and will be faced inside with brick, while the equipment of machinery will be such as to allow repairs of every kind to be made at Fort William. The circle of the roundhouse is being continued until it reaches around the walls of the machine shop, greatly increasing the accommodation for engines. The foundation for this is also under construction. Next year a car repairing shop will be added to the company's equipment at this point. The construction of a new coal shed will be proceeded with im-

mediately, and temporary chutes are being rigged up so as to clear away all the coal from the end of the new freight sheds, and when this is done the building of the new addition will be commenced.

The Packard Electric Co., St. Catharines, Ont., has just completed three 75 k.w. oil cooled transformers of 10,000 volts each to be installed in the Mille Roche plant of the Canadian Colored Cotton Co. The Packard Electric Co. is very busy in all the departments of its large plant.

Rogers Bros., McGregor, Man., whose milling plant was recently destroyed by fire, will put up an elevator and install feed grinding machinery, pending the erection of a new mill.

The Stuart-Arbutnot Machinery Co., Winnipeg, Man., are making an important addition to their premises. A new building 136x40 feet, two storeys high, is being erected at the back of the present one which will be used as a machine and boiler shop and also for storage, the upper



The above engraving represents a style of setting sometimes adopted in connection with our

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storey being reserved for this latter purpose. This will greatly increase the capacity of the company's repair department, and will enable it to handle much work which has hitherto been turned away. The machinery for the new works is already on hand. The company will give special attention to mill work, and private enterprises of all kinds. Several orders of this kind have lately been booked. Electric lighting plants are at present being installed for the Arrow Milling Co., Birtle, Man.; McCulloch & Co., millers, Rapid City, Man.; and Smith & Hunter, millers, Carnduff, Assa.

The proposed new sugar beet factory at Raymond Alberta, N.W.T., is considered a sure thing. The concern will cost over half a million dollars, and will have a capacity of over 400 tons of beets a day. Dyer Bros., Cleveland, Ohio, who have the contract for the sugar machinery, have a representative on the ground arranging for the kind of building that will be required to suit the plant which is to be put in. Estimates have been prepared of the other supplies, such as limestone, lumber, sand, etc., and these sub-contracts will be let at once. It is expected that there will be a large influx of settlers and laborers in the spring. The factory means a great deal for Raymond and for surrounding districts. Contracts are being made with settlers for the planting of patches of beets, and for the delivery of these at a certain price per ton. \$7 is guaranteed, which is a good price. A rate of 25 cents per ton for hauling over distances not exceeding 20 miles has been secured from the St. Mary's Railway. Everything points to a favorable issue of the undertaking.

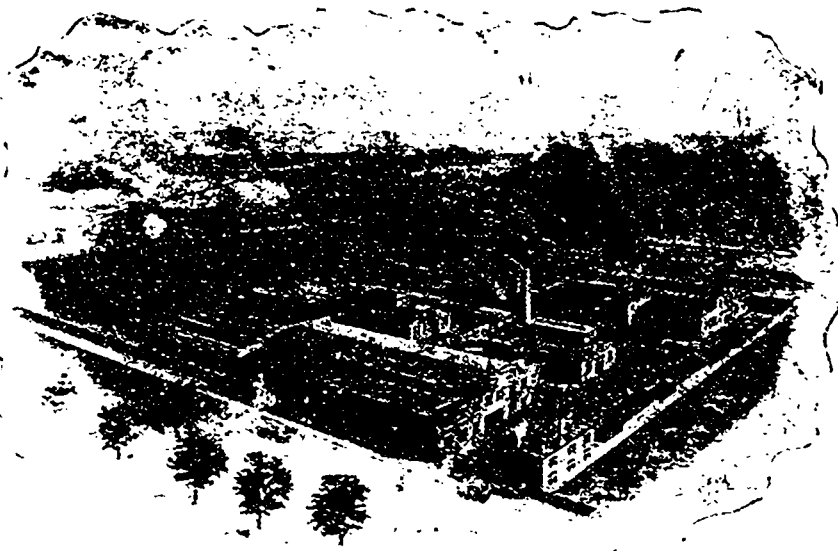
The result of the analysis of the coal recently found in Grey County, Ont., has been received at the Bureau of Mines from Mr. A. G. Burrows, provincial assayer, Belleville, Ont. The sample assayed was found to contain 78.22 per cent. of fixed carbon and 12.51 per cent. of ash. It was found to be low in moisture and fairly low in volatile combustible matter. The percentage of carbon, though below the ordinary run of anthracites, along with the low percentage of volatiles, brings the sample nearer the class of anthracite than bituminous. From the sample the assayer says he could hardly

give a definite opinion of what variety of coal it is, other than that it closely resembles the anthracite. He would judge that if obtainable in any quantity it could be used for fuel. The Bureau of Mines is not aware of the existence of any quantity of this coal, the only knowledge forwarded being that a piece of 150 pounds was found.

THE CANADIAN OTIS ELEVATOR CO.

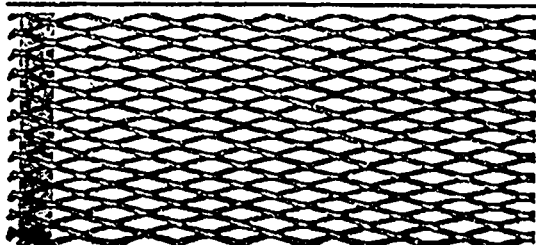
The new works of the Canadian Otis Elevator Co., at Hamilton, Ont., are rapidly nearing completion and the company hope to be manufacturing in them by the middle of November. This plant

from the Grand Trunk Railway runs into this building so that heavy machinery can be handled in the most economical manner. A ten-ton electric travelling crane runs the length of the building, and the heavy lathe and boring mills are so arranged that they can be reached by the crane. This shop has two galleries about 20 feet wide, one of which will be used for electric work and the other for light machine work. Back of the main shop is the boiler and blacksmith shop, 102 x 40. The entire plant will be heated by hot air system installed by the Buffalo Forge Co. Adjoining the boiler house is the wood shop 80 x 42. This will be equipped with all the latest wood-working tools. The foundry building will be started next



when finished will be one of the most modern and complete in Canada, and, it is claimed, the most perfect elevator plant in the world. All the buildings were designed and laid out by the engineers of the Otis Elevator Co., and to show how thoroughly this work was done it might be mentioned that the position of every tool was determined before the building was commenced. The main machine shop is 160 x 76, having one end so arranged that it can be extended

spring and will be 150 x 175. The office, 50 x 30 and the necessary buildings for patterns, storage, etc., complete the plant, which is a model one in all respects. All the buildings are of brick and will be equipped with sprinkler systems, etc. The company have acquired considerable land and will have plenty of room to extend their plant. The officers and directors of the new company will be:— President, W. D. Baldwin, president Otis Elevator Co.; vice-president and general manager, H. A. Douglas, Hamilton; sec-



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WE have a Factory equipped with the very latest and best machines for the building of

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retary-treasurer, Stewart Strathy, Hamilton; auditor, W. G. McCune, auditor Otis Elevator Co.; directors, W. D. Baldwin, New York; W. G. McCune, New York; Joseph Wright, (Bennett & Wright) Toronto; Watson Jack, (Watson Jack & Co.) Montreal; H. P. Douglas, Hamilton.

At the present time the company have Canadian contracts on hand amounting to over \$70,000.

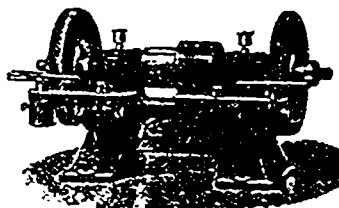
CANADIAN CORUNDUM WHEELS.

The Canadian Corundum Wheel Co., Hamilton, Ont., the first manufacturers of abrasive wheels made from Canadian corundum are doing a large business all over Canada, having during the past few months made many large shipments to dozens of the largest industrial concerns in the country. The company has also sent numerous consignments to England and other European countries and will operate a branch plant in England in order to supply the foreign demand for its various products.

The superiority of corundum over emery as an abrasive material is now

generally recognized, and numerous reports received by the Canadian Corundum Wheel Co. go to show that the Canadian product is equal to if not superior to American corundum.

A wheel made from pure Canadian corundum is a cold cutter. There being no iron in it to rub, it takes a clean bite and does not burn the material like emery. Another advantage is that it



Corundum Grinder.

does not leave a burr on the edges. Any user of saws or fine tools will appreciate the advantage of this.

These advantages have been the means of building up a very large trade for the company throughout the Dominion, and in other countries. The company manufacture corundum wheels and other

abrasives for all purposes, and they also make emery wheels, grinding machinery, wheel dressers, etc.

THE OTTAWA STEEL CASTING CO.

Application is being made for the incorporation of the Ottawa Steel Casting Co., the following provisional directors having been elected: Geo. R. Rae, Dr. D. C. McLaren, A. J. McGibbon, Jas. G. McLaren, J. H. Gervan, G. B. Norton and J. E. Askwith, of which Mr. Askwith is chairman and Mr. Gervan secretary-treasurer.

The company, we learn, have already secured suitable works in Ottawa, and will with as little delay as possible, begin the manufacture of steel for commercial purposes.

There was an interesting exhibition of the process of manufacture of this steel made at the company's works in Ottawa a few days ago, made by Dr. Hunter, the inventor, and Mr. Tuckett, an expert of Philadelphia, before a large number of citizens, at which Dr. Hunter, who has been engaged in the work for some time,

Hyde Water Tube Safety Boiler

The modern boiler for Rolling Mills, Blast Furnaces, and general power purposes.

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Undertake legitimate Detective business and Confidential Investigations for CORPORATIONS, COMPANIES, BANKS, MERCANTILE HOUSES, LEGAL FIRMS, or individuals in any part of Canada or the United States by experienced and Reliable operatives.

WE supply Detectives who are Mechanics, Clerks or Laborers to work in Factories, Warehouses, Storehouses, Mines, etc., in order to learn all going on in regard to Unions present or prospective, contemplated strikes, grievances, thefts or leaks of any kind, and all general information of value to the employer. We do not operate for rewards nor engage in divorce cases. Terms as reasonable as is consistent with good service. Patronage solicited.

ALEX. F. NOBLE, *Principal*.
A. E. NOBLE, *Superintendent*.

LONG DISTANCE PHONE.

gives in the following statement some of the merits of his process :

"That cast iron after this treatment can be tempered like ordinary high carbon steel, and is available for use in making edge tools.

"When not tempered, the iron after treatment is the equivalent of soft steel and malleable iron.

"The short period during which the cast iron is submitted to heat in order to produce the conversion renders the cost of this process far less than the cost of present equivalent processes. The prevailing process requires the metal to be subjected to heat continuously for ten days, for conversion into malleable iron, while by this process the same number of hours only are required.

"This process produces from the raw material, metal which may be rendered hard by tempering, or will remain soft where tempering is omitted. In all prevailing processes different material and processes must be used to produce metals which are intended for diverse purposes where high steel and malleable iron are used.

"The cost of finishing goods under this process is, of course, the same as finishing goods made under the old process; but the low cost of converting the original metal makes the cost of the finished product at least one half less than that of any goods of equal quality now in the market manufactured under the present process.

"The tensile strength of iron under this treatment is far greater than that of malleable iron under the old process; while the latter has a tensile strength of

about 45,000 pounds to the square inch, this has a tensile strength of from 60,000 to 80,000 pounds to the square inch.

"By this process at less than one half cent a pound castings can be turned into materials, which, in the rough, are worth at least 7c. to 12c. per pound and have a ready market at these prices."

THE ALGOMA STEEL CO.

The Algoma Steel Co., with works at Sault Ste. Marie, Ont., are now turning out 700 tons of steel rails a day, in addition to other forms of product. Meanwhile work is proceeding actively on the uncompleted portions of the plant. Two blast furnaces are nearing completion, and are so placed with reference to the new steel and concrete ore docks, now building, that they will receive material from the latter by machinery operated electrically, from power generated by the company's canal from Lake Superior.

The nickel and pyrrhite mines of this corporation are now in operation and considerable ore is in the roasting heaps. The same will be treated at the Sault and a ferro-nickel briquette made therefrom will be used in the blast furnace charge along with hematite iron ore. This will give a pig iron that will make a nickel steel of the highest value for many commercial forms.

The plans of Mr. Clergue and his associates in the company for improvements to be undertaken within a comparatively near time look to the building of an open hearth furnace plant, and the erection of a tube works, to be operated by the Algoma Tube Co., Limited. The com-

pany has secured the Perrin patents for the manufacture of seamless steel tubes, and will erect works on a very extensive scale, including blast furnaces, puddling furnaces, rolling mills and tube works, with all the necessary finishing departments, and tubing of from 1½ to 12 inches will be the regular product. The building for the drawing of these tubes will occupy about nine acres and a vast amount of electrical power, to be furnished by the company's canal out of Lake Superior, will be required.

SMITH'S FALLS MALLEABLE IRON WORKS.

Mr. James A. Ellis, the well-known architect of Toronto, is preparing plans and specifications for a number of important alterations and additions to the plant of the Smith's Falls Malleable Iron Works at Smith's Falls, Ont., of which Mr. W. H. Frost is proprietor. A new building 250x66 feet is to be erected between the two large buildings now included in the works, the new structure making it possible to bring the three buildings under one roof, covering an area of about 50,000 square feet. This will be accomplished by removing the side walls of the two present buildings. There will be included a new pattern shop 58x18 feet and a pattern vault 66x18 feet. The offices of the superintendent will be so arranged as to command a view of the entire works. The enlargement of these works implies the manufacture of a number of special lines not before made in them.

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ENGINE and MACHINE WORKS

GALT, - CANADA

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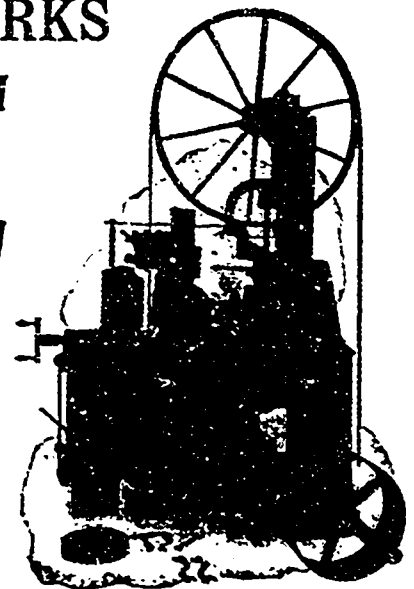
ENGINES, BOILERS

....AND....

New Mill Machinery

ETC., ETC.

... SEND FOR CATALOGUE ...



No. 1.
BAND RE-SAW.

RAVEN LAKE PORTLAND CEMENT CO.

This company has recently been organized and is beginning building operations at Raven Lake on the Grand Trunk Railway near Victoria Road Station, Victoria County, Ont., where they have over 350 acres of a marl deposit within a few feet of the railway line. They also have an excellent water power a few miles away and already have a first-class dam built. The water power will be used for the generation of electricity for driving the works. Their whole layout appears to be so arranged as to secure great economy in handling and manufacturing, and with the ever-increasing demand for Portland cement the company are starting at a very favorable time. The business offices are at 16 King Street West, Toronto.

CALIFORNIA EXCURSIONS.

The Chicago, Union Pacific and North-Western Lines are selling round trip excursion tickets at low rates to principal California points, the route of the famous "Overland Limited" the finest trans-continental train. Less than three days to California. Write for "Overland" booklet and "California Illustrated" to B. H. Bennett, general agent, 2 East King street, Toronto, Ont.

MANUFACTURE OF PIG IRON IN CANADA.—The American Iron and Steel Association has received direct from the manufacturers the statistics of the production of pig iron in Canada in the first six months of 1902. The figures show a slight increase as compared with the last half of 1901, but a very great increase as compared with the first half of that year.

In the first six months of 1902 the production of all kinds of pig iron in the whole of the Dominion amounted to 157,804 gross tons, as compared with 149,952 tons in the last half of 1901, and 95,024 tons in the first half of the year. The increase in the first half of 1902 over the last half of 1901 was 7,852 tons, or over 5 per cent., while the increase over the first half of 1901 was 62,750 tons, or over 66 per cent. Of the total production in the first half of 1902, 12,000 tons were Bessemer and low phosphorous and 57,209 tons were basic pig iron. The coke furnaces made 147,892 tons and the charcoal furnaces 9,912 tons. Neither spiegelisen nor ferromanganese has been made in Canada for several years.

The unsold iron held by Canadian pig iron manufacturers on June 30, 1902, none of which was intended for their own consumption, amounted to 37,721 gross tons, as compared with 59,472 tons on December 31, 1901, and 23,711 tons on June 30, 1901. Of the unsold iron on hand on June 30, 1902, less than 2,000 tons were made with charcoal, the remainder being coke iron.

On June 30, 1902, Canada had 14 completed blast furnaces, of which eight were in blast and six were idle. Of this total, nine were equipped to use coke for fuel, four to use charcoal, and one to use mixed charcoal and coke.

ASBESTOS IN CANADA.—The recent report of the discovery of asbestos in the Temiskaming district of Ontario has aroused considerable interest in this important Canadian industry. Last year the production of asbestos in this country amounted to more than 30,000 tons, valued at about \$750,000, the greater portion coming from Quebec, although deposits occur in the Algoma district of Ontario, in Manitoba, British Columbia and Newfoundland. While the production of the United States in asbestos is about 25,000 tons annually it is of a very inferior quality. The known asbestos deposits of Quebec, which are the chief ones now known in this country, extend from the Vermont line to some distance beyond the Chaudiere River, occurring in the Lower Silurian geological series known as the Quebec group. These mines are located in the districts of Thetford, Black Lake and Danville, the deposit being from three to six inches thick, and mining is carried on by blasting away the rock and separating the fibrous material from the walls with hammers. The value of the export of products manufactured

from Canadian asbestos last year amounted to about \$870,000, of which \$450,000 went to the United States. It is used for fireproofing cloth, for piston packing, closing joints in cylinder heads and other fittings where heat, either dry or from steam and hot water, would soon destroy a less durable substance. The lower grades are made into a felt which, on account of its non-conducting powers, is utilized in covering steam boilers, and ground into cement and paints it has a wide use for fireproofing purposes.

THE AMBITIOUS CITY.—Our Hamilton, Ont. contemporaries are telling of the growth and enlargement of the manufacturing and industrial establishments of their city during the current year, and the prospects in that direction for the coming year. The Times says:

When the record of Hamilton's growth is made up it will in all probability be found that never in the history of the city up to this year, 1902, has there been as much money spent in putting up new and enlarging existing manufacturing establishments as in the building season

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MANAGING DIRECTOR.

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TAR PRODUCTS. Refined Tar, Benzole, Solvent Naptha.

PITCH. Carbolic Acid (Crudo and Crystal), Picric and Cresylic Acids.
CREOSOTE. Green Oil, Pyridine.

NAPHTHALINE (CRUDE, PRESSED, CRYSTAL, SUBLIMED, MARBLES) CYANIDES. PRUSSIAN OF POTASH AND SODA.
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Chemicals. Sulphate of Copper. Chlorates of Potash and Soda. Calcium Carbide. Acetate of Soda. Wood Naptha. Acetone, Bichromates.
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More SOLID LEATHER to the Foot than any Belt made.

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D. K. McLAREN

Head Office and Factory, - MONTREAL.

Western Trade, - TORONTO STOCK DEPOT, 192 BAY ST.

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now drawing to a close. Even without the immense International Harvester (Deering) Works, this year's building operations will show a material advance over last year's, and much of the new work has been additions to manufactories. When good times set in a few years ago, almost all the iron working establishments in the city found it necessary to enlarge their buildings, but this year all sorts of industrial concerns have been forced to extend.

Of course the International Harvester Co. has been the greatest factor in the city's growth as a great manufacturing centre. Along in July last that company let contracts for its first set of buildings, the cost being estimated, according to Building Inspector Anderson's books, at \$95,000. Not many weeks later a second set of buildings were contracted for at an estimated cost of \$80,000, making a total of \$175,000. Since that time still a third set of buildings have been decided upon and will be erected just as soon as possible, at a large cost and more buildings still are to follow. Representatives of the giant concern state that when completed the buildings will have cost in the neighborhood of half a million dollars, but only the \$175,000 is included in this season's growth as shown by the building permit book.

Another concern that found it necessary to make large additions to its buildings is the Otis Elevator Co., whose works at the foot of Victoria avenue are rapidly nearing completion. Early in

July the company let contracts for foundry and other buildings, to cost \$15,500, and in the following month new contracts were let to the value of \$9,500, making \$25,000 in all.

One of the long-established Hamilton concerns which has grown wonderfully in recent years is the B. Greening Wire Co. Year after year it has gone on extending its premises. Early this year it put up new office buildings at a cost of something over \$4,000. Later on, but still early in the year, contracts were let for a \$4,000 addition to the wire works, and along in June another addition was decided upon at a cost of \$7,000—a total of \$15,000 for new buildings for an already very large concern.

Still another old concern, which has found it necessary to enlarge from time to time, is the Hamilton Cotton Mill Co., which quite recently let the contract for an \$8,000 addition, being the second of this year, contracts for a \$5,000 building having been let in June.

The Hamilton Bridge Co. has a \$15,000 extension under way, and has taken in an immense tract of land to accommodate its growing business. Other new buildings and extensions of others during the year are:

Howell Lithographing Co., new building, at cost of \$10,000.

Cataract Power Co., addition to power station, \$6,500.

Hamilton Whip Co., addition \$5,000.

Fowler's Canadian Co., additional buildings on Wentworth street, \$4,000.

D. Moore Mfg. Co., warehouse at foundry on Catharine street, \$4,000.

M. Brennen & Sons Co., addition \$2,500, subsequently destroyed by fire with the rest of the mill property, which is to be restored.

W. A. Freeman Fertilizer Co., repairs after fire \$2,000, and addition \$1,800.

Hamilton Distillery Co., addition, \$2,000.

Ontario Lantern Co., addition, \$1,600. Chadwick Bros., repairs, \$1,500.

Chipman Holton Knitting Co., alterations, \$1,200.

Canada Preserving Co., addition, \$1,000.

J. H. Clappison, engine packing works alterations, \$800.

And at the present time there is in sight for the near future probably more work than was done this year. This includes the Westinghouse Co's new works, in which that enterprising concern will go into the manufacture of electrical appliances on a very large scale, having purchased many acres of land for the purpose and several large new buildings for the Sawyer-Massey Co., which only a few years ago put up some of the finest, largest and most modern buildings to be found in Canada. Additional buildings for the International Harvester Co. and the Otis Elevator Co., the extension of the Tuckett tobacco factory, and several new concerns which are likely to go into business here make Hamilton's outlook at the present time brighter than ever.

A GOOD PLANER . . .

WILL SAVE ENDLESS WORK FOR FITTERS

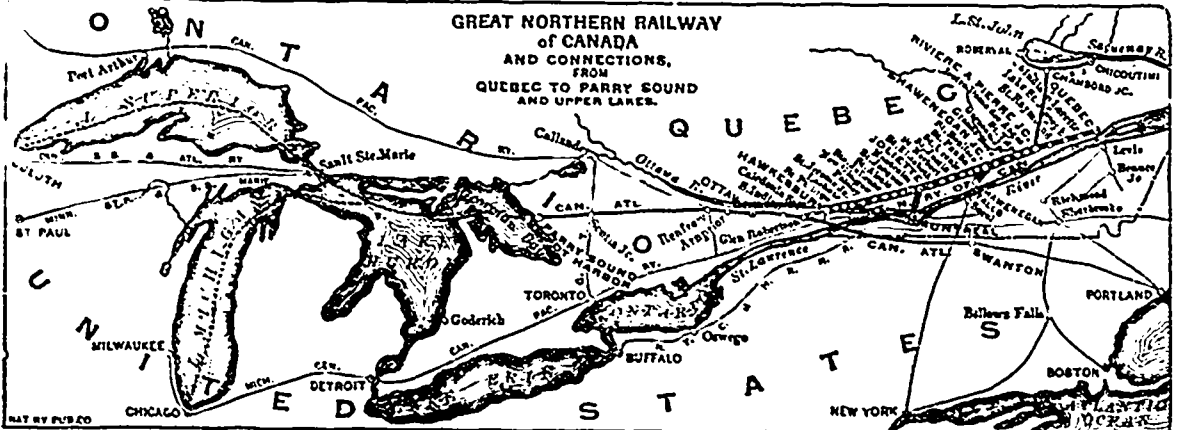
OUR TOOLS ARE OF NEWEST DESIGN THROUGHOUT

Power, strength, convenience and accuracy are to a high degree combined in their construction. Is such a combination interesting?

The R. McDOUGALL Co., Limited, - Galt, Canada.

THIS Road runs through the Forests of the Laurentian Mountains, and taps the greatest water powers of the country, and is being extended to Montreal and Ottawa.

EXCEPTIONAL opportunities for manufacturers are offered.



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OPPORTUNITIES.

The following enquiries have been received at the offices of the High Commissioner for Canada in London, and at the Canadian Section of the Imperial Institute, London, England.

NOTE.—Those who may wish to correspond with any of these enquirers can obtain the names and addresses by applying to the CANADIAN MANUFACTURER, Toronto. No charge for giving information. When writing refer to the numerals opposite the enquiries, and enclose 2c. postage stamp for reply.

872. A Scottish firm which buys buggy harness and other specialties for the trotting track, horse boots, etc., wish to get into touch with Canadian manufacturers of such goods.

873. A London firm of shipping and Colonial agents, with branches at Cape Town and Durban, desires to correspond with Canadian exporters prepared to do business with South Africa.

874. Canadian houses desiring a representative in England for the sale on commission of canned goods, meats, fruits, etc., and similar produce can be placed in communication with a gentleman who has had experience in this line.

875. A Hamburg firm already doing an import business in Canadian fish desire to extend their relations with the Dominion, and will be glad to hear from exporters in other lines of produce who require representation in Germany.

876. An English company manufacturing pumping machinery wishes to secure the services of Canadian resident agent, more particularly in British Columbia. A first-class firm desired possessing a connection in the engineering trade.

877. A Bradford house asks to be placed in touch with Canadian manufacturers of excelsior.

878. A firm of merchants possessing houses both in London and Natal wishes to hear from Canadian manufacturers of deals, doors, mouldings, shelvings, and similar lines who may desire to develop direct trade with South Africa.

INDUSTRIAL PUBLICATIONS.

The October number of the Transactions of the Canadian Institute, just issued, contains a number of interesting papers read before the Institute at its various meetings.

The Chapman Double Ball Bearing Co. of Canada, with offices at 39 Scott St., Toronto, has issued an illustrated and descriptive booklet of their new bearing system. The officers of the company are: President, Archibald Campbell, M.P., Toronto; vice-president, J. H. Tilden, of the Gurney-Tilden Co., Hamilton, Ont.; secretary, W. A. Murray, Toronto; assistant sec., James Reeves, Halifax, N.S.

The W. E. Caldwell Co., Louisville, Ky., have just issued a catalogue and price list of tanks, towers and other appliances for water pumping by wind power, which will be of interest to users of such power in this country.

The "Machine Shop" number of Casier's Magazine, of New York and London, just issued, will be found of great interest by all those interested in mechanical work.

Both Ornamental..... and Practical

We make all kinds of Architectural Sheet Metal Work.

Fanciful Designs for effective finish in any desired style, as well as every variety of fireproof metal covering, suited to old or new buildings of any and every description.

Our goods are foremost among practically popular lines for decorative finish and superior utility—their reliable merit fully proved by conclusive tests.

**METALLIC CEILINGS, CORRUGATED IRON,
FANCY EMBELLISHMENTS, SKYLIGHTS, VENTILATORS,
SHINGLES, CORNICES, SIDING, LATHING,
And Many Other Lines Certain to Give Satisfaction.**

Consult our catalogue for full details.

METALLIC ROOFING CO., Limited
TORONTO WINNIPEG MONTREAL

A very tasty little booklet has just been issued by the American Blower Co., Detroit, Mich., entitled "At Home." It shows a bird's eye view of the plant and several photographs of the various departments. It is issued, as the preface announces, merely to acquaint the company's friends and patrons with its unequalled manufacturing facilities.

An excellently engraved and printed catalogue has just come from the Port Huron Air Tool Co., Port Huron, Mich. The company says in its preface to the catalogue that it cheerfully looks into the requirements of its consumers and designs and builds accordingly. It also designs air appliances for all classes of work and erects the same, such as jib cranes, stationary motors and traveling cranes. The half-tones which illustrate the book are carefully vignetted and show compressed air, motors, motor hoists, drills and hammers.

The Consolidated Electric Co., Toronto, has issued circulars descriptive of their King Edward dynamo and motor.

The Canadian Corundum Wheel Co., Hamilton, has just issued a handsome illustrated price list and catalogue of the various abrasive materials which they manufacture from Canadian corundum. The catalogue is in the form of a corundum wheel bearing the trade mark of the

firm. This company is the pioneer manufacturer of abrasives from strictly Canadian corundum.

Catalogue A of the Packard Electric Co., St. Catharines, Ont., deals with the various types of Packard lamps, which are all fully described and illustrated. Another catalogue issued by the same company deals with the new type "G" Scheeffler Recording Watt Meter.

The Hamilton Motor Co., Hamilton, Ont., is distributing printed matter descriptive of the type of motors which it builds.

The Watertown Engine Co., Watertown, N.Y., has issued an attractive illustrated catalogue descriptive of "Watertown" steam engines.

The Canadian Steel & Coal Co., which is being financed by the Colonial Securities Co. of New York, has issued a prospectus giving details of its plans.

The Canadian Thresherman Publishing Co., which is to engage in the business of publishing an implement and agricultural paper at Winnipeg, has received its letters patent. A new building has been erected for this company in which to carry on its business.

The Wire-Woven-Wood Mfg. Co., Toronto, has just issued a descriptive and illustrated catalogue and price list of their line of wire-woven baskets and trucks, which they will mail upon request.

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MARKETS.

This Department of THE CANADIAN MANUFACTURER is devoted to the interests of the Hardware Trade.

THE CANADIAN MANUFACTURER is distributed to the Wholesale and Retail dealers in Hardware, to manufacturers of Agricultural Implements, of Iron and Wood-working Machinery, of Electrical Appliances, of Steam Engines and Boilers, to Engineers and Foundrymen, and to Dealers in Machinery and Steam Fitters' Supplies throughout Canada. There are more than 10,000 manufacturing concerns in Canada which use Steam as a Motive Power. We reach them all. Every recipient of this paper is a buyer of Hardware of one kind or another; and Advertisers will do well to bear this in mind.

Following are reports and observations relating to the markets of Canada and elsewhere, having reference to Hardware, Metals, Paints, Oils and such specialties as are usually handled by Jobbers and dealers in such goods. Following these items will be found current market quotations on such goods, and the trade are requested to suggest to the publishers any improvements by which it is believed the quotations may be rendered as correct and valuable as possible.

Toronto, November 21, 1902.

The leading manufacturers, as well as most of the hardware and metal dealers report a fair run of business. The demand for nearly all metal product continues quite active. The pig iron sales during the last week or so have been heavy, the prices of the Scotch and English product having declined slightly. Canadian hardware dealers are enjoying a lively business and altogether the metal industries are in a prosperous condition. The fuel supply, so far as concerns the manufacturing industries, has been improving greatly during the past few weeks, and while the prices of coal and coke are maintained at a high figure the supply is very satisfactory.

THE TORONTO MARKET.—In metals there is a fair demand. Prices are mostly steady to firm. There is talk of the formation of a thirty million dollar trust in the manufacture of axes and tools. It is reported the National Tube Co. is getting ready to slash prices in pipes to drive smaller concerns to the wall. Barbed Wire—\$2.67½ to \$2.90 per 100 lbs.

Binder Twine—650 ft., 15c; 600 ft., 14c; sisal, 500 ft., 11½c.

Building Paper—Dry sheathing, 35c; tar sheathing, 45c.

Bolts and Nuts—Carriage bolts, common, \$1 list, 50 per cent.; carriage bolts, full square, \$2.40 list, 55 and 10 per cent.; carriage bolts, Norway iron, \$3 list, 55 and 10 per cent.; machine bolts, all sizes, 50 and 10 per cent.; coach screws, 66½ and 10 per cent.

Cement—Canadian Portland, \$2.80 to \$3.20; Canadian hydraulic cements, \$1.35 and upwards.

Cut Nails—\$2.40 to \$2.50.

Galvanized Wire—Nos. 6, 7 and 8, \$3.20; No. 9, \$2.55; No. 10, \$3.50; No. 11, \$3.40; No. 12, \$2.70; No. 13, \$2.80; No. 14, \$3.80; No. 15, \$4.30; No. 16, \$4.55.

Green Wire Cloth—\$1.40 per 100 square feet.

Harvest Tools—60 and 10 per cent.

Horse Nails—"C" brand, oval, 40, 10 and 7½ per cent.; "M" brand, 50, 10 and 5 per cent. off; countersunk, 60 p.c.

Horseshoes—No. 2 iron shoes, light, medium and heavy, \$3.45 f.o.b.; snowshoes, \$3.70.

Iron pipe—Black, 1 inch, \$5.20; galvanized, 1 inch, \$7.20.

Poultry Netting—2-inch mesh, 19 w.g., 60 per cent. off the list; 2-inch mesh, 18 w.g. and heavier, 50 and 10 per cent.

Rope—Pure Manila, 15c; sisal, 12½c; British Manila, 13c, lath yarn, 11½c to 12c.

Rivets and Burrs—Iron rivets, 60 and 10 per cent.; iron burrs, 55 per cent.; copper burrs, 30 and 10 per cent.; copper rivets and burrs, 45.

Smooth Steel Wire—Base price, \$2.60 per 100 lbs.; fine steel wire, 25 per cent.

Spades and Shovels—40 and 5 per cent.

Wire Nails—Base price, \$2.50 to \$2.55.

Screws—Flat head, bright, 87½ and 10 per cent. off the list; round head, bright, 82½ and 10; flat head, brass, 80 and 10 per cent.; round head, brass, 75 and 10 per cent.; flat head, bronze, 70 per cent.; round head, bronze, 65 per cent.

Old Material—Agricultural scrap, 60c; machinery cast, \$14 to \$15; stove plate, \$10; No. 1 wrought, \$13 per ton; No. 2, \$4.50; new light scrap copper, 8c to 8½c; coil wire, scrap, 10c; light brass, 5c to 5½c; heavy yellow brass, 8c to 8½c; heavy red brass, 9½c; scrap lead, 2c to 2½c; zinc, 3c; scrap rubber, 6½c; good country mixed rags, 50c.

Antimony—9c per lb.

Bar Iron—Price for Common, \$2.05 up per 100 lbs.

Black Sheets—28-gauge, \$3.15; dead flat, 26-gauge, \$2.50.

Brass—Sheet and rod, discount 15 per cent.

Canada Plates—All dull, \$2.90 to \$3 per box; half-polished, \$2.85 to \$3.10, and all bright, \$3.75 to \$3.85.

Copper—Ingot copper at 13c per lb., and 22c to 23c for sheet.

Galvanized Sheets—\$4.30 to \$4.50.

Lead Pipe—Discount 35 per cent.

Pig Iron—No. 1, \$23; No. 2, \$22.50.

Pig Tin—31c to 32c.

Pig Lead—3½c to 3¾c.

Solder—Half and half, 20c; refined, 19c; wiping, 18½c.

Tool Steel—B. C. and black diamond, 10c to 11c.

Spelter—5c to 6c per lb.

Tin Plates—I. C., \$4.75 to \$5; cokes, \$4.25.

Terne Plates—\$8.50.

Tinned Sheets—7½c to 8c.

Zinc Sheets—6c to 6½c.

THE MONTREAL MARKET.—The only change reported during the week was a decline of ½ to 1c a pound in the price of cordage.

The market is generally firm, and demand continues active.

Following are the quotations on the principal lines, corrected to date:

Bar Iron—Merchants' bar, \$1.95 per 100 lbs., in small quantities.

Black Sheets—\$2.40 for 8 and 16 gauge per 100 lbs.

Galvanized Iron—No. 28, Queen's Head, \$4.40; Apollo, 10½ ounces, \$4.40, and Comet, \$4.25, with 25c extra in less than case lots.

Ingot Tin—31c per lb.

Lead—\$3.25 per 100 lbs.

Terne Plates—\$7.50 per box.

Lead Pipe—7c for ordinary, and 8c for composition waste, with 37½ per cent. off.

SMALL BOILER FEEDER
HYDRAULIC PRESSURE PUMP
LARGE BOILER FEEDER
MARSH
STEAM PUMPS
STANDARD FOR ALL DUTIES
MANUFACTURED BY AMERICAN STEAM PUMP CO.
BATTLE CREEK MICH.
PATENT SELF-FERRING STEAM VALVE
PATENT EAST SEATING WATER VALVES
NO. OUTSIDE VALVE GEAR
FOR KEEP WELLS
50,000 SOLD IN 13 YEARS
MAXIMUM OF STRENGTH AND SERVICE
WRITE FOR NO. 11 CATALOGUE
LARGE TANK
COMPOUND

Canadian Agents **The A. R. WILLIAMS MACHINERY CO. LIMITED**
Head Office, - - - TORONTO
Branch Office—MONTREAL

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Iron Pipe—Black pipe, $\frac{1}{2}$, \$2.40 per 100 feet; $\frac{3}{4}$, \$2.65; 1, \$3; $1\frac{1}{4}$, \$3.70; 1 inch, \$5.25; $1\frac{1}{2}$, \$7.40; 2, \$8.90; 2 inches, \$12.40; galvanized $\frac{1}{2}$, \$4; $\frac{3}{4}$, \$5.05; 1 inch, \$7.25; $1\frac{1}{2}$, \$10.10; 2, \$12.15; 2 inches, \$16.70.

Coil Chain—No. 6, $12\frac{1}{2}$ c; No. 5, $10\frac{1}{2}$ c; No. 4, 10c; No. 3, $9\frac{1}{2}$ c; $\frac{1}{2}$ inch, $7\frac{1}{2}$ c per lb.; 5-16, \$5.05; 3-5, \$4.40; 7-16, \$4.20; $\frac{1}{2}$, \$4; 9-16, \$3.95; $\frac{3}{4}$, \$3.70; 1, \$3.65; $\frac{1}{2}$, \$3.65; 1, \$3.65. In carload lots an allowance of 10c is made.

Sheet Zinc—In cask lots, \$5.50; in less, \$5.75.

Antimony—10c a lb.

Tinplates—\$4.25 for coke; \$4.75 to \$5.25 for charcoal.

Canada Plates—52's, \$2.70 to \$2.80; 60's, \$2.80 to \$2.90; 75's, \$2.80 to \$2.85; full polished, \$3.75; and galvanized, \$4.25 to \$4.35.

Tool Steel—Black Diamond, 8c; Jessops, 13c a lb.

Steel—Sleighshoe, \$2.20; tire, \$2.30; spring, \$3; reeled machinery, \$2.85, and too calk, \$2.90.

Barbed Wire—\$2.90 per 100 lbs f.o.b. Montreal in less than car lots.

Horseshoes—Iron shoes, light and medium patterns, No. 2 and larger, \$3.35; No. 1 and smaller, \$3.60; snowshoes, No. 2 and larger, \$3.60; No. 1 and smaller, \$3.85; X.L. steel shoes, all sizes, 1 to 5. No. 2 and larger, \$3.45; No. 1 and smaller, \$3.70; featherweight, all sizes, \$5; toe weight steel shoes, all sizes, \$6.25 f.o.b.

Horse Nails—Discount of $57\frac{1}{2}$ per cent. on oval heads, and 65 per cent. on countersunk heads; C brand, discount of 40, 10, $7\frac{1}{2}$ per cent.

Wire Nails—\$2.55 in small lots, and \$2.50 for car lots, f.o.b. Montreal.

Cut Nails—\$2.45 for small lots, and \$2.40 for car lots.

Building Paper—Tarred felt, \$1.70 per 100 lbs.; 2-ply ready roofing, 85c per roll; 3-ply, \$1.10 per roll; carpet felt, \$2.25 per 100 lbs.; dry sheathing, 35c per roll; tar sheathing, 45c per roll; dry fibre, 50c per roll; tarred fibre, 60c per roll; O.K. and I.X.L., 65c. per roll; heavy straw sheathing, \$30 per ton; slaters' felt, 60c per roll.

Cordage—Manila, 14c per lb for 7-16 and large; sisal, 12c per lb., and lath-yarn, 11c lb.

Scythes—Cast steel, \$5; Clipper, \$6; Climax, \$6.50; concave, \$7; grain, \$10; bush., \$6.

Galvanized Wire—No. 5, \$3.70; 6, \$3.15; 7, \$3.15; 8, \$3.15; No. 9, \$2.65; No. 10, \$3.20; No. 11, \$3.25; No. 12, \$2.80; No. 13, \$2.90; No. 14, \$3.75.

Smooth Steel Wire—Bright iron and annealed on a base of \$2.60 per 100 lbs., f.o.b. Montreal, Toronto, Halifax, London, Hamilton and St. John. Net extras per 100 lbs. are as follows. Coppered wire, 60c; tinned wire, \$2; oiling, 10c; spring wire, \$1.25; best steel wire, 75c; bright, soft drawn, 15c; special hay-baling wire, 30c.

Fine Wire—The discount is 25 per cent.

Brass and Copper Wire—Discount, $52\frac{1}{2}$ per cent.

Fence Staples—Bright staples sell for \$2.90 per 100 lb. keg, and galvanized at

“SCIOTO” FIRE BRICKS

are the best. WHY NOT USE THEM?

More extensively imported into Canada than any others made in the United States. One million now sold for Spring delivery to Ontario. Special inducements. Write to-day.

MANUFACTURED BY

THE SCIOTO FIRE BRICK COMPANY, - Sciotoville, Ohio, U.S.A.

—One of the oldest firms in the States—

Canadian Representative: **STANYON ENGINEERING CO., 402 McKinnon Bldg., Toronto, Ont.**

ALEX. GARTSHORE, President. J. G. ALLAN, Sec.-Treas. JAB. THOMSON, Vice-Pres. and Gen. Mngt.

THE GARTSHORE-THOMSON PIPE & FOUNDRY CO. Limited



3 in. to 60 in. diameter.

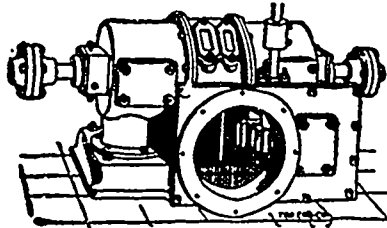
For Water, Gas, Culverts and Sewers

Special Castings and all kinds of

FLEXIBLE AND FLANGE PIPE.

WATER WORKS SUPPLIES

HAMILTON, ONT.



Horizontal Type.

“LITTLE GIANT” TURBINE

....FOR ALL PURPOSES....

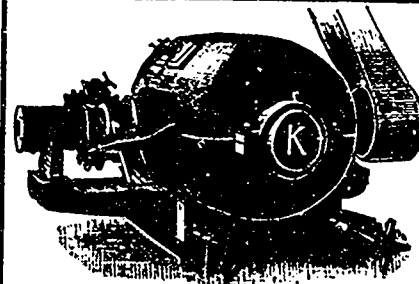
HORIZONTAL AND VERTICAL
BUILT IN 44 SIZES.

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

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

Correspondence Solicited.

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



Special Attention Given to Electrical Repairing.

THE KAY ELECTRIC DYNAMO & MOTOR COMPANY, Limited

219-221 Queen St. East,

Manufacturers of — TORONTO, ONT.

MULTI-POLAR MOTORS.

BI-POLE MOTORS

ALTERNATING CURRENT MOTORS.

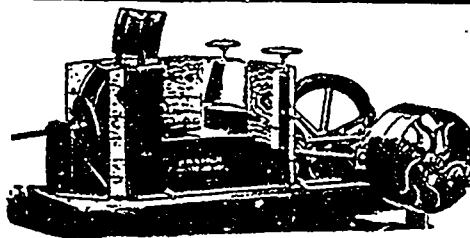
INDUCTION MOTORS.

DYNAMOS for Incandescent and Arc Lighting.

DYNAMOS for Electro-plating and Electrotyping.

ELECTRIC CONTROLLERS for Elevators.

ELECTRIC ORGAN BLOWERS.



H. W. KARCH

HESPELER, ONT.

IRON FOUNDER and MACHINIST

Manufacturer of

WOOLEN MACHINERY,

Rotary Fulling Mills, Kieker Fulling Mills, Soaping Machines,
Cloth Washers, Wool and Waste Dusters, Rag Dusters, Drum Spool Winders
Reels, Spooling and Doubling Machines, Ring Twisters, Card Creels
Dead Spindle Spooler for Warp or Dresser Spools,
Patent Double-Acting Gig Dyeing Machines.

tea, the next largest item being cotton manufactures, which last year amounted to \$495,000.

CANADIANS MAY EXHIBIT.—Information of interest to Canadian manufacturers is given in a letter from Mr. Wm. Hutchison, Dominion Exhibition commissioner, to the secretary of the Toronto Board of Trade. It is in answer to a question from the board for particulars as to what the Government proposed to do officially at exhibitions to be held in South Africa, Japan and St. Louis.

Mr. Hutchison states that two exhibitions are to be held in South Africa, at Cape Town in 1903 and Johannesburg in 1904, but he is unable to state what the Government will do in respect to these. The department is at present in communication with Lord Strathcona regarding them.

At the Exhibition at Osaka, Japan, next year, the Government will be represented and will occupy its own building. There will be a large display in the departments of agriculture and fruits, and the balance of the space, which will be limited, will be allotted to Canadian manufactures.

The Government has in preparation for the St. Louis Exposition a large display in the departments of agriculture, horticulture, forestry and minerals. These will be displayed collectively, but for Canadian manufactured articles the rules preclude a collective display. These will be arranged in groups, and each article

will be shown in the group to which it belongs. Space to manufacturers will be allotted free if application is made through the Department of Exhibitions.

ALCOHOL FROM ACETYLENE.—The producers of alcohol in France are somewhat disturbed because of the new invention by which alcohol is manufactured by synthesis by means of acetylene. Although the process is as yet too costly to endanger their industry, the members of the Society of Agriculture of the Nord, in a recent meeting, issued the following recommendation:

Considering the facts that alcohol manufactured from fruit and agricultural distilleries can be replaced by mineral fabrication by means of carburet;

That these carburets can be produced economically only in foreign countries possessing powerful waterfalls and special minerals;

That this manufacture will ruin the distillation of roots, grains and fruits, to the exclusive profit of foreign countries;

The Society of Agriculture of the Nord recommends that a tariff of 50 francs (\$9.65) per 100 kilograms (220.46 pounds) be placed on the carburets from foreign countries which are to be used for the manufacture of acetylene.

PETROLEUM AS A FUEL.—The utilization of petroleum for fuel and other commercial purposes is being more widely adopted, comparatively speaking, in the little European state of Roumania, than

in many other larger and more important countries, according to an exchange. Nearly all the sugar mills, distilleries, gas works, hospitals and manufactories in Roumania now use petroleum refuse as fuel, as well as the state railways, upon which it is employed largely for the locomotives. During the last two years the price of British coal, which was formerly almost exclusively used in the manufactories, has mounted to about \$10 per ton. Considering that the heating effect of petroleum residue is about one and a half times that of coal, and taking the price of coal at \$10 per ton, the comparative value of petroleum residue is equivalent to \$15 per ton. The average price of residuum, however, is about \$8, and crude petroleum, \$7 per ton. It is proposed to hold a petroleum congress at Bucharest in 1903. Before the congress will be laid geological maps of Roumania, showing the petroliferous zones, worked and unworked; maps showing the salt, lignite, coal and quarries existing in the country; tables explaining the growth and development of the petroleum industry, a series of geological sections of the most important works and soundings, analyses of the chemical and industrial properties of the petroleum, photographs of the chief refineries and workshops, a series of geological sections of the valleys, plans of injectors in service for the use of petroleum as a combustible as employed by the Roumanian state railways and navigation societies, and a map showing the geographical position of Roumania in

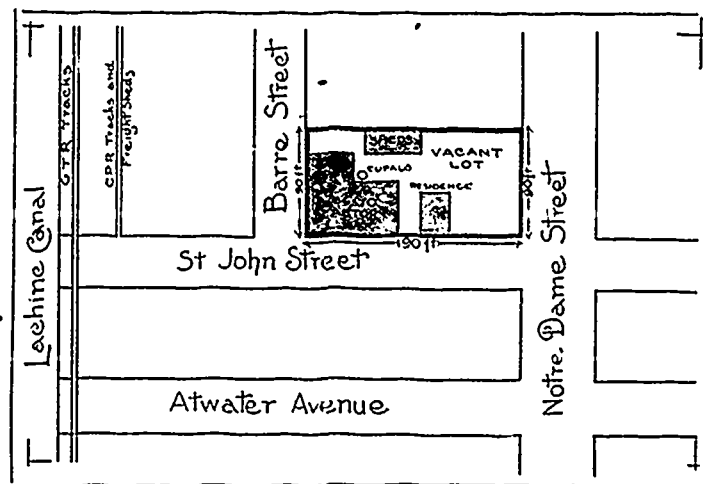
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regard to other countries, buyers of petroleum, the means and cost of transport, besides other matters of importance bearing on the subject of petroleum.

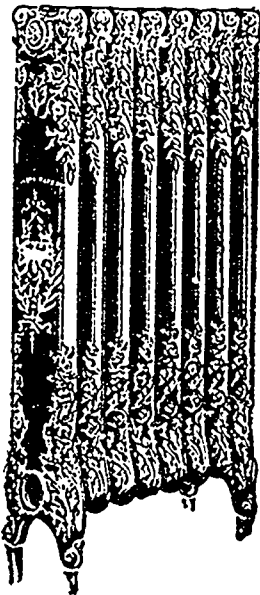
AN IMPORTANT TRADE MARK RULING.

—General Spaulding, assistant secretary of the United States Treasury, has recently issued a ruling which would be of considerable interest to Canadian manufacturers were a similar ruling observed in this country. In the United States ruling it is pointed out a method whereby manufacturers of patented articles may, in a measure, protect themselves against the importations of infringements of such articles, and yet not take such matters into court. This ruling was the result of a number of applications that have reached the Treasury Department, asking that custom offices at various ports be instructed to refuse admittance to such articles. There is a law making such an action possible, but attention is called to the fact that under section 11 of the tariff act is provided a partial remedy. That act reads as follows:—"That no article of imported merchandise which shall copy or simulate the name or trademark of any domestic manufacture or manufacturer, or which shall bear a name or make which is calculated to lead the public to believe that the article is manufactured in the United States, shall be admitted to entry at any customs house of the United States. And in order to aid the officers of the customs in enforcing this prohibition, any domestic manufacturer who has adopted trade marks, may require his name and residence and a

description of his trade mark to be recorded in books which shall be kept for that purpose in the Department of the Treasury, under such regulations as the Secretary of the Treasury may prescribe, and may furnish to the department facsimiles of such trade marks, and thereupon the Secretary of the Treasury shall cause one or more copies of the same to be transmitted to each collector or other officer of the customs." General Spaulding suggests that owners of patented articles shall adopt a trade mark, which may be registered as provided in the section quoted above, and while it must be conceded that a trade mark will not protect every infringement, which must be prosecuted in the courts, still it is believed that the publicity which will thus be gained will be such a protection that infringers will not find it profitable to attempt to import goods which may be otherwise identical, but which cannot be imported under or otherwise use the trade mark. It must be borne in mind, however, that this registration of a trade mark or a proprietary name, will not prevent the importation of goods under the same trade mark, if the manufacturer of such goods has the right to use it, the department taking the position that the law is intended to protect the consumer from fraudulent importations, and not to prevent the exclusion of genuine articles manufactured abroad by parties who have a right, by purchase, license or otherwise, to use the trade mark. The best way to obtain the benefit of the act above quoted, is to send to the Secretary of the Treasury a dozen

printed copies of the registration papers published by the patent office. These copies can be had for five cents each and being official documents, carry with them considerable prestige, and besides, gives just the information the collectors of customs want.

NEW PROCESS OF BRICKMAKING.—An industry of a most staple character is well within view for the city of Toronto. It is for the manufacture of brick facings for buildings and pavements in accordance with a new process invented by William Owen, of London, England, who was in Toronto a few days ago to complete negotiations having to do with the disposal of the patent right of his invention for Canada. Mr. Owen's negotiations are with Hon. George E. Foster, who has interested himself in this new process and it is the intention of Mr. Foster and others associated with him to erect an establishment in Toronto or vicinity for manufacturing operations. Mr. Owen stated that brick was now being manufactured by his process in England and in South Australia with satisfactory results. Only lime, sand and a moist heat were used in the process. It was the simplicity of the invention upon which its value was largely based. While the ordinary clay brick took four or five days to make, by his process it only takes four or five hours. The making of the brick and other forms was altogether automatic, the moulds being filled mechanically with the material, which, after being pressed and dried, was ejected and carried away by additional automatic means.



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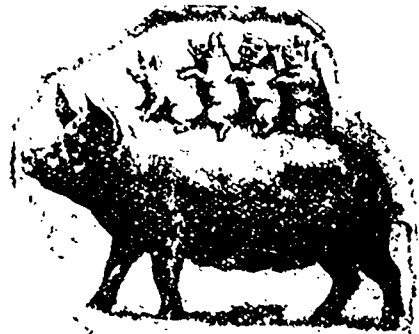
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STEEL RAIL CONTRACTS.—Messrs. Mackenzie & Mann have just closed a contract with Mr. Gerald Lomer, of Montreal, acting on behalf of German makers, for about 40,000 tons of steel rails and fastenings for their requirements on the Canadian Northern and their Nova Scotian roads. Other contracts for very large quantities of steel rails have recently been placed by the Grand Trunk and Canadian Pacific Railways, the latter including a large contract for shipment round the Horn to Vancouver. German makers are also doing a very large business in steel rails, through their Canadian agency, to Mexico and Central America, also to gulf ports in the United States. At the same time it is stated that the German State railways are now arranging the relaying of their roads with heavier rails, which will undoubtedly soon put a stop to the possibility of further export business.

THE NON-ADVERTISER.—My friend, have you heard of the town of Yawn, on the banks of the River Slow, where blooms the Waitavhile flower fair, where the Sometimeorother scents the air, and the soft Goeasys grow? It lies in the valley of Whatstheuse, in the province of Letherslide; that tired feeling is native there, it's the home of the listless Idontcare, where the Putitoffs abide. The Putitoffs smile when asked to invest, and say they will do it to-morrow; and so they delay from day unto day, till death cycles up and steals them away, and their families beg, steal or borrow.

PAPER COSTS RAILROADS MORE THAN STEEL RAILS.—The average railroad company spends more money every year for paper than it spends for steel rails, says an exchange. This statement may seem incredible, but any railroad man, or anyone who has had the least experience in railroad work, or has seen the routine of a vast railroad system, will accept it without hesitation.

Every time that a railroad official writes an order, paper is used. An enormous amount of correspondence goes out of railroad offices. Every time a circular or a time card is issued there is a fresh requisition upon the paper mills. In fact, paper is as necessary a requisite to a railroad as engines and cars. A railroad could no more get along without it than they could get along without steam.

By way of illustrating for what the paper is used, it is said that every time the Illinois Central Railroad issues a time card, 15,000 copies are used; the company issues a new time card about every month. Every time a trainman makes a trip, a large sheet of paper is used to keep his record.

WIRELESS TELEGRAPHY.—Mr. J. N. Greenshields, solicitor for the Marconi Wireless Telegraph Co., while in Victoria, B.C., a few days ago, announced that the company is about to establish a system of wireless telegraphy across the Dominion of Canada. He said that not only would the company operate a system of wireless telegraphy across the ocean, but also a

land line across the continent from Cape Breton to Victoria. Stations will be erected at many points in the Dominion, and all the principal cities and towns of Canada will be included in the system, the principal stations being at Halifax, St. John, Quebec, Montreal, Toronto, Hamilton, Kingston, London, Sault Ste. Marie, Port Arthur, Winnipeg, Regina, Calgary, Revelstoke, Kamloops, Vancouver and Victoria. The savings of tolls will be great when the system is in vogue, for press messages will be sent for one-half the present prices, and there will be a reduction of 60 per cent. on commercial messages. He says there is no longer any doubt regarding the success of the Marconi system, and the official announcement to this effect can be expected at any time.

CHEMISTS FOR MANUFACTURING CONCERNS.—A chemist and a laboratory are now necessary adjuncts of many manufacturing businesses. It pays to have such scientific appliances. Take, for instance, a large brass foundry buying thirty tons of copper per month. The chemist would earn a good part of his salary were he to show that the purchased copper contained, say 1½ per cent. zinc. Of course zinc would be added anyhow to make the brass alloy, but the difference between thirty tons of copper per month of pure metal, and thirty tons with 1½ per cent. zinc would represent in New York over \$1,500 annually. And so it is in other metallurgical operations.

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Syracuse Smelting Works, Montreal.

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Tallman, J. N., & Sons, Hamilton, Ont.

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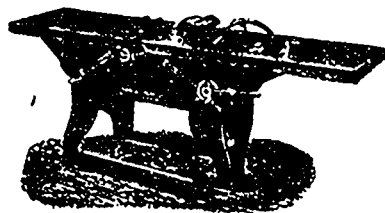
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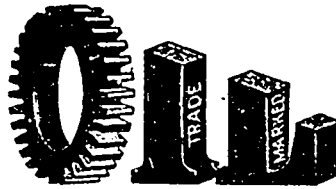
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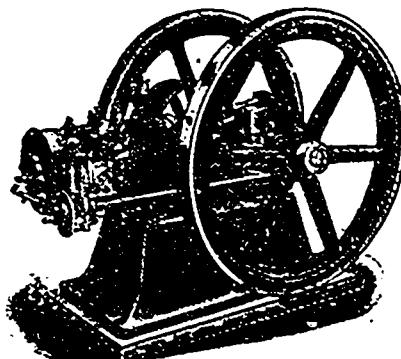
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Queen City Oil Co., Toronto.

Machinists.

Worth & Martin, Toronto.

Machinists' Supplies

Armstrong Mfg. Co., Bridgeport, Conn.
Butterfield & Co., Rock Island, Que.
Goldie & McCulloch Co., Galt, Ont.
Morrow, John, Machine Screw Co., Ingersoll, Ont.
Petrie, H. W., Toronto.
Worth & Martin, Toronto.

Machine Tools

Bertram, John, & Sons Co., Dundas, Ont.
Petrie, H. W., Toronto.

Malleable Iron Castings

Frost, Wm. H., Smith's Falls, Ont.
McKinnon Dash & Metal Works Co., St. Catharines, Ont.
Ontario Malleable Iron Co., Oshawa, Ont.
Walkerville Malleable Iron Co., Ltd., Walkerville, Ont.

Metal Specialties

Brantford Plating Co., Brantford, Ont.
Rehder Plating & Mfg. Co., Thorold, Ont.

Mill Machinery and Supplies

Armstrong Mfg. Co., Bridgeport, Conn.
Cooper, James, Mfg. Co., Montreal.
Cowan & Co., Galt, Ont.
Darling Bros., Montreal.
Fleming, W. A., & Co., Montreal.
Gartshore, John J., Toronto.
Goldie & McCulloch Co., Galt, Ont.
Hamilton Brass Mfg. Co., Hamilton, Ont.
Hay, Peter, Galt, Ont.
Jencks Machine Co., Sherbrooke, Que.
Karch, H. W., Hespeler, Ont.
Laurie Engine Co., Montreal.
London Machine Tool Co., London, Ont.
McDougall, R. Co., Galt, Ont.
Morrow, John, Machine Screw Co., Ingersoll, Ont.
Petrie, H. W., Toronto.
Rico Lewis & Son, Toronto.
Samuel, M. & L., Benjamin & Co., Toronto.
Spence, R. & Co., Hamilton, Ont.
Wilson, J. C., & Co., Glenora, Ont.

Mineral Lands

Commissioner of Crown Lands, Toronto.

Motors and Dynamos

Canadian General Electric Co., Toronto.
Electrical Construction Co., London, Ont.
Forman, John, Montreal.
Geo Electrical Engineering Co., Toronto.
Jones & Moore Electric Co., Toronto.
Kay Electric Dynamo and Motor Co., Toronto.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.

Novelty Manufacturers.

Worth & Martin, Toronto.

Office Furniture and Supplies

Canadian Office & School Furniture Co., Preston, Ont.
Morton Co., Toronto.

Oils and Lubricants

Dixon, Jos., Crucible Co., Jersey City, N.J.
Fleming, W. A., & Co., Montreal.
Imperial Oil Co., Petrolia, Ont.
Queen City Oil Co., Toronto.

Oil Filters

Burt Mfg. Co., Akron, Ohio.

Paints and Colors

Bellhouse, Dillon & Co., Montreal.
Russell Color Co., New York City.
Fleming, W. A., & Co., Montreal.
Keller, John J., & Co., New York City.
Kilpstein, A., & Co., New York City.
McArthur, Cornelio & Co., Montreal.
Schoellkopf, Hartford & Hanna Co., Buffalo, N.Y.
Wright & Dallrn, Hamilton, Ont.
Zanzibar Paint Co., Toronto.

Paper Manufacturers

Barber, Wm., & Bros., Georgetown, Ont.
Kinleith Paper Co., St. Catharines, Ont.
Toronto Paper Mfg. Co., Cornwall, Ont.

Patents

Budden, Hanbury A., Montreal.
Case, Egerton R., Toronto.
Fetherstonbaugh & Co., Toronto.

Stanyon Engineering Co.,

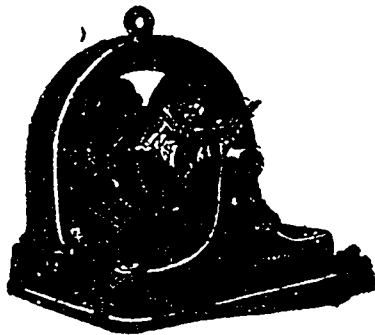
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Bourne-Fuller Co., Cleveland, Ohio.
Canada Iron Furnace Co., Montreal.
Deseronto Iron Co., Deseronto, Ont.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Samuel, M. & L. Benjamin & Co., Toronto.

Pipe Threading Machines

Armstrong Mfg. Co., Bridgeport, Conn.
Rico Lewis & Son, Toronto.

Pipes and Tubes

Bourne-Fuller Co., Cleveland, Ohio.
Canada Foundry Co., Toronto.
Gartshore-Thomson Pipe & Foundry Co., Hamilton, Ont.
Montreal Pipe Foundry Co., Montreal.
Rico Lewis & Son, Toronto.
Samuel, M. & L. Benjamin & Co., Toronto.

Plaster

Albert Mfg. Co., Hillsborough, N.B.

Plates

Bourne-Fuller Co., Cleveland, Ohio.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Rico Lewis & Son, Toronto.
Samuel, M. & L. Benjamin & Co., Toronto.

Plating

Brantford Plating Co., Brantford, Ont.
Rehder Plating & Mfg. Co., Thorold, Ont.

Pneumatic Tools

Cooper, James, Mfg. Co., Montreal.
Jenckes Machine Co., Sherbrooke, Que.

Portland Cement

Canadian Portland Cement Co., Deseronto, Ont.
Hyde, F. & Co., Montreal.
Owen Sound Portland Cement Co., Owen Sound, Ont.
Lathbin Co., Toronto.
St. Lawrence Portland Cement Co., Montreal.

Power—Electric and Water

Central Canada Power Co., Peterboro, Ont.
Great Northern Railway of Canada, Quebec.

Power Plants—Equipments

American Steam Gauge & Valve Mfg. Co., Boston, Mass.
Buffalo Forge Co., Buffalo, N.Y.
Canadian General Electric Co., Toronto.
Cooper, James, Mfg. Co., Montreal.
Electrical Construction Co., London, Ont.
Geo Electrical Engineering Co., Toronto.
Goldie & McCulloch, Galt, Ont.
Jenckes Machine Co., Sherbrooke, Que.
Jones & Moore Electric Co., Toronto.
Kay Electric Dynamo & Motor Co., Toronto.
Northey Co., Toronto.
Perrin, Wm. R. & Co., Toronto.
Phillips, Eugene F. Electrical Works, Montreal.
Robb Engineering Co., Amherst, N.S.
Stanyon Engineering Co., Toronto.
Sturtevant, B. F., Co., Boston, Mass.
Toronto & Hamilton Electric Co., Hamilton, Ont.
United Electric Co., Toronto.
Wilson, J. C., & Co., Glenora, Ont.

Precious Stones

Wickramanayaka, J., & Co., Kalutara, Ceylon, India.

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Dodge Mfg. Co., Toronto.
Goldie & McCulloch Co., Galt, Ont.
Wilson, J. C., & Co., Glenora, Ont.

Pulp and Saw Mill Sites

Great Northern Railway of Canada, Quebec.

Purifiers

Cowan & Co., Galt, Ont.
Goldie & McCulloch Co., Galt, Ont.

Railroads

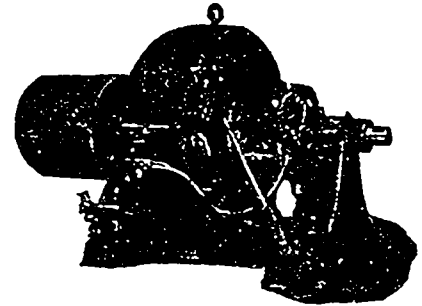
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Chicago & North-Western Ry., Toronto & St. Paul, Minn.
Great Northern Railway of Canada, Quebec.

Railway Supplies

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Canada Switch & Spring Co., Montreal.
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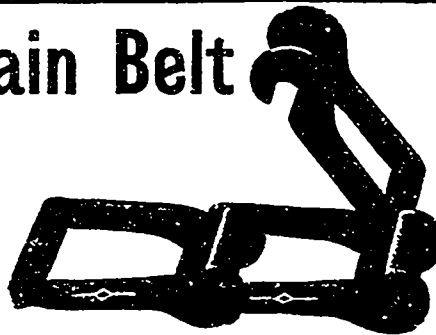
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Metallic Roofing Co., Toronto.

Rubber Goods

Gutta Percha & Rubber Mfg. Co., Toronto.

Shafting

Bourne-Fuller Co., Cleveland, Ohio.
Nova Scotia Steel & Coal Co., New Glasgow, N.S.
Petrie, H. W., Toronto.

Shear Knives

Hay, Peter, Galt, Ont.

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Samuel, M. & L. Benjamin & Co., Toronto.

Silica Brick

Buckner, R. E. H., Toronto.
Dougall, James, & Sons, Bonnybridge, Scotland.

Steam Gauges

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American Steam Pump Co., Battle Creek, Mich.
Crosby Steam Gauge & Valve Co., Boston, Mass.
Northey Co., Toronto.
Williams, A. R., Machinery Co., Toronto.

Steam Pumps

American Steam Pump Co., Battle Creek, Mich.
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American Steam Pump Co., Battle Creek, Mich.
Crosby Steam Gauge & Valve Co., Boston, Mass.
Kerr Engine Co., Walkerville, Ont.
Williams, A. R., Machinery Co., Toronto.

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Toos

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Canadian Colored Cotton Mills Co., Montreal.
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Dominion Oil Cloth Co., Montreal.
Hamilton Cotton Co., Hamilton, Ont.
Morrice, D., Sons & Co., Montreal.
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Parker, A. S., New Toronto, Ont.
Reiche & Co., Bradford, England.
Smith Wool Stock, Toronto.
Storey, W. H., & Sons, Acton, Ont.

Tin

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Tin Plates

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Sling-by, H. C., Montreal.
Wiro-Woven-Wood Mfg. Co., Toronto.

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Wilson, J. C. & Co., Glenora, Ont.

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 Canada Foundry Co., Toronto.
 Hamilton Brass Mfg. Co., Hamilton, Ont.
 Kerr Engine Co., Walkerville, Ont.
 Williams, A. It., Machinery Co., Toronto.

Ventilators

Buffalo Forge Co., Buffalo, N.Y.
 McEachren Heating & Ventilating Co., Galt, Ont.
 Sturtevant, B. F. Co., Boston, Mass.

Wagons and Carriages

Hore, F. W., & Son, Hamilton, Ont.

Weaving Machinery

Karch, H. W., Hespeler, Ont.
 Mason Machine Works, Taunton, Mass.
 Riley, C. E., & Co., Boston, Mass.

Wire and Wire Rope

Greening, B. Wire Co., Hamilton, Ont.
 Samuel, M. & L. Benjamin & Co., Toronto.
 Wire & Cable Co., Montreal.

Wire-Woven-Wood Baskets.

Wire-Woven-Wood Mfg. Co., Toronto.

Wood-Working Machinery

Carrier, Laine & Co., Lewis, Que.
 Clark & Demill, Galt, Ont.
 Cowan & Co., Galt, Ont.
 Karch, H. W., Hespeler, Ont.
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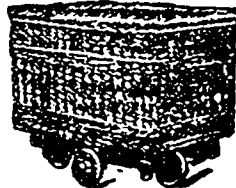
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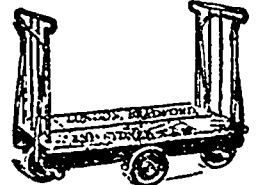
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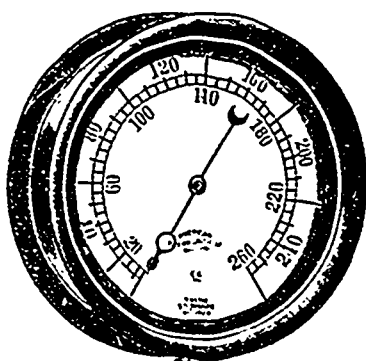
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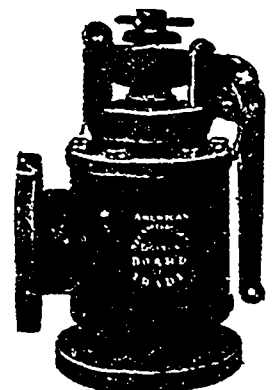
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